

G20 BALI LEADERS' DECLARATION

Bali, Indonesia, 15-16 November 2022

1. Fourteen years ago, the Leaders of the G20 met for the first time, facing the most severe financial crisis in our generation. We recognized, as large global economies, that collectively we carry responsibilities and that our cooperation was necessary to global economic recovery, to tackle global challenges, and lay a foundation for strong, sustainable, balanced, and inclusive growth. We designated the G20 the premier forum for global economic cooperation, and today we reaffirm our commitment to cooperate as we, once again, address serious global economic challenges.
2. We met in Bali on 15-16 November 2022, at a time of unparalleled multidimensional crises. We have experienced the devastation brought by the Covid-19 pandemic, and other challenges including climate change, which has caused economic downturn, increased poverty, slowed global recovery, and hindered the achievement of the Sustainable Development Goals.
3. This year, we have also witnessed the war in Ukraine further adversely impact the global economy. There was a discussion on the issue. We reiterated our national positions as expressed in other fora, including the UN Security Council and the UN General Assembly, which, in Resolution No. ES-11/1 dated 2 March 2022, as adopted by majority vote (141 votes for, 5 against, 35 abstentions, 12 absent) deplores in the strongest terms the aggression by the Russian Federation against Ukraine and demands its complete and unconditional withdrawal from the territory of Ukraine. Most members strongly condemned the war in Ukraine and stressed it is causing immense human suffering and exacerbating existing fragilities in the global economy - constraining growth, increasing inflation, disrupting supply chains, heightening energy and food insecurity, and elevating financial stability risks. There were other views and different assessments of the situation and sanctions. Recognizing that the G20 is not the forum to resolve security issues, we acknowledge that security issues can have significant consequences for the global economy.
4. It is essential to uphold international law and the multilateral system that safeguards peace and stability. This includes defending all the Purposes and Principles enshrined in the Charter of the United Nations and adhering to international humanitarian law, including the protection of civilians and infrastructure in armed conflicts. The use or threat of use of nuclear weapons is inadmissible. The peaceful resolution of conflicts, efforts to address crises, as well as diplomacy and dialogue, are vital. Today's era must not be of war.
5. At today's critical moment for the global economy, it is essential that the G20 undertakes tangible, precise, swift and necessary actions, using all available policy tools, to address common challenges, including through international macro policy cooperation and concrete collaborations. In doing so, we remain committed to support developing countries, particularly the least developed and small island developing states, in responding to these global challenges and achieving the SDGs. In line with the Indonesian G20 Presidency theme – Recover Together, Recover Stronger – we will take coordinated actions to advance an agenda for a strong, inclusive and resilient global recovery and sustainable development that delivers jobs and growth. With the above in mind, we will:



- Stay agile and flexible in our macro-economic policy responses and cooperation. We will make public investments and structural reforms, promote private investments, and strengthen multilateral trade and resilience of global supply chains, to support long-term growth, sustainable and inclusive, green and just transitions. We will ensure long-term fiscal sustainability, with our central banks committed to achieving price stability.
 - Protect macroeconomic and financial stability and remain committed to using all available tools to mitigate downside risks, noting the steps taken since the Global Financial Crisis to strengthen financial resilience and promote sustainable finance and capital flows.
 - Take action to promote food and energy security and support stability of markets, providing temporary and targeted support to cushion the impact of price increases, strengthening dialogue between producers and consumers, and increasing trade and investments for long-term food and energy security needs, resilient and sustainable food, fertilizer and energy systems.
 - Unlock further investments for low- and middle-income and other developing countries, through a greater variety of innovative financing sources and instruments, including to catalyze private investment, to support the achievement of the SDGs. We ask the Multilateral Development Banks to bring forward actions to mobilize and provide additional financing within their mandates, to support achievement of the SDGs including through sustainable development and infrastructure investments, and responding to global challenges.
 - Recommit to accelerate achievement of the SDGs, achieving prosperity for all through sustainable development.
6. We are deeply concerned by the challenges to global food security exacerbated by current conflicts and tensions. We therefore commit to taking urgent actions to save lives, prevent hunger and malnutrition, particularly to address the vulnerabilities of developing countries, and call for an accelerated transformation towards sustainable and resilient agriculture and food systems and supply chains. We commit to protect the most vulnerable from hunger by using all available tools to address the global food crisis. We will take further coordinated actions to address food security challenges including price surges and shortage of food commodities and fertilizers globally. Recalling the G20 efforts such as the Global Agriculture and Food Security Program, we welcome global, regional, and national initiatives in support of food security, and in particular note the progress made by the UN Secretary General's Global Crisis Response Group on Food, Energy and Finance, as well as the World Bank Group's and IMF's food security responses. We emphasize the importance of building on the G20 Matera Declaration, working together to sustainably produce and distribute food, ensure that food systems better contribute to adaptation and mitigation to climate change, and halting and reversing biodiversity loss, diversify food sources, promote nutritious food for all, strengthen global, regional, and local food value chains, and accelerate efforts to reduce food loss and waste. We will also implement the One Health approach, intensify research on food science and technology, and improve stakeholders' capacity along the food supply chains, particularly women, youth, smallholder, and marginal farmers as well as fishers.
7. We support the international efforts to keep food supply chains functioning under challenging circumstances. We are committed to addressing food insecurity by ensuring accessibility,



affordability, and sustainability of food and food products for those in needs, particularly in developing countries and least developed countries. We reiterate our support for open, transparent, inclusive, predictable, and non-discriminatory, rules-based agricultural trade based on WTO rules. We highlight the importance of enhancing market predictability, minimizing distortions, increasing business confidence, and allowing agriculture and food trade to flow smoothly. We reaffirm the need to update global agricultural food trade rules and to facilitate trade in agricultural and food products, as well as the importance of not imposing export prohibitions or restrictions on food and fertilizers in a manner inconsistent with relevant WTO provisions. We are committed to sustained supply, in part based on local food sources, as well as diversified production of food and fertilizers to support the most vulnerable from the disruptions in food trade supply chain. We will avoid adversely impacting food security deliberately. We commit to facilitate humanitarian supplies for ensuring access to food in emergency situations and call on UN Member States and all relevant stakeholders with available resources to provide in-kind donations and resources to support countries most affected by the food crisis, as required and based on assessed needs by governments of affected countries. We continue to support the carve out of humanitarian activities from sanctions and call on all nations to support this aim, including through current efforts at the UN. We will continue to closely monitor the state of global food security and nutrition.

8. We welcome the Türkiye and UN-brokered two Istanbul Agreements signed on 22 July 2022 and consisting of the Initiative on the Safe Transportation of Grain and Foodstuffs from Ukrainian Ports (Black Sea Grain Initiative) and the Memorandum of Understanding between the Russian Federation and the Secretariat of the United Nations on Promoting Russian Food Products and Fertilizers to the World Markets, on the unimpeded deliveries of grain, foodstuffs, and fertilizers/inputs from Ukraine and the Russian Federation, to ease tension and prevent global food insecurity and hunger in developing countries. We emphasize the importance of their full, timely and continued implementation by all relevant stakeholders, as well as the UN Secretary-General's calls for continuation of these efforts by the Parties. In this context we highlight other efforts that ensure the flow of agri-food goods such as the EU Solidarity Lanes and the Russian donations of fertilizers facilitated by the World Food Programme. Moreover, we take note of various initiatives addressing food insecurity such as the Arab Coordination Group initiative.
9. We are committed to supporting the adoption of innovative practices and technologies, including digital innovation in agriculture and food systems to enhance productivity and sustainability in harmony with nature and promote farmers and fishers' livelihoods and increase income, in particular smallholders by increasing efficiency, and equal access to food supply chains. We will promote responsible investments in agricultural research and science and evidence-based approaches. We will continue to strengthen the Agricultural Market Information System (AMIS) as an early warning tool, to enhance food and fertilizer/inputs market transparency, reduce market uncertainties, and support coordinated policy responses for food security and nutrition, through the sharing of reliable and timely data and information.
10. We ask the Food and Agriculture Organization (FAO) and the World Bank Group (WBG) to share with us the results of their mapping exercises on food insecurity, which will be consolidated in the future with inputs from technical experts and other relevant international organizations, and will provide a systemic analysis of responses to address food security. This will identify any major gaps in global responses; examine food and nutrition variables and funding; examine the supply and demand of fertilizers; build on the G20 Agricultural Market Information System (AMIS); and identify any medium-term issues that require further technical and systemic analysis. The FAO and WBG will report back by the 2023 Spring



Meetings.

11. We meet at a time of climate and energy crises, compounded by geopolitical challenges. We are experiencing volatility in energy prices and markets and shortage/disruptions to energy supply. We underline the urgency to rapidly transform and diversify energy systems, advance energy security and resilience and markets stability, by accelerating and ensuring clean, sustainable, just, affordable, and inclusive energy transitions and flow of sustainable investments. We stress the importance of ensuring that global energy demand is matched by affordable energy supplies. We reiterate our commitment to achieve global net zero greenhouse gas emissions/carbon neutrality by or around mid-century, while taking into account the latest scientific developments and different national circumstances. We call for continued support for developing countries, especially in the most vulnerable countries, in terms of providing access to affordable, reliable, sustainable, and modern energy, capacity building, affordable latest technology within the public domain, mutually beneficial technology cooperation and financing mitigation actions in the energy sector.
12. We reaffirm our commitment to achieve SDG 7 targets and strive to close the gaps in energy access and to eradicate energy poverty. Recognising our leadership role, and guided by the Bali Compact and the Bali Energy Transition Roadmap, we are committed to finding solutions to achieve energy markets stability, transparency, and affordability. We will accelerate transitions and achieve our climate objectives by strengthening energy supply chain and energy security, and diversifying energy mixes and systems. We will rapidly scale up the deployment of zero and low emission power generation, including renewable energy resources, and measures to enhance energy efficiency, abatement technologies as well as removal technologies, taking into account national circumstances. We recognise the importance to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation, including renewable energy, as well as energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power, in line with national circumstances and recognising the need for support towards just transitions. We will increase our efforts to implement the commitment made in 2009 in Pittsburgh to phase-out and rationalize, over the medium term, inefficient fossil fuel subsidies that encourage wasteful consumption and commit to achieve this objective, while providing targeted support for the poorest and the most vulnerable. We will strengthen international cooperation as well as relevant producer-consumer dialogues on securing energy affordability and accessibility by limiting volatility in energy prices and scaling up clean, safe, inclusive, and sustainable technologies, including developing regional energy interconnectivity. We are committed to promote investment in sustainable infrastructure and industry, as well as innovative technologies and a wide range of fiscal, market and regulatory mechanisms to support clean energy transitions, including, as appropriate, the use of carbon pricing and non-pricing mechanisms and incentives, while providing targeted support for the poorest and the most vulnerable.
13. Mindful of our leadership role, we reaffirm our steadfast commitments, in pursuit of the objective of UNFCCC, to tackle climate change by strengthening the full and effective implementation of the Paris Agreement and its temperature goal, reflecting equity and the principle of common but differentiated responsibilities and respective capabilities in light of different national circumstances. We will play our part fully in implementing the Glasgow Climate Pact and the relevant outcomes of previous COPs and CMAs, in particular COP 26, including the call to revisit and strengthen the 2030 targets in our NDCs, as necessary to align with the Paris Agreement. In this regard, we welcome enhanced climate actions resulting



from the new or updated NDCs and invite parties to urgently scale up mitigation and adaptation ambition and means of implementation as well as make progress on loss and damage at COP 27 which is being held in Africa. Noting the IPCC assessments that the impact of climate change will be much lower at a temperature increase of 1.5°C compared with 2°C, we resolve to pursue efforts to limit the temperature increase to 1.5°C. This will require meaningful and effective actions and commitment by all countries, taking into account different approaches, through the development of clear national pathways that align long-term ambition with short and medium-term goals, and with international cooperation and support, including finance and technology, and sustainable and responsible consumption and production as critical enablers, in the context of sustainable development.

14. We welcome the progress to date towards achieving a Post 2020 Global Biodiversity Framework (GBF). We urge all parties and countries to finalize and adopt the GBF with the view of realizing of 2050 Vision of “Living in harmony with Nature” at the second part of COP15 CBD as a strong framework of action and accountability for halting and reversing biodiversity loss by 2030 and, as appropriate, to update National Biodiversity Strategies and Action Plans accordingly. We emphasize the importance of achieving and synergizing the objectives of the three Rio Conventions. We stress the need for clear and measurable goals and targets for biodiversity and means of implementation and accountability. We commit to strengthen actions to halt and reverse biodiversity loss by 2030 and call on CBD Parties to adopt an ambitious, balanced, practical, effective, robust and transformative post-2020 Global Biodiversity Framework at COP-15 in Montreal. We urge for increased resource mobilization from all sources, including from countries and entities, to provide new and additional financial resources for the implementation of the GBF, once it is negotiated, including to help enable and support developing country parties, and for aligning private and public financial flows with biodiversity objectives. We will scale up efforts to combat biodiversity loss, deforestation, desertification, land degradation and drought, as well as restoring degraded land to achieve land degradation neutrality by 2030, and in support of the G20’s ambition to reduce land degradation by 50% by 2040 on a voluntary basis. We recognize the effort made by a number of countries to ensure that at least 30% of global land and at least 30% of the global ocean and seas are conserved or protected by 2030 and we will help to make progress towards this objective in accordance with national circumstances. We commit to reduce environmental impacts by changing unsustainable consumption and production patterns as well as to enhance environmentally sound waste management including by preventing illegal cross-border traffic of waste.
15. We will step up efforts to halt and reverse biodiversity loss, including through Nature-based Solutions and Ecosystem-based Approaches, support climate mitigation and adaptation, enhance environmental conservation and protection, sustainable use and restoration, responding to natural disasters, reduce ecosystem degradation, enhance ecosystem services and to address issues affecting the marine and coastal environment. We will further promote sustainable development and lifestyles, resource efficiency and circular economy to increase sustainability and work together on scientific knowledge-sharing, raising awareness, and capacity building, particularly to advance on the ocean-based climate action. We are committed to ending illegal, unreported and unregulated fishing. We welcome the WTO multilateral Agreement on Fisheries Subsidies and encourage its rapid entry into force. In line with the UNEA Resolution 5/14, we are committed to develop an international legally binding instrument on plastic pollution, including in the marine environment, with the ambition of completing the work by the end of 2024. We highlight the progress made and call on participating delegations to achieve an ambitious and balanced agreement without delay on an international legally binding instrument under UNCLOS on the conservation and



sustainable use of marine biological diversity of areas beyond national jurisdiction, as called for in the UNGA Resolution 69/292. We also acknowledge that ecosystems, including forests, seagrasses, coral reefs, wetland ecosystems in all their diversity, including peatlands and mangrove, support climate change mitigation and adaptation efforts.

16. We acknowledge the urgent need to strengthen policies and mobilize financing, from all sources in a predictable, adequate and timely manner to address climate change, biodiversity loss, and environmental degradation including significantly increasing support for developing countries. We recall and further urge developed countries to fulfil their commitments to deliver on the goal of jointly mobilizing USD 100 billion per year urgently by 2020 and through to 2025 in the context of meaningful mitigation action and transparency on implementation. We also support continued deliberations on an ambitious new collective quantified goal of climate finance from a floor of USD 100 billion per year to support developing countries, that helps in fulfilling the objective of the UNFCCC and implementation of the Paris Agreement. We emphasize the importance of transparency in the implementation of the pledges. We also recall the Glasgow Climate Pact urging developed countries to at least double their collective provision of climate finance for adaptation to developing countries, from 2019 levels, by 2025, in the context of achieving a balance between mitigation and adaptation in the provision of scaled up financial resource, recalling Article 9 of the Paris Agreement.
17. In the context of strengthening global efforts to reach the objective of the United Nations Framework Convention on Climate Change (UNFCCC) and the goals of the Paris Agreement, as well as implementing the COP26 commitments, we reiterate that our policy mix toward carbon neutrality and net zero should include a full range of fiscal, market and regulatory mechanisms including, as appropriate, the use of carbon pricing and non-pricing mechanisms and incentives, and phase out and rationalize, over the medium term, inefficient fossil fuel subsidies that encourage wasteful consumption and commit to achieve this objective, while providing targeted support to the poorest and most vulnerable, and in line with national circumstances. We acknowledge the macro-economic risks stemming from climate change and will continue discussions on the costs and benefits of different transitions.
18. We are committed to take actions in support of orderly, just and affordable transitions to achieve the objectives of the 2030 Agenda for Sustainable Development in line with the UNFCCC and the Paris Agreement as well as with the convention on Biological Diversity. We welcome the progress made across the G20, international organizations, other international networks and initiatives, and the private sector in addressing the priorities of the G20 Sustainable Finance Roadmap, which is voluntary and flexible in nature, and call for further efforts to advance the Roadmap's recommended actions that will scale up sustainability financing. We welcome the establishment of the Sustainable Finance Working Group's online dashboard and repository of relevant work, to illustrate ongoing and future progress made on the Roadmap, and encourage members to contribute on a voluntary basis, taking country circumstances into consideration. We endorse the 2022 G20 Sustainable Finance Report which articulates practical and voluntary recommendations for jurisdictions and relevant stakeholders in developing transition finance frameworks, improving the credibility of financial institutions' net zero commitments and scaling up sustainable finance instruments, with a focus on improving accessibility and affordability. We also welcome the valuable discussion during the Presidency's Forum on policy levers that incentivize financing and investment to support the transition.



19. We remain committed to promoting a healthy and sustainable recovery which builds towards achieving and sustaining Universal Health Coverage under the SDGs. While the COVID-19 pandemic is not over, the World Health Organization (WHO) has recently declared monkeypox as another Public Health Emergency International Concern (PHEIC), reinforcing that international health threats are ever present and that the G20 and broader global community must come together to improve our collective prevention, preparedness and response capabilities. We reaffirm the importance of strengthening of national health systems by putting people at the center of preparedness and equip them to respond effectively. We emphasize the need for equitable access to pandemic medical countermeasures, and welcome the efforts of ACT-A, and note that the results of the ACT-A external evaluations can be useful lessons for future discussions. We reaffirm our commitment to strengthen global health governance, with the leading and coordination role of WHO and support from other international organizations. We support the work of the Intergovernmental Negotiating Body (INB) that will draft and negotiate a legally binding instrument that should contain both legally binding and non-legally binding elements to strengthen pandemic PPR and the working group on the International Health Regulations that will consider amendments to the International Health Regulations (IHR) (2005) mindful that the decision will be made by World Health Assembly.
20. The G20 High Level Independent Panel, as well as the WHO and World Bank have estimated there is an annual pandemic PPR financing gap of approximately USD 10 billion. As initiated by the Saudi Arabian G20 Presidency, the Italian G20 Presidency and continued by the Indonesian G20 Presidency, we welcome the provision of additional financial resources, to assist in financing critical gaps in implementing IHR (2005) and increase PPR capacities. In this regard, we welcome the establishment of a new Financial Intermediary Fund for Pandemic PPR (the 'Pandemic Fund') hosted by the World Bank. It aims to address critical pandemic PPR gaps and build capacity at national, regional and global levels, bring additionality in financial resources for pandemic PPR, catalyze complementary investments, and facilitate a coordinated and coherent approach to pandemic PPR strengthening. We welcome the Pandemic Fund's inclusive membership and representation from low- and middle-income countries, civil society organizations and donors, and acknowledge the WHO's technical expertise and central coordination role in this endeavor, which reflects its leadership role in the global health architecture. We appreciate the work of the Secretariat hosted by the World Bank, with the WHO as technical lead and as chair of the Technical Advisory Panel. We look forward to the launch of the Pandemic Fund's first call for proposals as soon as possible. We commit to increase the capacity of developing countries for pandemic PPR through the Pandemic Fund, and look forward to the stocktaking review of the Pandemic Fund at the end of its first year to draw on lessons learned and incorporate any changes needed to ensure it is operating in accordance with its governing documents and effective at filling critical PPR gaps, and that it continues to have a central coordination role for the WHO, maintains a strong connection to the G20, and is inclusive of the perspectives of low- and middle-income countries and additional non-G20 partners in its decision making. We commend the pledges by current donors, amounting to over USD 1.4 billion, and encourage additional voluntary pledges. We call on new donors to join the Pandemic Fund, as they are able to.
21. It is essential to continue collaboration between Finance and Health Ministries for pandemic PPR. We extend the mandate of the Task Force, and ask the Secretariat of the Task Force to work with the Task Force co-chairs, the incoming Indian G20 Presidency, the G20 Troika, and G20 members to agree on a Task Force workplan for 2023, taking into account a multi-year planning horizon. We thank the WHO for continuing to host the Secretariat, with support from the World Bank. In 2023 the Task Force will continue to be co-chaired by Indonesia and Italy,



representing advanced and emerging economy perspectives, and will continue to draw on expertise of the WHO, International Financial Institutions and other relevant organizations, with the support of the 2023 Indian G20 Presidency. To expand the voice of lower income countries we invite key regional organizations to join the Task Force meetings, as appropriate. We will work closely with the WHO to ensure the Task Force continues to complement the global pandemic PPR architecture and there is no further duplication and fragmentation of the global health governance system. Delivering on the mandate from the G20 Rome Leaders' Declaration, in 2023 the Task Force will continue developing coordination arrangements between Finance and Health Ministries, and share best practices and experiences from past finance-health coordination in order to develop joint responses to pandemics, as appropriate. The Task Force will undertake work to better understand economic risks and vulnerabilities from pandemics, and how to mitigate them, with a focus on finance and health coordination in response to new pandemics, considering country-specific circumstances and recognizing the importance of further work on resource mobilization. We ask the Task Force to report back to Finance and Health Ministers in 2023 on its progress.

22. We recognize that the extensive COVID-19 immunization is a global public good and we will advance our effort to ensure timely, equitable and universal access to safe, affordable, quality and effective vaccines, therapeutics and diagnostics (VTDs). Acknowledging the adoption of the Ministerial Declaration on the WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics and the Ministerial Decision on the TRIPS Agreement at the WTO's 12th Ministerial Conference (MC12), we note that, no later than six months from the date of the Ministerial Decision on the TRIPS Agreement, WTO members will decide on its extension to cover the production and supply of COVID-19 diagnostics and therapeutics. We remain committed to embedding a multisectoral One Health approach and enhancing global surveillance, including genomic surveillance, in order to detect pathogens and antimicrobial resistance (AMR) that may threaten human health. To enable global pathogen surveillance as part of our commitment to implement the IHR (2005), we encourage sharing of pathogen data in a timely manner on shared and trusted platforms in collaboration with WHO. We encourage sharing of benefits arising from the utilization of pathogens consistent with applicable national laws.
23. We recognize the need for strengthening local and regional health product manufacturing capacities and cooperation as well as sustainable global and regional research and development networks to facilitate better access to VTDs globally, especially in developing countries, and underscore the importance of public-private partnership, and technology transfer and knowledge sharing on voluntary and mutually agreed terms. We support the WHO mRNA Vaccine Technology Transfer hub as well as all the spokes in all regions of the world with the objective of sharing technology and technical know-how on voluntary and mutually agreed terms. We welcome joint research and joint production of vaccines, including enhanced cooperation among developing countries. We acknowledge the importance of shared technical standards and verification methods, under the framework of the IHR (2005), to facilitate seamless international travel, interoperability, and recognizing digital solutions and non-digital solutions, including proof of vaccinations. We support continued international dialogue and collaboration on the establishment of trusted global digital health networks as part of the efforts to strengthen prevention and response to future pandemics, that should capitalize and build on the success of the existing standards and digital COVID-19 certificates.
24. The COVID-19 pandemic has accelerated the transformation of the digital ecosystem and digital economy. We recognize the importance of digital transformation in reaching the SDGs.



We acknowledge that affordable and high-quality digital connectivity is essential for digital inclusion and digital transformation, while a resilient, safe and secure online environment is necessary to enhance confidence and trust in the digital economy. We recognize the importance of policies to create an enabling, inclusive, open, fair and non-discriminatory digital economy that fosters the application of new technologies, allows businesses and entrepreneurs to thrive, and protects and empowers consumers, while addressing the challenges, related to digital divides, privacy, data protection, intellectual property rights, and online safety. We acknowledge the importance to counter disinformation campaigns, cyber threats, online abuse, and ensuring security in connectivity infrastructure. We remain committed to further enable data free flow with trust and promote cross-border data flows. We will advance a more inclusive, human-centric, empowering, and sustainable digital transformation. We also reaffirm the role of data for development, economic growth and social well-being.

25. We encourage international collaboration to further develop digital skills and digital literacy to harness the positive impacts of digital transformation, especially for women, girls, and people in vulnerable situations, and further support efforts to develop reliable skills and literacy. We note the increasing demands for a workforce adept at utilizing emerging technologies, education and training, reskilling and upskilling to meet such demands. We also seek to increase connectivity by accelerating high capacity and secure infrastructure and provide more accessible and affordable resources and tools, while also improve the digital literacy skills of learners, teachers, school leaders, and other educational professional to ensure universal access to education, accelerate learning recovery and promote lifelong learning.
26. We found digital technology becomes the key for recovery and empowerment across various sectors, including in building a resilient and sustainable food system and agriculture, creating sustainable and decent jobs and human capacity development, supporting inclusive trade, industrialization and investment, increasing productivity, as well as opening up the potential of the future economy, especially for Micro, Small and Medium Enterprises (MSMEs) and start-ups. It is essential to ensure that no one is left behind in our effort to digitally transform our society, by involving all stakeholders, including the youth, women, business sector, audit institution, parliaments, scientists, and labours.
27. We support continued implementation of the G20 Roadmap for Enhancing Cross-Border Payments, including the future delivery of the initial estimates for key performance indicators and 2022 Progress Report that sets out priorities for the next stage of work. We encourage central banks, other public authorities and the payments industry to continue to work collaboratively on these important initiatives to enhance cross-border payments. We welcome the report by the Bank for International Settlements (BIS) Committee on Payments and Market Infrastructures (CPMI) on interlinking payment systems and the role of Application Programming Interfaces (APIs) that was presented in a joint workshop by the Indonesian G20 Presidency in coordination with the BIS CPMI and the BIS Innovation Hub (BISIH) on cross-border payments and interoperability at the Festival Ekonomi Keuangan Digital Indonesia (FEKDI) 2022. We also welcome the joint report by the BIS CPMI, BISIH, IMF, and World Bank on options for access to and interoperability of Central Bank Digital Currencies (CBDCs) for cross-border payments.
28. We endorse the G20 Financial Inclusion Framework on Harnessing Digitalization to Increase Productivity and Foster a Sustainable and Inclusive Economy for Women, Youth and MSMEs or Yogyakarta Financial Inclusion Framework guided by the G20 2020 Financial Inclusion



Action Plan. To address digitalization and sustainable finance developments, and support financial inclusion and well-being, we endorse the updated G20/OECD High-Level Principles on Financial Consumer Protection and welcome the updated G20/OECD High-Level Principles on SME Financing.

29. To support our collective ambition to recover together, recover stronger, we commit to well-calibrated, well-planned, and well-communicated policies to support sustainable recovery, with due consideration to country-specific circumstances. We commit to mitigate scarring effects to support strong, sustainable, balanced and inclusive growth. We will stay agile and flexible in our fiscal policy response, standing ready to adjust to the changing circumstances as needed. Temporary and targeted measures to help sustain the purchasing power of the most vulnerable and cushion the impact of commodity price increases, including energy and food prices, should be well designed to avoid adding to high inflationary pressures. We will continue to enhance macro policy cooperation, preserve financial stability and long-term fiscal sustainability, and safeguard against downside risks and negative spillovers. Macroprudential policies need to remain vigilant to guard against rising systemic risks as financial conditions tighten. Recognizing that many currencies have moved significantly this year with increased volatility, we reaffirm the commitments made on exchange rates by our Finance Ministers and Central Bank Governors in April 2021. We also reiterate the importance of global cooperation and express our appreciation to the Indonesian G20 Presidency for its efforts to maintain an effective system of multilateralism through the G20.
30. G20 central banks are strongly committed to achieving price stability, in line with their respective mandates. To that end, they are closely monitoring the impact of price pressures on inflation expectations and will continue to appropriately calibrate the pace of monetary policy tightening in a data-dependent and clearly communicated manner, ensuring that inflation expectations remain well anchored, while being mindful to safeguard the recovery and limit cross-country spillovers. Central bank independence is crucial to achieving these goals and buttressing monetary policy credibility.
31. We are committed to the swift implementation of the OECD/G20 two-pillar international tax package. We welcome the progress on Pillar One. We also welcome progress on Pillar Two Global Anti-Base Erosion (GloBE) Model Rules, which pave the way for consistent implementation at a global level as a common approach, and we look forward to the completion of the GloBE Implementation Framework. We call on the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) to finalize Pillar One, including remaining issues and by signing the Multilateral Convention in the first half of 2023, and to complete the negotiations of the Subject to Tax Rule (STTR) under Pillar Two that would allow the development of a Multilateral Instrument for its implementation. We will work to strengthen the tax and development agenda in light of the July 2022 G20 Ministerial Symposium on Tax and Development, and we note the G20/OECD Roadmap on Developing Countries and International Tax. We support the progress made on implementing internationally agreed tax transparency standards, including regional efforts and welcome the signing of the Asia Initiative Bali Declaration in July 2022. We also welcome the Crypto-Asset Reporting Framework and the amendments to the Common Reporting Standard, both of which we consider to be integral additions to the global standards for automatic exchange of information. We call on the OECD to conclude the work on implementation packages, including possible timelines, and invite the Global Forum on Transparency and Exchange of Information for Tax Purposes to build on its commitment and monitoring processes to ensure widespread implementation of both packages by relevant jurisdictions.



32. We reaffirm our commitment to strengthening the long-term financial resilience of the international financial architecture, including by promoting sustainable capital flows, and developing local currency capital markets. We welcome the IMF's revised Institutional View on Liberalization and Management of Capital Flows and look forward to continued discussions with international organizations on the coherent implementation of international frameworks for the use of capital flow management measures, while being mindful of their original purpose. We look forward to further progress by the IMF in operationalizing the Integrated Policy Framework and welcome the report by the Bank for International Settlements (BIS) on Macro-financial stability frameworks. We welcome continued exploration of how CBDCs could potentially be designed to facilitate cross-border payments, while preserving the stability and integrity of the international monetary and financial system. We welcome the successful completion of the G20 TechSprint 2022, a joint initiative with the BISIH, which has contributed to the debate on the most practical and feasible solutions to implement CBDCs. We reiterate our commitment to maintaining a strong and effective Global Financial Safety Net with a strong, quota-based and adequately resourced IMF at its center. We remain committed to revisiting the adequacy of quotas and will continue the process of IMF governance reform under the 16th General Review of Quotas, including a new quota formula as a guide, by 15 December 2023. We take note on the continuation of discussion of the IMF surcharge policy.
33. ¹ We are committed to support all vulnerable countries to recover together, recover stronger. We welcome pledges amounting to USD 81.6 billion through the voluntary channelling of Special Drawing Rights (SDRs) or equivalent contributions, and call for further pledges from all willing and able countries to meet the total global ambition of USD 100 billion of voluntary contributions for countries most in need. We welcome the operationalization of the Resilience and Sustainability Trust (RST) to help eligible low-income countries, small states and vulnerable middle-income countries address longer-term structural challenges that pose macroeconomic risks, including those stemming from pandemics and climate change. We welcome the voluntary contributions to the RST and call for additional pledges and timely contributions to it and to the Poverty Reduction and Growth Trust (PRGT), especially for subsidy resources, to ensure a broad pool of contributors to meet funding needs. We are open to explore viable options for countries to voluntarily channel SDRs through Multilateral Development Banks (MDBs), while respecting national legal frameworks and the need to preserve the reserve assets status of SDRs. We will explore ways, including through balance sheet optimization measures, and other potential avenues, to maximize MDBs' development impact. We welcome early deliberations and urge MDBs to continue to discuss options for implementing the recommendations of the G20 Independent Review of MDBs' Capital Adequacy Frameworks within their own governance frameworks, and to deliver an update in Spring 2023. This will inform the ongoing development of a roadmap for the implementation of the recommendations, while safeguarding MDBs' long-term financial sustainability, robust credit ratings and preferred creditor status. We acknowledge the concluding report on the 2020 Shareholding Review of the International Bank for Reconstruction and Development (IBRD) and look forward to the 2025 Shareholding Review. At this challenging juncture, we reiterate our commitment to step up our efforts to implement the Common Framework for Debt Treatment beyond the Debt Service Suspension Initiative (DSSI) in a predictable, timely, orderly and coordinated manner. We welcome progress in this regard, including the provision of financing assurances for Zambia. We welcome the conclusion of the debt treatment to Chad and encourage the timely conclusion of the debt treatment for Zambia by early 2023.

¹ Noting that one member has divergent views on debt issues in paragraph 33, and emphasized the importance of debt treatment by multilateral creditors like MDBs.



We also encourage the conclusion of the debt treatment for Ethiopia under an IMF-supported program. We are concerned about the deteriorating debt situation in some vulnerable middle-income countries. This could be addressed by multilateral coordination that involves all official and private bilateral creditors to take swift action to respond to their requests for debt treatments. We stress the importance for private creditors and other official bilateral creditors to commit to providing debt treatments on terms at least as favourable to ensure fair burden sharing in line with the comparability of treatment principle. We reaffirm the importance of joint efforts by all actors, including private creditors, to continue working toward enhancing debt transparency. We welcome the efforts of private sector lenders who have already contributed data to the joint Institute of International Finance (IIF)/OECD Data Repository Portal, and continue to encourage others to also contribute on a voluntary basis.

34. In the face of a more challenging global economic and financial outlook, we underline the need to reinforce global financial system resilience and ask the Financial Stability Board (FSB) and IMF to continue their monitoring efforts. We commit to sustaining global financial stability, including through continued coordination of policy measures and implementation of international standards. We welcome the FSB's final report on financial sector exit strategies and scarring effects of COVID-19 and its conclusions regarding financial stability issues by the end of 2022. We strongly support global policy actions to increase resilience, in particular against cross-border spillovers, including by addressing the identified structural vulnerabilities in non-bank financial intermediation (NBFi) from a systemic perspective. To this end, we welcome the FSB's NBFi progress report with policy proposals to address systemic risk in NBFi, including in open-ended funds. We welcome the report by the Basel Committee on Banking Supervision (BCBS), the BIS Committee on Payments and Market Infrastructures (CPMI), and the International Organization of Securities Commissions (IOSCO) on the review of margining practices. We support taking forward the implementation of the FSB updated Roadmap for addressing climate-related financial risks which complements the G20 Sustainable Finance Roadmap. Globally consistent data are needed in order to effectively address climate-related financial risks. We look forward to the finalization of standards by the International Sustainability Standards Board (ISSB) in support of globally consistent, comparable and reliable climate-related financial disclosures, and its work beyond climate, and we welcome the efforts to achieve interoperability across disclosure frameworks. We welcome the FSB progress report on achieving consistent and comparable climate-related financial disclosures and the final report on supervisory and regulatory approaches to climate-related risks. We welcome the report by the FSB and the Network for Greening the Financial System (NGFS) on climate-scenario analysis by jurisdictions.
35. We welcome ongoing work by the FSB and international standard setters to ensure that the crypto-assets ecosystem, including so-called stablecoins, is closely monitored and subject to robust regulation, supervision, and oversight to mitigate potential risks to financial stability. We welcome the FSB's proposed approach for establishing a comprehensive international framework for the regulation of crypto-asset activities based on the principle of 'same activity, same risk, same regulation'. We welcome the FSB consultative report on the review of its high-level recommendations for the regulation, supervision and oversight of "global stablecoin" arrangements. We also welcome the FSB consultation report on promoting international consistency of regulatory and supervisory approaches to crypto-assets activities and markets. It is critical to build public awareness of risks, to strengthen regulatory outcomes and to support a level playing field, while harnessing the benefits of innovation. We welcome the final guidance by the BIS CPMI and IOSCO which confirms that the Principles for Financial Market Infrastructures apply to systematically important stablecoin arrangements. We welcome the FSB consultative report on achieving greater convergence in cyber incidents



reporting, and look forward to the final report. We welcome the results of the second phase of the Data Gaps Initiative (DGI-2) and will continue to work with partners in addressing the identified remaining challenges. We welcome the workplan on the new Data Gaps Initiative (DGI) prepared by the IMF, FSB and the Inter-Agency Group on Economic and Financial Statistics (IAG) in collaboration with participating members. We ask the IMF, the FSB and the IAG to begin work on filling these data gaps and report back on progress in the second half of 2023, noting that the targets are ambitious and delivery will need to take into account national statistical capacities, priorities, and country circumstances as well as avoiding overlap and duplication at international level. We welcome the progress of work on the review of the G20/OECD Principles of Corporate Governance, including the second report and the ongoing public consultation, and look forward to further updates on the review.

36. We reaffirm that the rules-based, non-discriminatory, free, fair, open, inclusive, equitable, sustainable and transparent multilateral trading system (MTS), with the WTO at its core, is indispensable to advancing our shared objectives of inclusive growth, innovation, job creation and sustainable development in an open and interconnected world as well as to supporting the resilience and recovery of a global economy under strain due to COVID-19 and global supply chain disruption. We agree that reforming the WTO is key in strengthening trust in the MTS. We will continue to ensure a level playing field and fair competition to foster a favourable trade and investment environment for all. We note the importance of the contribution of the MTS to promote the UN 2030 Agenda and its SDGs. Commending the successful conclusion of the 12th WTO Ministerial Conference (MC12), we commit to seize and advance the positive momentum by engaging in active, constructive, pragmatic, and focused discussions on WTO reform to improve all its functions, including reform of the dispute settlement mechanism, on the path leading to the MC13.
37. We are committed to reinforce international trade and investment cooperation to address supply chain issues and avoid trade disruptions. We believe that trade and climate/environmental policies should be mutually supportive and WTO consistent and contribute to the objectives of sustainable development. We also recognise the importance of inclusive international cooperation on digital trade. We recognize the need to promote value addition through sustainable and inclusive investment in highly productive sectors such as downstream manufacturing, digital trade, and services, and to foster linkages between foreign investors and local enterprises particularly MSMEs. We note the initiative from the Indonesian Presidency to hold discussions on policy coherence between trade, investment and industry, and to continue addressing industry-related issues in the broader G20 process, as appropriate.
38. We recognize the importance of revitalizing infrastructure investment in a sustainable, inclusive, accessible, and affordable way. We endorse the voluntary and non-binding G20/GI Hub Framework on How to Best Leverage Private Sector Participation to Scale Up Sustainable Infrastructure Investment which will consider country circumstances, and which will complement investment from other sources, including public investment and finance provided by MDBs. We note the Outcome Document from the 2022 G20 Infrastructure Investors Dialogue. To enhance social inclusion and address subnational disparities, we endorse the G20-OECD Policy Toolkit on Mobilizing Funding and Financing for Inclusive and Quality Infrastructure Investment in Regions and Cities, prepared with the support of the Asian Development Bank (ADB). We note the Preliminary Findings Report on Gender Inclusive Approaches in Private Participation in Infrastructure in promoting gender considerations during the infrastructure lifecycle and look forward to the final report. We endorse the InfraTracker 2.0 which will enable both the public and private sectors towards transformative



infrastructure investment post-COVID-19, by providing insights into long-term infrastructure strategies and plans. To narrow the digital divide, we endorse the G20 Compendium of Case Studies on Digital Infrastructure Finance: Issues, Practices and Innovations. We endorse the Quality Infrastructure Investment (QII) Indicators and associated guidance note, developed for the G20, which are voluntary and non-binding and consider country circumstances, and we look forward to further discussions on how the QII indicators can be applied. We welcome progress made towards developing a possible new governance model for the Global Infrastructure Hub (GI Hub) and ask that principles to guide the process be finalized as soon as possible.

39. The rise of automation and digital technologies are reshaping the world of work, presenting both opportunities and challenges. Adding to the situation, the COVID-19 pandemic has exacerbated pre-existing inequalities in many countries and continues to disproportionately affect women, youth, older workers, persons with disabilities and migrant workers. We underline that it remains our utmost priority to mitigate the adverse impact of the current trends on the labour market, reduce inequalities while responding effectively to the opportunities that automation and digital technologies present and promote gender equality. We remain committed to the promotion of decent work and the elimination of child and forced labour.
40. We reaffirm our commitment to support the full inclusion of migrants, including migrant workers, refugees, in our recovery efforts, in the spirit of international cooperation and in line with national policies, legislation, and circumstances, ensuring full respect for their human rights and fundamental freedoms regardless of their migration status. We also recognize the importance of preventing irregular migration flows and the smuggling of migrants, as part of a comprehensive approach for safe, orderly and regular migration, while responding to humanitarian needs and the root causes of displacement. We support strengthening cooperation between countries of origin, transit, and destination. We will continue the dialogue on migration and forced displacement in future Presidencies.
41. We remain committed to a human-centred, inclusive, fair, sustainable approach that leads to greater social justice, decent work, and social protection for all. We will continue our work to integrate persons with disabilities, women, and youth across sectors and levels in pursuit of an inclusive labour market. We are resolved to promote sustainable development of human capacity, labour markets, and productivity, including through community-based vocational education and training, to advance job creation through entrepreneurship, to empower MSMEs, and to accelerate our efforts to foster and adapt labour protection for all workers, including those in the informal sector. We will maximize our approach to skills development to respond effectively to the needs of the labour market, with the involvement of social partners. We will accelerate progress towards the Antalya Youth Goal, as well as universal social protection for all by 2030.
42. We are deeply concerned that multidimensional crises, including the COVID-19 pandemic, as well as lack of fiscal space and unequal access to finance and technology, are posing significant challenges towards realizing the 2030 Agenda for Sustainable Development and the Addis Ababa Action Agenda in a timely manner. We will demonstrate leadership and take collective actions to implement the 2030 Agenda for Sustainable Development and accelerate the achievement of the SDGs by 2030 and address developmental challenges by reinvigorating a more inclusive multilateralism and reform aimed at implementing the 2030 Agenda.



43. In this regard, we will strengthen inclusive and sustainable recovery and build resilience in all developing countries, including SIDS in the Pacific and Caribbean and LDCs, through ambitious and concrete actions. We also reiterate our continued support to Africa, including through the G20 Compact with Africa and the G20 Initiative on Supporting Industrialization in Africa and LDCs. We will focus on MSMEs, adaptive social protection, green economy and blue economy. We recognise the need for partnership to promote mutually beneficial technology cooperation and share good practice, as well as the need for inclusive and quality infrastructure investment for stronger recovery and resilience. We underscore the need to address the financing gap towards implementation of the 2030 Agenda, through enhancing innovative financing mechanisms, including blended finance, while noting the importance of transparency and mutual accountability. We take note of initiatives such as the Coalition for Disaster Resilience Infrastructure and the Global Blended Finance Alliance, and welcome the Global Platform for Disaster Risk Reduction. We look forward to the success of the SDGs Summit in 2023.
44. Access to education is a human right and a pivotal tool for inclusive and sustainable economic recovery. We welcome the outcome of the Transforming Education Summit. We will act in solidarity in particular with developing countries to rebuild more resilient, tech-enabled, accessible, and effective education systems. We will empower relevant actors within and beyond G20 to remove barriers to education, improve teaching and learning environments, and support transitions within and across all stages of education, with emphasis on women and girls. We also underscore the importance of learners' well-being in their preparation for work and meaningful participation and contribution to more equitable, inclusive and sustainable society. We reaffirm the importance of Education for Sustainable Development (ESD) and our commitment to SDG4 to ensure inclusive and equitable quality education and training. We are committed to promoting lifelong learning at all levels amidst the changing nature of work and encourage partnership in this regard.
45. We acknowledge the importance of research and innovation in sustainable resource utilization in various sectors, especially in the midst of health, climate, food and energy crises. We welcome research and innovation collaboration for the conservation of biodiversity and its use to support the sustainable development including green and blue economy. We also promote inclusive collaborations to further research and innovation, as well as promoting researchers' international mobility.
46. As women and girls continue to be disproportionately affected by the COVID-19 pandemic and other crises, we reaffirm our commitment to put gender equality and women's empowerment at the core of our efforts for an inclusive recovery and sustainable development. We commit to implement the G20 Roadmap Towards and Beyond the Brisbane Goal foster financial inclusion and access to digital technologies, including to address the unequal distribution in paid and unpaid care and domestic work, with a focus on closing the gender pay gap. We commit to the elimination of gender-based violence, the enhancement of social, health, care and educational services, and the overcoming of gender stereotypes. We will continue to advance women's and girls' equal access to inclusive and quality education, including participations in STEM education, women entrepreneurship through MSMEs, and women's and girls' access in leadership positions. We will promote quality of life for women in rural areas and women with disabilities. We welcome the work that has been done by the EMPOWER Alliance and its engagement with the G20, and support the future convening of G20 Ministerial Conference on Women's Empowerment.



47. We reaffirm the important role of tourism for global recovery, and the community-based approach for rebuilding a more human-centred, inclusive, sustainable, and resilient tourism sector. We acknowledge the vital importance of strengthening safe international mobility and connectivity and seamless post-Covid travel to enable tourism recovery. We further recognize that creative economy, which involve knowledge-based economy, human creativity, and intellectual property rights, contributes to improving the resiliency of tourism local communities and MSMEs through human capital development, digital transformation, innovation, public-private partnerships, sustainable preservation of natural and cultural heritage, and innovative financing while retaining their significant commercial and cultural values.
48. We reaffirm the role of culture as an enabler and driver for sustainable development with intrinsic value beyond its social and economic benefits. We are committed to develop policies that draw on cultural diversity as a resource for sustainable living and promote an inclusive and equitable ecosystem at all levels that values the contribution of those working in the culture, arts and heritage sectors. We will respect, protect and preserve the cultural heritage of our peoples, including local communities and indigenous peoples, as applicable. We support public incentives and sustainable investments from the private sector to strengthen the cultural economy. We will safeguard cultural heritage as well as fighting illicit trafficking of cultural property and promoting restitution to its rightful owner/countries of origin, in accordance with the relevant UNESCO Conventions and national laws.
49. We will continue to lead by example through strengthening and implementing our obligations and commitments to anti-corruption efforts including through legally binding instruments, while renewing our commitment to zero tolerance for corruption. We emphasize the importance of transparency and accountability for both public and private sector as a crucial part of a collective recovery effort. We underscore the important role of auditing as well as public participation and anti-corruption education in preventing and tackling any form of corruption. We recall our commitments and call on all countries to criminalise bribery, including bribery of foreign public officials, and effectively prevent, combat, detect, investigate, prosecute and sanction bribery. We will further work to strengthen international cooperation and legal frameworks to combat economic crimes including corruption related to organized crime and money laundering, including, on a voluntary basis, through existing networks and initiatives such as GlobE and the G20 Denial of Entry Experts Network. We will share information on our actions towards criminalising foreign bribery and enforcing foreign bribery legislation in line with Article 16 of UNCAC, and look forward to enlarging participation to the OECD Anti-Bribery Convention, as appropriate. We reaffirm our commitment to deny safe haven to corruption offenders and their assets, in accordance to domestic laws. We also recognize the importance of mitigating corruption risk in all sectors. We will further strengthen our engagement with and promote active participation by stakeholders such as academia, civil society, media and the private sector, including to advance a culture of integrity.
50. We recognize the need for the international community to step up their efforts to effectively combat money laundering, terrorism financing, and proliferation financing. We reaffirm our commitment to delivering the strategic priorities of the Financial Action Task Force (FATF) and its FATF Style Regional Bodies (FSRBs) to lead global action to respond to these threats. We welcome the initiative by the FATF to promote implementation of international standards on virtual assets, in particular the “travel rule”, and transparency of beneficial ownership, and acknowledge their role in the fight against systemic corruption and environmental crimes, which gravely impact economies and societies. We support the ongoing work of the FATF to



enhance global efforts to seize criminal proceeds and return funds to victims and states in line with domestic frameworks. We encourage all G20 members to strengthen collaboration to adopt and effectively implement the FATF standards.

51. We welcome the Indonesian Presidency's efforts to compile a wide array of national submissions and international coordinated collaborations from G20 members, invited countries, and regional and international organizations. These have been presented in the "G20 Action for Strong and Inclusive Recovery", as annexed. We call for further concrete actions to impart greater momentum and impact to the efforts of international community to recover together and recover stronger.
52. We welcome the outcomes of various G20 working groups and Ministerial meetings. We appreciate and thank Indonesia for its Presidency and for successfully hosting the Bali G20 Leaders' Summit and for its contribution to the G20 process. We look forward to meeting again in India in 2023, in Brazil in 2024 and in South Africa in 2025.

We thank international organizations, including the UN and its Specialised Agencies, World Bank Group, IMF, OECD, Asian Development Bank, ERIA, CEPI, European Investment Bank, GGGI, ICAO, IEA, IEF, IFAD, ILO, IRENA, FAO, FSB, Gavi, Global Fund, IAEA, Islamic Development Bank, ITU, Medicine Patent Pool, Sustainable Energy for All (SEforAll), OPEC, WEF, WFP, WHO, WTO, UNCCD, UNCTAD, UNDESA, UNDP, UNECE, UNESCAP, UNESCO, UNFCCC, UN Global Pulse, UN Habitat, UNICEF, UNIDO, UNOPS, UN Women, UNWTO and the G20 Engagement Groups (W20, L20, T20, S20, Y20, SAI20, P20, C20, B20, U20) for their valuable inputs and policy recommendations.



Annexes

A. Ministerial Meetings and Working Group Outcome Documents

1. Communiqué 1st G20 Finance Ministers and Central Bank Governors Meeting (Jakarta, 17-18 February 2022)
2. Chair Summary G20 Finance Ministers and Central Bank Governors Meeting (Washington DC, 20 April 2022)
3. Chair Summary Note Meeting of G20 Agricultural Chief Scientists (MACS-G20) (Bali, 5-7 July 2022)
4. G20 Chair's Summary Third G20 Finance Ministers and Central Bank Governors Meeting (Bali, 15-16 July 2022)
5. Chair's Summary Ministerial Conference on Women's Empowerment (Bali, 24-25 August 2022)
6. G20 Chair's Summary Joint Environment and Climate Ministers' Meeting (31 August 2022)
 - a. Annex 1: G20 Partnership on Ocean-based Actions for Climate Mitigation and Adaptation
 - b. Annex 2: G20 Studies under the Climate Sustainability Working Group
7. G20 Digital Economy Ministers' Meeting 2022 Chair's Summary (Bali, 1 September 2022)
 - a. Annex 1: Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity
 - b. Annex 2: Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situations in the Digital Economy
 - c. Annex 3: Report on Identifying Key Enablers on Digital Identity
8. G20 Chair's Summary Education Ministers' Meeting (Bali, 1 September 2022)
9. G20 Chair's Summary Energy Transitions Ministers Meeting 2022 (Bali, 2 September 2022)
 - a. Bali Compact
 - b. Decade of Actions: Bali Energy Transitions Roadmap
 - c. Stocktake on Access, Technology and Finance
 - d. Summary of G20 2022 Energy Transitions Working Group Side Events
10. G20 Chair's Summary on Multilateralism for Sustainable Development Goals (Belitung, 8 September 2022)
 - a. G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including Least Developed Countries and Small Island Developing States
 - b. G20 Principles to Scale up Blended Finance in Developing Countries, including Least Developed Countries and Small Island Developing States
 - c. 2022 G20 Bali Update on the G20 Action Plan on the 2030 Agenda for Sustainable Development and G20 Development Commitments
11. Culture for Sustainable Living: Chair's Summary of the G20 Culture Ministers Meeting (Borobudur, 13 September 2022)
12. G20 Chair's Summary Labour and Employment Ministers Meeting 2022 (Bali, 13-14 September 2022)
 - a. The G20 Policy Recommendations for Sustainable Growth and Productivity in Human Capacity Development through Strengthening Community-Based Vocational Training (CBVT)
 - b. G20 Policy Principles on Adapting Labour Protection for More Effective Protection and Increased Resilience for All Workers



- c. Policy Recommendation on Promoting Entrepreneurship and Support MSMEs As Job Creation Instruments
- d. Action Plan on Accelerating and Monitoring the G20 Principles for the Labour Market Integration of Persons with Disabilities
- e. Update of the G20 Skills Strategy
13. G20 Chair's Summary Trade, Investment and Industry Ministers Meeting (Bali, 22-23 September 2022)
 - a. Non-binding Guiding Principles to Support the Multilateral Trading System for the Achievement of the SDGs
 - b. G20 Compendium on Promoting Investment for Sustainable Development (Bali Compendium)
14. 2022 G20 Tourism Ministerial Meeting Chair's Summary
 - a. Bali Guidelines for strengthening Communities and MSMEs as Tourism Transformation Agents – A People-Centered Recovery
15. Chair's Summary G20 Agriculture Ministers' Meeting "Balancing Food Production and Trade to Fulfil Food for All (Bali, 28 September 2022)
16. High-Level Principles on Enhancing the Role of Auditing in Tackling Corruption (29 July 2022)
17. Background Note on Mitigating Corruption Risk in Renewable Energy (11 November 2022)
18. Compendium of Good Practices on Public Participation and Anti-Corruption Education (11 November 2022)
19. Compendium on Good Practices of Regulatory Frameworks and Supervisory Measures for Legal Professionals to Mitigate Corruption-Related Money Laundering Risks (11 November 2022)
20. G20 ACWG Accountability Report (12 November 2022)
21. The G20 Joint Finance and Agriculture Ministers' Meeting: G20 Presidency Chair's Summary (Washington DC, 11 October 2022)
22. G20 Chair's Summary Fourth G20 Finance Ministers and Central Bank Governors Meeting (Washington DC, 12-13 October 2022)
23. Chair's Summary Health Ministers' Meeting: G20 Health Minister's Action to Strengthen Global Health Architecture (Bali, 27-28 October 2022)
 - a. The Lombok G20 One Health Policy Brief
 - b. Call to Action on Financing for TB Response
 - c. Call to Action on Antimicrobial Resistance
24. Chair's Summary G20 Joint Finance-Health Ministers' Meeting (Bali, 13 November 2022)

B. G20 Action for Strong and Inclusive Recovery

Communiqué

**G20 Finance Ministers and Central Bank Governors Meeting
17-18 February 2022, Jakarta, Indonesia**



1. The global economic recovery is continuing. However, new waves of COVID-19 infections and the emergence of new variants are impacting the pace of recovery. Recovery is expected to be asynchronous, partly due to uneven access, delivery and uptake of vaccines, therapeutics, and diagnostics, with an increased likelihood of narrower and uneven macroeconomic policy space. Supply disruptions, supply-demand mismatches, and increased commodity prices, including energy prices, have also contributed to rising inflationary pressures in a number of countries and pose potential risks to the global economic outlook. We will continue to strengthen the resilience of global supply chains. We remain vigilant of the impacts of these challenges on our economies. We will also continue to monitor major global risks, including from geopolitical tensions that are arising, and macroeconomic and financial vulnerabilities. We will undertake a more systematic analysis of macroeconomic risks stemming from climate change and of the costs and benefits of different transitions. We reaffirm the importance of open and fair rules-based trade in restoring growth and job creation, reiterate our commitment to fight protectionism, and encourage concerted efforts to reform the World Trade Organization. We confirm our April 2021 exchange rate commitments.

2. We will continue to use all available policy tools to address the impacts of the pandemic, in particular on those most impacted, such as women, youth and informal and low-skilled workers, and on inequalities. We reaffirm our commitment to advancing the forward-looking agenda set in the G20 Action Plan and progressing the 2030 Agenda for Sustainable Development to achieve stronger, greener and more balanced global development. While being cautious with the withdrawal, we will adjust and target policy support as appropriate, as our economic recoveries continue. We will preserve financial stability and long-term fiscal sustainability, and safeguard against downside risks and negative spillovers. To support our collective ambition to recover together, recover stronger, we confirm our commitment for well-calibrated, well-planned, and well-communicated exit strategies to support recovery, with due consideration to country-specific circumstances. Inflation rates are currently elevated in many countries. Central banks will act where necessary to ensure price stability in line with their respective mandates, while remaining committed to clear communication of their policy stances. Central bank independence is crucial to achieving these goals and buttressing monetary policy credibility.

3. We emphasize the priority for collective and coordinated action to get the pandemic under control across the world. We remain committed to ensuring safe, timely, equitable and affordable access to vaccines, therapeutics, diagnostics, and personal protective equipment (PPE), particularly for low- and middle-income countries, and reiterate our support for ACT-A and the need to address the financing gaps of all ACT-A pillars. We ask the World Health Organization (WHO), World Bank (WB) and implementing partners to work further with countries to report on obstacles to, and accelerate, vaccine deployment strategies to get more vaccine shots in arms. We welcome the update on the G20 Joint Finance-Health Task Force's agreed work program aimed at enhancing dialogue and global cooperation on issues relating to pandemic prevention, preparedness and response (PPR), and promoting collective action to respond to the pandemic and contributing towards a strengthened global health architecture, while maintaining the crucial leadership role of the WHO in the international health work. The G20 Joint Finance-Health Task Force will aim to develop coordination arrangements between Finance and Health Ministries. We note the initial assessment of the financing gaps for PPR presented by the WHO and the WB, and look forward to the final report, including further detailing of the assessment of existing international financing mechanisms, for pandemic PPR. Informed by this analysis, we will work with G20 Health Ministers to further step up our efforts to respond to the current pandemic, and will review a report from the Task Force in April on modalities to establish a financial facility to ensure adequate and sustained financing for pandemic PPR.

4. To ensure the swift global implementation of the historic OECD/G20 two-pillar international tax package agreed in 2021, we commit to develop the model rules and multilateral instruments according to the timetable provided in the Detailed Implementation Plan, with a view to ensure that the new rules will come into effect at global level in 2023. We welcome the technical design of the Global anti-base erosion Model Rules for Pillar 2 adopted by the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS), and call for their finalization and consistent implementation at a global level as a common approach. We also welcome the ongoing development of the Multilateral Convention for Pillar 1. Bespoke technical assistance will be available to developing countries to support all aspects of implementation. We support the global and regional efforts, including in the Asia-Pacific region, to improve domestic resource mobilization in developing countries through technical assistance and capacity building and welcome the G20 Ministerial Symposium to discuss these issues. We support the progress

Communiqué

G20 Finance Ministers and Central Bank Governors Meeting 17-18 February 2022, Jakarta, Indonesia



made on implementing internationally agreed tax transparency standards. We ask the OECD to swiftly complete the work on the framework for the automatic exchange of information on crypto-assets. We acknowledge the OECD/G20 Inclusive Framework on BEPS report on Tax Policy and Gender Equality.

5. We reiterate our commitment to strengthening long-term financial resilience of the international financial architecture, including promoting sustainable capital flows and developing local currency capital markets. We will continue our discussion on Central Bank Digital Currencies, to further understand their macro-financial implications for the international monetary and financial system, including for spillovers and capital flows. We look forward to the review of the IMF's Institutional View on the liberalization and management of capital flows, informed by, among others, the IMF work on Integrated Policy Framework. We reiterate our commitment to maintaining a strong and effective Global Financial Safety Net with a strong, quota-based, and adequately resourced IMF at its center. We remain committed to revisiting the adequacy of IMF quotas and will continue the process of IMF governance reform under the 16th General Review of Quotas, including a new quota formula as a guide, by 15 December 2023.

6. We will continue to support vulnerable countries affected by the COVID-19 pandemic to ensure we all recover together. We welcome pledges amounting to USD 60 billion through the voluntary channelling of Special Drawing Rights (SDRs) or equivalent contributions and encourage further pledges as a step towards the total global ambition of USD 100 billion of voluntary contributions for countries most in need. We call on the IMF to establish the Resilience and Sustainability Trust (RST) by the 2022 Spring Meetings, and to work with its members to ensure it is operational by the 2022 Annual Meetings, and for it to implement RST support in close collaboration with the WB. We call for further voluntary loan and subsidy contributions to the Poverty Reduction and Growth Trust (PRGT). We remain open to consider viable options to voluntarily channel SDRs through Multilateral Development Banks (MDBs). The reserve assets status of channelled SDRs should be preserved with due consideration to national legal frameworks. We welcome the historic USD 93 billion agreement on the 20th replenishment of the International Development Association (IDA20) reached in December 2021. We welcome members' achievements under the G20 Debt Service Suspension Initiative (DSSI), also agreed by the Paris Club, which ended in December 2021, while noting the lack of private sector participation. The total estimated debt service deferred under the DSSI, between May 2020 and December 2021, is USD 12.9 billion. We welcome the IMF disbursements of USD 26 billion (USD 21.4 billion in net disbursements) to DSSI-eligible countries from April 2020 through December 2021 through its various facilities. We look forward to the Independent Review of MDBs' Capital Adequacy Frameworks. We welcome MDBs' approved commitments to DSSI-eligible countries over the period between April 2020 and December 2021, which totalled USD 100.1 billion. Of these, USD 66.0 billion have been disbursed, equivalent to USD 48.2 billion in net transfers. These efforts are part of our commitments made to support emerging market economies and low-income countries during the pandemic, which have increased to USD 276.4 billion, in excess of the original commitments of USD 230 billion.

7. We welcome efforts to progress the Common Framework for Debt Treatment beyond the DSSI, and reiterate our commitment to step up our efforts to implement it in a timely, orderly and coordinated manner. These enhancements would give more certainty to debtor countries and facilitate the IMF's and MDBs' quick provision of financial support. We note that Creditor Committees may discuss and find appropriate solutions on a case-by-case basis, for those countries who have requested debt treatment. We note that Chad, Ethiopia and Zambia have requested debt treatment under the Common Framework. We continue to support early engagement of borrower countries with official bilateral and private creditors. We look forward to relevant Creditor Committees' efforts to conclude the Chad and Ethiopia debt treatment, and encourage G20 and Paris club creditors to work on the requested debt treatment from Zambia in a timely manner. We stress the importance for private creditors and other official bilateral creditors to commit to providing debt treatments on terms at least as favorable, to ensure fair burden sharing in line with the comparability of treatment principle. We recall the forthcoming work of the MDBs, as stated in the Common Framework, in light of debt vulnerabilities. We affirm the importance of joint efforts by all actors, including private creditors, to continue working toward enhancing debt transparency. We welcome the launch of the joint Institute of International Finance (IIF)/OECD Data Repository Portal and encourage all private sector lenders to contribute data to this initiative.

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8. The COVID-19 pandemic has disrupted government and private sector investment into infrastructure. To ensure we recover stronger, we commit to revitalizing infrastructure investment in a sustainable, inclusive, accessible and affordable way, in line with the G20 Roadmap to Infrastructure as an Asset Class, the Collaboration with Institutional Investors and Asset Managers on Infrastructure and considering the outcomes of the 2021 G20 Infrastructure Investors Dialogue. We will develop actions to leverage private sector participation to scale up sustainable infrastructure development, which will complement investment from other sources, including public investment and finance provided by MDBs. We will develop policies to mobilize inclusive infrastructure investment to enhance social inclusion and address subnational disparities in regions and cities. We reaffirm our commitment to increase digital infrastructure and InfraTech investments to narrow the digital divide. To assist both the public and private sector towards transformative investment post-COVID-19, we will advance the InfraTracker 2.0 tool to provide insights into long-term infrastructure strategies and plans. We will advance the work on the G20 Principles for Quality Infrastructure Investment (QII), and make progress on the work on QII indicators, which will be voluntary and non-binding and consider country circumstances, prepared by the International Finance Corporation, with the aim of early conclusion by October 2022. We look forward to considering the future of the Global Infrastructure Hub.

9. We reiterate our commitment to tackle global challenges such as climate change and environmental protection, including biodiversity loss. In the context of strengthening global efforts to reach the goals of the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, as well as implementing our COP26 commitments, our policy mix toward carbon neutrality and net zero should include a full range of fiscal, market and regulatory mechanisms including, if appropriate, the use of carbon pricing mechanisms and incentives, and phase out and rationalize, over the medium term, inefficient fossil fuel subsidies that encourage wasteful consumption and commit to achieve this objective, while providing targeted support to the poorest and most vulnerable, and in line with national circumstances. We recognize that our G20 Finance Track policy dialogue on the macroeconomic and fiscal impact of climate change policies could benefit from further technical work. We also recall and reaffirm the commitment made by developed countries, to the goal of mobilizing jointly USD 100 billion climate finance per year by 2020 and annually through 2025 to address the needs of developing countries, in the context of meaningful mitigation actions and transparency on implementation and stress the importance of meeting that goal fully as soon as possible.

10. Sustainable finance is critical to a green, resilient and inclusive global economic recovery, and the achievement of the 2030 Agenda for Sustainable Development in line with the UNFCCC and the Paris Agreement. We are taking forward actions of the G20 Sustainable Finance Roadmap, that is voluntary and flexible in nature, including by reporting and assessing on its progress in addressing the Roadmap priorities in the 2022 G20 Sustainable Finance Report. We will take actions to enable transition finance to support orderly, just and affordable transitions towards a low-greenhouse gas emissions and climate-resilient economy. We will scale up sustainable finance markets and improve access for countries and firms, including for developing economies and SMEs, in an affordable way. We welcome private sectors' growing role in accelerating sustainable recovery alongside public and MDB finance and reaffirm the crucial role of IFIs and public policy levers in addressing market externalities, reducing the cost of low emissions technologies and incentivizing the participation of private capital in sustainable investments that promote green transitions, while considering country specific circumstances.

11. We commit to reinforcing global financial sector resilience to ensure an equitable economic recovery and to avoid any potential scarring impacts from the pandemic to preserve financial stability. We look forward to the Financial Stability Board (FSB)'s work on exit strategies and addressing scarring effects in the financial sector. We commit to strengthening the resilience of non-bank financial intermediation with a systemic perspective and consider the need for further policy actions, including on open ended funds, and interactions between USD funding and emerging market economy vulnerabilities. We are supporting the continued implementation of the G20 Roadmap for Enhancing Cross-Border Payments, including monitoring progress towards the roadmap's quantitative targets, and look forward to further progress in taking forward the actions of the FSB Roadmap for Addressing Climate-Related Financial Risks.

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12. We will continue to assess and address in a comprehensive manner the potential benefits and risks to global financial stability, arising from the rapid development of technological innovations in the financial sector, including cyber risks and the potential for regulatory gaps and arbitrage posed by crypto-asset markets. We welcome the FSB's updated assessment of financial stability risks from fast-evolving crypto-asset markets and note that in the absence of effective regulation and supervision, they could reach a point where they represent a threat to global financial stability due to their scale, structural vulnerabilities and increasing interconnectedness with the traditional financial system. We encourage the FSB, in close coordination with other standard-setting bodies, to accelerate and deepen its work to monitor and share information on regulatory and supervisory approaches to unbacked crypto-assets, stablecoins, decentralized finance, and other forms of crypto-assets and to address any gaps and arbitrage, including by recommending coordinated and timely policy actions to preserve global financial stability, thus creating the necessary conditions for safe innovation. We also welcome the FSB's efforts to promote effective regulatory practices and cooperation on operational resilience in the global financial system in light of evolving risks. We welcome the update report on the progress of the review of the G20/OECD Principles of Corporate Governance.

13. The COVID-19 pandemic has widened inequality for the most financially vulnerable and underserved groups especially women, youth, and Micro, Small, and Medium Enterprises (MSMEs). We reaffirm our commitment to bring forward the financial inclusion agenda and we look forward to the Global Partnership for Financial Inclusion (GPII) developing a financial inclusion framework on harnessing the benefit of digitalization, with the objective of boosting productivity, and fostering a sustainable and inclusive economy for women, youth, and MSMEs, building on the G20 2020 Financial Inclusion Action Plan.

14. We reaffirm our full support for the Financial Action Task Force (FATF) as the global standard setting body for preventing and combating money laundering (ML), terrorist financing (TF) and proliferation financing (PF). We recognize that effective implementation of the FATF Standards is crucial for building stability and confidence in financial markets, curbing corruption and ensuring a sustainable and inclusive recovery. We welcome the FATF's Updated Guidance for a Risk-Based Approach on virtual assets and virtual assets service providers published in October 2021 and reaffirm our commitment to implement the FATF standards on virtual assets and virtual assets service providers, in particular the implementation of the "travel rule". We commit to effectively implement the FATF standards on beneficial ownership. We reaffirm our commitment to sustaining and strengthening the FATF Global Network by supporting the FATF-style Regional Bodies to complete their evaluation programs to schedule. We welcome FATF's continued focus on the risks and opportunities of the digital transformation for fighting financial crime. We commend FATF's continued assessment of emerging threats and vulnerabilities to the integrity of the international financial system.

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Annex I: Issues for further action

Framework/global economy

- We ask the Framework Working Group (FWG) to advance the forward-looking agenda set in the G20 Action Plan to sustain the recovery and steer the global economy toward strong, sustainable, balanced and inclusive growth through developing a voluntary and non-binding note on exit and recovery strategies and addressing scarring effects.
- We ask the FWG to conduct a systematic analysis of macroeconomic risks stemming from climate change and discuss the costs and benefits of different transitions, including by drawing on well-established methodologies, and recognizing heterogeneities across G20 economies.
- We ask the FWG to continue work on enhancing global risk monitoring to assess the key risks faced by the global economy and look forward to integrating it more systematically into future policy discussions where appropriate.
- We ask the FWG to undertake further analysis on macroeconomic and distributional impacts of climate risk prevention strategies and climate mitigation and adaptation policies.

Finance-Health

- We ask that the G20 Joint Finance-Health Task Force present their report to Finance and Health ministers on modalities to establish a financial facility for pandemic preparedness and response at our next meeting in April, with further follow-up in July and, jointly with G20 Health Ministers, in October.
- We ask that the G20 Joint Finance-Health Task Force present an update on its work to G20 Finance and Health Ministers at their respective meetings in June and July.
- We ask that the G20 Joint Finance-Health Task Force present their report on how health and finance collaboration can strengthen efforts to prevent, detect, and respond to future health emergencies with cross-border potential at the G20 Joint Finance and Health Ministers' meeting in October.

International Taxation

- We ask the OECD as a top priority to explore further the recommendations of the report on developing countries and the OECD/G20 Inclusive Framework on BEPS to identify possible areas where domestic resource mobilization efforts could be further supported, including in the Asia-Pacific region and in collaboration with the Asian Development Bank's Asia-Pacific Tax Hub.
- We ask the OECD to complete the work on a reporting framework for automatic exchange of information on crypto-assets, with a view to improve tax compliance.
- We look forward to the OECD work on the tax policy implications of gender equality.

International financial architecture

- We will discuss the drivers of currency usage in trade and finance, in a balanced manner, considering the costs and benefits.
- We acknowledge the IMF's update on surcharge policy and note opportunities for the Board to discuss related issues, including in the context of the upcoming review of the Fund's income position.
- We look forward to the review of the IMF's Institutional View on the liberalization and management of capital flows, informed by, among others, the IMF work on Integrated Policy Framework.
- We look forward to the BIS work on Macro Financial Stability Policy Framework.

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- We look forward to the IMF's forthcoming semi-annual report to the Board of Governors on the progress of the 16th General Review of Quotas, with the next report to be issued in April.
- We will monitor the progress made towards the global ambition of USD 100 billion of voluntary channelling of SDRs, or equivalent contributions, throughout 2022.
- We look forward to the IMF's work on bringing in more transparency on the use of SDRs and functioning of the Voluntary Trading Arrangements (VTAs) following the SDR allocation.
- We welcome the recent expansion in VTAs and call for additional members to participate.
- We look forward to the MDBs presentations on potential SDR channelling options beyond the PRGT and RST in June.
- We ask the International Financial Architecture Working Group (IFAWG) to explore ways to maximize MDBs' development impact, including through balance sheet optimization measures and other options for increasing MDBs' development financing.
- We ask the IFAWG to note the next Shareholding Review of the International Bank for Reconstruction and Development (IBRD), which will take place in 2025.
- We ask the IMF and the WB to continue reporting on their work to strengthen the quality and consistency of debt data and improve debt disclosure.
- We ask MDBs to contribute to future discussions in the IFAWG on country-owned country platforms.
- We look forward to the OECD's reporting on progress on the data submitted to the OECD/IIF Data Repository Portal, in line with the IIF Voluntary Principles for Debt Transparency, and to report on sovereign marketable debt trends in low-income countries.

Infrastructure

- We ask the Infrastructure Working Group (IWG) to develop a framework to best leverage sustainable infrastructure financing, particularly through mobilizing private sector resources, to complement investment from other sources including public investment and finance provided by MDBs.
- We ask the IWG to develop a policy toolkit to mobilize financing mechanisms to enhance infrastructure investment in regions and cities.
- We ask the IWG to explore ways to facilitate financing and development of more cost-efficient, and better-quality InfraTech and digital infrastructure.
- We ask the IWG to discuss ways to advance the work related to the Principles for Quality Infrastructure Investment (QII), including by progressing the possible QII indicators.

Climate change

- Mindful of the spirit of cooperation required to address climate change, we will continue our efforts at dialogue informed by, and where appropriate, relevant expert international technical work, without prejudice to our own domestic and existing international processes.

Sustainable Finance

- We ask the Sustainable Finance Working Group (SFWG) to coordinate the actions of the G20 Sustainable Finance Roadmap including by developing a publicly accessible repository to capture the work being done by G20 working groups (across Finance and Sherpa tracks), international organizations (IOs), and other international networks and initiatives, and to assess and summarize progress of the aforementioned

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work, in the SFWG's 2022 G20 Sustainable Finance Report, including on progress on the work IFRS International Sustainability Standards Board to develop a baseline standard for global sustainability reporting. We also welcome SFWG member voluntary inputs to the repository on relevant country or jurisdictional-level progress.

- We ask the Financial Stability Board (FSB) to report to the G20 in July on progress on its Roadmap for Addressing Climate-Related Financial Risks, and in October on climate-related scenario analysis, regulatory and supervisory approaches, and achieving consistent climate-related disclosures.
- We ask the SFWG to develop a voluntary and non-binding high-level framework for transitions finance, and to work together with international initiatives, as appropriate, on improving the credibility of financial institution commitments.
- We ask the SFWG to develop a voluntary, non-binding policy toolbox highlighting ways to scale up sustainable finance instruments, in cooperation with other relevant G20 working groups, with a focus on improving accessibility and affordability.
- We ask the SFWG to work with other G20 working groups, relevant IOs, networks and initiatives as appropriate, to analyze the implications of public policy levers on market signals that could influence sustainable investment decisions with due consideration for national circumstances.
- With the assistance of relevant international organizations, the Indonesian Presidency will convene a seminar to discuss how best to help developing countries mobilize and improve access to sustainable private finance alongside other sources.

Financial regulation

- We ask the FSB to deliver its work on exit strategies and addressing scarring effects in the financial sector as an interim report in July and a final report in October.
- We ask the FSB to provide a consultative report on the review of FSB high-level recommendations on the regulation, supervision and oversight of "global stablecoins" arrangements in October.
- We ask the FSB to provide its progress report on non-bank financial intermediation in October and its analysis of the interactions between USD cross-border funding and vulnerabilities in emerging market economies' external financing in April.
- We ask the FSB to report in October on progress in the implementation of the G20 Roadmap for Enhancing Cross-Border Payments against the milestones set for 2022 and on baseline estimates against which future progress towards the quantitative targets can be monitored.
- We ask the FSB to report in October on best practices for cyber incident reporting.
- We call on the FSB, working with the International Organization of Securities Commissions (IOSCO), to conduct, by the end of 2023, a stocktake of progress made by member jurisdictions in adopting reforms to enhance money market fund resilience, followed up, by 2026, with an assessment of the effectiveness of the measures adopted by jurisdictions in addressing financial stability risks.
- We look forward to the OECD reporting on the draft revised G20/OECD Principles of Corporate Governance at our July 2022 meeting.

Financial inclusion

- We look forward to the review of the G20/OECD High-Level Principles for Financial Consumer Protection.
- We look forward to the revision of G20-OECD high level principles on SME financing, to be deliberated by the OECD Committee.

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Financial Action Task Force

- We look forward to the conclusion of the Financial Action Task Force's (FATF) priority work on Digital transformation of Combatting Money Laundering and the Financing of Terrorism and Proliferation.
- We ask the FATF to provide an update on the outcomes of its strategic review and how it will further emphasize the effectiveness of countries' measures to combat ML, TF and PF in the FATF's 5th round of mutual evaluations.
- We ask the FATF to provide an update of their ongoing efforts to enhance beneficial ownership transparency, including the adoption of the revision of the FATF standard on transparency and beneficial ownership of legal persons.
- We look forward to the results of the FATF's strategic prioritization process currently being undertaken by the FATF on its work program for a more effective and fine-tuned global implementation of the relevant FATF Standards.

New Data Gap Initiative (DGI)

- We look forward to the draft workplan of the new DGI being prepared by the IMF in close cooperation with the Inter-Agency Group on Economic and Financial Statistics members and the FSB.

Annex II: Reports and Documents Received

- IMF G20 Surveillance Note.
- The WB and WHO assessment of the gaps of global financing for pandemic prevention, preparedness and response (PPR).
- The G20/OECD Inclusive Framework on BEPS report on Tax Policy and Gender Equality.
- The FSB's Chair letter to the G20 Finance Ministers and Central Bank Governors, February 2022.
- The FSB's updated assessment of risks to financial stability from crypto-assets.
- The OECD Secretary-General's Report on the Review of the G20/OECD Principles of Corporate Governance.

Chair Summary

G20 Finance Ministers and Central Bank Governors Meeting
20 April 2022, Washington DC, United States of America



1. G20 Finance Ministers and Central Bank Governors met on Wednesday 20 April 2022, for the second time under the Indonesian G20 Presidency. The meeting was attended by G20 members, invited countries including Ukraine, and international and regional organizations.

2. The meeting was held under challenging circumstances, as the war in Ukraine continues and its impacts are felt by countries beyond Europe. Members expressed deep concerns about the humanitarian crisis, economic and financial impacts of the war, and called for an end to the war as soon as possible. Many members condemned the war as unprovoked and unjustifiable, and a violation of international law. Few members expressed that G20 should be faithful to its own mandate and ensure the discussions focus on economic impacts and take a comprehensive and balanced approach. Some members expressed concerns about the economic consequences of sanctions.

3. Many members shared the view that the war has made global growth and recovery much more complex, and undermines the existing global efforts in addressing health pandemic prevention, preparedness and response (PPR), high debt in vulnerable countries, and climate change mitigation and adaptation. Many members shared the view that the war and the associated actions have and will continue to hinder the global recovery process, raising particular concerns about food security, supply chain disruption and energy prices. Low income and vulnerable countries will be particularly affected as they were already facing challenges, including limited fiscal space and high debt vulnerability.

4. In dealing with the global economy and risks, most members underlined the crucial role of the G20, as the premier forum for international economic cooperation, to deal with the current multifaceted and complex global economic challenges. Most members supported the adaptation of the existing agenda to enable the G20 to address the economic impacts of the war while also remaining committed to addressing pre-existing global challenges, and leading the world back to strong, sustainable, inclusive and balanced growth. Many members supported the ongoing G20 focus on these issues as well as its other priorities including international taxation. Members noted concerns about broader and persistent inflationary pressures leading to several central banks raising their policy rates and resulting in faster than expected tightening of global liquidity. The higher policy rates brought into focus the need to deliver on the February commitment to well-calibrated, well-planned and well-communicated exit strategies to support the recovery and mitigate against potential spillovers.

5. Collective and coordinated action to get the pandemic under control remains a priority for members. Increased COVID-19 infections in some regions have weighed on growth, prolonged supply disruptions, exacerbated inflationary pressures and consequently could hinder the global recovery. There was broad support for the World Health Organization (WHO)-World Bank (WB) assessment of the significant financing gaps for pandemic PPR that need to be addressed, and support for the G20 to act to address those gaps. Most members agreed on the need for a new multilateral financing mechanism dedicated to addressing pandemic PPR financing gaps, and many concurred with the WHO-WB assessment that a Financial Intermediary Fund (FIF) housed at the WB is the most fit for purpose option for a new financing mechanism. Given the support among many members to set up a FIF, the Presidency concluded that the WB should begin exploring the process to develop and set up a FIF, alongside discussions on potential key governance and operating arrangements, including ensuring the central role of the WHO. Some members noted the concerns on the broader PPR coordination mechanism that will be discussed among members in parallel.

6. Members reiterated their commitment to support low-income and vulnerable countries, particularly those at risk of debt distress. Most members discussed the need to do more with respect to the implementation of the Common Framework and called for next steps to be more timely, orderly and coordinated. Many members noted that they look forward to the timely agreement of the debt treatment for Chad and the establishment of the Creditor Committee for Zambia. Some members reiterated the importance of debt transparency. Some also conveyed their support in developing guidelines for eligible countries on the implementation of the Common Framework. Members welcomed the establishment of the IMF's Resilience and Sustainability Trust (RST), encouraging further pledges towards the global ambition of USD 100 billion of voluntary contributions for countries in need, and looked forward to its operationalization by the 2022 Annual Meetings. Given the current

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**G20 Finance Ministers and Central Bank Governors Meeting
20 April 2022, Washington DC, United States of America**



economic conjuncture, most members acknowledged the crucial role of the Multilateral Development Banks (MDBs) to support development financing, and in catalyzing private sector mobilization. Members looked forward to the completion of the Review of MDBs' Capital Adequacy Frameworks by the Independent Expert Panel. On capital flows, members shared the view that countries face various challenges in maintaining financial resilience and promoting sustainable capital flows in the current economic conjuncture. Many members noted that a calibration of policy responses is warranted. Some members highlighted the importance of moving forward the implementation on of the G20 Roadmap to Enhance Cross-border Payments. Given the rapid development of crypto-assets markets, including its potential implications for global financial stability, few members underlined the need to advance the work on risk monitoring and to address potential regulatory gaps. Against the background of increased uncertainty, members reaffirmed their commitment to maintaining a strong and effective Global Financial Safety Net with a strong, quota-based and adequately resourced IMF at its center, and the timely conclusion of the 16th General Review of Quotas by 15 December 2023.

7. Members underlined the critical role of sustainable finance for a green, resilient and inclusive global economic recovery and the achievement of the 2030 Agenda for Sustainable Development in line with the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement. Members also provided strategic guidance in developing the sustainable finance G20 deliverables. There was broad support that the high-level framework for transition finance should cover a wide range of alignment approaches and be inclusive, practical, science-based and forward looking to ensure that it can enable the financial market to facilitate climate transitions. Some members also noted considerations to improve the credibility of financial institution commitments. In developing a policy toolbox to scale up sustainable finance instruments, a number of members highlighted the importance of scaling up de-risking facilities and exploring sustainable finance instruments beyond bonds, while also considering country circumstances. Many members pointed towards the need to particularly support Small and Medium Enterprises (SMEs) and build capacity in developing countries. Some members noted their views on policy levers, which will be discussed in the upcoming forum in mid-June. A number of members reiterated their commitment to take forward the actions of the G20 Sustainable Finance Roadmap.

8. Members looked forward to continuing the dialogue in the Third G20 Finance Ministers and Central Bank Governors' Meeting in Bali on 15-16 July 2022.

CHAIR SUMMARY NOTE

Meeting of G20 Agricultural Chief Scientists (MACS-G20) Bali, Indonesia, 5-7 July 2022

1. The 11th Meeting of G20 Agricultural Chief Scientists (MACS-G20) was held in Denpasar, Bali, Indonesia on July 5-7, 2022, attended by 75 delegates consists of G20 members except for Mexico and Türkiye, invited country, and international organizations.
2. The agenda of this meeting includes presentations from incredible speakers, discussion on the communique, gala dinner facilitated by Mayor of Badung, Bali on the first day and facilitated by DG of IAARD on the second day, and the last day the delegates enjoyed the field trip in Jati Luwih and Lake Baratan, Bali.
3. The first day meeting we have incredible speakers who have presented several important topics regarding the current global condition on food security post-covid19 pandemic and the impacts on the global agri-food system need to be rebalanced, no longer just business-as-usual approach but more breakthrough in formulating more resilient and sustainable food system. Coherent policies on transformative innovation must be formulated to tackle the food security crisis. The importance of investment in climate-smart and innovations to further expand the set of solutions that can address the multiple challenges of climate change, food loss and waste, biodiversity loss and pollution, and enhance food security. Therefore, we note efforts of initiatives such as the Agriculture Innovation Mission for Climate (AIM for Climate), C40 Good Food Cities, electronic phytosanitary certification (e-phyto) galvanising additional investment, and traceability and valuable interventions for all the members.
4. All delegates acknowledged the content in the communique, except in Para 2 on the topic of food security post-covid19 which highlights the current condition of geopolitical tension between Russia and Ukraine. Some countries insisted to elaborate the context of the communique with the geopolitical tension, while other members stick to discussing on scientifically based without any political issues. Indonesia as the G20 Presidency in 2022 keep position as neutral as possible. Related to another para in the communique has been acknowledged by G20 member countries. Therefore, four points of communique as follows:



- 4.1. We support innovative climate resilient agriculture is an approach to using existing natural resources sustainably in crop and livestock production systems to achieve higher long-term productivity and farm income in the facing of climate change. Given that the agriculture sector is vulnerable as well as contributing to climate change and it can also be the part of the solutions. Therefore, it is critical to continue and strengthen the effort of global research cooperation to address exchange research, knowledge, innovation, and win-win option for climate change mitigation and adaptation. Rising the concern on climate change in agriculture sector, Indonesia will host a G20 Technical Workshop on Climate Change on 3-5 August 2022 in Bogor.
- 4.2. We will to continue the importance of research collaborative work on the reduction of food loss and waste (FLW) and strengthening efforts to reduce global food waste at the retail and consumer levels and to reduce food loss along with production and supply chains in line with SDGs Commitment regarding Global FLW. We also encourage research on the potential benefits on utilizing digital agriculture by developing the regional FLW platform and standardization process on agriculture machinery and across the supply chain, including post-harvest losses based on previous activities and results of the technical workshops. We welcome continued activities of Collaborative Initiative on Food Losses and Food Waste launched at MACS-G20 to foster international exchange to achieve SDGs. For this purpose, Indonesia with the support of Germany (FLW WG Chair) will host an FLW workshop in October 2022 in Yogyakarta to tackle the identified regional FLW challenges in ASEAN countries and foster dialogue and networking activities.
- 4.3. We reaffirm the importance of research on the application of digital agriculture and digital traceability is an inevitable in improvement of the food systems framework. Digital agriculture has the potential to improve agricultural productivity, cost efficiency, market expansion, and environmental benefits through optimized resource use. In term of digital traceability, it is a key role in enabling risk-based food safety approaches, supporting the work of regulatory agencies, and providing information for consumers. Critical and emerging technologies such as artificial intelligence, advanced computing, and distributed ledger technologies could enhance digital agriculture and traceability and lead to safer and more sustainable food systems. We encourage reinforcement of capacity through training and research collaboration to improve the use and application of digital agricultural and traceability technologies.



- 4.4. We acknowledge the continued and vital need to address the global issues of antimicrobial resistance (AMR) should gain attention from all G20 members as discussed in previous meetings of the MACS-G20. Scientific and technical meetings on several aspects of AMR highlighting the One Health approach are strongly encouraged to promote responsible antimicrobial use and to address the related risks to public health and food systems among G20 members. Acknowledging global concern regarding antimicrobial resistance (AMR) risk, we welcome Codex products completed in 2021.

This Chair Summary Note will be delivered to all delegates. This Chair Summary Note will also be reported to The Second Agriculture Deputies Meeting held in Yogyakarta on 27-29 July 2022.



G20 Chair's Summary

Third G20 Finance Ministers and Central Bank Governors Meeting Bali, 15-16 July 2022



The G20 Finance Ministers and Central Bank Governors, met in Bali on 15-16 July 2022, for the third time under the Indonesian G20 Presidency. The meeting was attended by G20 members, invited countries (including Ukraine), and international and regional organizations.

Part I

1. Many members agreed that the recovery of the global economy has slowed and is facing a major setback as a result of Russia's war against Ukraine, which was strongly condemned, and called for an end to the war. One member expressed the view that the sanctions are adding to existing challenges. Members noted that existing challenges have been exacerbated, including supply-demand mismatches, supply disruptions, and increased commodity and energy prices, which have added to rising inflationary pressures and contributed to the increasing risk of food insecurity. Many members noted the importance of continued action on climate change, as well as on addressing debt vulnerabilities. Some members welcomed the G20 Presidency Note on Policy Setting for Exit Strategies to Support Recovery and Addressing Scarring Effect to Secure Future Growth.

2. The majority of members agreed that there is an alarming increase of food and energy insecurity, which are felt disproportionately by vulnerable groups. Some also expressed concerns about fertilizer availability which has the potential to further exacerbate the food crisis. Members affirmed their commitment to use all available policy tools to address current economic and financial challenges, including the risk of food insecurity. Many members stand ready to take prompt collective actions on food security, including by working with other initiatives. Members supported multilateral initiatives. Some members called on international financial institutions to implement the commitments in their Action Plan to Address Food Insecurity. Members also welcomed the High Level Seminar on Strengthening Global Collaboration for Tackling Food Insecurity. Members agreed to preserve financial stability and long-term fiscal sustainability.

Part II

Ministers and Governors expressed broad support for the following actions from our shared G20 FMCBG Agenda, noting a range of views on some issues:

3. G20 central banks remained strongly committed to achieving price stability, in line with their respective mandates. To that end, central banks are closely monitoring the impact of price pressures on inflation expectations and will continue to appropriately calibrate the pace of monetary policy tightening in a data-dependent and clearly communicated manner, ensuring that inflation expectations remain well anchored, while being mindful to safeguard the recovery and limit cross-country spillovers. Central bank independence is crucial to achieving these goals and buttressing monetary policy credibility. We reaffirmed the importance of open and fair rules-based trade and reiterated our commitment to fight protectionism. We reaffirmed our April 2021 exchange rate commitments. We also reiterated the importance of global coordination and expressed our support for the Indonesian G20 Presidency's efforts to maintain an effective system of multilateralism through the G20.

4. We reaffirm our commitment to prioritizing collective and coordinated action to get the pandemic under control. We welcome the establishment of a Financial Intermediary Fund (FIF) for pandemic Prevention, Preparedness and Response (PPR), as developed by the G20 Joint Finance-Health Task Force (JFHTF), and hosted by the World Bank (WB). The FIF will build on the existing global health architecture for PPR with a central role for the World Health Organization (WHO). It will help ensure adequate, sustained and better coordinated financing for pandemic PPR, and its catalytic role will facilitate co-financing and mobilization of domestic resources. We encourage financial pledges to the FIF, on a voluntary basis. We will continue discussing the FIF's governance which should include the central coordination role of the WHO, be G20-driven and be inclusive of low- and middle-income countries, and additional non-G20 partners; and its operating arrangements, with the goal of launching it in September 2022. We look forward to an update on the FIF at our next meeting. We also note the progress of the work of the JFHTF aimed at developing coordination arrangements between Finance and Health Ministries, including from non-G20 countries, while ensuring that there is no further duplication and fragmentation of the global health governance system, and maintaining the crucial leadership role of the WHO, and look forward to further deliberations.

5. We reaffirm our commitment to the swift implementation of the OECD/G20 two-pillar international tax package. We support the ongoing work on Pillar One and welcome the completion of Pillar Two Global Anti-Base Erosion (GloBE) Model Rules, which pave the way for consistent implementation at a global level as a common approach, and we look forward to the completion of the GloBE Implementation Framework. We call on the OECD/G20

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Inclusive Framework on Base Erosion and Profit Shifting (BEPS) to finalize Pillar One, including by signing the Multilateral Convention in the first half of 2023, and call on the Inclusive Framework to complete the negotiations that would allow the development of the Multilateral Instrument for implementation of the Subject to Tax Rules (STTR) under Pillar Two. We reaffirm our objective to strengthen the tax and development agenda in light of the G20 Ministerial Symposium on Tax and Development, and we note the forthcoming new G20/OECD Roadmap for Developing Countries and International Tax. We support the progress made on implementing internationally agreed tax transparency standards, including regional efforts and welcome the signing of the Asia Initiative Bali Declaration. We also welcome the progress at the OECD on the Reporting Framework for Crypto-Assets as well as the amendments to the Common Reporting Standard and call for their swift completion.

6. We reiterate our commitment to strengthening long-term financial resilience of the international financial architecture, including promoting sustainable capital flows, and developing local currency capital markets. We reiterate our commitment to maintaining a strong and effective Global Financial Safety Net with a strong, quota-based, and adequately resourced International Monetary Fund (IMF) at its center. We remain committed to revisiting the adequacy of IMF quotas and will continue the process of IMF governance reform under the 16th General Review of Quotas, including a new quota formula as a guide, by 15 December 2023. We welcome the IMF's Review of the Institutional View on Liberalization and Management of Capital Flows and the Bank for International Settlements' (BIS) report on Macro-financial stability frameworks. We look forward to continued discussions with other international organizations on international standards for using capital flow management measures, while being mindful of their original purpose, and welcome continued work on the operationalization of Integrated Policy Framework. We welcome continued discussions on Central Bank Digital Currencies (CBDCs), as these may be designed to facilitate cross-border payments while preserving the stability of the international monetary and financial system. We look forward to the G20 Techsprint 2022, a joint initiative with the BIS Innovation Hub, which will contribute to the debate on the most practical and feasible solutions to implement CBDCs.

7. We continue supporting all vulnerable countries to ensure that we will all recover together, recover stronger. We welcome pledges amounting to USD 73 billion through the voluntary channelling of Special Drawing Rights (SDRs) or equivalent contributions, and call for further pledges from all willing and able countries to meet the total global ambition of USD 100 billion of voluntary contributions for countries most in need. We welcome the establishment of the Resilience and Sustainability Trust (RST) and call on the IMF, with support from its members, to ensure its full operationalization by the 2022 Annual Meetings to help low-income countries, eligible small states and vulnerable middle-income countries address longer-term structural challenges that pose macroeconomic risks, including those stemming from pandemics and climate change. We welcome the pledges for voluntary contributions to the RST and call for further contributions to it and to the Poverty Reduction and Growth Trust (PRGT) to ensure a broad pool of contributors to meet funding needs. We remain open to explore viable options for countries to voluntarily channel SDRs through Multilateral Development Banks (MDBs), while respecting national legal frameworks and the need to preserve the reserve assets status of SDRs. We will continue to explore ways, including through balance sheet optimization measures and other potential avenues, to maximize MDBs' development impact. We welcome the report from the Independent Review on MDBs' Capital Adequacy Frameworks (CAF). We look forward to further discussions on its recommendations which could unlock significant amounts of development financing while maintaining MDBs' preferred creditor status. We reiterate our commitment to step up our efforts to implement the Common Framework for Debt Treatment beyond the DSSI in a timely, orderly and coordinated manner, and welcome progress in this regard, including the first meeting of the creditor committee for Zambia. We look forward to the provision of financing assurances for Zambia, and encourage the timely conclusion of the debt treatments for Chad and Ethiopia. We note the deteriorating debt situation in some vulnerable middle-income countries, and we welcome multilateral coordination that involves all bilateral creditors to take swift action to respond to middle-income countries' requests for debt treatments. We stress the importance for private creditors and other official bilateral creditors to commit to providing debt treatments on terms at least as favorable to ensure fair burden sharing in line with the comparability of treatment principle. We affirm the importance of joint efforts by all actors, including private creditors, to continue working toward enhancing debt transparency, and we continue to encourage all private sector lenders to contribute data to the joint Institute of International Finance (IIF)/OECD Data Repository Portal.

8. We reaffirm our commitment to revitalizing infrastructure investment in a sustainable, inclusive, accessible, and affordable way. Following on from previous years' events, the 2022 G20 Infrastructure Investors Dialogue highlighted the importance of public-private sector collaboration, and we look forward to the outcome document.

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We welcome progress in developing a framework to best leverage private sector participation to scale-up sustainable infrastructure investment, which will complement investment from other sources, including public investment and finance provided by MDBs, and in developing a policy toolkit to mobilize financing mechanisms to enhance infrastructure investment in cities and regions. We endorse the G20 Blueprint for scaling up InfraTech Financing and Development. We look forward to a compendium of case studies on financing digital infrastructure development and welcome progress on advancing the InfraTracker 2.0 to illustrate public infrastructure investment trends. We endorse the Compendium of Quality Infrastructure Investment (QII) Indicators and associated guidance note, developed for the G20, which are voluntary and non-binding and consider country circumstances. We note the update on options for the future of the Global Infrastructure Hub and look forward to resolving its long-term future by October 2022.

9. Our commitment to tackling urgent global challenges such as climate change and environmental protection, including biodiversity loss, remains critical to achieving greener, more prosperous and inclusive economies and societies. In the context of strengthening global efforts to reach the goals of the United Nations Framework Convention on Climate Change (UNFCCC) and Paris Agreement, as well as implementing our COP26 commitments, we reiterate that our policy mix toward carbon neutrality and net zero should include a full range of fiscal, market and regulatory mechanisms, including if appropriate, the use of carbon pricing mechanisms and incentives, and phase out and rationalize, over the medium term, inefficient fossil fuel subsidies that encourage wasteful consumption and commit to this objective, while providing targeted support to the poorest and most vulnerable, and in line with national circumstances. We continue to recall and reaffirm the commitment made by developed countries, to the goal of mobilizing jointly USD 100 billion climate finance per year by 2020 and annually through to 2025 to address the needs of developing countries, in the context of meaningful mitigation actions and transparency on implementation, and we stress the importance of fully meeting that goal as soon as possible.

10. We reinforce our commitment to support orderly, just and affordable transitions to achieve the objectives of the 2030 Agenda for Sustainable Development in line with the UNFCCC and the Paris Agreement. We commend the progress made to address the G20 Sustainable Finance Roadmap, that is flexible and voluntary in nature, which will be illustrated in an online repository dashboard. We call for further efforts across the G20, international organizations, other international networks and initiatives, and the private sector, to address the actions identified in the Roadmap, and welcome voluntary inputs from members to highlight country-level progress. We welcome the progress in developing a transition finance framework, improving the credibility of financial institutions' net-zero commitments, enhancing the accessibility and affordability of sustainable finance, and discussing policy levers that incentivize financing and investment that support the transition. We look forward to the final G20 Sustainable Finance Report in October 2022. We note the discussions of the Presidency's Forum on International Policy Levers Forum for Sustainable Investment and the G20 Sustainable Finance for Climate Transition Roundtable and look forward to the outcome document of the Roundtable. We welcome private sectors' growing role in accelerating transitions towards net-zero and the discussion of the G20 Sustainable Finance Private Sector Roundtable.

11. In the face of a more challenging global economic and financial outlook, we underline the need to reinforce global financial system resilience and ask the Financial Stability Board (FSB) to intensify its monitoring. We commit to sustaining global financial stability, including through continued coordination of policy measures and implementation of international standards. We welcome the FSB's Interim Report on financial sector exit strategies and scarring effects of COVID-19 and look forward to the final report's policy considerations prior to the Leaders' Summit in November. We strongly support global policy actions to increase resilience against cross-border spillovers, including by addressing structural vulnerabilities in non-bank financial intermediation (NBFi) from a systemic perspective, and we look forward to the FSB's report with policy proposals to address systemic risk in NBFi in October. We support taking forward the implementation of the FSB updated Roadmap for addressing climate-related financial risks that complements the G20 Sustainable Finance Roadmap. Globally consistent data is needed in order to effectively address climate-related financial risks. We look forward to the finalization of standards by the International Sustainability Standards Board (ISSB) for globally consistent, comparable and reliable climate-related financial disclosures.

12. We welcome the FSB's ongoing work to ensure that crypto-assets, including so-called stablecoins, are subject to robust regulation and supervision. We support the FSB's efforts to build public awareness of risks and its public communication that stresses the importance of implementing the principle of 'same activity, same risk, same regulation', in order to strengthen regulatory outcomes and to support a level playing field, while harnessing

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benefits of innovation. We support the continued implementation of the G20 Roadmap for Enhancing Cross-Border Payments, including the future delivery of the initial estimates for key performance indicators and the 2022 Progress Report that will set out priorities for the next stage of work. We welcome the report by the BIS Committee on Payments and Market Infrastructures (CPMI) on interlinking payment systems and the role of application programming interfaces, as well as the joint report by the CPMI, BIS Innovation Hub, IMF, and WB on options for access to and interoperability of CBDCs for cross-border payments. We welcome the completion of the second phase of the Data Gaps Initiative (DGI-2) and will continue to address the identified remaining challenges. We continue to develop the workplan on the new Data Gaps Initiative (DGI). We ask the IMF, FSB and the Inter-Agency Group on Economic and Financial Statistics (IAG), in close consultation with participating economies, to develop a more fine-tuned workplan, taking into account country circumstances. We welcome the second report on the review of the G20/OECD Principles of Corporate Governance.

13. The pandemic has widened inequality for the most financially vulnerable and underserved groups especially women, youth, and Micro, Small, and Medium Enterprises (MSMEs). We welcome the progress made by the Global Partnership for Financial Inclusion (GPII) and look forward to the finalization of the G20 Financial Inclusion Framework on Harnessing the Benefit of Digitalization, with the objective of boosting productivity and fostering a sustainable and inclusive economy for underserved groups guided by the G20 2020 Financial Inclusion Action Plan. The framework will build upon a Practical Implementation Guide for the G20 High-Level Principles for Digital Financial Inclusion, a living database related to digital and innovative financial products and services to MSMEs beyond credit, and a regulatory diagnostic toolkit for MSMEs access to digital financial services. To address digitalization and sustainable finance developments, and support financial inclusion and well-being, we endorse the updated G20/OECD High-Level Principles on Financial Consumer Protection and welcome the updated G20/OECD High-Level Principles on SME Financing.

14. We recognize the need for the international community to step up their efforts to effectively combat money laundering (ML), terrorist financing (TF) and proliferation financing (PF). We reaffirm our commitment to enhancing the capacity of the Financial Action Task Force (FATF) and its regional bodies to lead global action to respond to these threats. We support the effective implementation of FATF standards, including on virtual assets, in particular “travel rule”, and transparency of beneficial ownership, and acknowledge their role in the fight against grand and systemic corruption and environmental crimes, which gravely impacted economies and societies.

Ministers and Governors looked forward to continuing their dialogue in the Fourth G20 Finance Ministers and Central Bank Governors’ Meeting in October 2022 in Washington DC, USA.

Chair's Summary

G20 Ministerial Conference on Women's Empowerment

Bali, 24-25 August 2022



The Indonesian G20 Presidency convened the second G20 Ministerial Conference on Women's Empowerment on 24 and 25 August 2022, in Bali, Indonesia.

The Conference brought together Ministers responsible for gender equality and women empowerment from G20 member countries and invited countries, delegations from relevant international organisations as well as representatives from official G20 engagement groups and initiatives, social partners and alliance.

Building upon participants' exchanges of best practices and lessons learned, the Conference managed to have fruitful discussions on promising practices and critical issues to close gender gaps and support women's empowerment globally, particularly in a post-Covid-19 global economy.

Recommendations from G20 Empower Initiative and Women20, have also been heard and considered, as well as from other relevant institutions.

The Covid-19 pandemic has affected every aspect of society, from health, and education, to international trade. Other global challenges remain, including climate change, unemployment, poverty, and women's access to financing. At the same time, gaps in countries' capacities to address the crisis continue. Views were also expressed on the impacts of the ongoing geopolitical conflicts on women and children.

Understanding the challenges and the need for collective action, the Indonesian G20 Presidency focuses on three priority issues, namely Global Health Architecture, Sustainable Energy Transition, and Digital Transformation.

Participants gathered at the Conference to discuss three main topics:

1. Care Economy Post-Covid-19: The Missing Opportunity in the Labour Market;
2. Closing Digital Gender Gap: Women's Participation in the Digital Economy and Future Work; and
3. Women's Entrepreneurship: Accelerating Equality, Accelerating Recovery.

Care Economy Post-Covid-19

The session points out issues on paid and unpaid care that affect the economic position of women, especially during and post-Covid-19. Participants have noted that women faced set-back in job markets as the burden of unpaid care work hampers their opportunities. The session highlighted that it is important to develop care ecosystems and infrastructures, as well as to formulate family-friendly policies in supporting health, education, and well-being. Therefore, investing in comprehensive care services is necessary.

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Care work is still predominantly done by women leading to the belief that it is women's job and responsibility. Participants acknowledged that care work is a shared responsibility between men and women, as well as the responsibility of countries and societies. Tendencies to undervalue unpaid care work and to determine the division of domestic roles based on gender were underlined as archaic traditional practices. It is therefore important to change the cultural view and stereotype against women that care work is not exclusively a women's job.

Valuing unpaid care work can unlock women's potential especially when the distribution of care work is equally distributed between men and women. This is significant in the effort to accelerate the roadmap of the Brisbane Goal.

As many countries experience an ageing population, governments' efforts must also focus on providing a strong and comprehensive care service system. Further, providing affordable and accessible early learning and childcare services will extend opportunities for women's participation in the workforce and contribution to support the economy, especially in post-Covid-19 recovery.

Closing Digital Gender Gap

In the issues of closing the digital gender gap, the participants highlighted the importance of ensuring women received equal access to technology, access to financing, and access to employment in STEM industries including leadership in the digital economy. Participants acknowledged that to increase women's role in the digital economy, the support of disaggregated data and increased education and skills are needed.

Another component for women to excel as acknowledged by participants is to open more opportunities for women's participation in STEM and digital sectors by creating a safe environment including acknowledging biases and cultural boundaries faced by women and girls because building infrastructure is not enough. Furthermore, developing women's digital resilience, and ensuring women's digital literacy should also be considered.

Participants understand that to tackle complex challenges in minimising the digital gender gap, multi-stakeholder partnerships are needed, including partnerships with private sectors, international organisations, NGOs, and education institutions. Nevertheless, as the development of digital technology continues to grow, without relevant intervention, support, and regulations, women might not be able to enjoy the full benefits of digital technology.

Women's Entrepreneurship

The roles of women in entrepreneurship including in micro, small, and medium enterprises have become an important driver for economic growth, especially in post-Covid-19. Nevertheless, women are still less capable in accessing finance to expand their

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business compared to men. This in turn has contributed to the inequalities that women face, even in a sector that has been considered crucial to transform women to be more independent and fully participate in the economy.

Enabling ecosystems to support women's entrepreneurship include equal access to finance, skill development, digital and technology infrastructure, and skills, as well as a comprehensive childcare system and early learning.

To promote women's entrepreneurship, governments need to focus on promoting the collection and use of sex-disaggregated data and statistics, implement gender-responsive budgeting, and strengthen collaboration and coordination with all stakeholders, both on national and global levels. These would contribute to the development of a sustainable environment and ecosystem to ensure women's MSMEs flourish.

Sharing Results of G20 Empower Initiative and Women20

During the sharing session of the G20 Empower Initiative and Women20, the recommendation to the government points out issues that are in line with three issues discussed in the conference. The G20 Empower Initiative highlighted issues related to women's participation in the workforce including in leadership positions, scaling up support to women-owned businesses, and extending skills in digital technology. The G20 Empower Initiative has also submitted a technical annex, playbook, and dashboard to support private sectors and government in scaling up women's participation in the workforce and business.

Women20 has identified five recommendations including non-discrimination and equality, women-owned and led MSMEs, gender equitable health responses and support for rural women and women with disabilities. There are seven cross-cutting areas identified as enabling factors in advancing women, including digital and non-digital infrastructure, gender-responsive policies, data transparency, performance monitoring, as well as increasing women and girls' education, labour, and leadership participation.

Way Forward

Participants called for stronger international cooperation and collaboration to further empower women. Establishing a network of women entrepreneurs at the national and regional levels can be beneficial to help advance women's active participation in the economy.

Building upon the discussions and recommendations, participants agree to support efforts to increase women's participation in and access to leadership positions, especially as decision-makers.

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In this regard, a number of areas that require significant investment have been identified. These include investing in high-quality, inclusive, and affordable care facilities, digital technology, and MSMEs infrastructure and tools. The development of sex-disaggregated data and domestic policies are also recommended.

Finally, to ensure no one is left behind, participants fully support the need to focus their policies and programs on women and girls, including those with disabilities and in rural areas.

Having discussed the aforementioned issues, participants welcome the excellent work of Women20 and the G20 Empower Initiative on empowering women globally. Participants are also pleased that for the last two years, G20 has convened the Conference on Women's Empowerment, and look forward to the continuation of this commitment by future presidencies.

Women empowerment has been an important cross-cutting issue in the work of the G20. It is worth considering that future deliberations of the G20 could include a task force on women to further consolidate our work. Some participants expressed their support for this.

G20 Chair's Summary Joint Environment and Climate Ministers' Meeting August 31, 2022



The G20 Joint Environment and Climate Ministerial Meeting (JECMM) took place in Bali on 31 August 2022 and was chaired by the Minister of Environment and Forestry of Indonesia, Prof. Dr. Siti Nurbaya Bakar.

The meeting was convened in a hybrid manner where a number of Ministers were present physically and some virtually.

During the meeting, Ministers discussed and supported the priority issues of the Indonesian G20 Presidency at the Environment Deputies Meeting and Climate Sustainability Working Group, namely i) Supporting more sustainable recovery, (ii) Enhancing land and sea-based actions to support environment protection and climate objectives, and (iii) Enhancing resource mobilization to support environment protection and climate objectives. The Indonesia's presidency also uses the outcomes of several important studies it commissioned to inform the JECMM discussion.

PART I

We are meeting against the backdrop of a fragile and uncertain global socioeconomic outlook, amid the ongoing coronavirus disease (Covid-19) pandemic, the climate, environment, and biodiversity crises, as well as conflicts and rising geopolitical tensions with widespread effects on people, planet, prosperity and peace.

We are gravely concerned, in this regard, by the increased and ongoing conflicts in many parts of the world, including the one in Ukraine. Some members condemn Russia in this regard, while some members view that Environment Deputies Meeting and Climate Sustainability Working Group are not the proper forum to discuss geopolitical issues. Members have called for peace, cessation of hostilities and an end to war. We underline that the continuation of the on-going situation will have adverse impacts on food and energy security, climate change and environment degradation, as well as the attainment of sustainable development goals.

PART II

There is a broad agreement on the following issues:

Environment

1. We will continue and scale up our efforts to combat desertification, land degradation and drought, as well as restoring degraded land to achieve Land Degradation Neutrality by 2030, as per SDG 15.3, towards the G20's ambition to reduce land

degradation by 50 percent by 2040 on a voluntary basis and towards a number of related UN Agenda 2030 Sustainable Development Goals and Targets. We emphasize the importance of preparation and implementation of the voluntary land degradation reports by countries to achieve the UN Agenda 2030.

2. We will actively promote and increasingly mainstream ecosystem restoration, including land and forest restoration on all types of ecosystems by involving public private partnership, into recovery policies and plans, in line with the UN Decade on Ecosystem Restoration 2021-2030 which encompasses protection, conservation, restoration, and sustainable land management in pursuit of fighting climate change and halting biodiversity loss. G20 members that have endorsed the Glasgow Leaders' Declaration on Forests and Land Use, made at UNFCCC COP26, remain committed to working collectively to reduce and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation.
3. We continue to support the G20 Global Initiative on Reducing Land Degradation and Enhancing Conservation of Terrestrial Habitats adopted under Saudi Arabia's Presidency and to enhance land protection, conservation, and restoration, address common land tenure challenges in accordance with national legislation in line with the recent decision 27 at UNCCD COP15 and promote inclusive sustainable land management by actively contributing to the operational development of the Global Initiative. We are committed to further meaningful and inclusive engagement with the whole of society, including engaging private sector and civil society, Indigenous peoples, local communities, women, youth and children, persons with disabilities and people in vulnerable situation, academia, governments at all levels as appropriate in sustainable land management, protection, conservation and land restoration including in related programs and projects. We recognize the crucial role of traditional and indigenous knowledge as well as their role as key protagonists in sustainable land use and preventing deforestation and protecting, conserving, sustainability using and restoring biodiversity.
4. We acknowledge that wetlands in all their diversity, including peatlands and mangroves, are unique ecosystems and particularly important in the provision of many ecosystem services as well as in climate change mitigation and adaptation. We emphasize our commitment to implement measures to protect, conserve, sustainably use and restore them, and to ensure their sustainability and resilience. We recognize important measures taken by G20 members to contribute to wetlands protection, conservation, sustainable use, and restoration in line with National Action Plan for Wetlands, consistent with their conservation and wise use obligations under the Ramsar Convention on Wetlands, UNEA Resolution 4/16 on Conservation and Sustainable Management of Peatlands and UNEA Resolution 4/13 on Sustainable Management for Global Health of Mangrove. We will increase efforts for the establishment or improvement of monitoring and evaluation systems, including, among others, early warning systems to build community and ecosystem resilience.
5. We recognize the role of sustainable management and land restoration for achieving the objectives of the three Rio Conventions. We underline the importance of finding synergies and promoting complementary action which achieve land degradation objectives and other goals of the Multilateral Environmental Agreements and

recognize that Nature-based Solutions and Ecosystem-based Approaches can play an important role as a means to achieving Land Degradation Neutrality.

6. We acknowledge that healthy ecosystems, freshwater, lands and soils are the foundation of sustainable food systems and global food safety and security. As an integral part of our response to the current food security crisis, we will ensure that our efforts to strengthen global food security will go hand in hand with our measures to achieve our goals related to water resources, climate change mitigation and adaptation, land degradation, pollution reduction, and biodiversity. We will enhance our efforts to drive forward the sustainable food systems transition along the whole value chain including food production, consumption and food loss and waste, as highlighted by the UN Food Systems Summit 2021.
7. We acknowledge the importance of strengthening the G20 support to existing global initiatives for sharing experience and knowledge, enhancing capacity building, coordination, and synergy in tackling desertification, land degradation and drought and its links with all ecosystem loss and degradation, and deforestation, especially of primary forests and other unique ecosystems. Such exchanges between existing initiatives should be further developed for learning and exchanging experiences and best practices, conservation, restoration, and sustainable management, sharing expertise and networking in undertaking and up-scaling restoration.
8. Furthermore, we support and encourage existing platforms and efforts inter alia the UNCCD, the Global Peatlands Initiative, global mangrove alliances, and the UN-REDD Programme to provide ecosystem-specific advice based on physical and cultural landscape approach with the potential to ultimately cover all ecosystems, including peatlands, mangroves, and exchange results and best practices to address protection, conservation, sustainable use, restoration, and sustainable management to contribute to multiple ecological, economic and social benefits.
9. We stress that the protection, restoration, conservation, and sustainable use of nature are critical to achieve the UN 2030 Agenda for Sustainable Development and its Sustainable Development Goals to halt and reverse biodiversity loss. We are committed to strengthen evidence-based, effective, and holistic action to halt and reverse biodiversity loss by 2030 and to address direct and indirect drivers of biodiversity loss through national action as well as through, as appropriate, multilateralism and global responses, with a view to realizing the 2050 vision of “living in harmony with nature”, including through the implementation of nature-based solutions and ecosystem-based approaches. We stress the importance of mainstreaming biodiversity protection, conservation, sustainable use and restoration into all policies. We note with concern the IPBES global assessment report (2019) and welcome the recent approval of the summary for policymakers of the IPBES Assessment on the Sustainable Use of Wild Species and recognize the need to address overexploitation of wild species as a key driver of biodiversity loss. We also recognize the importance of mitigating the harmful effects of pollution on biodiversity globally and welcome the UNEA Resolution 5/8 to establish a science-policy panel for chemicals, waste and pollution.
10. We are working, and welcome the progress made towards achieving a clear, ambitious, realistic, transformative and robust Post 2020 Global Biodiversity

Framework (GBF), and we urge all the parties and countries to finalize and adopt the GBF at the second part of COP15 and, as appropriate, to update National Biodiversity Strategies and Action Plans accordingly. We stress the need for clear and measurable goals and targets for biodiversity and means of implementation, associated with a set of measurable headline indicators and an effective implementation and review and reporting mechanism. Some G20 members have expressed their support for the target to protect or conserve at least 30% of global land and at least 30% of global ocean by 2030. G20 members that made these voluntary commitments encourage and support others to make similarly ambitious commitments.

11. We commit to mainstreaming and scaling up complementarities in addressing biodiversity loss, climate change, land degradation, decline in the health of ocean and seas, deforestation, pollution, waste, and food insecurity and water safety, availability and accessibility.
12. We are committed to achieving SDG 6 and the water related goals of the 2030 Agenda. We welcome UNEA Resolution 5/4 on Sustainable Lake Management and commit to working towards a successful outcome of the UN 2023 Water Conference and Ramsar COP 14 to enhance integrated, sustainable and climate resilient water management by emphasizing actions to be implemented including protection, conservation, restoration of water-related ecosystems, including wetlands and aquifers, rivers and lakes, sustainable use of water-dependent ecosystem and involvement of relevant stakeholders and development of international collaboration to achieve living in harmony with nature. We recognize SDG 6 is at risk of being missed and highlight the need for more action and investment in sustainable water resource management from all sources, including from the private sector. We also recognize the need to help countries create an enabling environment to reduce risks and barriers for those sectors most impacted by climate change.
13. We recognize the importance of Integrated Water Resources Management (IWRM) at all appropriate levels including river basin scale cooperation and across sectors and the implementation of water resource protection, conservation and sustainable use. We also recognize the importance of implementation of water-saving sustainable production and consumption patterns, water conservation, as well as the recourse to non-conventional/alternative water sources, including rainwater harvesting, reuse of reclaimed water (treated wastewater) sustainable, effective, and efficient use of surface and groundwater. We encourage community-based water governance and working with relevant communities and structures as appropriate on river basin-based water governance as well as river basin-based approaches recognizing the benefit of cooperation between the neighbouring countries, linking the integrated water resources management with sustainable management of rivers, lakes, the ocean and seas, as well as efforts of cities to improve resource efficiency, including through circular economy approaches. We emphasize the urgency to strengthen and support efforts to mitigate, prepare for and adapt to the impacts of climate change on water resources to ensure that future generations have access to reliable, sufficient, safe and clean water resources.
14. We recall the right to safe and clean drinking water and sanitation as a human right as derived from the right to an adequate standard of living. We also recognize

water's many values for people and nature. Water is essential and underpins almost everything we do towards sustainable development.

15. We underline the need to address water utilization in all sectors mindful of the interlinkages between water, energy, food, and ecosystems in a sustainable manner and highlight its significant economic and social impact and the need to include all the stakeholders and water users in the elaboration of sustainable and integrated water management strategies. We encourage the development of water allocation mechanisms, as part of the Integrated Water Resource Management (IWRM).
16. We note the urgency of predicting and adapting to extreme weather events and other impacts resulting from climate change including incorporating measures to prevent and combat extreme droughts, heat waves, floods and their effects as well as sea-level rise into national mitigation and adaptation policies and plans. We also note the need to increase efforts to build community and ecosystem resilience, establishing accessible early warning and monitoring systems, enhancing forecasting, rehearsing and emergency planning abilities, and acknowledging also the importance to scale up investments in implementation, in particular for most vulnerable countries.
17. We emphasize the significance of sharing of knowledge and best practices regarding integrated and climate resilient water management including the transfer of technology on voluntary and mutually-agreed terms. We support the G20 Water Dialogue and its continuation and will facilitate the use of its output, including through the G20 Water Platform hosted by the Kingdom of Saudi Arabia.
18. We recognize that our current material resource use and its associated impacts need to be compatible with the achievement of the SDGs, especially SDG 12, to address climate change, biodiversity loss, water safety, availability and accessibility, land degradation, waste and pollution. We underline that increasing the circularity and resource efficiency of our economies will help bring our environmental, climate, and development goals within reach. We restate our support and commitment to the implementation of UNEA Resolution 5/11 on 'Enhancing circular economy as a contribution to achieving sustainable consumption and production'.
19. We emphasize the importance of resource efficiency and circular economy for the achievement of sustainable production and consumption thus contributing to addressing climate change, biodiversity loss, land and water degradation and pollution. We underline the need for strong collaboration and cooperation, including on science and knowledge sharing, particularly to developing countries, and among governments at all levels, industries, value chain actors, communities, relevant partners and stakeholders including civil society, Indigenous peoples, local communities, women, youth and children, persons with disabilities or people in vulnerable situation as well as research organizations to enhance implementation of resource efficiency and circular economy, among other approaches and minimize the negative environmental, social and economic impacts of consumption and production.
20. Acknowledging the need to enhance the sustainability of production and services across the life cycle in order to reduce their environmental footprint, including GHG

emissions, biodiversity loss, ecosystem degradation and pollution, and the need to increase the sustainability and the efficiency and circularity of their resource use, as well as supply and value chains transparency as appropriate whilst also being inclusive, resilient and clean, many members recognize the importance to work with the business sector and encourage knowledge sharing between business sectors globally.

21. We recognize the importance of raising awareness in society, in particular among youth regarding sustainable production and consumption patterns, including circular economy, life cycle perspective and the importance of more sustainable choices in relation to products and services, among other approaches, as fundamental tools to achieve sustainable development.
22. We highlight the important role of the G20 Resource Efficiency Dialogue in sharing measures, actions, knowledge and good practices, in cooperation with relevant stakeholders, to foster resource efficiency and circular economy and other means to achieve sustainable production and consumption patterns. Our sharing will consider national circumstances, capabilities and priorities and include information on the implementation of national Extended Producer Responsibility (EPR) schemes and other market-based instruments, voluntary schemes, regulation, Sustainable Public Procurement, capacity building, technological aspects and new circular business models that take into account a life cycle perspective and include sustainable, resilient and transparent supply and value chains as appropriate. We welcome the further development of the G20 Resource Efficiency Dialogue Portal in July 2022 and thank the Presidency for having organised a meeting of the G20 Resource Efficiency Dialogue as well as the European Union, Italy and Indonesia's Chamber of Commerce and Industry for organizing relevant workshops. We hereby endorse the G20 Resource Efficiency Dialogue Roadmap 2021-2023 and support its implementation. We reaffirm to continue our cooperation through the Dialogue, profiting from science-based inputs among others the UNEP International Resource Panel.
23. We acknowledge the role of the 10-Year Framework of Programmes on Sustainable Consumption and Production and of clear national strategies on sustainable and circular economy approaches to accelerate innovation and develop effective measures for sustainable development as well as clean and sustainable consumption and production. We recognize the importance of new, circular and resource efficient business models, among other sustainable production and consumption patterns in line with SDG 12.
24. We invite the research and scientific community and relevant international organizations such as, inter-alia, the International Resource Panel, UNEP, UNIDO, and OECD to continue research and analysis on material and natural resource use and their impacts on the environment, climate, the economy and societies, identifying gaps and challenges, and suggest possible actions and policy options, as appropriate, for consideration in accordance with national priorities and needs.
25. We recognize marine litter and plastic pollution, including microplastics, have significant impacts on ecosystems and their biodiversity. We also acknowledge that the main sources of marine litter and plastic pollution are land-based, while there

are also a number of contributors to marine litter from sea-based sources including abandoned, lost or otherwise discarded fishing gear, known as ghost gear.

26. We fully support and are committed to doing our utmost to end plastic pollution worldwide, including by participating in the Intergovernmental Negotiating Committee (INC), established by Resolution UNEA 5/14, to develop an international legally binding instrument on plastic pollution, including in the marine environment, which could include both binding and voluntary approaches, based on a comprehensive approach that addresses the full life cycle of plastic, taking into account, among other things, the principles of the Rio Declaration on Environment and Development, as well as national circumstances and capabilities. We are determined to play a constructive and strategic role in the process, with the ambition of completing its work by the end of 2024. We reiterate the need for a long-term global vision for the instrument.
27. We are committed to cooperation among and beyond G20 countries and other relevant stakeholders through the Intergovernmental Negotiating Committee to negotiate arrangements for capacity building and technical assistance, technology transfer on mutually-agreed terms, and financial assistance, recognizing that some legal obligations arising out of a new international legally binding instrument will require capacity-building and technical and financial assistance in order to be effectively implemented by developing countries and countries with economies in transition.
28. We highlight the progress made and call on participating delegations to achieve an ambitious and balanced agreement without delay on an international legally binding instrument under the UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) as called for in UN General Assembly Resolution 69/292.
29. We emphasize the importance of accelerating the implementation of SDG 14 on conserving and sustainably using the world's ocean, seas and marine resources as well as the speedy implementation of the other ocean-related SDGs including access for small scale artisanal fishers to marine resources and market in line with SDG 14b.
30. We reiterate our strong commitment to combat and to end illegal, unreported and unregulated (IUU) fishing and recognize that IUU fishing remains a serious threat to the sustainability of the ocean in many parts of the world. We welcome the landmark new WTO Agreement on Fisheries Subsidies that will prohibit subsidies to vessels or operators engaged in IUU fishing or fishing related activities in support of IUU fishing and that will discipline subsidies for fishing or fishing related activities with regard to overfished stocks. We continue our efforts to achieve a comprehensive WTO agreement that responds to the imperative of sustainability of our oceans, seas and marine resources including through further disciplines on certain forms of fisheries subsidies that contribute to overcapacity and overfishing recognizing that appropriate and effective special and differentiated treatment for developing country members and LDC members should be an integral part of these negotiations in line with SDG 14.6.

31. We recognize the important work of the Taskforce on Nature-related Financial Disclosures (TNFD) in developing a framework for businesses and organizations to report and act on evolving nature-related financial risks, and for the investors to better evaluate nature-related financial risks. We invite market participants to engage in the TNFD's framework and commit to support its development. We continue working with Finance Ministers in this area.
32. We support scaling up sustainable finance for protecting, conserving, sustainably using and restoring all ecosystems, such as but not limited to surface and ground water wetlands including peatlands and mangroves, coral reefs, forest, marine and other unique ecosystems with close cooperation and collaboration with the G20 Sustainable Finance Working Group and the Finance track of the G20, and call for additional progress in addressing the priority actions identified in the G20 Sustainable Finance Roadmap for stepping up G20-led efforts concerning finance for nature, biodiversity, circular economy and resource efficiency, water, sanitation and social issues. We welcome the Finance for Biodiversity Pledge launched at the Biodiversity Summit of the United Nations General Assembly in September 2020 and encourage financial institutions to sign it. We welcome the Statement on 'Nature, People and Planet' made by Multilateral Development Banks at UNFCCC COP26 and call upon MDBs to commit to pledging concrete amounts to international biodiversity finance before CBD COP15.2. We also highlight the urgent need to align financial flows with sustainable development, nature and climate objectives and underline the many synergies in these areas. We will strengthen those synergies to maximize co-benefits.
33. We are committed to strengthening policies to enhance the participation in sustainable finance of public and private financial institutions and other relevant public institutions, and we are also committed to the implementation of the G20 Sustainable Finance Roadmap. We encourage the further development and implementation of innovative financing instruments that support the protection, conservation sustainable use and restoration of nature.
34. Supporting strong legal and policy instruments, as well as effective institutions at all levels, including through river basin management and relevant MEAs measures, as appropriate, many members recognize that the instruments allow capacity building and river basin scale cooperation between neighbouring countries on water and wetlands. Members also recognize that the effective implementation of collective actions requires enabling and coherent legal and policy frameworks at all levels, according to national laws and regulations, by scaling up capacity building, environmentally sound technologies, development of existing as well as new and innovative financing schemes, dedicated development partnerships, and a renewed and strong commitment to multilateralism and international cooperation.
35. We highlight the role that fiscal policies can play as an effective instrument to foster behaviour changes in businesses and consumers for steering the economy on the whole towards greater sustainability, leaving no one behind and encourage initiatives to scale up and maximize these instruments, including through international partnerships among countries to finance land protection, conservation, sustainable management and restoration programs and projects.

36. We recognize the implementation of relevant innovative financing instruments and encourage initiatives to scale up and maximize these instruments, including through international partnerships among countries to finance land protection, conservation, sustainable management and restoration programs and projects.
37. Mindful of the interconnectedness of poverty, health, economic and environmental challenges, we commit to a just and equitable transition to sustainable economies, leaving no one behind, whilst taking into account the different levels of development and capacity of countries. We encourage the provision of financial, technological and capacity building support to developing countries especially to the least developed countries, making the best use of existing governance frameworks and working to identify new and innovative solutions. Recalling the principles of the Rio Declaration and recognizing that we face different challenges, we will strengthen our international cooperation towards sustainable development.

Climate Sustainability

1. Recognizing the importance of leading, members reaffirmed their steadfast commitments and objectives of the UNFCCC to tackle climate change by strengthening the full and effective implementation of the Paris Agreement in holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances.
2. Recalling with concern the findings of the best available science, including IPCC special report on Global Warming of 1.5°C and the 6th Assessment Report of the IPCC (AR6), members recognized that the impacts of climate change at 1.5°C are much lower than at 2°C and that climate resilient development may not even be possible in some regions if global warming exceeds 2°C, and that the resolve to try to limit the temperature increase to 1.5C is urgent. In this regard, some members underlined the leading role of developed countries in deep reduction of GHG emissions.
3. We underline that climate change has already caused widespread adverse impacts and related losses and damages to nature and people when natural and human systems are being pushed beyond their ability to adapt. We will enhance adaptation measures, including nature-based solutions and ecosystem-based approaches to improve resilience to climate change.
4. We will play our part fully in implementing the relevant outcomes of previous COPs and CMAs including COP26 and CMA3. We welcome the efforts and express our full support to the incoming Egyptian Presidency of COP27 and will work constructively to pave the way for a successful, ambitious and balanced set of outcomes to be adopted in Sharm el-Sheikh. We support and underline the implementation and highlight the reinforcement of mitigation, adaptation, and means of implementation.

5. We recognize the importance of a sustainable, resilient, inclusive, and just recovery from the pandemic and the opportunity to work together in promoting a prosperous, inclusive, resilient, secure and sustainable society that leaves no one behind in order to accelerate NDC implementation and just transitions towards net zero GHG emissions/carbon neutrality by or around mid-century, reflecting the latest science and taking into account different national circumstances and approaches, including the circular carbon economy, socio economic, technological and market development.
6. We appreciate the presidency's initiative in commissioning the Study on Stocktaking of Economic, Social, and Environmental Impacts of Sustainable Recovery, including Impacts on NDC Implementation. We note that Covid-19 recovery spending may create an opportunity to advance mitigation and adaptation spending of each country. We also note that recovery spending may lead to faster and targeted actions in the effort to confront climate-related challenges, maladaptation, as well as seizing the opportunities in social, environmental and health co-benefits that support progress towards achieving the Sustainable Development Goals.
7. We note the importance of promoting locally-driven approaches, stakeholder participation and inclusive governance arrangements in designing and implementing recovery measures. These include recovery through existing local initiatives that engage local communities and Indigenous peoples and leveraging traditional knowledge, knowledge of Indigenous peoples and local knowledge systems as well as measures for just transitions towards low GHG emissions and climate resilient development that ensures sustainable development and respects and promotes respective obligations on the rights of Indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations, as well as promotes and respects gender equality, empowerment of women, girls, and youth and intergenerational equity.
8. Acknowledging the ambition gap and to align with the Paris Agreement temperature goals, some members recall the Glasgow Climate Pact's request to Parties to revisit and strengthen the 2030 targets in their NDCs as necessary to align with the Paris Agreement temperature goal by the end of 2022, taking into account different national circumstances. Some members also noted the importance of concrete implementation actions, including but not limited to adopting and implementing domestic measures, aiming to achieve NDC targets and net zero commitments informed by the best available science for effective climate action and sufficient financial support to developing countries.
9. Acknowledging the importance of the climate and energy nexus and the need for just energy transitions, majority of members look forward to the outcomes of Energy Ministerial Meeting that focus on concrete and practical actions toward sustainable energy transitions, as we are recovering together and recovering stronger.
10. We welcome and commit to implement the Glasgow-Sharm el-Sheikh work program on the global goal on adaptation on enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change with a view to contributing to sustainable development and ensuring an adequate adaptation response in the

context of the temperature goal referred to in Article 2 of Paris Agreement. We underscore the potential synergy between adaptation and mitigation actions.

11. We commit to averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, including via strengthening policy strategies and governance of comprehensive risk management including disaster risk reduction, displacement and non-economic losses. We also commit to continue to constructively engage in the Glasgow Dialogue and work towards full operationalization of the Santiago network.
12. Recognizing National Adaptation Plans are a relevant source of information on countries' needs and priorities on climate adaptation, and noting that countries face different challenges, in particular developing countries, some members called for different level of support to continually prepare, implement and monitor National Adaptation Plans.
13. We highlight that raising ambition on climate mitigation and adaptation will accelerate efforts to create enabling conditions, particularly in developing countries, including through strong domestic policy actions that align with the goals of the Paris Agreement. We also highlight the importance of support for developing countries through capacity building, development, transfer, and deployment of technologies, and mobilization of climate finance, as well as the coherence of financial flows with a low GHG emissions and climate resilient development.
14. Some members stress the importance of balance between mitigation and adaptation in the provision of scaled-up financial resources, including, as appropriate through recovery measures by increasing the availability of and facilitating access to financial resources for developing countries with high climate vulnerability and creation of decent works and quality jobs.
15. Highlighting the vital role of strengthening cooperative actions on technology development and transfer for innovation, including in circularity and capacity building in mitigation and adaptation action to achieve our collective climate ambition, members recognize the need for holistic approaches, including technology in the transition phase through enhanced international cooperation in research and development as well as deployment and transfer of technology to developing countries by supporting low emission technology development that enhances abatement and sinks capacity of GHG Emissions. In this regard, some members reiterated the intention to consider further actions to reduce by 2030 non carbon dioxide GHG emissions, including methane.
16. We recognize the role of multilateralism in addressing climate change and promoting regional and international cooperation in order to strengthen climate action in the context of sustainable development and efforts to eradicate poverty.
17. We acknowledge, taking into account different government systems, the important role of cities, regions and local governments, in implementing climate actions and in making the transitions in the context of local needs and environmental conditions, including environmentally conscious lifestyle, promoting knowledge sharing and city-to-city collaboration. In this regard, we also acknowledge the need to reduce

vulnerability by increasing adaptive capacity in urban context. We recall the crucial importance of sustainable urban development as underlined by the New Urban Agenda. We highlight the significance of lifestyle choices in combating climate change and the importance of education, training, public awareness, public participation and public access to information in this regard.

18. Recognizing the importance of harnessing the ocean-climate nexus to foster climate change mitigation and adaptation, many members called for stepping up their efforts towards more collaborative ocean climate actions, including through strengthening international cooperation, national plans and initiatives to promote more sustainable, inclusive, and resilient coastal ecosystem management.
19. We underline the importance of improving ocean observation and modelling for data collection and management, research and development, predictions, and enhanced understanding of the ocean-climate nexus, in order to improve scientific knowledge and put in place efficient actions including disaster risk reduction, to mitigate, adapt and enhance resilience to the adverse impact of climate change such as sea level rise across all geographies and scales in line with UN Decade of Ocean Science for Sustainable Development taking into account different national and regional circumstances.
20. Members commit, consistent with national circumstances, respective capabilities and priorities, to invest in efforts to conserve, sustainably use, protect and restore blue carbon ecosystems and to foster research and development and technological innovation for ocean mitigation and adaptation, as well as improve the protection, conservation restoration, sustainable use and management of coastal ecosystems including blue carbon habitats, in order to enhance their health, integrity and effectiveness in reducing GHG emissions and in building resilience to climate change. Furthermore, we highlight the importance of experience sharing, development, deployment and dissemination of environmentally sound technologies, capacity building, finance, and cooperation on safe and sustainable ocean climate innovation and action at the global level to promote more sustainable and inclusive coastal resilience. In this regard, some members underlined the importance of taking into account different national needs, priorities, circumstances and respective capabilities. Furthermore, some members commit to accelerate the transition of the shipping sector to zero-emission fuels and technologies, placing the sector on a pathway that aligns with the goal to limit global temperature rise to 1.5°C.
21. We recognize the importance of promoting the policy interface of social, physical, and economics sciences to enhance collective knowledge regarding different approaches by facilitating inclusive dialogue in and between these three areas as well as engaging all relevant stakeholders in the process. We also recognize the role of local and regional initiatives in the sustainable lifestyles, growth and resilient development of coastal areas that contribute to GHG emissions reductions and removals as well as adaptation.
22. We acknowledge the importance of engaging vulnerable groups, including women, children, youth, indigenous peoples and local communities in vulnerable situations in coastal zones and cities affected by the adverse impacts of climate change, in

developing and implementing ocean-based climate policies and strategies, ocean-based adaptation planning and integrated coastal zone management.

23. Majority of members strive to strengthen our engagement in the UNFCCC Ocean and Climate Change Dialogue and in other relevant fora, to advance potential ocean-based actions in reducing anthropogenic GHG emissions and in enhancing resilience and adaptation to climate change. Furthermore, members will further explore the opportunity to build on existing initiatives and processes including to discuss the possibility of establishing a voluntary partnership on the ocean-climate nexus to advance ocean-based mitigation and adaptation. In this regard, some members noted Presidency's Proposal of G20 Partnership on Ocean-based Actions for Climate Mitigation and Adaptation (Annex 1).
24. We recognize the importance of fiscal and monetary policies, financial and sectoral regulations and public finance instruments taking into account national circumstances which can serve as drivers of mobilizing private finance, improving climate related risk management, and the implementation of NDCs. We recognize the key role policy approaches and regulatory reform in enabling private investment to support scaled up climate action. In this context we support the ongoing discussion in the Finance Track.
25. Recalling Article 9 of the Paris Agreement, some members appreciated progress made thus far and increased volume of climate finance mobilized. While some members noted with deep regret that the goal of developed country Parties to mobilize jointly USD 100 billion per year by 2020 in the context of meaningful mitigation actions and transparency on implementation has not been met, yet welcomed the increased pledges made by many developed country Parties and the Climate Finance Delivery Plan: Meeting the USD 100 Billion Goal and the collective actions contained there in, and emphasize the importance of transparency in the implementation of their pledges.
26. Recalling the Glasgow Climate Pact by which parties urged developed countries to at least double their collective provision of climate finance of adaptation to developing countries parties from 2019 levels by 2025, in the context of achieving a balance between mitigation and adaptation, in the provision of scaled-up financial resources, recalling Article 9, paragraph 4, of the Paris Agreement, some members called on developed countries to continue to provide more information on these efforts through the progress report to the Delivery plan, while also unlocking multiple opportunities for targeted investments to protect against adverse impacts of climate change.
27. We emphasize that public finance remains a key enabler for mobilizing other sources of climate finance, in particular for adaptation actions, and that there is a need to continue to work to identify synergies between private and public national, bilateral and multilateral financial sources to increase the provision and mobilization of resources including exploring alternative and innovative sources of finance, which should not undermine efforts towards debt sustainability.
28. We welcome the initiative of the presidency to commission the study on Innovative Finance Towards Low Greenhouse Gas (GHG) Emissions and Climate Resilience

Future, which notes that regulators, law makers, financial associations, and private entities in G20 countries, in the context of their roles and responsibilities, have proposed, developed, and applied policies, systems, and innovative financial instruments to accelerate funding for the low GHG green and sustainable transitions, and further notes that could serve as a role model for accelerating climate and sustainable finance application while taking into account different circumstances and levels of development.

29. Majority of members call on public and private financial institutions, multilateral development banks (MDBs) and international financial institutions (IFIs) to increase cooperation in developing countries for enhancing access to financial resources to deliver the scale needed to achieve effective climate actions. In this regard, majority of members reiterate call to MDBs to follow up with their commitments, in line with their mandates, to mobilize increased climate finance, and step up their efforts to pursue alignment of the portfolio of activities and investment with the Paris Agreement within ambitious time frames and make finance flows consistent with a pathway towards low GHG emissions and climate-resilient development. Furthermore, many members recognize the key role of MDBs and IFIs in mobilising finance for addressing climate change, as well as the importance of mainstreaming mitigation and adaptation issues in their policies, investments and operations. In light of this, many members further call on MDBs to set out plans by 2022 to mobilize private finance, in line with their mandates, and strategically de-risk investments in view of co-sharing risks with the private sector, including where appropriate through country-led processes and platforms.
30. We also call on all multilateral development banks and financial institutions to finalise and make publicly available robust methodologies for Paris and SDG alignment before COP27 for all their activities, in particular for indirect and policy-based lending, and to set out how they collectively plan to report on the alignment of their portfolios by COP27.
31. We stress the importance of the implementation of Article 6 of the Paris Agreement, which has potential to enhance climate actions. We also recognize the need for capacity building in particular in developing countries for implementation of Article 6 and enhanced transparency framework under Article 13 in the Paris Agreement as well as to increase the readiness for accessing climate finance resources for private and public sectors to support national and global climate objectives and international cooperation.
32. Welcome the following studies as part of the Presidency's initiative in the Climate Sustainability Working Group (Annex 2):
 - a. Study on Stocktaking Economic, Social and Environmental Impacts of Sustainable Recovery, including Impacts on NDC Implementation;
 - b. Study on the role of mitigation-adaptation co-benefits for creating a more resilient future for all;
 - c. Study on Strengthening Action and Partnership for Sustainable Ocean Initiatives,
 - d. Study on Promoting Ocean-based Solutions to Climate Change Through Enhanced Cooperation in Science, Research, and Innovation;
 - e. Study on Innovative Finance Frameworks towards Low GHG Emission and Climate Resilience Future; and

- f. Study on Accelerating NDC Implementation and Sustainable Transition Towards Low GHG Emission and Climate Resilience Future through Utilizing Economic Value of Carbon.

We also had a robust exchange of views on a wide range of issues related to , among others, land degradation, biodiversity conservation, integrated and sustainable water management, resource efficiency and circular economy, marine litter, ocean conservation, sustainable finance, climate mitigation and adaptation as well as means of implementation. We remain committed to continuously enhance our work and concrete actions on these issues.

The Ministers expressed their high appreciation for Indonesia's leadership as well as for the hospitality and excellent organization in hosting both of the Environment Deputies Meeting and Climate Sustainability Working Group (EDM-CSWG) and the Joint Environment and Climate Ministers' Meeting (JECMM) in 2022. We also support India's Presidency in 2023 and will work closely to ensure success in advancing cooperation in environment and climate sustainability at the G20 and beyond.

Annex 1.
Presidency's Proposal:
G20 Partnership on Ocean-based Actions
for Climate Mitigation and Adaptation

Background

According to the Special Report on the Ocean and Cryosphere in a Changing Climate and the recent contributions of WGI, WGII, and WGIII to the Sixth IPCC Assessment Report, there are systemic changes such as ocean warming, acidification, deoxygenation, ice melt, and sea level that have disastrous effects on ocean and coastal life and the livelihoods of coastal communities.

The SROCC also identified that protection, restoration, precautionary ecosystem-based management of renewable resource use, and the reduction of pollution and other stressors could support the services and options provided by ocean ecosystem. Response options highlighted in the SROCC include networks of protected areas to help maintain ecosystem services, including carbon uptake and storage; terrestrial and marine habitat restoration and ecosystem management tools; strengthening precautionary approaches; restoration of vegetated coastal ecosystems, such as mangroves, tidal marshes and seagrass meadows (coastal 'blue carbon' ecosystems) to provide climate change mitigation through increased carbon uptake and storage; and ocean renewable energy to support climate change mitigation, comprising of energy extraction from offshore winds, tides, waves, thermal and salinity gradient and algal biofuels.

Based on the Study on Promoting Ocean-based Solutions to Climate Change through Enhanced Cooperation in Science, Research, and Innovation and the Study on Strengthening action and partnership for sustainable ocean initiatives prepared by Presidency, all G20 members have developed ocean policies, plans, and strategies. In addition, some members have included ocean into their NDCs in the element of adaptation or mitigation as well as in both elements.

The studies identified the need to enhance scientific understanding of the ocean and climate nexus to be adequately reflected in policy, dialogue, and action. Urgent action is needed to invest in ocean science, facilitate the exchange of technology and information, support the scaling-up of the protection of coastal and marine environments, support small-scale fishing communities, and the sustainable management of the oceans. The contribution of the oceans to the global economy is projected to grow to USD 3 trillion by 2030. More than 3 billion people rely on the oceans for their livelihoods, and over 80 per cent of world trade is transported by sea. Small-scale fisheries account for about 90 per cent of primary marine fisheries employment. Climate change increases the intensity and frequency of natural hazards, ocean warming, acidity, and deoxygenation, and it causes shifts in the distribution and abundance of fish populations, adversely affecting fishery-dependent developing countries.¹ Small-scale fishers and fish farmers are also important stakeholders as they are the local implementers and enforcers that restore

¹ United Nations. 2022 United Nations Conference to support the Implementation of Sustainable Development Goal 14: Conserve and sustainably use the oceans, seas, and marine resources for sustainable development. Access through: https://sdgs.un.org/sites/default/files/2022-05/ID_4_Fisheries.pdf

and protect their natural resources, thus being vital champions for nature-based solutions to climate change². Until recently, the mainstreaming of climate change adaptation in national fisheries and aquaculture development and policies was weak and only slowly improving. There is a need for greater adaptation in the sector, but in particular to its tailoring to national and sub-national contexts in order to take into account the specific threats, sensitivity, and vulnerability of fisheries and aquaculture systems and to enhance their adaptation potential and that of the communities and stakeholders who depend on them. Recognizing, integrating, and addressing concerns specific to fisheries and aquaculture will lead to greater resilience of the sector and of the communities it supports in the face of climate and other environmental threats³.

G20 members are countries that have coastlines and concerns about the ocean's vital role in strengthening the action toward low carbon and climate resilience by promoting the role of research, innovation, and technology development.

Objectives

Indonesia G20 Presidency proposes the G20 Partnership for Ocean-based Actions for Climate Mitigation and Adaptation to explore the opportunity to establish a partnership on the ocean-climate nexus on knowledge sharing, technology transfer, and capacity building to advance ocean-based mitigation and adaptation actions among all G20 members.

G20 partnership will provide more close cooperation on the importance of enhancing the policy interface of social, physical, and economic sciences by facilitating dialogue in and between these three areas. In addition, the partnership will be designed to exchange views and experiences on policy options, research, innovation, and best practices examples for ocean-based actions for climate adaptation and mitigation among G 20 members.

Setting the Context

Indonesia Presidency initiates the partnership with the participation of CSWG G20 members, which is voluntary in nature while taking into different national circumstances, needs, and priorities, while exploring the possibility of engaging experts from G20 members, international organizations, and other relevant organizations.

The partnership will be started with a kick-off event of exchange of best practices, lessons learned and knowledge, research, and innovation on coastal resilience and protection, nature-based solutions and ecosystem-based approaches, equal social development, more efficient international shipping corridors, and increased sink capacity of ocean, as well as sustainable green-blue economies. The partnership is expected to support the next series of G20 meetings.

² United Nations Climate Change. Climate Action Pathways: Oceans and Coastal Zones Action Table. 2020. Access through: https://unfccc.int/sites/default/files/resource/Action_table%20_OCZ.pdf

³ FAO. Addressing Fisheries and Aquaculture in National Adaptation Plans. 2020. Access through: https://www4.unfccc.int/sites/NAPC/Documents/Supplements/FAO_Fisheries%20and%20aquaculture_ca2215_en.pdf

The Scope of Partnership

The scope of this partnership as recognized under the CSWG discussions as follow:

- 1) Sharing information and knowledge, experience, and good practices on ocean-based actions for adaptation and mitigation through promoting research, development, and technology deployment (R, D&D) on ocean climate nexus for ocean-based solutions.
- 2) Strengthening actions through joint cooperation for sustainable ocean initiatives at the global levels to catalyse the role of ocean towards low GHG emission and climate resilience, as well as capacity-building, technical assistance, and resource mobilization; and
- 3) Facilitate stakeholder, expert-moderated/knowledge sharing through the G20 dialogue.

The proposed topics are ocean science, ocean-based adaptation, and ocean-based mitigation and adaptation with mitigation co-benefits.

Proposed Agenda of the First Workshop

Thursday, 1 September			
Session/Time (UTC+8)	Theme/Duration	Speakers	Topic
09.00 – 09.20	G20 Partnership for Climate Adaptation and Mitigation 20 min	<ul style="list-style-type: none"> • Welcome Remark by Minister of Maritime and Fisheries Affairs (MMFA), Republic of Indonesia • Keynote and Opening Remark by Minister of Environment and Forestry (MoEF), Republic of Indonesia 	The urgency of ocean-based climate actions and the follow-up actions.
Panel I and moderated discussion			
09.20 – 09.50	Reflecting on the State of Ocean-Climate Science 30 min	Nathan Bindoff, Coordinating Lead Author Chapter 5 IPCC SROCCC, Institute for Marine and Antarctic Studies, University of Tasmania)	The importance of the ocean and cryosphere for people living in the lowest-lying coastal areas.
		Prof. Dr. Katja Matthes - Director of Helmholtz Centre for Ocean Research Kiel	The critical role of addressing ocean data science to explore ocean and climate-based solutions
		Victor Gustaaf Manoppo, Director General of Marine	Strategy to implement the blue economy through

		Spatial Management, MMAF Indonesia	sustainable innovation	ocean
		Moderator: Manuel Castillo, UNESCAP		
Panel II and moderated discussion				
09.50 – 10.20	Robust Ocean- Climate Data, Research, Innovation, and Technology (R, D&D) as Basis to the Policy Decision Making 30 min	Prof. Kouadio Affian - Advisor Board of UN Ocean Decade	The importance of science and technology for ocean climate for adaptation and mitigation	
		Hide Sakaguchi, President of Ocean Policy Research, Institute of the Sasakawa Peace Foundation	Ocean-based solutions to advance climate action towards climate resilience	
		Prof. William Cheung – University of British Columbia	Assessing the impacts of climate change on marine ecosystems and their goods and services	
		Moderator: Gerd Fleischer, GIZ		
Panel III and moderated discussion				
10.20 – 10.50	Building an Ocean-Climate Partnership 30 min	Short statement from G20 Delegations	Exchange views and knowledge for research, innovation, and development, as well as technology deployment	
		Moderator: Nur Masripatin, Senior Advisor to Minister of Environment and Forestry (MoEF)		
10.50 – 11.00	Closing remarks 10 min	Laksmi Dhewanthi - Director General of Climate Change, MoEF, Chair of G20 EDM-CSWG		

Proposed Second Workshop

Presidency proposes to convene the Second Workshop in Sharm-el-Sheikh in conjunction with COP 27 UNFCCC

Next Activities

Will be discussed during the First Workshop

Annex 2.
G20 Studies
under the Climate Sustainability Working Group:

- a. Stocktaking Economic, Social and Environmental Impacts of Sustainable Recovery, including Impacts on NDC Implementation;
- b. The role of mitigation-adaptation co-benefits for creating a more resilient future for all;
- c. Strengthening Action and Partnership for Sustainable Ocean Initiatives,
- d. Promoting Ocean-based Solutions to Climate Change Through Enhanced Cooperation in Science, Research, and Innovation;
- e. Innovative Finance Frameworks towards Low GHG Emission and Climate Resilience Future; and
- f. Accelerating NDC Implementation and Sustainable Transition Towards Low GHG Emission and Climate Resilience Future through Utilizing Economic Value of Carbon.



CLIMATE SUSTAINABILITY WORKING GROUP (CSWG) G20 2022

STOCKTAKING ECONOMIC, SOCIAL, AND ENVIRONMENTAL IMPACTS OF SUSTAINABLE RECOVERY, INCLUDING IMPACTS ON NDC IMPLEMENTATION

Final Report



September 2022



STUDY 1.1

STOCKTAKING ECONOMIC, SOCIAL, AND ENVIRONMENTAL IMPACTS OF SUSTAINABLE RECOVERY, INCLUDING IMPACTS ON NDC IMPLEMENTATION

Indonesia, September 2022

Recover Together, Recover Stronger

Authors :



Contributors :



Acknowledgments

Authors

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List of Abbreviations

CH ₄	Methane
CO ₂	Carbon dioxide
DFI	Development finance institution
EV	Electric vehicle
E3ME	Energy-environment-economy macro-economic
GCF	Green Climate Fund
GDP	Gross domestic product
GGGI	Global Green Growth Institute
GHG	Greenhouse gas
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH
ICT	Information and communication technology
IFI	International financial institution
IMF	International Monetary Fund
IRENA	International Renewable Energy Agency
LT-LEDS	Long-term low emissions development strategies
MDB	Multilateral development bank
MRV	Measurement, reporting and verification
NAP	National adaptation plan
ND-GAIN	Notre Dame Global Adaptation Initiative
NDC	Nationally Determined Contribution
PES	Planned Energy Scenario
SDG	Sustainable Development Goal
UNICEF	United Nations Children's Fund

Executive Summary

This stocktaking report aims to inform G20 members on how to upscale their recovery efforts to continue to pursue a sustainable, resilient, and inclusive recovery from the negative impacts of the COVID-19 pandemic. To this end, this report first assesses to what extent the G20 members' announced recovery spending supports the achievement of the international climate targets. Second, the report discusses the mitigation and socioeconomic implications of different recovery scenarios. Third, the report provides recommendations on how sustainable recovery efforts can further support the achievement of the Paris Agreement.

This report bases its findings on two assessments. First, a macro-econometric model assesses the greenhouse gas (GHG) emission reductions and socioeconomic impacts of the announced recovery measures under three scenarios: (1) the G20 recovery scenario (current spending), (2) the G20 recovery scenario with fiscal constraints reflecting a more conservative iteration, and (3) the G20 recovery scenario with extended support, reflecting higher ambitions in comparison with the initial G20 recovery scenario. The modeling results show to what extent G20 recovery measures to date can aid in limiting the increase in the global average temperature to well below 2°C above pre-industrial levels and pursue further efforts to limit the temperature increase to 1.5°C.¹ Second, a literature review is conducted to evaluate how recovery measures from G20 members create an enabling environment for implementing the Nationally Determined Contributions (NDCs). The report examines how recovery measures have strengthened multiple aspects of the Glasgow Climate Pact (Decision 1-CMA.3), including capacity-building, coordination for implementation, and development of innovative financing mechanisms.²

The insights of this report—focused mostly on climate impacts—are complemented by the findings from the report *The role of mitigation-adaptation co-benefits for creating a more resilient future for all*, which examines the contribution of the G20 announced recovery efforts toward the achievement of the Sustainable Development Goals (SDGs).

This report divides its findings and recommendations into six action areas, each of which requires attention to advance an even sustainable recovery and to employ recovery efforts that facilitate the achievement of international climate targets. The action areas include (1) reinforcing the positive climate impacts derived from the announced G20 recovery spending beyond 2025; (2) ensuring equal support for both adaptation and mitigation recovery actions; (3) overcoming fiscal constraints for future recovery support; (4) maintaining long-term sustainable employment, especially green jobs, generated from recovery spending; (5) measuring the effectiveness of sustainable recovery spending; and (6) tackling compound risks.

1 UNFCC. "Glasgow Climate Pact." Accessed June 15, 2022.

2 UNFCC. "Glasgow Climate Pact."

1. Introduction

The COVID-19 pandemic caused a deep social and economic crisis with substantial negative implications for achieving international climate targets.

Despite signals of recovery from the G20 members during the first quarter of 2022, the International Monetary Fund (IMF) forecasts a continuous trend of economic slowdown.³ The G20's cumulative gross domestic product (GDP) growth rate exceeded its pre-pandemic (Q4 2019) level in Q1 2022.⁴ In addition, G20 labor markets experienced a recovery at the beginning of 2022, with unemployment rates below pre-pandemic levels for most G20 advanced economies.⁵ However, the IMF forecasts a 0.9% decrease in G20's cumulative GDP growth rate for 2022.⁶

Nevertheless, G20 climate policies, although improved and leading to slower growth in emissions, remain insufficient to meet the Paris Agreement.⁷ **The unique opportunity to shift G20 economies toward a low-carbon development pathway through green recovery efforts has not been sized.** Carbon dioxide (CO₂) emissions from multiple G20 members have surpassed pre-pandemic levels.^{8,9} In addition, the COVID-19 pandemic has caused a long-term disruption of efforts and resources that address climate-driven challenges. COVID-19 has shifted attention and resources toward ending the pandemic and away from addressing climate change as a top priority, particularly in developing countries.¹⁰

To recover from the socioeconomic crisis, the G20 Presidencies in 2020 and 2021 highlighted the importance of paving the way toward an inclusive, low-carbon development pathway. Strengthening the alignment between sustainable finance, recovery, and impact investment agendas was prioritized.¹¹ The G20 Riyadh Summit set fundamental principles and commitments to support recovery and achieve strong, sustainable, balanced, and inclusive growth. The G20 Rome Leaders' Declaration focused on strengthening G20 members' actions to implement the G20 Action Plan on the 2030 Agenda and the G20 Support to COVID-19 Response and Recovery in developing countries.

Since then, the G20 members have pledged approximately USD 14 trillion on rescue and recovery measures to stimulate the economy, develop resilience in the health systems, and support employment creation.¹² However, only 6% of the total G20 announced spending (USD 860 billion) directly addresses climate change.¹¹

3 "Facing a Darkening Economic Outlook: How the G20 Can Respond." IMF. Last modified July 13, 2022.

4 OECD. "G20 GDP growth continues to slow in the first quarter of 2022." Last modified September 30, 2021

5 ILO. "Monitoring the impact of the COVID-19 pandemic on employment in the G20." Last modified November 25, 2021.

6 "Facing a Darkening Economic Outlook: How the G20 Can Respond." IMF.

7 Nascimento, Leonardo, Takeshi Kuramochi, and Niklas Höhne. "The G20 emission projections to 2030 improved since the Paris Agreement, but only slightly." *Mitigation and Adaptation Strategies for Global Change*, 27, no. 39 (2022).

8 IEA. "Global CO₂ emissions rebounded to their highest level in history in 2021." Last modified March 8, 2022.

9 DW. "Climate change: EU emissions surpass pre-pandemic levels." Last modified May 16, 2022.

10 Eurasia Group. "Top Risks 2021." Last modified 2021.

11 G20 Research Group. "Leader's Declaration." Last modified November 21, 2020.

12 Nahm, Jonas M., Scot M Miller, and Johannes Urpelainen. "G20's USD 14 trillion economic stimulus reneges on emissions pledges." *Nature*, 24, no. 3.

Research studies tracking global recovery spending found that G20 governments could further seize the opportunity to restructure their economies toward a low-carbon transition through recovery measures. Many of these studies highlighted the need for G20 members to address policy coherence and policy gaps to strengthen a sustainable recovery, better integrate nature and biodiversity¹³ in their recovery plans, reevaluate environmentally friendly vs. business-as-usual measures to pursue a more ambitious transformation, and further understand the long-term impacts and opportunities of sustainable recovery. Furthermore, the G20 group has been exhorted by the IMF to avoid a two-track economic recovery between developed and developing countries. Developing countries with tight fiscal space and rising levels of debt experience limitations on the type and pace of recovery they can pursue. These limitations can widen inequality and hinder a country's ability to achieve more ambitious climate objectives.¹⁴ A two-track economic recovery could result in slower and less definite actions to confront climate-related challenges, particularly in low- and middle-income countries. Avoiding a two-track economic recovery would require better recovery planning, improved access, and extended economic stimulus and technical assistance for developing countries.

To inform G20 members on how to better design and implement recovery plans that can support the achievement of international climate and development targets, it is necessary to understand the current and potential impacts of their recovery measures on mitigation, adaptation, and socioeconomic development (e.g., employment creation, impact on GDP). Additionally, G20 members need to continuously measure the progress of their recovery pledges and adjust plans when progress falls short of ambition. Nevertheless, there is a paucity of information on mitigation—particularly at a sectoral level—and advancements in adaptation because of recovery pledges being implemented.

This report aims to address the knowledge gap in the impacts of recovery measures on climate targets and the macroeconomic situation among G20 members. It aims to provide evidence-based insights that will contribute to the continuation of the efforts undertaken during the previous G20 summits in 2020 and 2021. Moreover, it aims to derive recommendations to better fight the systemic and global climate crisis through sustainable recovery efforts.

For this purpose, this report is divided into five sections:

Methodology lists the primary data sources and explains the undertaken analyses.

Stocktake of Recovery Measures takes stock of G20 members' announced recovery spending up to the first quarter of 2022. Additionally, it summarizes the contribution of announced recovery measures to achieving long-term mitigation and adaptation objectives. Finally, it identifies good practices of sector-specific recovery measures.

¹³ This report focuses mainly on the impacts of COVID-19 on achieving climate targets (i.e., mitigation and adaptation). It limits its analysis of the COVID-19 effects on achieving biodiversity targets and the relationship between biodiversity targets and socio-economic co-benefits. This is because the report was commissioned and aims to inform the Climate Sustainability Working Group (CSWG) of the G20, which does not cover the topic of biodiversity.

¹⁴ Georgieva, Kristalina. "Urgent Action Needed to Address a Worsening 'Two-Track' Recovery." Last modified July 7, 2021.

Contribution of Recovery Efforts to NDC Implementation outlines how recovery measures have contributed to the creation of an enabling environment for NDC implementation in five areas: (a) planning and development of climate policies, (b) government coordination, (c) finance mobilization, (d) capacity development and resilient institutions, and (e) effective monitoring and regulatory frameworks. In addition, the section highlights opportunities to further utilize recovery measures as enablers for NDC implementation for each of those cross-cutting areas.

Current and Potential Recovery Scenarios establish different recovery scenarios to quantify the medium- and long-term impacts of the G20 announced recovery measures on CO₂ emissions reductions, employment creation, and GDP. The section discusses how the different recovery scenarios can help close the gap to limit global warming to well below 2°C, and to 1.5°C, compared to pre-industrial levels. The modeling of future recovery scenarios indicates the level of change required in recovery plans from the G20 members to support achieving the Paris Agreement goal.

Recommendations to Drive NDC Achievement Through a Sustainable Recovery provides policy recommendations for G20 members to (a) improve recovery measures to support the achievement of the Paris Agreement and (b) ensure an inclusive recovery.

2. Methodology

2.1 Data Sources

The study uses the Global Recovery Observatory¹⁵ database, last updated on December 16, 2021 (referred to as *Observatory*), as the main data source. The Observatory has compiled the announced national fiscal policy interventions of all G20 members since January 2020. The Observatory was selected over other data sources¹⁶ because it has the highest depth and coverage of global recovery spending and provides the most granular data available. It introduces a temporal component to GHG considerations, includes social impacts of policies, and uses a significantly more granular categorization of spending (based on a classification of fiscal policy measures of 40 archetypes and 158 sub-archetypes) than other COVID-19 recovery databases.

The data from the Global Recovery Observatory¹⁷ was complemented with data from the OECD Green Recovery Database (last updated in April 2022) and reports from the International Energy Agency Sustainable Recovery Tracker (last updated in March 2022)¹⁸ to verify recovery measures up to the first quarter of 2022.

In addition, this study utilizes primary data on recovery spending and recovery measure case examples from surveys submitted to all G20 members. The survey was partially answered by seven G20 members—Germany, Indonesia, Japan, Russia, Saudi Arabia, the United Kingdom, and the United States—and one G20 permanent guest, Spain. The survey responses related to recovery spending were compared against the latest data from the Observatory. The survey questionnaire and a comparison of country responses about recovery spending can be found in Annexes 1 and 2.

Finally, secondary data—such as country-specific recovery plans, Nationally Determined Contributions (NDCs), national adaptation plans (NAPs), Sustainable Development Goal (SDG) indicators, and socioeconomic indicators—were used as input for the modeling and for assessing the impact of recovery measures to create an enabling environment for the implementation of NDCs.

2.2 Definitions

The study utilizes the following definitions aligned with the Global Recovery Observatory methodology:

15 Global Recovery Observatory. "Draft Methodology Document." Last modified February 1, 2021.

16 For the development of this report, the most cited COVID-19 recovery trackers, tools, and reports were reviewed, including ADB's COVID-19 Policy Database; 'Greenness of Stimulus Index' by Vivid Economics (2020); the Global Recovery Observatory led by the Oxford University Economic Recovery Project and the UN Environment Programme (UNEP); ING's Green Recovery analysis, which focused on major economies in the Asia-Pacific region; the Climate Action Tracker, which has tracked recovery policies from China, the EU, India, South Korea, and the USA; IMF's Fiscal Monitor; the OECD COVID-19 Recovery Dashboard; and WRI's a Typology for Facilitating a Paris-Aligned COVID-19 Recovery. Additionally, sector-specific tools and reports were reviewed, such as the Energy Policy Tracker (2022), IRENA's Post-COVID recovery: An agenda for resilience, development, and equality; and IEA's World Energy Outlook Special Report on Sustainable Recovery (2020).

17 OECD. "Assessing environmental impact of measures in the OECD Green Recovery Database." Last modified April 21, 2022.

18 IEA. "Sustainable Recovery Tracker." Last modified April 2022.

- **Rescue measures** are defined as a short-term fiscal policy designed for emergency support to keep people and businesses afloat. They include, among others, temporary liquidity support to businesses and public entities, temporary life and livelihoods cash transfers, and tax and payment relief cuts.
- **Recovery measures** are defined as medium- or long-term fiscal policy incentives or investments to boost economic growth, which are considered part of the COVID-19 recovery efforts of a country. They include, among others, worker retraining and job creation policies; investments in education, health care, infrastructure, and research and development; disaster preparedness; and capacity building.
- **GHG emissions** are the atmospheric release of CO₂, methane (CH₄), and other gases that create a warming greenhouse effect. The baseline for assessing the net GHG emissions impact of recovery measures is the national emissions rate with no intervention, as expected at the time of policy intervention.
- **Short-term net GHG impact** relates to the immediate period of the implementation or the development period of a measure (e.g., the construction of a wind turbine will lead to increased consumption of concrete and steel in the short term). In contrast, **long-term effects on climate** relate to the period after one year of implementation (e.g., the construction of wind turbines will compensate for the emissions it caused during development and have a positive net effect).
- **Green recovery spending** refers to investments in recovery measures that positively impact GHG emissions and/or the environment. Green recovery spending can fall into the archetypes listed on Annex 3 and the positive sub archetypes listed on Annex 4 .
- **Adaptation readiness** refers to the country's ability to leverage investments and convert them to adaptation actions. The Notre Dame Global Adaptation Initiative (ND-GAIN) measures overall readiness by considering three components: economic readiness, governance readiness, and social readiness.
 - Economic: captures the ability of a country's business environment to accept investment that could be applied to adaptation that reduces vulnerability (reduces sensitivity and improves adaptive capacity).
 - Governance: captures the institutional factors that enhance the application of investment for adaptation.
 - Social: captures factors—such as social inequality, information and communication technology (ICT) infrastructure, education, and innovation—that enhance the mobility of investment and promote adaptation actions.
- **The study classifies G20 countries into two groups: *developed economies*** (i.e., Australia, Canada, South Korea, the United States, Italy, France, Germany, Japan, the United Kingdom, and the European Union) **and *developing economies*** (i.e., China, Brazil, India, Indonesia, Mexico, Russia, South Africa, Turkey, Saudi Arabia, and

Argentina), following the United Nations Country Classification.¹⁹

2.3 Analyses

The report consists of two independent analyses complemented by a literature review. The first analysis uses the Global Recovery Observatory's database of recovery measures, taxonomy, and methodology to assess the net GHG emissions impact of the G20 member states' recovery measures in four specific sectors (i.e., transport, building, energy, and agriculture and forestry). In addition, it compares the level of climate vulnerability and adaptation readiness to the recovery spending linked to adaptation of each G20 member. The results of this analysis are shown in section 3. A literature review on how recovery measures have contributed to creating an enabling environment for implementing the NDCs complements the findings of the analyses. The results of this literature review are shown in section 4. Finally, the second analysis inputs the Global Recovery Observatory's database of recovery measures into the E3ME model to compute three recovery scenarios. The results of this analysis are shown in section 5.

2.3.1 Analysis 1. Stocktake of recovery measures and its contribution to long-term mitigation and adaptation goals.

First, for mitigation, all G20 members' recovery measures from the Global Recovery Observatory are classified into four sectors (i.e., energy, agriculture and forestry, transport, and buildings). The sector classification is based on the direct impact on the emissions reduction and/or increase of the recovery measure to a respective sector. The industrial sector is not considered because the measures included in the database are likely to have an indirect effect, rather than a direct effect, on industry emissions through changes in consumption. *Annex 3 shows the alignment between policy sub-archetypes from the Global Recovery Observatory and the four sectors.*

Each classified recovery measure is assigned either a positive, negative, or long-term neutral effect on climate using the Global Recovery Observatory's Likert scale. A summary of the Observatory methodology can be found at the beginning of the Annex section. The analysis assesses the green recovery spending disaggregated by economic sectors and their climate impact.

Second, for adaptation, the recovery measures without a direct effect on GHG emissions related to health, education, green market creation, communication, and social and cultural sectors were considered to have an impact on adaptation readiness and were counted as recovery spending linked to adaptation.²⁰

¹⁹ UN. "Statistical Annex." Last modified 2021.

²⁰ Spending on adaptation was estimated using the Global Recovery Observatory, considering the following recovery policy archetypes and sub archetypes: X: Worker retraining and job creation (1 Green worker retraining and job creation), Z: Health care investment (non-infrastructure) (1 General medical investment), : Communications infrastructure investment (1 Broadband investment, 2 Remote working infrastructure investment, 3 Civil cybersecurity programs, and 4 Implementation of digital programs), : Local (project-based) infrastructure investment (1 Urban development programs), : Natural infrastructure and green spaces investment (1 Public parks and green spaces investment, 2 Tree planting and biodiversity protection, 3 Ecological conservation initiatives, 4 Waterway protection and enhancement, and 5 Agricultural

The report compares the level of climate vulnerability and adaptation readiness to the recovery spending linked to the adaptation of each G20 member. The level of climate vulnerability and adaptation readiness of each G20 member was estimated based on the ND-GAIN Country Index.²¹

Limitations of the analysis

- There are inherent limitations to the data collected by the Observatory. For example, as the data has not been updated since December 2021, it might miss some longer-term policies that are still targeting recovery but have been put into place with longer-term aims. For instance, the Infrastructure Investment and Jobs Act is not included in the Observatory data.²² In addition, the database is somewhat subjective by design (i.e., the classification of policies to archetypes is based on expert judgment), and some definitions lack granularity and exact specification. Nevertheless, based on current knowledge, this database provides the best available and most detailed data on recovery spending induced by the COVID-19 crisis.
- Limiting the assessment to the direct effect of GHG emissions ignores that some recovery measures have a different mitigation potential. Recovery measures will be assessed with the same score and thus sometimes misrepresent the picture of the assessment. For example, a measure to support airlines with green conditions is evaluated as positive because the scenario has a positive impact compared to no intervention. By the same logic, building new homes with green conditions or new energy infrastructure is also positive. From a climate policy perspective, however, the recovery measures mentioned as examples have a different relevance, which is not reflected in the GHG effect assessment but discussed qualitatively on section four.

2.3.2 Analysis 2. Modeling the impacts of recovery measures on the achievement of the Paris Agreement targets.

About the model

The modeling of impacts of the G20 recovery measures to achieve the 1.5°C target of the Paris Agreement was carried out using *Cambridge Econometrics' E3ME macro-econometric model*. The E3ME model has previously been used extensively to assess the socioeconomic and environmental impacts of climate policies. Being an E3 model, or energy-environment-economy model, E3ME is capable of capturing energy and emission impacts of economic policies, such as the recovery policies considered.

uplift), δ : Other large-scale infrastructure investments (3 Large-scale space infrastructure), ϵ : Disaster preparedness and capacity building investment (1 Future epidemic reaction capabilities, 2 Disaster-response infrastructure (shelters, food-stocking, water supplies), 3 Anti-flood, fires, and other climate adaptation measures), ψ : Clean research and development investment (2 Agriculture R&D programs).

21 Chen, C., I. Noble, J. Hellmann, J. Coffee, M. Murillo, and N. Chawla. "Country Index Technical Report – University of Notre Dame Global Adaptation Index." Last modified November 2015.

22 According to <https://recovery.smithschool.ox.ac.uk/tracking/> on 14/07/2022.

E3ME is global in scope and produces results for 70 regions (covering each G20 member separately), with 43 industrial sectors in each region. The two-way linkages between the economy, wider society, and the environment are key features of the model. Another core feature of the model is its treatment of technology in power generation, steel, land transport, and household heating. E3ME fully incorporates Future Technology Transformation (FTT) sub-models of new technologies that are needed for the low-carbon transition.²³

The macro-econometric specification of the E3ME model provides a strong empirical basis for analysis and is not limited by many of the restrictive assumptions common to computable general equilibrium models. For example, E3ME does not assume fully rational behavior nor optimal utilization of resources as a starting point and, therefore, incorporates real-world features such as involuntary unemployment. The depiction of the financial sector in E3ME (including endogenous money) is recognized by central banks as an accurate representation. Again, this is a favored behavior for modeling recovery measures as the crisis has created a situation where involuntary unemployment and an increased output gap (i.e., the economy performing below its potential) are evident.

E3ME can be used to assess a wide variety of scenarios, which include stimulus or austerity measures as well as policies relating to the efficient use of resources in the economy. Further information, including the entire methodology manual, may be found on the model's website at www.e3me.com.

How the E3ME model assesses the impacts of recovery measures

Recovery measures aim at stimulating demand in the economy through public spending and might have positive, negative, or neutral impacts on climate and the environment. The modeling does not judge the environmental outcome of the simulated policies a priori. Rather, it takes the approach of using the E3ME model to simulate the economic policy and then infer from the model results what is the expected environmental outcome of the given policy. For example, recovery investments in renewable energy will likely produce positive environmental outcomes, while investments in fossil fuels will likely produce negative ones. In the case of neutral policies, the environmental outcome is entirely dependent on the existing economic and energy structures (and interactions from policies implemented at the same time). An advantage of the multi-regional, country-specific, and sector-specific simulation that E3ME is capable of is that environmental impacts of neutral policies will be dependent on country-specific structures within the model. For example, a simple VAT reduction policy may have vastly different environmental impacts in a country with a decarbonized energy system than in one that is reliant on fossil fuels only. The model is able to capture and show this difference.

²³ The FTT framework is discussed in detail in Mercure, Jean-François. "FTT: Power: A global model of the power sector with induced technological change and natural resource depletion." *Energy Policy* 48 (2012): 799-811. <https://www.sciencedirect.com/science/article/abs/pii/S0301421512005356>.

Information on G20 recovery measures, including the amount in USD, was taken from the Global Recovery Observatory database and modeled at the main archetype level for each of the G20 members. The full list of Global Recovery Observatory's recovery spending archetypes used can be found in Annex 4.

Scenarios

Six scenarios were developed to understand how G20 recovery measures contribute to or undermine the achievement of NDCs and long-term climate targets (i.e., 1.5°C and 2°C targets) (See Table 1). The modeling results of each scenario include socioeconomic impacts (i.e., GDP, investment impacts, and employment generation) and emissions mitigation potential for the recovery scenarios by country and by sector. Modeling results are presented as differences from the baseline.

Baseline: Business-as-usual baseline

It incorporates the latest data on the economy, jobs, energy demand, and emissions, considering the impacts of the COVID-19 crisis. It also includes government rescue measures that have already been implemented during the pandemic, such as spending on medical emergencies and direct support to workers and businesses during lockdowns. It is assumed that the world economy will follow the business-as-usual policies (pre-COVID-19) after the pandemic, and low-carbon technologies will continue to diffuse at the rates observed in the historical data. All other scenarios are compared against this baseline.

Pathway 1: Global 1.5°C scenario

The world's transition to the 1.5°C compatible pathway is modeled through a series of ambitious green stimulus programs (energy efficiency investment, renewable subsidies, feed-in tariffs, public procurements of new low-carbon technologies) and supporting climate policies (carbon and energy tax and phase-out regulations). The complete list of the 1.5°C policies is given in Annex 5.

This emissions pathway is likely to go beyond the existing NDCs' commitment. Given the urgent need to respond to the threat of climate change, it is assumed that climate policies will kick off immediately. In this scenario, additional revenues are raised through carbon taxation and are expected to be used to fund green stimulus programs.

Pathway 2: Global 2°C scenario

A global 2°C compatible pathway was modeled as a further comparison point. The pathway is built on the global 1.5°C pathway but has minor differences in the geographical distribution of measures implemented for reaching the climate pathway. This represents the reality that some regions are more likely to adopt climate mitigation measures than others.

Scenario 1: G20 recovery

This scenario models all recovery measures from the G20 members listed in the Global Recovery Observatory database. Recovery measures are additional to any government rescue measures included in the baseline. The objective of this scenario is to understand the emissions impacts of the G20 recovery measures. Emission outcomes from this scenario are compared against the baseline, the 1.5°C pathway, and the 2°C pathway.

This scenario assumes that the total amount of recovery spending is spread between 2022 and 2024, and national governments fund the recovery spending through government borrowing where budget deficits are incurred (no austerity assumptions later).

Scenario 2: G20 recovery under fiscal constraints

Developing countries may find it more difficult to mobilize domestic financial resources for recovery spending than developed countries. Therefore, this scenario provides an alternative to Scenario 1 and assumes that only half of the recovery measures are implemented in G20 developing countries to reflect their fiscal constraints.

Scenario 3: G20 recovery with extended funding for green measures in G20 developing countries

This scenario assumes a more ambitious recovery, especially in G20 developing countries, focusing on green measures. The scenario doubles the total current recovery spending in G20 developing countries (i.e., increasing announced G20 recovery spending by 12.6%) and allocates it solely under green recovery measures, distributed across the Global Recovery Observatory archetypes following global spending shares (see Table 1).

Table 1. Additional spending distribution across green measures

Green market creation ²⁴	23.7%
Clean transport infrastructure investment	34.1%
Clean energy infrastructure investment	16.3%
Building upgrades and energy efficiency infrastructure investment	5.2%
Natural infrastructure and green spaces investment	14.0%
Clean research and development investment	6.7%

Source: Cambridge Econometrics Modelling, March–July 2022

²⁴ Green market creation includes investments in capacity building for a green and sustainable pathway, increasing energy market participation for renewables and investing in transitional or modernization technologies.

Sensitivity Analysis

As a sensitivity, a high energy price version of the G20 recovery scenario is simulated. The results of the sensitivity scenario are compared against a baseline with the same increased prices (i.e., a business-as-usual baseline with higher energy prices). The sensitivity considers the impact of highly increased global natural gas prices due to recent geopolitical developments.²⁵ Therefore, when the report describes results from the sensitivity run and compares them to results from the standard run, the comparison focuses on marginal differences due to the policies (and their interaction with energy prices) rather than the impact of heightened energy prices.

Limitations of the analysis

- This assessment provides an overview of plausible scenarios and a general impact assessment before a detailed ex-post analysis per country is made. It does not produce accurate forecasts of outcomes.
- Non-fiscal policy measures, such as monetary and macro-financial measures or exchange rate and balance of payments measures, are not considered in the assessment as they are not included in the Global Recovery Observatory,²⁶ with the database being utilized as the primary data source.
- The low data availability on the timeline of implementation of recovery measures led to the assumption that recovery measures are spread out in 2022–2024, which might not entirely reflect the reality of developing countries.
- The G20 recovery plan scenario assumes all policies/measures included in the Global Recovery Observatory database are fully implemented (the different extents of implementation are considered in the sensitivity analysis).
- The scenarios do not make explicit assumptions about the financing of the measures.
- The G20 recovery plan scenario focuses on recovery measures but excludes the latest climate policies and targets announced at COP²⁶. These policies and targets are included implicitly in the global 1.5°C scenario, supported by additional climate policies required to achieve long-term net-zero targets globally.
- The E3ME model is simulation based, meaning the model outcomes are path-dependent and are influenced by policy inputs. The results of the 1.5°C and 2°C scenarios and their associated economic and job opportunities should therefore be interpreted as a possible pathway, and not as optimal pathways. In contrast to general equilibrium economic models, E3ME does not seek the least-cost way to meet temperature targets.

25 The price assumption for natural gas employed is based on the April 2022 edition of the World Bank's Commodity Markets Outlook, assuming that global prices develop in line with the most extreme European price trajectory until 2024 and then largely stagnate.

26 Global Recovery Observatory. "Draft Methodology Document." Last modified February 1, 2021.

3. Stocktake of Recovery Measures

As of December 2021, spending on rescue measures (81%) announced by G20 members outweighs spending on recovery measures (19%), adding up to a total investment of USD 17.8 billion (see Figure 1). Even though both types of expenditures—rescue and recovery—may support a sustainable recovery, this report solely focuses on assessing spending on recovery measures as this has the highest potential to generate long-term impacts.

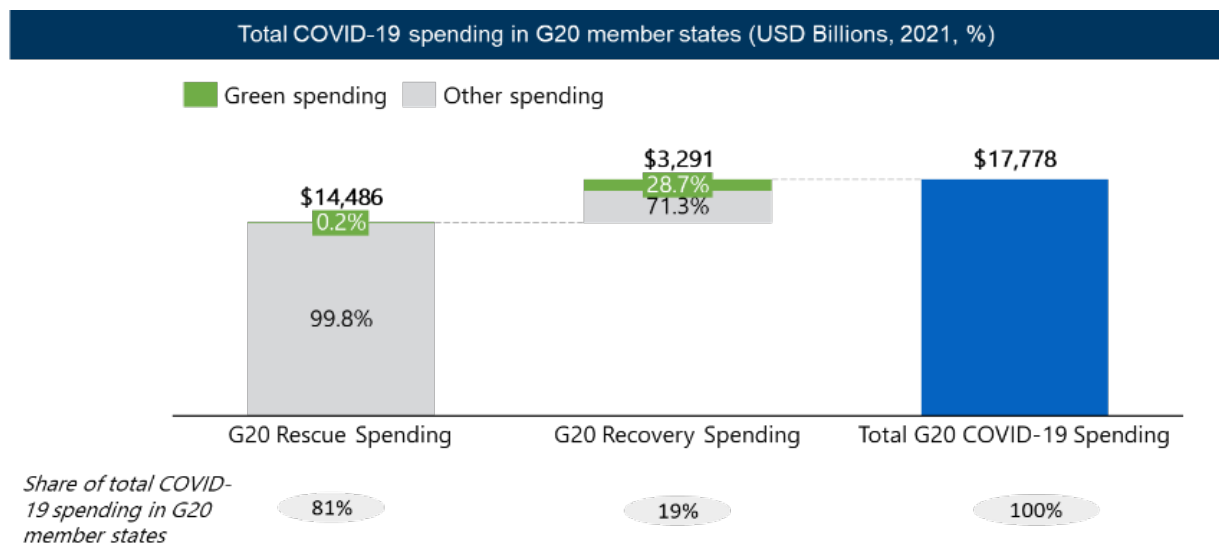


Figure 1. Total COVID-19 spending by G20 members, 2021 (USD billions)

Source: Developed by Wuppertal Institute with data from Global Recovery Observatory, last updated Dec. 2021

By the end of 2021, G20 members of developed countries announced on average 4.5 times more spending on recovery in relation to their GDP than G20 members of developing countries (Figure 2). This is partially due to their tighter fiscal constraints and focus on social and economic rescue measures. The difference in magnitude of recovery spending between G20 members of developed and developing countries is likely to continue. In 2022, G20 members of developing countries aim to normalize public spending to pre-pandemic levels to strengthen their fiscal health, while several G20 members of developed countries have announced an increase in recovery expenditure. For example, due to receding government spending, Argentina expects a slowing economic recovery in 2022.²⁷ Equally, the Indonesian 2022 budget saw a reduction in COVID-19 recovery support.²⁸ Moreover, even though economic recovery is identified as a key pillar underpinning the improvement of its fiscal outlook, Saudi Arabia’s government budget is

²⁷ Zepeda, Mariana. “Argentina’s economic recovery will slow in 2022 as government spending recedes.” *Frontierview*. Last modified October 7, 2021.

²⁸ World Bank. “Indonesia Economic Prospects (IEP), June 2022: Financial Deepening for Stronger Growth and Sustainable Recovery.” Last modified June 22, 2022.

decreasing.²⁹ On the contrary, Japan has announced a record budget of approximately USD 797 billion (JPY 107.6 trillion) for the fiscal year 2022, reflecting an increase in spending on social security and addressing the spreading of the COVID-19 Omicron variant.³⁰

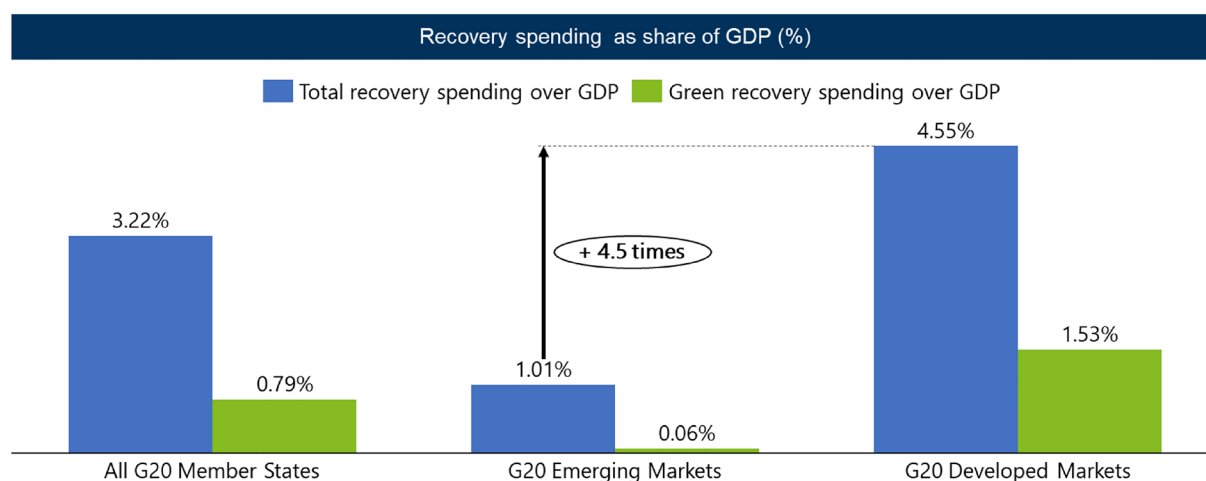


Figure 2. Recovery spending by type as a share of GDP by G20 members

Source: Developed by Wuppertal Institute with data from Global Recovery Observatory, last updated Dec. 2021

3.1 Contribution of Recovery Spending to Mitigation Objectives

By the end of 2021, green recovery spending represented nearly 29% of the total recovery spending (Figure 1). Approximately 62% (USD 614 billion) of the green recovery spending of all G20 members has a positive long-term contribution toward climate goals, 32% (USD 315 billion) has no current climate contribution, and only 7% (USD 68 billion) has a negative climate contribution (Figure 4).

Green recovery spending is expected to increase slightly. During the first quarter of 2022, several G20 members announced additional green recovery spending. India stated it would spur the 2022–23 budget to sustain economic recovery and to boost economic growth.³¹ The EU pledged its highest annual budget ever, dedicating USD 320 billion (EUR 313 billion) toward recovery—as the top priority to lay the foundation of a more resilient union. The second priority of this budget is the continuation of a green and digital transformation.³² Even though its spending levels are returning to normal, Canada announced USD 9 billion (CAD 12 billion) in their 2022 budget for new green spending and incentives that aim to make adopting clean technologies more affordable over the coming years.³³

29 KPMG. Saudi Arabia budget report 2022. Last modified December 16, 2021.

30 Nippon.com. "Japan's Record ¥107.6 Trillion Budget for Fiscal 2022." Last modified January 17, 2021. <https://www.nippon.com/en/japan-data/h01206/>

31 Times of India. "Budget 2022-23 bets on spending spur to sustain eco recovery." Last modified February 1, 2022.

32 European Parliament. "EU Budget 2022 approved: investing more for a strong recovery." Last modified November 24, 2021.

33 The Conversation. "What the 2022 federal budget says about Canada's commitment to a green recovery." Last modified April 8, 2022.

3.1.1 Spending by sector.

Recovery spending with a direct impact on climate shows an imbalance across sectors. G20 members will spend approximately 70% of the total recovery budget in the transport and energy sectors. Green recovery spending was mostly allocated to economic sectors that directly impact climate. About 49% of the total green recovery spending by G20 members was focused on the transport sector, followed by 21% on the energy sector, 16% on agriculture and forestry, and 14% on buildings (Figure 4).

There are multiple reasons why allocating a high share of recovery spending in the transport and energy sectors can drive a fast, inclusive, and green recovery. However, balancing green recovery spending across sectors is necessary to ensure resilience and a shift toward an inclusive low-carbon development pathway. The electricity generation and transport sectors have the highest potential for a low-carbon transition³⁴ because they represent the highest share of GHG emissions among G20 members. Moreover, the energy and transport sectors have a high share of the workforce in both G20 developing and developed countries and are key sectors for developing societal resilience.^{35, 36} However, other sectors should not be disregarded. For instance, recovery spending on sustainable agriculture and forestry practices may reduce agriculture’s carbon footprint, capture the excess carbon generated by other industries and generate substantial co-benefits for biodiversity.³⁷ In addition, higher support to primary economic sectors might accelerate the reduction of inequality and promote social mobility, particularly in developing countries where support to the most vulnerable population is a priority.

The imbalance of green recovery spending across economic sectors seems to prevail in 2022 recovery budget allocations. Recovery measures announced in 2022 are still focused on energy, ground transport, and buildings. According to the Energy Policy Tracker, the United Kingdom announced four new recovery policies with a total commitment of around USD 11.9 billion, targeting the buildings and power generation sectors. The United States also announced two new recovery policies with a total commitment of USD 520 million for the buildings and power generation sectors.³⁸ Equally, Canada and Australia announced new energy-related recovery measures. Moreover, under the current geopolitical situation, G20 policymakers are reviewing energy security incentives to assure a green transition in a publicly supported way.

34 Climate Transparency. “G20 GHG emissions per sector.” Last modified 2021.

35 OECD. “Assessing environmental impact of measures in the OECD Green Recovery Database.” Last modified April 21, 2022.

36 World Economic Forum. “Jobs of Tomorrow: The Triple Returns of Social Jobs in the Economic Recovery.” Last modified May 2022.

37 World Economic Forum. Here’s how we can use agriculture to fight climate change. Last modified September 20, 2019.

38 Energy Policy Tracker.2022. “G20 countries.” Last modified August 17, 2022.

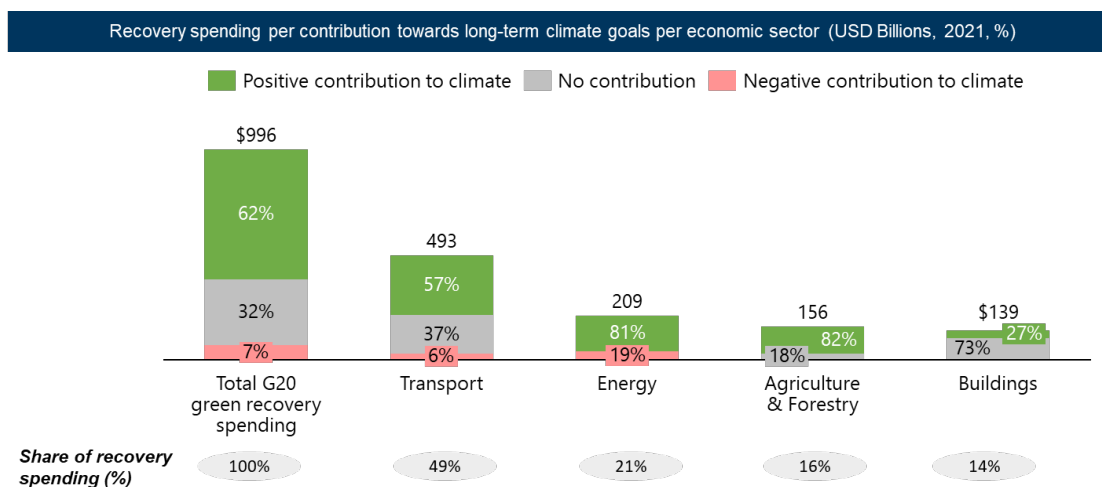


Figure 3. Distribution of green recovery spending per sector, 2021 (USD billions)

Source: Developed by Wuppertal Institute with data from Global Recovery Observatory, last updated Dec. 2021

3.1.2 Positive and negative spending.

G20 developing countries' efforts in green recovery were hampered due to competing priorities for addressing the health impacts of the COVID-19 pandemic. Therefore, it is observed that almost 90% of the green recovery spending with a positive long-term contribution toward climate goals comes from G20 members of developed countries (Figure 4). The imbalanced spending on recovery measures with a direct positive impact on climate between G20 members from developed and developing countries creates a two-track recovery. This imbalance hinders the achievement of international climate targets as future emitters are more likely to perpetuate business-as-usual and high-carbon activities.

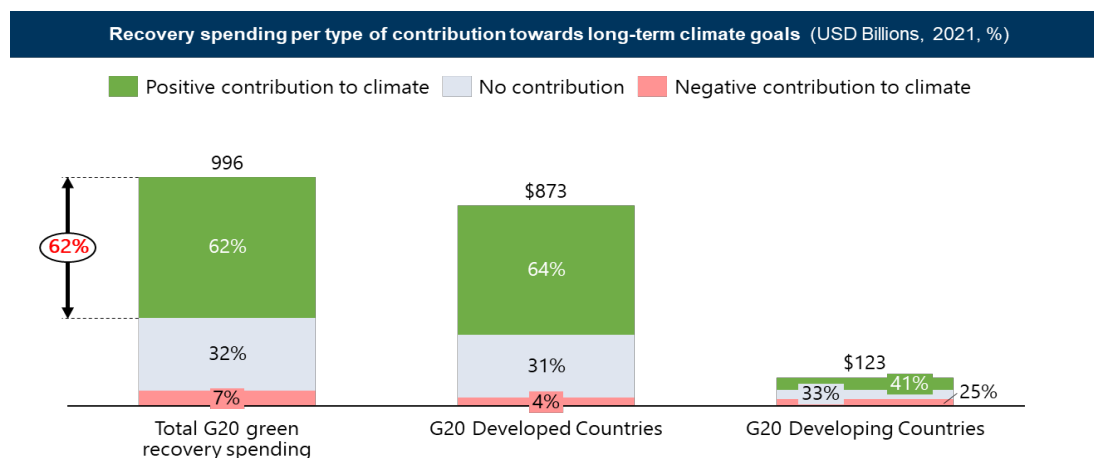


Figure 4. Recovery spending per contribution type toward long-term climate goals, 2021 (USD billions)

Source: Developed by Wuppertal Institute with data from Global Recovery Observatory, last updated Dec. 2022

Moreover, more than 95% of the recovery spending with negative long-term impacts on climate in G20 developing countries is concentrated in the energy sector (Figure 5). In response to the COVID-19 crisis, significant public investment commitments for fossil fuel-intensive activities in the energy sector were established, mostly by G20 developing countries, potentially missing opportunities for a low-carbon transition.³⁹ For example, in China, the provincial government of Hubei announced a CNY 90 billion investment over three years (2020–2022) in the coal, oil, gas, and electricity sectors to recover by increasing the energy supply capacity of the province’s energy sector.⁴⁰ In Argentina, offshore activities, promotion of investment in hydrocarbons through law, and supporting activities in the Vaca Muerta natural gas reservoir are examples of long-term commitments to supporting fossil fuels. In Mexico, there is dedicated support for the national oil and gas company, PEMEX, as well as new refineries and thermal power plants. Brazil committed to building new thermal power plants and providing incentives for investment in hydrocarbon and coal-related activities.⁴¹

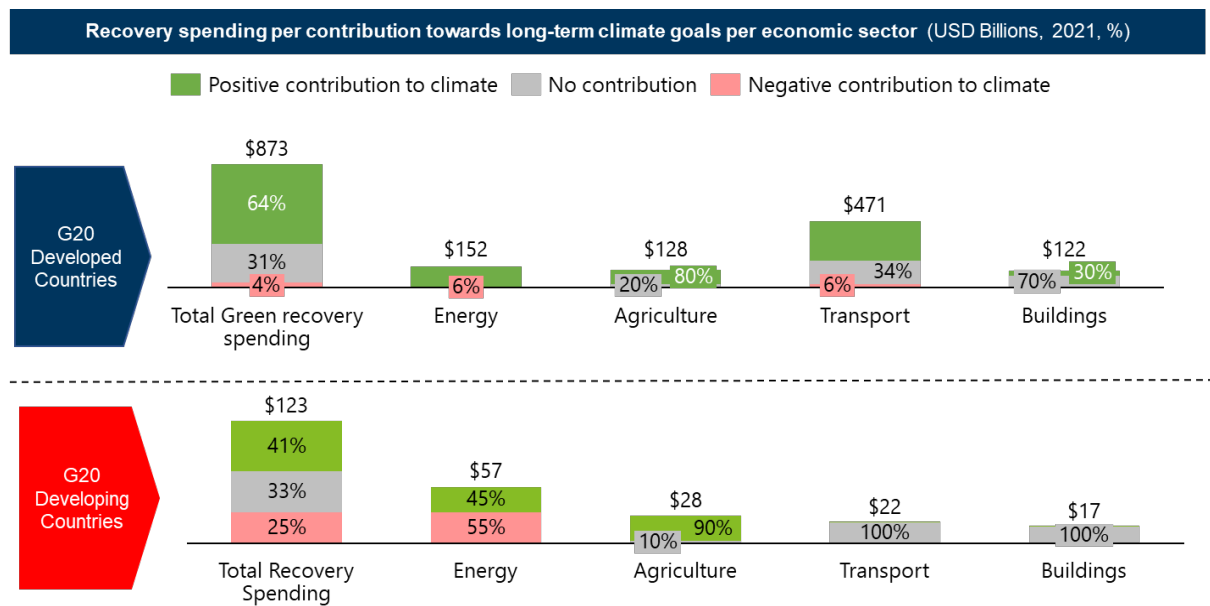


Figure 5. Distribution of recovery spending per sector and G20 group, 2021 (USD billions)
 Source: Developed by Wuppertal Institute with data from Global Recovery Observatory, last updated Dec. 2021

39 IISD. “Doubling Back and Doubling Down: G20 scorecard on fossil fuel funding.” Last modified November 9, 2020.
 40 OECD. “Assessing environmental impact of measures in the OECD Green Recovery Database.” Last modified April 21, 2022.
 41 SEI. “Pandemic recovery efforts undermine a just energy transition in Latin America.” Last modified November 7, 2021.

3.1.3 Transformational effect of spending.

Some of the announced recovery spending with a positive impact on climate has long-term financial allocations, enabling a low-carbon transition. For example, Australia announced that beginning in 2021–2022, the government will provide AUD 1.6 billion for low emissions technology over ten years and AUD 20.1 million to deliver a comprehensive Global Resources Strategy over two years. In India, the government of Kerala announced a 50% reduction in motor vehicle tax for electric, fuel cell, and total hybrid battery electric vehicles (EV) for five years in the state’s 2021–2022 budget. In July 2020, South Korea announced to commit KRW 160 trillion (USD 133 billion) to the K-New Deal, which aims for long-term carbon neutrality, a green transition of infrastructure, a low-carbon energy supply, and innovation in the green industry.⁴² **However, green recovery spending with a positive impact on climate and short- to medium-term financial allocations was predominantly in G20 developed countries.** For example, Canada pledged to invest CAD 287 million over two years to continue the Incentives for the Zero-Emission Vehicles (iZEV) program until March 2022. The United Kingdom provided a Bus Recovery Grant (BRG) of GBP 226.5 million, which ran from September 2021 to April 2022, and provided up to GBP 56 million for the Light Rail and Tram Recovery Grant (LRTRG), which was under implementation from July 20, 2021 to April 5, 2022.

3.1.4 Multilateral spending.

Implementing cross-sectoral and cross-country recovery measures could reduce sectoral and geographic imbalances of recovery spending. This recovery approach also avoids implementing stand-alone recovery measures, which may not have a long-lasting impact, by encouraging synergies. For example, the ASEAN Socio-Cultural Community, of which Indonesia is a member, launched the ASEAN Comprehensive Recovery Framework (ACRF) to strengthen cross-sectoral and regional collaboration against the COVID-19 pandemic impacts.⁴³ The ACRF coordinates a regional recovery response through a cross-sectoral and cross-pillar approach that maximizes the synergies of the ASEAN market integration, avoiding the duplication of recovery efforts within the region and ensuring all recovery efforts are long-term oriented.⁴⁴

3.1.5 Spending with no climate impact.

Recovery spending with no climate contribution in sectors that have a direct impact on climate is considered an untapped opportunity to be converted into spending with a positive long-term climate contribution. For example, recovery spending for building upgrades without green conditions will not contribute to long-term climate goals and may contribute to the short run negatively. However, linking the building upgrades to green requirements may trigger a long-term positive contribution.

42 OECD. “Assessing environmental impact of measures in the OECD Green Recovery Database.” Last modified April 21, 2022.

43 ASEAN. “ASEAN Socio-Cultural Community encourages stronger cross-sectoral collaboration towards COVID-19 recovery.” Last modified March 16, 2021.

44 ASEAN. “ASEAN Comprehensive Recovery Framework.” Last modified 2020.

3.2 Contribution of Recovery Spending to Adaptation Objectives

By the end of 2021, G20 members had limited announced recovery spending linked to adaptation. According to Krishnan and Brandon, only four G20 members (i.e., South Korea, China, the UK, and France) explicitly considered investing in adaptation or climate resilience in their recovery plans.⁴⁵ It is acknowledged that not all spending linked to adaptation and supporting recovery was announced, particularly by G20 developing countries.⁴⁶ For example, Indonesia increased its budget toward coast resilience, aiming to support a sustainable recovery through a blue economy program.⁴⁷ An imbalance between mitigation and adaptation spending indicates that recovery packages lack a systemic response to the interaction of crises, including climate change, biodiversity loss, and the economic consequences of COVID-19.⁴⁸

Moreover, based on the announced recovery spending, it is observed that G20 developing countries spend significantly less on recovery measures that directly or indirectly support adaptation and adaptation readiness, despite their higher vulnerability to climate change, than G20 developed countries. G20 members have different levels of vulnerability to the adverse impacts of climate change and adaptation readiness.⁴⁹ G20 developing countries have the highest vulnerability to climate change but the lowest level of readiness.⁵⁰ These countries are considered to have the greatest adaptation challenges and, therefore, have a greater need for investment to improve readiness and a greater urgency for adaptation action than G20 developed countries.⁵¹ However, G20 developing countries have a considerably lower recovery spending on adaptation than developed countries. The increase in magnitude and frequency of climate shocks, in combination with the health crisis of COVID-19 and low recovery-related spending, may worsen poverty and inequality in developing countries, hindering an inclusive recovery (Figure 7).⁵²

G20 members allocated recovery spending on measures that combine pandemic preparedness with long-term strategies for climate adaptation. Recovery spending on adaptation prioritizes food security, disaster risk prevention, access to improved sanitation and clean drinking water, employment creation for the purpose of ecosystem restorations, and infrastructure development, including nature-based solutions, resilient roads, and buildings. During 2019–2022, recovery measures for the agricultural sector address

45 N. Krishnan and Brandon (forthcoming). "Are COVID-19 Stimulus Packages Building Climate Resilience?"

46 The low number of accounted recovery spending linked to adaptation is due to multiple reasons. For example, the launch of adaptation programs/ programs that do not necessarily emphasized its linked with recovery. The launch of adaptation projects or programs in a different timing than recovery packages, etc.

47 OECD. "Sustainable Ocean Economy Country Diagnostics of Indonesia." Last modified April 2021.

48 Ringsmuth, Andrew K., Ilona M. Otto, Bart van den Hurk, Glada Lahn, Christopher P.O. Reyer, Timothy R. Carter, Piotr Magnuszewski et al. "Lessons from COVID-19 for managing transboundary climate risks and building resilience." *Climate Risk Management* 35 (2022).

49 Tilleard, Simon, and James Ford. "Adaptation readiness and adaptive capacity of transboundary river basins." *Climatic Change* 137 (2016): 575–591.

50 Climate Transparency. "Climate Transparency Report: Comparing G20 Climate Action Towards Net Zero." Last modified 2021.

51 Chen, C., I. Noble, J. Hellmann, J. Coffee, M. Murillo, and N. Chawla. "Country Index Technical Report – University of Notre Dame Global Adaptation Index." Last modified November 2015. .

52 IDB. "The Inequality Crisis: Latin America and the Caribbean at the Crossroads." Last modified 2020.

adaptation and mitigation simultaneously.⁵³

COVID-19 recovery packages have the potential to support G20 members' needs for adaptation investment and action, generating a durable economic benefit and reducing climate vulnerability. However, the evidence presented in the AGR21 report indicates recovery efforts are becoming a lost opportunity for adaptation.^{54,55,56}

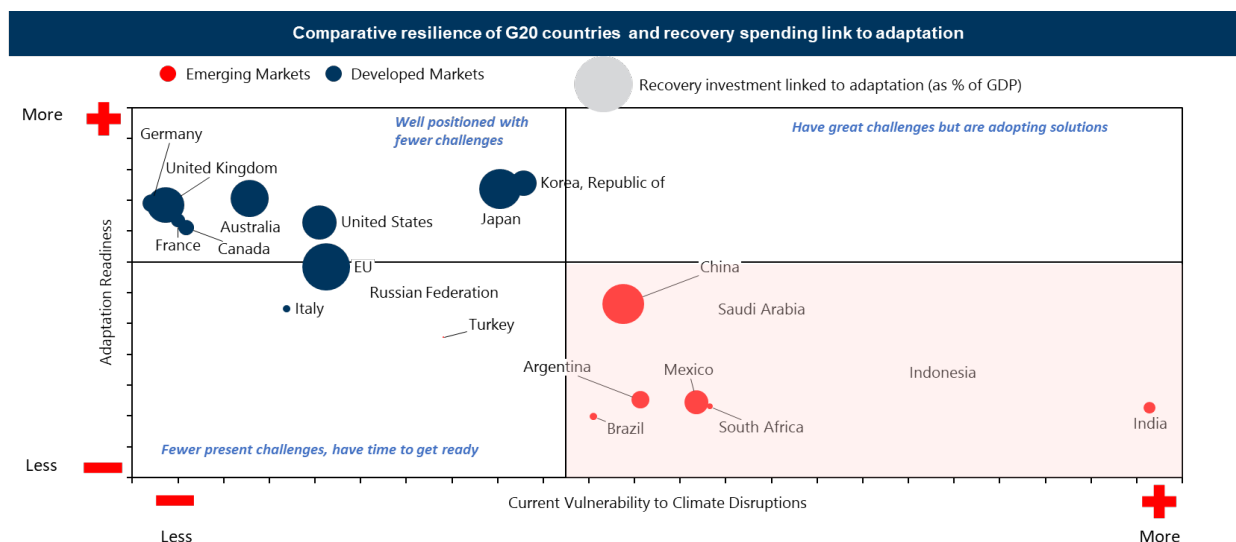


Figure 6. Comparative resilience of G20 members and recovery spending link to adaptation

Source: Developed by GGGI with data from Global Recovery Observatory, last updated Dec. 2021

3.3 Sector Recovery Measures' Positive Impact on Mitigation and Adaptation

3.3.1 Buildings

G20 recovery measures in the buildings sector with a positive effect on long-term climate goals are linked to green retrofitting programs, such as daylighting, electrification, and energy efficiency improvements. The most significant investments are taken by France (USD 9.4 billion), the United States (USD 9.1 billion), the United Kingdom (USD 5.7 billion), and South Korea (USD 5.2 billion).

Green retrofitting recovery measures have the potential to accelerate the energy transition and meaningfully contribute to achieving climate neutrality goals. The most successful green retrofitting recovery measures focus on deep (or staged deep) renovations and on the creation of frameworks for skills development, certification, awareness raising

53 OECD. "Assessing environmental impact of measures in the OECD Green Recovery Database." Last modified April 21, 2022.

54 UNEP. "Adaptation Gap Report 2021: The gathering storm – Adapting to climate change in a post-pandemic world." Last modified November 1, 2021

55 Richmond, Morgan, June Choi, Paul Rosane, Matthew Solomon, Bella Tonkonogy (CPI) Dominic Molloy, Felipe Larrain, and Jennifer Jacobowitz Rae (GCA). "Adaptation Finance in the Context of Covid-19: The Role of Development Finance in Promoting a Resilient Recovery." Global Center on Adaptation. Last modified January 2021.

56 Global Center on Adaptation. "Global scientists call for economic stimulus to address climate adaptation and COVID." Last modified January 22, 2021.

and support for citizens, and attracting private finance.⁵⁷

Countries with preexisting energy efficiency and building upgrade programs saw higher impacts by directing stimulus there. The use of preexisting structures may reduce the time and resources required to launch a widespread spending program.⁵⁸ An example of increasing funding to an existing program is a USD 7 billion worth upgrade—equivalent to nearly 20% of the recovery measures of the sector with a positive contribution to long-term climate goals—for the Weatherization Assistance Program in the United States (See Annex 6, Example 1).

3.3.2 Transport

Approximately 57% of G20 members' recovery spending with a positive contribution toward climate goals is linked to the transport sector. More than 70% of the total recovery spending in the transport sector was directed toward expanding existing infrastructure, 15% toward new public transport systems or line expansions, 4% to EV charging infrastructure, 4% to cycling and walking infrastructure, 4% to fuel efficiency initiatives, and 3% to others. The United Kingdom, the United States, and Mexico have allocated the most spending in this sector as a share of GDP.

Recovery spending on the transport sector, aiming to promote a behavioral change by increasing daily mobility with public transport or zero-emission options, is preferable to speed up a low-carbon development pathway. An example of a behavioral change local-level recovery action in the transport sector was the establishment of a temporary bike lane. Initially put forward by Mexico, due to its success, the intervention was replicated in Argentina, Colombia, and Peru (Annex 6, Example 3).

3.3.3 Energy

According to data from the Global Recovery Observatory, recovery spending contributing positively toward long-term climate goals in the energy sector ranges from R&D programs (16% of total recovery spending with positive climate impacts for the energy sector) to new or refurbished facilities to generate electricity from renewable sources (14%), carbon capture and storage/utilization (13%), other initiatives to reduce GHG emissions from existing fossil fuel assets (12%), hydrogen infrastructure (11%), and new or refurbished nuclear-fueled power generation plants (10%). Very little spending was recorded for battery and storage infrastructure or biofuels (4%). The great variety of green investments reflects the various needs for a successful transition of the energy sector: expanded transmission and distribution networks, smart grids, and storage are enablers for renewable energy penetration. As a share of GDP, South Korea stands out particularly positively, mostly resulting from the Korean Green New Deal (See Annex 6, Example 2).

⁵⁷ Green Recovery Tracker. 2021.

⁵⁸ Oxford University. "Are We Building Back Better? Evidence from 2020 and Pathways to Inclusive Green Recovery Spending." Last modified 2021.

3.3.4 Agriculture, land use & forestry

Most of the recovery spending linked to agriculture, land use and forestry was deployed by the United States (USD 92 billion), followed by the European Union (USD 24.6 billion) and China (USD 23.7 billion). Recovery measures in this sector focus mainly on promoting ecological conservation initiatives. The most common recovery measures in this sector include wildfire risk reduction programs; air and water pollution prevention; soil protection programs; habitat restoration activities, such as planting trees and protecting biodiversity; investing in water management systems; and developing public parks and green spaces.

Due to its high employment creation potential, as well as its impacts on SDGs, recovery spending linked to the agriculture, land use and forestry sector was prioritized by G20 developing countries. Annex 6, Example 4 shows an Indian recovery measure that simultaneously fosters biodiversity, job creation, and tribal community support.

4. Contribution of Recovery Efforts to NDC Implementation

Multiple tools, databases, and periodic reports track climate action and NDC pledges in different countries. However, few studies have assessed the impacts of COVID-19 responses on the enabling environment for NDC implementation. The most prominent examples are the Climate Action Tracker,⁵⁹ the Global Carbon Project,⁶⁰ the UNDP Climate Promise Progress Report,⁶¹ and a scientific report by Rochedo et al.⁶²

This section synthesizes the existing literature on how recovery measures have contributed to the creation of an enabling environment for NDC implementation in five cross-cutting areas: (1) planning and development of climate policies, (2) government coordination, (3) mobilization of finance, (4) capacity development for the implementation of climate policies, and (5) more effective monitoring and impact measurements. In addition, it highlights further opportunities to utilize recovery measures as enablers for NDC implementation under those cross-cutting areas.

4.1 Planning and Development of Climate Policies

The alignment between national recovery plans and climate policies (i.e., NAPs, NDCs, LT-LEDS, and net-zero targets) has reinforced governments' response to economic and health needs while prioritizing the achievement of the Paris Agreement.

G20 countries are aligning and integrating NDC measures and strategies with COVID-19 recovery plans. For instance, Indonesia is generating data and evidence on the linkages between NDCs and green recovery, and Turkey's climate and recovery measures are directly linked to socioeconomic impact assessments. Other G20 members are increasingly using NDCs to make a socioeconomic case for ambitious climate action, including focusing on jobs.⁶³ However, opportunity areas remain unseized.

4.1.1 Mitigation

The required updating of the NDCs in 2020 and 2021 created the opportunity to integrate more ambitious climate actions and integrate recovery measures to lower emissions by 2030. However, many G20 members have not increased their previous pledges or sufficiently synergized recovery packages and NDCs. By the end of 2021, most G20 members had submitted their updated NDCs, reflecting on the impacts of the COVID-19 pandemic. Australia made the most recent submission in June 2022 and Brazil in

59 Climate Action Tracker. Accessed June 23, 2022. <https://climateactiontracker.org/>.

60 Global Carbon Project. "Global Carbon Budget 2021 CO₂ emissions rebound towards pre-COVID levels." Last modified 2021.

61 UNDP. "UNDP Climate Promise Progress Report." Last modified April 2021.

62 Rochedo, Pedro, Panagiotis Fragkos, Rafael Garaffa, Lilia Caiado Couto, Luiz Bernardo Baptista, Bruno S.L. Cunha, Roberto Schaeffer, and Alexandre Szklo, "Is Green Recovery Enough? Analyzing the Impacts of Post-COVID-19 Economic Packages." *Energies*, 14, no. 17 (2021): 5567.

63 UNDP. Impacts of COVID-19 on raising ambition of national climate pledges under the Paris agreement, or Nationally Determined Contributions (NDCs).

April 2022. India has yet to submit any updates on its 2016 NDC. Out of all G20 members, 11 (i.e., Argentina, Australia, Canada, China, the EU,⁶⁴ Japan, Saudi Arabia, South Africa, South Korea, the UK, and the US) claimed stronger mitigation targets than their previous NDC, five (i.e., Brazil, India, Indonesia, Russia, and Turkey) did not increase their mitigation targets, and one (i.e., Mexico) reduced their mitigation target.⁶⁵ Of the 11 G20 members with increased ambitions, members that have practiced renewable energy, like Canada and the EU, show strong synergies between their green recovery measures and NDCs. Other G20 members show conflicting support between their NDCs and recovery measures. For example, countries that still use fossil fuels as a main source of energy—including Argentina, Brazil, and Mexico—bolster fossil fuel consumption in their economic recovery packages.

The pursuit of a green and resilient economic recovery partially motivated G20 members toward net-zero pledges. However, these are yet to be formalized in the NDCs. For example, China, Indonesia, and South Africa announced net-zero targets but have not yet reflected them in their NDCs. Moreover, contrary to Canada, the European Union, Japan, and the United Kingdom—which committed to legally binding net-zero emissions targets by 2050—the United States has not announced any legally binding net-zero pledges. Moreover, seven G20 members are yet to state net-zero targets (i.e., Australia, India, Mexico, Russia, South Africa, Saudi Arabia, and Turkey). It is estimated that if all G20 members adopt mid-century net-zero emissions commitments and align their NDCs with a 1.5°C pathway, end-of-century global warming could be limited to 1.7°C.⁶⁶

4.1.2 Adaptation

After a delay in the development and implementation of NAPs due to the pandemic, G20 members ramped up efforts to develop and revise adaptation policies. Five G20 members published or reviewed at least one national-level adaptation planning instrument. The Russian Federation published its first National Adaptation Action Plan. South Africa published new adaptation policies that significantly updated previous versions from 2006 and 2011, respectively, and launched its National Climate Change Adaptation Strategy in September 2021. South Korea amended its National Strategic Plan for Climate Change Adaptation (2021–2025). Argentina decreed the creation of the regulation for the External Advisory Council to oversee the National Plan of Adaptation and Mitigation of Climate Change (2022) and continue the development of the plan up to 2030 and the long-term low-emissions resilient development strategy up to 2050, which is scheduled to be presented at the UNFCCC COP 27.

It is observed that G20 members' recovery and NAPs could further mutually reinforce actions on five adaptation fronts: (1) strategic assessment of compound risks, (2) disaster risk prevention and risk management systems, (3) the role of adaptation in increasing population health and reducing risks for infectious disease, (4) reinforced

64 Included in the EU's NDC: Germany, France, and Italy.

65 Climate Action Tracker. Accessed June 10, 2022. <https://climateactiontracker.org/>.

66 Climate Analytics and World Resources Institute. "Closing the gap: The impact of G20 Climate Commitments on Limiting Global Temperature Rise to 1.5°C." Last modified September 2021.

local-level interventions, and (5) A wider application of nature-based solutions across G20 members to support adaptation as well as mitigation objectives should be pursued.

Opportunity area

In line with their net-zero pledges, G20 members should play a leading role in developing their LT-LEDS. LT-LEDS can guide recovery plans through their long-term trajectory and help with the allocation of financial resources. However, several G20 members are yet to submit their LT-LEDS (i.e., Turkey, Saudi Arabia, Russia, China, Australia, and Brazil).

4.2 Government Coordination

A critical requirement for aligning climate policies with sustainable recovery plans is extensive coordination within national institutions, between different government levels, and between stakeholders.⁶⁷ To allow for this complex coordination and the timely development of recovery plans in the wake of the COVID-19 crisis, G20 members established new coordination mechanisms. These coordination mechanisms can be maintained and leveraged to facilitate NDC implementation as they are agile, capable of delivering results under time constraints, and facilitate cross-sectoral prioritization.

The establishment of multi-ministerial technical task forces in charge of the economic recovery response to the COVID-19 crisis increased government coordination in a limited amount of time. The multi-ministerial approach ensured the alignment of government priorities and facilitated the identification of synergies across sectors. It also avoided the implementation of stand-alone measures. For example, Italy established an Experts' Task Force for Reconstruction, which aimed at identifying practical and systemic solutions. This task force also considered cross-cutting issues such as gender.⁶⁸

Subnational-level coordination was also strengthened to facilitate a green recovery. For example, the decentralized cooperation between local government officials resulted in the replication of best recovery practices across EU cities. Similarly, the Alliance of Mexican Governors for Climate engaged in dialogues to promote an inclusive recovery through subnational coordination, allowing synergies between states and knowledge transfer of best green recovery practices.⁶⁹ These subnational coordination efforts should be further encouraged to ease the implementation of local- and provincial-level NDC measures.

Moreover, independent task forces for recovery strengthened the coordination between government and civil society. For example, Canada's Task Force for a Resilient Recovery is an independent group of finance, policy, and sustainability leaders that develops analyses and provides recommendations to the Canadian government on how to seize green recovery opportunities.⁷⁰

67 UNDP. 2020. "Building the Economy of Tomorrow: Using NDCs to Inform Green Recovery."

68 Jakubowska, Joanna, Ondřej Plevak, Patrik Szicherle and Zuzana Gabrizova. "Drafting national recovery plans: A laborious exercise for Visegrad countries." EURACTIV. Last modified February 10, 2021.

69 WRI Mexico. "Abre la Alianza de Gobernadores Mexicanos por el Clima diálogos por la recuperación." Last modified August 23, 2020.

70 Task Force for a Resilient Recovery. 2020. "Let's build back better."

Opportunity area

Greater coordination between the different levels of governments needs reinforcement to encourage the scale-up or replication of subnational recovery and NDC actions. To do so, G20 members should leverage their Green Recovery Task Forces by integrating a regional perspective within their mandates. Moreover, recovery plans aligned with NDCs, NAPs, and LT-LEDS should include subnational targets or geographically differentiated measures for mitigation and adaptation.

4.3 Mobilization of Finance

The COVID-19 pandemic increased the financing gap for NDCs, with earlier estimates of government funds available for mitigation and adaptation projects sharply reduced as government budgets were diverted to large emergency relief programs.^{71,72} In addition, the recent geopolitical developments will likely further *divert financial* resources and reduce the speed of sustainable global recovery and implementation of the climate agenda. However, some recovery efforts have increased the availability and access to sustainable finance for the implementation of recovery measures and NDCs in the face of the current fiscal constraints.

Global green recovery initiatives have increased access to finance from multilateral financial institutions. For example, in a move to enhance collaboration in adaptation amid the COVID-19 pandemic, the Adaptation Fund (AF), the Climate Investment Funds, the Green Climate Fund (GCF), and the Global Environment Facility released a joint statement to support developing countries on the road to a climate-resilient recovery from COVID-19.⁷³ In line with this statement, the AF received unprecedented support with a record USD 356 million in new pledges—triple what it raised in 2020 and nearly triple its USD 120 million fundraising goal for 2021. G20 member contributors included for the first time the United States (USD 50 million), Canada, the European Union (USD 100 million), and new pledges from Germany (USD 50 million to AF and to USD 100 million GCF).

The use of innovative financing mechanisms⁷⁴ has increased, expanding private sector financing and allowing developing countries and Least Developed Countries to have a more stable funding source for their recovery measures and NDCs.⁷⁵ As a recovery response to the COVID-19 crisis, G20 members promoted innovative financing instruments (i.e., blended finance, sustainable bonds, and the redistributive allocation of Special Drawing

71 ADB. "Green Finance Strategies for Post-COVID-19 Economic Recovery in Southeast Asia." Last modified October 2020.

72 Convergence. "The State of Blended Finance 2021." Last modified 2021.

73 Adaptation Fund. "Adaptation Fund: Key Achievements of 2021 and Entering 2022 with Promise." Accessed June 15, 2022.

74 According to the Leading Group on Innovative Financing for Development, innovative financing includes those sources and mechanisms that are not covered by traditional aid flows such as ODA. Two sub-categories of innovative financing are distinguished: (i) innovative financing sources generating new funds for sustainable development, and (ii) innovative financing mechanisms contributing to enhance the efficiency, impact, and leverage of existing resources (public, private, or under the form of public-private partnerships).

75 Gautam, Deepali, Rohit Goel, and Fabio Natalucci. "Sustainable Finance in Developing countries is Enjoying Rapid Growth, But May Bring Risks." IMF. Last modified March 1, 2022.

Rights) as a priority under the Saudi Arabian and Italian presidencies.⁷⁶ G20 efforts, in combination with the changes in financial markets, have resulted in an unprecedented 185% increase in the worldwide issuance of sustainability bonds volume since 2019.⁷⁷ Similarly, the annual capital flows of blended finance have increased by almost 200% since 2019.⁷⁸ Multilateral development banks (MDBs) and development finance institutions (DFIs) have also assumed a leading role in promoting innovative finance mechanisms to support G20 members' recovery plans. For example, to advance the development of more resilient water systems in Brazil, supporting adaptation and recovery simultaneously, the International Finance Corporation supported the first sustainability-linked loan in the Brazilian water sector.⁷⁹

G20 members are using the recovery experience as an opportunity to build stronger public finance systems, which are crucial for a strong recovery. Ministries of finance are implementing emergency policies and procedures to withstand the fiscal and social impacts in the event of a disaster as well as to ensure the effective delivery of exceptional payments. Moreover, governments are increasingly switching toward performance-based budgeting, using accrual basis accounting, and applying performance budgeting systems at the sectoral level.⁸⁰ Similarly, innovative Climate Budget Tagging schemes are being implemented. For example, Indonesia has used Climate Budget Tagging to track climate-related expenditures in the national budget since 2016. This tool allows the government to monitor its climate spending, make informed decisions about future budgetary allocations, and prioritize climate spending.⁸¹

Opportunity areas (further details in finance track of the G20)

To increase finance mobilization for a green recovery, countries should pursue further integration across the planning, performance-based budgeting, and reporting.

To reduce future fiscal constraints for recovery measures, countries should prioritize recovery investments in economic sectors that might have positive impacts on future fiscal revenues or widen the tax base by reducing informality. For example, cash transfer recovery programs for forestry restoration can be deployed, in combination with social protection schemes focused on integrating the informal economy into the sector, thus reducing tax evasion and supporting mitigation as well as adaptation.

Allow DFIs to lead the collaboration with the private sector to drive more capital. DFIs can leverage private sector finance through innovative financing instruments, partner with local development banks, and complement the support with technical assistance to governments in a more effective fashion than governments.

76 Berensmann, Kathrin. "How Can the G20 Support Innovative Mechanisms to Mobilise Financial Resources for LDCs in a Post-Pandemic World?" IAI. Last modified 2021.

77 Jones, Liam. "Sustainable Debt Tops \$1 Trillion in Record Breaking 2021, with Green Growth at 75%: New Report. Climate Bonds." Last modified April 25, 2022.

78 Convergence. "The State of Blended Finance 2021." Last modified 2021.

79 Hanway, Cheryl Edelson, and Henri Blas. "Private sector financing can accelerate a green recovery for cities. World Bank." Last modified October 21, 2021.

80 Gurazada, Srinivas. "Public Financial Management in the Post-COVID World." PEFA. June 10, 2022.

81 OECD. "Sustainable Ocean Economy Country Diagnostics of Indonesia." Last modified April 2021.

4.4 Capacity Development for the Implementation of Climate Policies

Technical support tools, guidelines, and overall capacity for implementing recovery projects, innovative financing measures, government coordination, and enforcement of climate policies are often lacking. UNFCCC identified three capacity gaps in integrating sustainable recovery elements into coherent NDC implementation and planning: (1) limited articulation and communication strategies at the country level and development of project proposals, (2) mobilization of financial resources for NDC implementation and deficiencies in national regulatory frameworks related to financial systems, and (3) a lack of analysis of labor market trends.⁸² Recovery efforts have slightly contributed to closing two of these capacity gaps.

Articulation and communication strategies at the country level and development of project proposals. The accelerated increase in sustainable finance has increased the demand for investment-ready sustainability projects. Consequently, countries are being forced to increase their capacity and knowledge to prioritize green projects within the national planning, packaging adaptation actions into project proposals for funding, identifying synergies sectors, enhancing their long-term capacity for planning, and developing bankable green projects. Countries have received support for capacity development in these areas from financial institutions. For example, under the GCF Readiness Programme, the GCF supports developing countries in advancing their climate-resilient recovery strategies and incorporating them into their NDCs.⁸³ This is done by providing a readiness grant, increasing the budget allocation of a current readiness grant, or via GCF technical experts' support. Moreover, the GCF Readiness Programme is being highlighted to increase countries' capacity for sustainable recovery project formulation.

Capacity to mobilize financial resources for implementing NDCs. Better prepared projects are the catalyst to attract increased flows of green capital. However, countries lack the knowledge and capacity to scale up innovative financial mechanisms. As part of their reinforced support for a sustainable recovery, MDBs have scaled up their capacity-building assistance to structure blended financing.

Opportunity area

Lack of analysis of labor market trends. Despite the importance of skills development to ensure both a sustainable recovery and a low-carbon transition, it is estimated that funding for skills training (green and non-green skills) in G20 members states' recovery plans amounts to about 3% of the total recovery budget, while funding for green skills training accounts for approximately 1%. Recovery expenditure related to skills development is primarily deployed by G20 advanced economies (i.e., China, the UK, the US, Canada, the EU, France, and South Korea). Moreover, the quantification of existing and potential green jobs, as well as the assessment of labor markets to anticipate green skill requirements for NDC implementation, is still insufficient, particularly in G20 developing countries and for adaptation-related activities.

82 UNFCCC. "11th Durban Forum on Capacity-building." Last modified June 8, 2022.

83 GCF. "Guidance Note – GCF Readiness Support to Climate Resilient Recovery." Accessed June 10, 2022.

Therefore, best case examples of skills development programs for addressing labor market trends need to be emulated in G20 developing countries. For example, the United Kingdom launched the Green Jobs Taskforce⁸⁴ as part of its Ten Point Plan for a Green Industrial Revolution⁸⁵ to transform the job market so it can support the government's plan to Build Back Better⁸⁶ and net-zero targets. The taskforce brings together government, industry, the education sector, and other stakeholders to assess the skills needed for a low-carbon transition, provide recommendations for the upcoming national net-zero strategy, and direct apprenticeship courses and standards for reskilling.

A low number of recovery measures focused on adaptation-related research. Recovery plans in the United States, Germany, the United Kingdom, the European Union, France, Canada, and China include substantial support for research programs. According to the International Energy Agency Sustainable Recovery Tracker, recovery policies in force and ended supporting research focused mostly on circular economy and on low-emission transport and energy technologies, such as clean hydrogen technologies, EV supply chains, energy storage, alternative fuels, and direct air capture.⁸⁷ Recovery support for research related to adaptation and effective measures for resilience pales in comparison to the support for mitigation technologies. G20 countries could reallocate recovery funds to overcome the knowledge barriers. Recovery funds should help develop an understanding of climate change impacts at the local and sectoral levels, the potential for effective climate risk reduction, the assessment of systemic risks, and the development of adaptation technologies.

4.5 Recovery Spending on Climate, Environment, and Social Development

As a response to the COVID-19 crisis, G20 members leveraged their open and digital government solutions to increase transparency on the response to disease control and the allocation of public resources for recovery. As a member of the Open Government Partnership, the Republic of Korea is an example of using technology to secure public transparency and openness during the COVID-19 crisis.⁸⁸

However, the lack of transparency for budget allocation and data gaps on the impacts of recovery measures remain a constraint for the development and implementation of recovery plans as well as NDCs.

Opportunity area

Most of the G20 members do not seem to have any recovery-related indicators to measure recovery impacts.

84 GOV.UK. "Green Jobs Taskforce." Accessed June 10, 2022.

85 GOV.UK. "The Ten Point Plan for a Green Industrial Revolution (HTML version)." Last modified November 18, 2020.

86 GOV.UK. "Build Back Better: our plan for growth." Last modified March 3, 2021.

87 IEA. "Sustainable Recovery Tracker." Last modified 2021.

88 Sharon, Alita. "South Korea looks to tech to combat Covid-19". OpenGov Asia. Last modified March 14, 2020.

G20 members that have specifically established indicators to quantify the climate impact of recovery measures are Canada, the United States, and the European Union. The Recovery and Resilience Scoreboard of the European Union includes a set of 14 common indicators that are used to report national recovery progress and plans for all EU countries. The identified indicators cover all six EU policy pillars, and eight indicators involve the pillars of green transition and smart, sustainable, and inclusive growth. This includes indicators such as annual primary energy consumption savings, additional operational capacity installed for renewable energy, and populations benefiting from protection measures against floods, wildfires, and other climate-related natural disasters.⁸⁹ Countries like the United States or Canada have program-specific indicators. For example, the US Department of Energy has indicators to measure energy intensity and energy performance. The Canadian Expert Panel on Climate Change Adaptation and Resilience recommends a suite of 54 indicators across five different areas.⁹⁰ Among these five areas is reducing climate-related hazards and disaster risks, as well as building climate resilience through infrastructure, which include four objectives and corresponding indicators for each objective.

Certain G20 members, including Russia, Indonesia, and Italy, use indicators that can be linked to the SDG-related socioeconomic indicators—such as the growth rate of real income, the unemployment rate, the GDP growth rate, welfare, and household consumption—to track the impact of their NAPs.⁹¹ Other examples of what countries reported as measures include having indicators to monitor the budget allocation in the economic recovery of the most vulnerable sectors (Mexico) or, more generally, reporting the recovery momentum and potential brakes in the coming months of 2022 (Brazil).⁹²

Ex-ante and ex-post assessments need to be built into recovery measures to ensure that their impacts can be monitored over time.⁹³ This is particularly important for adopting evidence-based policies for a sustainable recovery and engaging stakeholders in decision-making.

89 European Commission. 2021. Commission Delegated Regulation (EU) 2021/2106. Official Journal of the European Union. Accessed June 10, 2022.

90 Expert Panel on Climate Change Adaptation and Resilience Results. “Measuring progress on adaptation and climate resilience: recommendations to the Government of Canada.” Last modified 2018.

91 Faculty of Economics and Business, Universitas Indonesia (LPEM FEB UI) and BAPPENAS. “Thinking Ahead: Indonesia’s Agenda on Sustainable Recovery from COVID-19 Pandemic.” Last modified December 2020; Elcano Royal Institute. “Italy’s National Recovery and Resiliency Plan’s climate impact.” Last modified December 16, 2021.

92 Eco Emerging. “A recovery in loss of momentum.” Last modified 2022.

93 OECD. “Assessing environmental impact of measures in the OECD Green Recovery Database.” Last modified April 21, 2022.

5 Current and Potential Recovery Scenarios

Green recovery measures have the potential to support decarbonization and resilience activities, advancing NDC implementation and the achievement of the Paris Agreement.⁹⁴ Therefore, there are multiple studies assessing the future impacts of COVID-19 recovery spending on the international climate goals. For example, Rochedo et al. assessed the financial gap between pledged recovery packages and the investment needs to reach the Paris Agreement goals on a global level. Dafnomilis et al. examined the contribution of recovery measures to reducing global CO₂ emissions. While Pollitt et al., Hummelen et al. and Shan et al. all have analyzed the impact of possible recovery measures on global emissions as well as on the economy concluding that sufficient green recovery measures can contribute reaching climate goals.

This section assesses the impacts of the G20 announced recovery spending on the international climate goals for 2022–2050. It uses the E3ME macro-economic modeling to assess (1) the expected GHG emission reductions derived from recovery spending and (2) the expected macro-economic impacts (i.e., GDP and employment) of the recovery spending. To this end, six different scenarios were developed, as shown in Table 2. Scenario 1 is used as the baseline, scenarios 2 and 3 are climate trajectories, and scenarios 4, 5, and 6 directly focus on recovery.

Table 2. Overview of simulated scenarios

Scenario	G20 recovery measures included	Mitigation pathway	Further information
Baseline: Business-as-usual (BAU) baseline	None	None	<ul style="list-style-type: none"> ● Business-as-usual pathway ● Follows historical emission and technology adoption trends
Pathway 1: Global 1.5°C scenario	None	1.5°C by 2100 compatible pathway	
Pathway 2: Global 2°C scenario	None	2°C by 2100 compatible pathway	

⁹⁴ World Bank. "Impacts and Lessons Learned Supporting NDC Implementation." Last modified 2021.

Scenario 1: G20 Recovery	All G20 recovery measures from the Global Recovery Observatory database	N/A	<ul style="list-style-type: none"> Assumes recovery measures are deployed during 2022 and 2024 As a sensitivity, a high energy price version of this scenario is simulated to reflect the ongoing geopolitical situation
Scenario 2: G20 recovery under fiscal constraints	<ul style="list-style-type: none"> As the G20 recovery scenario assumes, 100% of the recovery measures from G20 advanced economies are deployed But only 50% of the recovery measures of G20 developing countries are deployed 	N/A	
Scenario 3: G20 recovery with extended funding for green measures in G20 developing countries	<ul style="list-style-type: none"> As the G20 recovery scenario assumes, 100% of the recovery measures from G20 advanced economies are deployed But recovery spending of G20 developing countries is double, and it is spent on green measures 	N/A	

5.1 GHG Emissions Reduction Impacts

5.1.1 Scenario 1: G20 recovery (i.e., current recovery spending).

The G20 current recovery spending (Scenario 1) leads to average emissions savings of around 1% compared to the baseline (approximately 0.3 GtCO₂ per year). This saving is persistent, achieved by 2025, and stable until 2050. This scenario includes all identified G20 recovery measures and not just green spending, so increases in emissions from higher economic activity are also included.

The main reasons for the limited reduction in emissions from the current recovery spending are:

- **A low recovery spending on mitigation measures.** Up to the end of 2021, less than 30% of the total recovery spending was classified as having a positive impact on reducing GHG emissions.
- **A short-term impact of current recovery spending.** The impact of the COVID-19 recovery response to climate change mitigation depends on long-term trajectory shifts. However, the current recovery spending is expected to last just a few years. Moreover, the economic crisis and lockdown restrictions linked to the COVID-19 pandemic in 2020 led to a temporary decline of only 5.4% in energy-related CO₂

emissions (1.9 billion tons of CO₂)—comparable to the annual emissions reduction rate needed to achieve the 1.5°C target. However, emissions soon rebounded to near pre-pandemic levels in 2021.⁹⁵ To achieve the 1.5°C target, global emissions would have to be reduced at a comparable rate every year.

- **Policies being incoherent with recovery efforts.** Without supporting policies, green recovery alone will not lead to large emissions reductions. For example, spending support for electricity generation from wind and solar will not be as effective as when accompanied by a coal phase-out policy or a carbon tax to help speed up the transition.

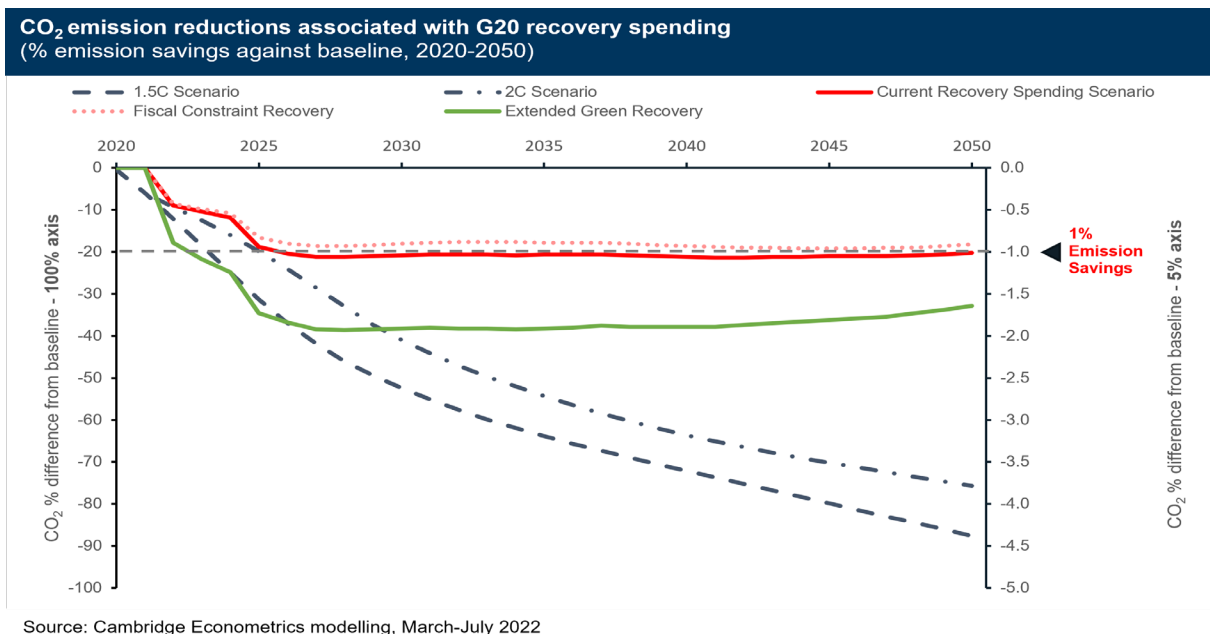


Figure 7. Emissions reductions associated with G20 recovery spending, 2020–2050 (% emissions savings against baseline)

5.1.2 Scenario 2: G20 recovery under fiscal constraints.

A fiscal constraints scenario (Scenario 2) was set up to understand the impacts of reduced implementation of recovery packages in G20 developing countries with little fiscal headroom. Scenario 2 assumes the same structure of recovery measures as the current recovery scenario (Scenario 1), but it limits the magnitude of recovery spending in G20 developing countries to 50%.

The G20 recovery scenario under fiscal constraints (Scenario 2) leads to an average emissions savings of 0.87% compared to the baseline for 2022–2050. The difference between the fiscal constraint and current recovery spending scenarios (Scenario 1) is small because total recovery spending is dominated by high-income G20 countries that are

⁹⁵ Global Carbon Project. “Global Carbon Budget 2021 CO₂ emissions rebound towards pre-COVID levels.” Last modified 2021.

not subject to the same fiscal pressures in this scenario. Since the share of green recovery spending in G20 developing countries is also comparatively small, the emissions outcomes remain similar to the *current recovery spending scenario* (Scenario 1). For example, under the current G20 recovery spending scenario (Scenario 1), it is observed that the European Union, Japan, and the United States show the highest emissions reduction contributions because their green measures have a much larger share in total recovery spending. Recovery spending from G20 developing countries tends to have lower climate contributions (Table 3). Therefore, when assuming fiscal constraints, the climate contribution of G20 developing countries will not represent a big percentage change.

Table 3: Modeled percentage reduction in CO₂ emissions in 2030 compared to the baseline scenario per economy

Germany	-3.81
Japan	-3.75
United Kingdom	-3.68
South Korea	-3.17
United States	-2.49
France	-2.28
European Union	-1.79
Italy	-1.02
Mexico	-0.92
Australia	-0.78
China	-0.64
Canada	-0.63
South Africa	-0.39
Saudi Arabia	-0.3
Indonesia	-0.02
Russia	-0.02
India	0.00
Brazil	0.03
Turkey	0.09

Source: Cambridge Econometric modelling, March–July 2022

Countries with limited fiscal headroom may prioritize short-term growth and employment over an emissions reduction despite larger benefits in the long term. Therefore, **international financial support is key to enabling developing countries to adopt long-term emissions reduction policies**. IRENA’s modeling of the Planned Energy Scenario (PES) on the World Energy Transitions Outlook (2021) explores the socioeconomic impacts of implementing such policies under a scenario of limited international financial support to developing countries that might be subject to fiscal constraints (see Box 1).

BOX 1 (1/2) Impact of selected policies on the distribution of socioeconomic outcomes: IRENA analysis

The 2021 edition of the World Energy Transitions Outlook (WETO) (IRENA, 2021) focused on the differential socioeconomic outcomes wrought by the two main scenarios: the Planned Energy Scenario (PES) and the 1.5°C scenario. The policy basket stipulated in the 2021 edition of WETO embraced relatively high carbon prices, aligned with the 1.5°C climate goal, and limited flows of international cooperation (USD 290 billion/year, or three times current pledges) through 2050. The global results improved GDP, jobs, and welfare. But regional or national socioeconomic disparities emerged between developed and developing countries, and these were in part linked to fossil fuel dependence. Indeed, a few countries—mainly developing countries or fossil fuel-dependent ones—saw dips in GDP when comparing the two scenarios: the 1.5°C scenario and PES.

In the 2022 edition of WETO (IRENA, 2022), a sensitivity analysis was carried out to better understand the implications of differing policies on economies and societies. Policy basket A (PB-A) entails a high carbon tax and low international cooperation (i.e., limited flows of funds to developing countries, although higher than current pledges). Policy basket B (PB-B) imposes a lower carbon tax (but higher than real-world levels) combined with stronger international cooperation.



Figure 8. Energy transition roadmaps and climate policy baskets

At the global level, both variants of the 1.5°C scenario enhance GDP in similar ways. Global GDP is 0.4% to 0.5% higher in the 1.5°C scenario than in the PES by 2030 (Figure 9, left bars) with both policy baskets. The policy baskets have nearly neutral effects on a global scale. In both models, GDP is 2.2%–2.3% greater than in the PES, on average, from now until 2030. PB-B, on the other hand, promotes employment more than basket A, rising from 0.9% to 1.2% in 2030. PB-B provides 1.6% more jobs across the economy than in the PES, on average, between now and 2030, while PB-A creates 1.2% more jobs.

This disparity can be explained by the increase in public investment and expenditure in labor-intensive sectors in developing nations that receive international assistance. When looking at policy baskets at the regional and country levels, various pictures emerge: a few countries are marginally worse off, while many others gain greatly. Improved budgetary freedom given by increased international engagement under basket B benefits recipient developing countries greatly. It enables social demands to be met and structural inequities to be eliminated, hence increasing the likelihood of popular acceptance of transition policies.

BOX 1 (2/2) Incidence of selected policies on the distribution of socioeconomic outcomes: IRENA analysis

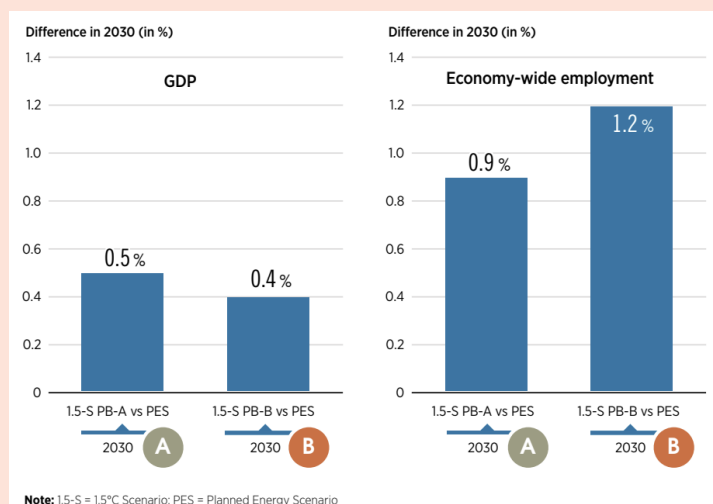


Figure 9. Global GDP and economy-wide employment in the two 1.5°C scenario variants

The number of people working in the global energy sector by 2030 could rise from 106 million under the PES to 139 million under the 1.5°C scenario (Figure 10). Job losses in conventional energy jobs (i.e., fossil fuels and nuclear) are more than offset by gains in renewables and other energy transition-related technologies (i.e., energy efficiency, power grids and flexibility, hydrogen). By 2030, the total number of renewable energy jobs more than doubles from 17.4 million in the PES to 38.2 million in the 1.5°C scenario, while other energy transition-related sectors rise from 45.8 million to 74.2 million.

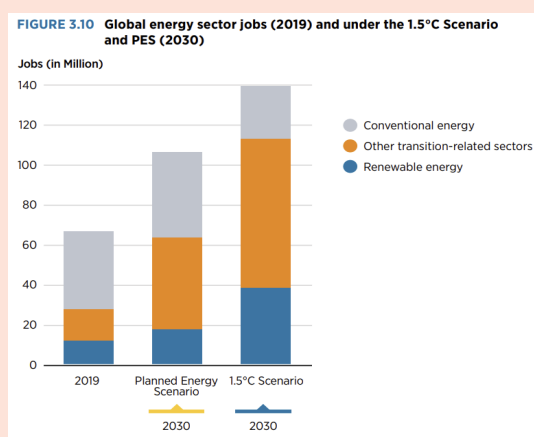


Figure 10. Global energy sector jobs (2019) under the 1.5°C scenario and PES (2030)

Additionally, welfare improves at a significantly faster rate than GDP and jobs. By 2030, both 1.5°C scenario policy baskets produce significant improvements over the PES, of approximately 20%, and much higher by mid-century. The primary purpose of this policy basket sensitivity analysis is to determine whether there is room to improve the distribution of transition burdens and benefits. The fact that both policy packages have identical results for GDP, economy-wide employment, and welfare at the global level suggests that distributional changes can be made while global socioeconomic growth is maintained.

5.1.3 Scenario 3: G20 recovery with extended funding for green measures in G20 developing countries.

Doubling the recovery spending of G20 developing countries and allocating it to green interventions leads to emissions savings of around 1.7% compared to the baseline. Emissions savings in Scenario 3 are 0.7 percentage points higher than in the current recovery spending scenario (Scenario 1).

Changes in the magnitude of the simulated recovery spending in G20 developing countries highly influence the emissions-saving results. In the fiscal constraints scenario (Scenario 2), the total recovery spending is 6.3% lower than in the current recovery spending (Scenario 1), while in the extended green recovery (Scenario 3), total recovery spending is 12.6% higher. In both cases, the reduction or addition is focused on G20 developing countries. Decreasing the spending in these countries by 6% shrinks the mitigation impacts of recovery measures disproportionately, by 10–12%. Nevertheless, increasing the recovery spending by about 12% and focusing it on green measures almost doubles the emissions reduction in the short term (70% increase).

5.1.4 Contribution to the Paris Agreement goal and aggregated G20 NDC targets.

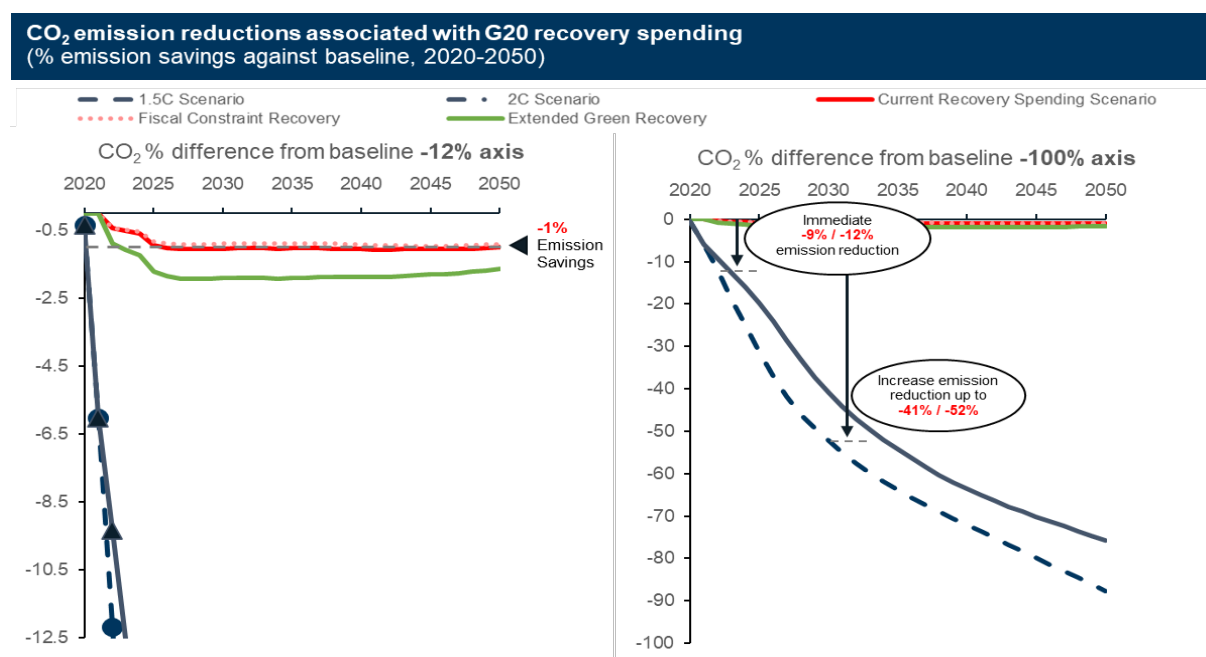
Although G20 recovery packages provide emissions abatement, they are rather far from the scale that would be needed to contribute substantially to the climate goals of the Paris Agreement. The simulations show that large-scale action and transformation would be required to achieve the 1.5°C and 2°C targets. Scenarios 1, 2, and 3 show that the recovery packages, although involving considerable spending with some green elements, do not reach the scale necessary to significantly contribute to this transformation.

The emissions reductions in the current recovery spending scenario (Scenario 1) have a limited contribution to putting the G20 members on a pathway consistent with the 1.5°C or 2°C targets.⁹⁶ For comparison, the 1.5°C scenario requires an immediate 12% emissions reduction, compared to the baseline, in year one (2022), rising up to 52% in 2030. Meanwhile, the 2°C compatible scenario would require an approximate 9% emissions reduction by year one, with a 41% reduction by 2030. However, the *current recovery spending* scenario only leads to an immediate 0.45% emissions reduction in 2022, peaking at 1.6% in 2028.

Likewise, the GHG emissions reductions estimated from scenarios 2 and 3 have a limited contribution to the combined updated NDC pledges of the G20. The saving of 0.4 GtCO₂ from the baseline in 2030, from scenarios 2 and 3, is a small contribution to the aggregated G20 NDC pledge. Moreover, while reductions in the case of an extended green recovery (Scenario 3) are higher, the achieved 0.7 GtCO₂ reduction is still a limited contribution. To reach their combined NDC ambition, the G20 members must keep their emissions in 2030 relatively flat compared to 2015. However, despite a 6% drop in 2020 due to the pandemic, emissions of G20 members are now higher than their 2019 levels and are expected to rise under the business-as-usual scenario.

⁹⁶ This is one of the possible pathways based on cumulative emission results and outcomes of policy inputs, between 2017 and 2100. The E3ME model is simulation based and does not produce a cost-optimal scenario.

It is relevant to highlight that the aggregated NDC mitigation effect of the G20 members is insufficient to reach the 1.5°C Paris Agreement target in the coming ten years—making up for 66% of the total emissions gap (23 GtCO₂e) to reach the target. The updated G20 members’ NDC targets are aligned with a 2.4°C pathway by the end of the century.⁹⁷



Source: Cambridge Econometrics modelling, March-July 2022

Figure 11. Emissions reductions associated with G20 recovery spending per economic sector (-12% axis vs -100% axis)

5.1.5 Sectoral contribution to emissions reductions.

Across all scenarios, recovery measures lead to the highest emissions reductions in transport, followed by electricity generation, and buildings. This is in line with the share of recovery spending for each sector. While emissions reductions are related to the amount of spending dedicated to individual measures, investing in affordable and widely deployable technologies generates more emissions reductions as the unit cost of abatement could be lower. For example, EVs could be more effective in mitigation as the technology is closer to a tipping point where the costs of EVs are becoming much more affordable. Solar and wind are often cost-competitive technologies for electricity generation, while renewable heating or hydrogen are still far more expensive than fossil fuel alternatives.

To lower the abatement cost of more expensive technologies being supported by recovery measures and to achieve higher emissions reductions, supporting policies will be needed on top of the spending.

97 Climate Action Tracker. “Global Update.” Last updated September 15, 2021.

CO₂ emission reductions per sector, Current Recovery Spending Scenario (1) and Extended Green Recovery scenario (3) (% emission savings against baseline, 2022-2050)

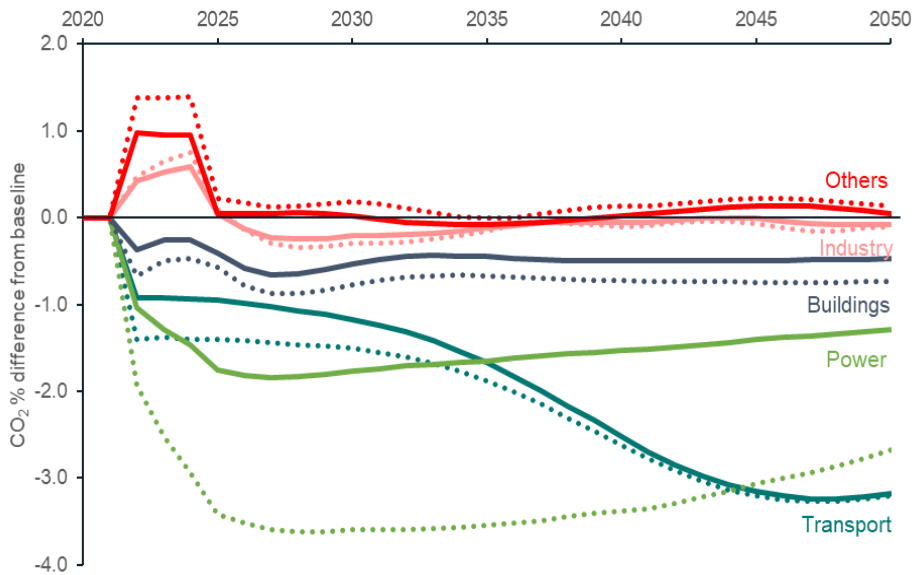


Figure 12. Emissions reductions associated with G20 recovery spending per economic sector, 2020–2050 (% emissions savings against baseline)

Source: Cambridge Econometrics modelling, March July 2022

5.2 Macroeconomic Impacts of G20 Recovery Spending

5.2.1 Gross Domestic Product (GDP)

Scenario 1: G20 Recovery

G20 recovery measures deliver positive GDP impacts, boosting GDP by around 1.6% (compared to the baseline) between 2022 and 2024. However, these increases are not sustained long term, declining sharply around three years after the introduction of the recovery measures.

To sustain the positive GDP impacts of recovery measures in the long term, it is necessary to implement supporting policies. Recovery measures are expected to create long-lasting, sustained effects on the economy (i.e., trigger structural reforms). However, in the absence of supporting policies, G20 recovery measures fail to initiate structural reforms, limiting the macroeconomic effects to the multiplier impacts of spending during the stimulus period and leading to a visible short-term decline.

In contrast, it is observed that the 1.5°C trajectory, which assumes a high degree of supporting policies, delivers much larger and longer-lasting impacts on GDP (compared to the baseline), reaching a peak of nearly 3% above the baseline scenario in 2028, with a much more gradual decline throughout the 2030s. The initial boost in GDP in the 1.5°C trajectory is driven mainly by the large amount of low-carbon investment that is needed for a transition. In the long

term, G20 GDP continues to improve due to an improved trade balance from a reduction in fossil fuel imports. Moreover, despite higher energy prices, overall expenditure on energy bills would be lower due to energy savings.

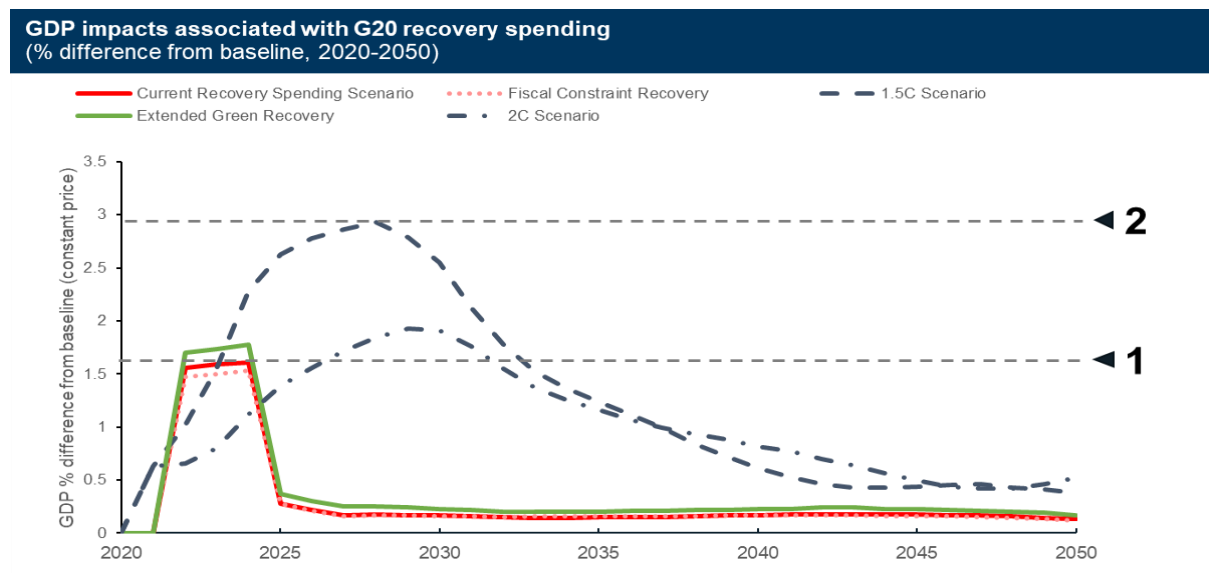


Figure 13. Impact of recovery measures on GDP, 2020–2050 (% difference from baseline)

Source: Cambridge Econometrics modelling, March July 2022

Other recovery scenarios

GDP impacts are somewhat lower in the fiscal constraint scenario, around a 1.5% GDP boost, and somewhat higher in the extended green recovery scenario, a 1.7% GDP boost. The relatively small changes are largely due to the lower weight of developing countries (who are mostly affected) in the G20 total GDP.

5.2.2 Employment

Scenario 1: G20 Recovery

The recovery measures also deliver net positive employment impacts, around 8.1 million jobs in 2024, but like GDP impacts, they are also unsustainable in the long term due to the nature of recovery spending and the lack of supporting policies. This is in contrast with the 1.5°C trajectory, where additional employment benefits are much greater, up to a net 44.1 million jobs at its peak. The difference in employment creation between the G20 recovery scenario and the 1.5°C trajectory is explained by the nature of the scenarios: for the 1.5°C pathway, a large-scale, sustained transition is necessary, while the recovery measures are concentrated in a few years and do not necessarily have sustained growth effects.

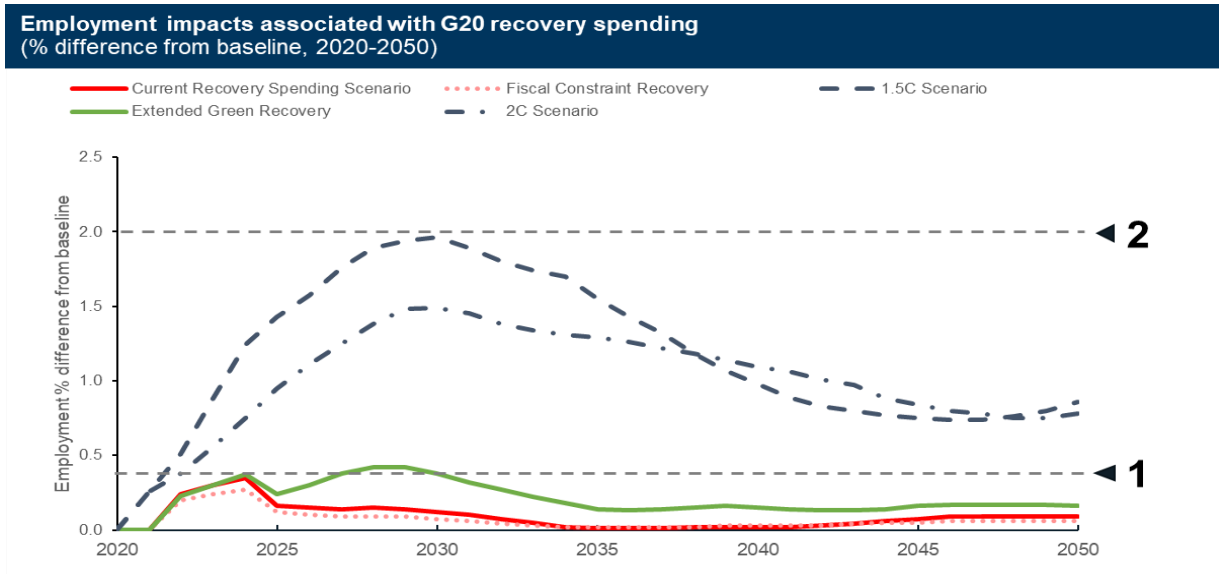


Figure 14. Impact of recovery measures on employment, 2020–2050 (% difference from baseline)

Source: Cambridge Econometrics modelling, March July 2022

Other recovery scenarios

The recovery scenario with extended funding for green measures (Scenario 3) produces more long-standing employment benefits than the current spending G20 recovery scenario (Scenario 1). While Scenario 1 (current spending) peaks in the year 2024, Scenario 3 (extended spending) has two peaks: one in 2024 and one around 2028. In 2024, scenarios 1 and 3 produce similar employment results (8.1 million and 8.6 million, respectively). However, Scenario 3 induces transitional processes in G20 developing countries; therefore, its outcome by 2028 is much more prominent. By 2028, the employment gains of Scenario 1 (current spending) are down to 3.3 million compared to the baseline, while Scenario 3 (extended spending) boosts a higher employment of 9.6 million compared to the baseline. **Considering what has been discussed earlier, a 12.6% increase in the magnitude of overall G20 recovery spending creates about 6 million more jobs (three times the employment impact by 2028) that remain stable over a decade.**

Sectoral contribution to employment

Employment benefits are unevenly distributed across industries. Sectoral distributional impacts are exceptionally small and short-lived in the current recovery spending scenario (Scenario 1, changes in total employment are less than 0.5% in any given sector at any time). During the employment creation peak in 2024, more jobs are created in consumer-related sectors since most of the recovery spending aims at stimulating consumer demand. In agriculture and forestry,⁹⁸ nature-based recovery measures boost employment, with a particularly strong effect in G20 developing countries. This is highlighted even more when

⁹⁸ The agricultural sector includes forestry and related services, which includes the creation and maintenance of green spaces and natural infrastructure.

green policies are boosted in G20 developing countries under the extended recovery support scenario (Scenario 3). In this case, agricultural and forestry employment will increase by over 2% by 2030. As was previously discussed, the extended green recovery scenario (Scenario 3) also leads to more sustained employment effects. Job losses are observed in all scenarios in the mining and utilities sector due to green recovery spending.

As a reference point, the 2°C trajectory brings much stronger employment impacts than any of the recovery scenarios (scenarios 1,2, and 3). Here it can be observed that the transition to a low-carbon pathway creates a high-scale restructuring of the economies. Similar to the recovery scenarios, the mining and utilities sector loses a substantial part of its jobs (up to 15%) in the 2°C trajectory. However, job creation in other sectors (in absolute terms) offsets these losses, resulting in overall net job gains.

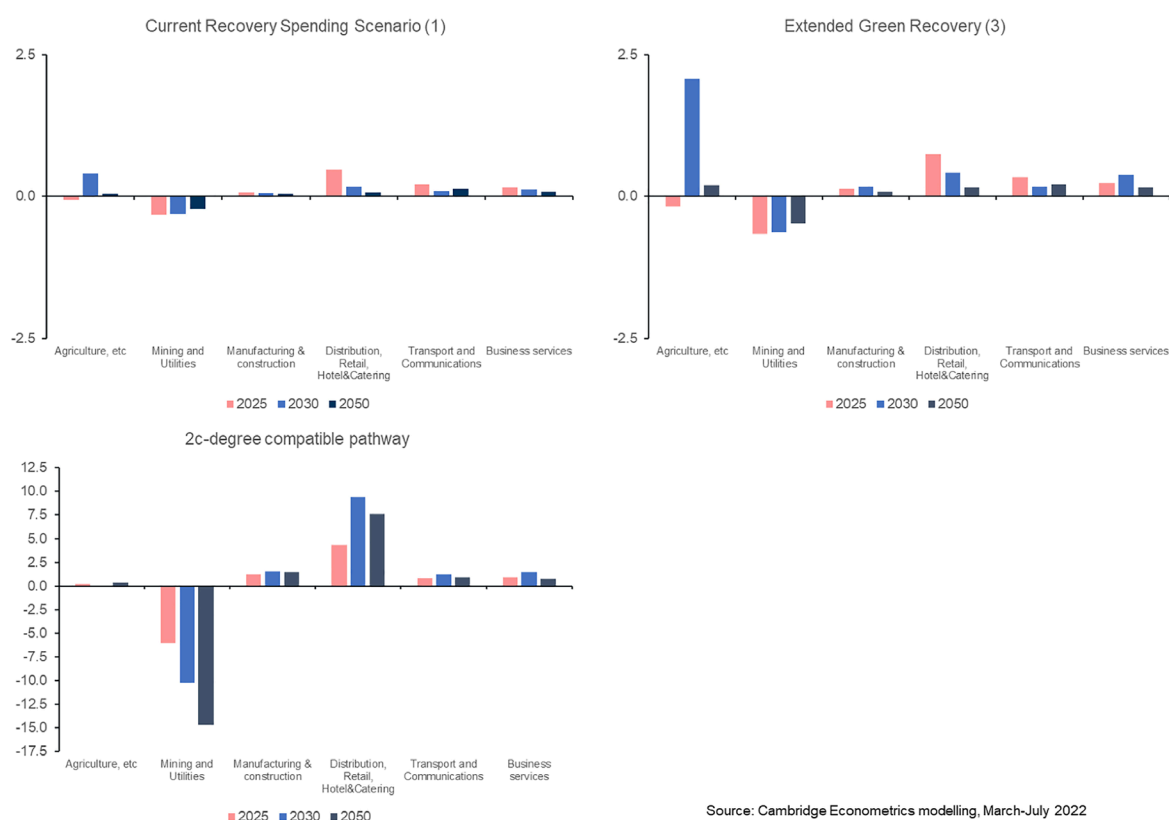


Figure 15. Impact of recovery measures by sector, 2020–2050 (% difference from baseline)

5.3 Impact of the Current High Energy Prices

A sensitivity analysis was carried out assuming higher energy prices than in the initial scenarios 1 to 3. In particular, the sensitivity analysis considered the impact of higher global natural gas prices to simulate the uncertainty in markets and recent developments in energy policy and global geopolitics.

To determine the marginal impacts of higher energy prices (global context) on mitigation, GDP, and employment, the following method was used. First, a baseline scenario and a recovery scenario with high energy prices were set up in addition to the standard baseline scenario (Scenario 1) and the standard current spending recovery scenario (Scenario 1). Second, the differences between the baseline with high energy prices and the recovery scenario with high energy prices were compared against the differences between the standard baseline scenario and the standard recovery scenario.

The sensitivity test resulted in negligible differences across the cases. GDP and employment impacts are within 0.1 percentage point between the standard and high energy price cases. However, there are some relevant differences in emissions reductions at the country level. Especially in European countries with substantial natural gas usage (i.e., Germany and the UK), emissions reduction impacts of the recovery scenarios are somewhat weaker (up to 0.6 percentage point) in 2020–2035, coinciding with higher natural gas prices. The reason for the weaker impacts is that the consumption of natural gas has already diminished due to its high price.

For recovery measures in general, given the uncertainties across fossil fuels and their pricing and market, there may be a case for an “organic” switching, from fossil fuels to other energy sources in some economic sectors. However, it could also become more difficult for policymakers to create policies that can bring further emission abatement—as the low-hanging fruits might disappear.

5.4 Results Overview

Table 4 below shows an overview of the key results. The main scenario, current recovery spending (Scenario 1), creates an approximate 1% sustained emissions reduction impact; it also has positive, small economic and job impacts, but these largely diminish over time and are concentrated around the implementation of the stimulus.

Table 4. Overview of simulation results, measured in % difference from the baseline scenario

Scenario	Reduction of CO ₂ emissions		Economic activity (GDP)		Employment (jobs)	
	Short term (by 2025)	Long term (by 2050)	Short term	Long term	Short term	Long term
Scenario 1: G20 recovery	-0.94	-1.01	0.28	0.13	0.16	0.09
Scenario 2: G20 recovery under fiscal constraints	-0.83	-0.91	0.28	0.12	0.12	0.06
Comparison: Scenario 1 vs Scenario 2	-12%	-10%	0%	-8%	-25%	-33%
Scenario 3: G20 recovery with extended funding for green measures in G20 developing countries	-1.73	-1.64	0.37	0.17	0.24	0.16
Comparison: Scenario 1 vs Scenario 3	84%	62%	32%	31%	50%	78%
Climate scenarios for comparison						
1.5°C pathway	-31.28	-87.64	2.63	0.38	1.43	0.86
2°C pathway	-19.86	-75.7	1.39	0.52	0.95	0.78

6 Recommendations to Drive NDC Achievement Through a Sustainable Recovery

To ensure an inclusive recovery that supports the achievement of the Paris Agreement, individual and joint G20 actions are recommended to focus on six areas of intervention.

1. Reinforcing the positive climate impacts derived from the announced G20 recovery spending beyond 2025.

As of 2022, G20 members have announced a recovery spending of about USD 3.45 trillion. However, only 33% of the total announced recovery spending has a direct impact on reducing greenhouse gas (GHG) emissions and supporting adaptation. The long-term emissions reductions derived from the current recovery spending are moderate, closing the emissions gap by only 1% for the 1.5°C scenario during 2022–2050. The modeling of a G20 recovery scenario with extended support indicates that increasing recovery spending by approximately 13%, with a focus on green measures and G20 developing countries, can boost emissions reductions by 62% by 2050, compared to the base case scenario.

The recommendations below address the main reasons why the announced recovery spending has a limited contribution to emissions reductions.

- a. Recovery spending is concentrated in G20 developed countries, with 64% of the total recovery spending having been announced. Therefore, recovery support that encourages a structural low-carbon transformation of future emitters should be increased.
- b. Across all G20 members, recovery spending is mostly focused on two economic sectors, energy and transport, while other sectors (e.g., industry, forestry, and waste management) receive less support. A more balanced spending across sectors could accelerate an inclusive recovery.
- c. Recovery spending allocation could further pursue long-term behavioral shifts in consumption or production by addressing the following:
 - Prevalence of stand-alone green recovery measures, which offer ambiguous long-term market signals or incentives for long-term sustainable growth.
 - Prevalence of green recovery spending with short-term financial allocations, limiting a long-term low-carbon transition.
 - Prevalence of a top-down approach to recovery, which does not scale up local-level measures.

The lack of alignment between current climate and economic development policies and recovery measures potentially hinders action, financial flows, and impact. Conflicts between existing policies and recovery support are particularly observed in emission-intensive sectors such as electricity generation. Announced recovery spending should reinforce climate policies and provide a coherent low-carbon development pathway.

- Allocate resources to identify cost-optimal interventions—complementary to planned or ongoing projects—to reduce emissions in the current least supported sectors, such as industry, forestry, and waste management.
- Seek cross-sectoral and cross-regional integration of recovery measures to avoid stand-alone, short-term interventions with limited impact on a long-term behavioral shift.
- Promote a bottom-up approach to the design and implementation of recovery measures. A bottom-up implementation of recovery measures might adequately consider existing local initiatives, increasing efficiency and effectiveness as efforts focus on specific actions and incentivize subnational governments to hold a stake in the social protection response. This could be done by increasing vertical integration or coordination between different government levels so local interventions can be scaled up at a national level.
- Ensure policy coherence between recovery efforts and a low-carbon pathway. This can be done by identifying synergies, assessing trade-offs, and detecting political barriers to individual interventions before allocating resources.

2. Ensuring balanced support for both adaptation and mitigation recovery actions.

There is an imbalance of recovery spending between mitigation and adaptation interventions in both G20 developed and developing countries. For example, only four G20 members explicitly considered investing in adaptation or resilience in their recovery plans (i.e., China, France, the Republic of Korea, and the UK). The imbalance between recovery spending on mitigation and adaptation could lead to slower and less definite actions to confront climate-related challenges and compound risks, particularly for the more vulnerable G20 members. There is also a risk of missing out on the social and environmental co-benefits that adaptation recovery measures can provide. Therefore, the recommendations below seek to guide the use of recovery funds for both adaptation and mitigation measures.

- Prioritize and/or assign potential new recovery support based on:
 - finance gaps/needs assessment studies
 - dependence of the intervention on public resources
 - potential contribution to the SDGs
 - historic recovery support to the sector
- Improve alignment of recovery measures with NDCs, NAPs, and economic priorities, and incorporate the effect of recovery interventions into the long-term plans to reduce emissions (e.g., LT-LEDS).
- Utilize recovery resources to overcome the knowledge barriers to adaptation by increasing support for adaptation-related research.
- Increasing the understanding of climate change impacts at a geographically more granular level, as well as at a sectoral level, the potential for effective climate risk

reduction, and the systemic risks of climate change would enable effective adaptation interventions and the development of adaptation technologies.

- Increase the availability of financial resources for G20 developing countries, prioritizing those with high vulnerability to and low preparedness to address the negative impacts of climate change.

3. Overcoming fiscal constraints for future and ongoing recovery support.

G20 developing countries face tight fiscal constraints on implementing long-term recovery measures. The fiscal constraints recovery scenario of this analysis shows a 9.3% reduction in the already moderate impact on carbon dioxide (CO₂) mitigation and a 36% reduction in the employment impacts, compared to the base case.

Furthermore, G20 developing countries with tight fiscal space and rising levels of debt experience limitations on the type and pace of recovery they can pursue. These limitations can widen inequality and hinder a country's ability to achieve more ambitious climate objectives. A two-track and two-speed economic recovery could result in slower and less definite actions to confront climate-related challenges.

Limited public and international funds mean the private sector is crucial in supporting sustainable recovery measures. The recommendations below seek to increase the efficiency of public sector spending as well as leverage private sector financing and its engagement in recovery measures.

- To crowd in private finance for recovery, focus on developing a pipeline of investment-ready sustainability projects that can easily access blended finance or utilize the innovative financing mechanisms already supported by G20 members.
- Prioritize investments in economic sectors that might have future impacts on fiscal revenues or widen the tax base by reducing informality while seeking mitigation or adaptation benefits. *For example, cash transfer programs for forestry restoration, in combination with social protection schemes, seek to promote the integration of the formal economy. Formal employment would raise tax revenue.*
- Incorporate the ongoing recovery spending into the country's annual budget through a Climate Budget Tagging and performance-based budgeting approach. *A performance-based budgeting approach can improve the effectiveness and efficiency of public expenditure for recovery. Moreover, it would facilitate the linkage of recovery spending focused on mitigation and adaptation with the future annual budget allocation for sustainable activities.*
- Reallocate international support or extended economic stimulus and technical assistance to developing countries to address the two-track and two-speed economic recovery from the pandemic, focusing on countries with high fiscal constraints and high climate vulnerabilities.

4. Maintaining, medium term (5–14 years) and long term (15–20 years), the positive impacts of recovery spending on job creation, with a focus on green jobs.

G20's announced recovery measures will deliver net positive employment impacts, boosting GDP by around 1.5% between 2022 and 2024 and supporting approximately 3.7 million jobs in 2025 (employment peak). However, these impacts are not sustained long term, declining sharply around three years after effective spending. Without supporting policies and actions to maintain long-term growth, the impacts of recovery spending will be limited to multiplier impacts of expenditures during the stimulus period. For example, it is estimated that extended recovery support can boost outcomes, with employment impacts being 80% higher in 2050, compared to the base recovery scenario.

Moreover, despite the importance of skills development to ensure an inclusive recovery and a low-carbon transition, it is estimated that G20 recovery spending on green skills training amounts to approximately 1% of the total recovery budget and is particularly modest in G20 developing countries.

Therefore, the recommendations below aim to maximize the creation and long-term maintenance of green jobs linked to recovery measures and to further support the development of a labor market for a low-carbon development pathway.

- Avoid stand-alone job creation, skilling, reskilling, or training interventions by developing recovery policies with a cross-sectoral approach that considers the diverse labor requirements and impacts across sectors. A cross-sectoral approach could increase the employment multiplier effect on investment.
- Boost private sector participation in skilling, reskilling, and training programs by linking recovery measure support to SMEs and entrepreneurship to recovery measures supporting labor market development. Linking employment generation sources with skills development recovery programs (i) reduces the risk of mismatching skill demands with skills development, (ii) encourages the population to undertake continuous learning, and (iii) helps reduce the gap between high-skill and low-skill employees.
- Utilize a bottom-up approach to devise recovery measures linked to skilling, reskilling, and training that successfully targets vulnerable populations and most unattended sectors.
- Promote the inclusion of green job creation in climate targets at the national level.
- Promote knowledge sharing between G20 members to emulate the best examples of skills development programs for addressing future labor market demands.
- Ensure the continuous measurement and monitoring of green jobs creation linked to recovery measures by increasing countries' capacity to define, quantify, and analyze green jobs and future labor market needs. Accurate national data and analyses on employment inform policymakers on potential actions to improve labor markets, facilitate the identification of job creation opportunities, and represent the precondition for a continuous improvement process.

5. Measuring the effectiveness of sustainable recovery spending by improving reporting, disclosure, and continuous tracking of recovery measures.

Only three countries out of all G20 members have explicitly stated indicators to measure the climate impact of their recovery measures. These members are Canada, the European Union, and the United States. The following recommendations aim to promote the consistent quantification of recovery impacts across G20 members to support the development of data-informed policies and allow for continuous improvement of recovery measures.

- Increase transparency in announced and implemented resources tagged as recovery by (i) systematically and consistently recording recovery spending and (ii) making the information publicly available. Open data on recovery spending can support policy decisions based on technical assessments and facilitate the improvement of interventions.
- Implement cross-ministerial/cross-sectoral technical groups to evaluate recovery targets in coordination with national climate and development objectives.
- Establish a standard definition of what constitutes recovery spending and set global indicators or recovery to ensure comparability between countries. These definitions and indicators could be linked to existing SDG indicators and climate targets.

6. Tackling compound risks.

Individual recovery measures by themselves make it difficult to tackle compound risks exacerbated by the COVID-19 crisis. Not addressing compound risks leads to more significant and sustained adverse impacts on lives, livelihoods, and ultimately sustainable development outcomes.⁹⁹ The following recommendations aim to prompt the uptake of a multi-dimensional risk recovery approach.

- Increase resource allocation for the development of disaster risk management frameworks/strategies that can better prepare the country to identify and implement resource deployment strategies, governance directives, and policy responses for a combination of environmental, socioeconomic, and political risks.
- Strengthen transboundary recovery efforts capable of increasing resilience in multiple areas simultaneously (i.e., environmental, economic, and social).

⁹⁹ Refers to eradicating extreme poverty; reducing all poverty by half; implementing social protection systems; ensuring equal rights to ownership, basic services, technology, and economic resources; and building resilience to environmental, economic, and social disasters.

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8. Annexes

The database of the Global Recovery Observatory contains policy items that are assessed, along with archetypes and sub-archetypes, for potential environmental impact (e.g., GHG emissions, air pollution, natural capital), social impact (e.g., wealth inequality, quality of life, rural livelihood), and economic impact (e.g., multiplier, speed of implementation). The policy items are first mapped to 40 exhaustive and mutually exclusive archetypes as well as 158 sub-archetypes. To assess GHG emissions, both short term and long term (i.e., high increase, increase, little net change, decrease, high decrease), a five-point Likert scale is used. A three-point Likert scale is used for all other assessments (i.e., improve, little net change, regress). Within the broad archetype categories, sub-archetypes are used to account for assessment variation.

GHG assessments include a temporal component, where the net effect is assessed both in the short term (while policies are being implemented) and long term (following policy implementation). This allows for greater nuance in green assessments and ensures that non-uniform emission life cycles are considered. Although long-term emissions certainly have a higher significance, short-term emissions are often politically relevant as governments strive to meet year-by-year emissions targets under international agreements. Clean energy infrastructure, for example, can be recognized for its short-term GHG impacts, such as through material use, and for its long-term effects of reducing GHG emissions through the provision of clean energy. Therefore, it is important to identify varied emissions profiles.

GHG emissions describe the atmospheric release of CO₂, CH₄, and other gases that create a warming greenhouse effect. The Global Recovery Observatory adopts the national rate of emissions with no intervention, as expected at the time of policy intervention, as a baseline for assessing the GHG emissions impact of archetypes. Short-term and long-term GHG emissions impacts are assessed separately on the five-point Likert scale. On this scale, -2 reflects a large increase in GHG emissions, -1 reflects a moderate increase, 0 reflects little or no change, +1 reflects a moderate decrease, and +2 reflects a large decrease. A negative score implies that the national rate of emissions is likely to increase, in comparison to a scenario where the investment is not made, and a positive score implies that the national rate of emissions is likely to reduce, compared to a scenario where the investment is not made.



1. Survey Questionnaire – Impact of a Sustainable Recovery in G20 Countries

Survey - Impacts of a sustainable recovery in G20 countries

IMPORTANT - READ BEFORE STARTING

This survey aims to collect and validate data on green recovery expenditure and its impacts on NDCs (mitigation and adaptation) across all G20 member countries.

Your response will be used only for the preparation of the Climate and Sustainability Working Group Study (**Output 1.1): Stocktaking of economic, social, and environmental impacts of sustainable recovery, including impacts on NDC implementation.**

Delegates of the Climate and Sustainability Working Group are kindly invited to submit answers by Friday 29 April 2022.

The survey has 5 sections:

1. Contact Information
2. Validation of Green Recovery Expenditure
3. Budgeting Process for Green Recovery
4. Impacts of Green Recovery on Adaptation
5. Efforts to Measure Impacts of Green Recovery

The survey can be answered by more than one ministry or government agency simultaneously as more than one entry may be submitted and not all sections of the survey have to be responded to in order to submit a response.

For any questions and comments, please reach out to Diana Quezada, GGGI -Green Recovery Lead –diana.quezada@gggi.org.

1. CONTACT INFORMATION

This survey might be followed by a brief interview, based on the availability of the respondent

1. Country

2. Full Name of Respondent

3. E-mail

4. Organization

5. Are you available to be contacted for further clarifications?

Yes No

2. GREEN RECOVERY SPENDING

The Climate and Sustainability Working Group Study (Output 1.1) utilizes the latest data on Green Recovery Expenditure published by the Global Recovery Observatory. (<https://recovery.smithschool.ox.ac.uk/tracking/>)

We aim to identify potential discrepancies between the Global Recovery Database and official national data.

Definitions used by the study

- Rescue Spending - Spending on short-term measures designed for emergency support to keep people and businesses alive
- Recovery Spending - Spending on long-term measures to boost economic growth
- Green Recovery Spending - Spending on measures that promote by themselves or have conditionalities for the mitigation of GHG emissions, adaptation against climate change impacts.

6. What is the total announced recovery spending in your country since March 2020 as of the end of March 2022?

7. Do you monitor the environmental and climate impact of recovery spending? If so, what proportion (%) of your announced recovery spending do you considered green?

8. Provide links or upload any national documents that can help us corroborate the total recovery announced spending provided above.

(E.g., List of policy/programme/projects/interventions approved for green recovery across all economic sectors, budgetary documents, recovery plans with investment amounts stated)

9. Space to provide links and/ or a brief explanation to uploaded documents on question 8

10. Provide links or upload the latest national green recovery or recovery plan/ roadmap/ strategy published.

(If your country does not have a recovery plan please provide the links to / name of the policy documents being utilized to guide recovery)

11. Space to provide links and/ or a brief explanation to uploaded documents on question 10

3. GREEN RECOVERY BUDGETING

This section aims to assess how countries are incorporating their green recovery spending into their national budget planning process? and Which policy measures are being implemented to finance green recovery?

Definitions used by the study

- Rescue Spending - Spending on short-term measures designed for emergency support to keep people and businesses alive
- Recovery Spending - Spending on long-term measures to boost economic growth
- Green Recovery Spending - Spending on measures that promote themselves or have conditionalities for the mitigation of GHG emissions, and/or adaptation against climate change impacts.
- Green Budget for Green Recovery Spending - National or Subnational Budget allocated for Green Recovery Measures

12. What is the total green recovery budget in your country as of the end of March 2022? (USD Billion)

13. Does your country have any planned or ongoing policy/program/project/intervention for integrating green recovery budget into the ongoing budgeting process?

Yes No

If yes, briefly describe the green recovery budgeting policy/initiative. (Name of Initiative, Status, Timeline of Implementation, Lead Institution, Objective, Relationship with Green Recovery, etc.)

14. Upload any national documents that could help us corroborate the information provided above.

4. IMPACTS OF GREEN RECOVERY ON ADAPTATION

15. Mark the square if your country has implemented at least one green recovery intervention related to adaptation (Columns) incurring on one or more categories of recovery impact (Rows)

	Resilience in food production systems (agriculture/ Crop Production)	Resilience in food production systems (Animal and Livestock)	Resilience in food production systems (Fisheries Yields and Aquaculture Production)	Conservation and/ or restoration of natural capital	Sustainable use of terrestrial and marine biodiversity and ecosystem services	Water resource management	Development of resilient infrastructure	Circular Economy	Prevention and management of negative impacts of climate change on the human health and wellbeing	Implementation of risk disaster management systems
Governance (Includes: Awareness-raising, Capacity Building, Enhanced Policy Framework, Education, Collaboration, Public Procurement, Regulation, Strategy)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job Creation	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other Social Benefits (Incl. Better Work Environment, Gender Equality, Wage Improvements, etc.)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Environment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Finance/ Investments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Infrastructure and Technology	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Economy and Businesses (Incl. Support to SMEs, Economic Efficiency, and sustainable production)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Others :

16. Please provide a case example for each of the recovery interventions related to adaptation (columns) marked as “yes” in the matrix above. (Briefly describe, add links and/ or upload relevant documents)

17. Upload any documents to respond to question 16.

18. Please provide the number of total estimated beneficiaries from the -announced recovery interventions related to adaptation- (columns) marked as “yes” in the matrix above? (Million People

Resilience in food production systems (Agri)

Resilience in food production systems (Livestock)

Resilience in food production systems (Fisheries)

Conservation and/or restoration of natural capital

Sustainable use of biodiversity or ecosystem services

Water management

Circular economy

Development of resilient infrastructure

Implementation of risk disaster management systems

Prevention and management of negative impacts of climate change on human health and wellbeing

19. If available, please provide Impact Assessments or similar documents that establish the impact of the announced recovery policies.

5. EFFORTS TO MEASURE IMPACTS OF GREEN RECOVERY

The Climate and Sustainability Working Group Study (Output 1.1) aims to measure green recovery impacts and progress in the different areas of adaptation via selected Global SDG indicators or country-specific indicators.

Thus, this section aims to identify key green recovery indicators and the number of people who benefited from recovery measures focused on adaptation in each G20 country.

20. Which indicators are you using to track the impact of your recovery policies? Please, list all indicators or provide a link to the relevant documents.

21. Upload any national documents that can support the response to question 19

22. Has your country estimated the potential averted costs/losses from climate change through the implementation of green recovery total or individual interventions? If yes, please explain the indicators used for that identification, or add link to relevant documents

23. Has your country considered alignment between, or contribution of, green recovery plans and interventions to Sustainable Development Goals? If so, how? Please explain or add link to relevant documents

2. Survey Responses – Recovery Spending Compared with Observatory Data

Green Recovery Spending		
Country	What is the total announced recovery spending in your country since March 2020 as of the end of March 2022?	Budget mentioned in the Global Recovery Observatory
Germany	130 billion Euro	Total spending: USD 1,357.74 billion Recovery spending: USD 92.23 billion Green Spending: USD 0.04 billion
Indonesia	The Indonesian government spent a recovery budget with a total amount of IDR 658.6 trillion. (USD 45.2 billion) in 2021, whilst realisation for 2022 until April 2022 reached IDR 29.3 trillion. (USD 2 billion), or 6.4% of the total 2022 budget allocation of IDR 455.62 trillion (USD 31.4 billion).	Total spending: USD 84.35 billion Recovery spending: USD 0.15 billion Green spending: USD 0.00 billion
Japan	□JPY 8,320.9 billion (total amount for 2020 specifically relating to green recovery). □JPY 9,192.8 billion (total amount for 2021 specifically relating to green recovery). □JPY 106,609.7 billion (the FY2021 Budget Framework, not specially for green recovery but the total amount of the budget).	Total spending: USD 1,292.56 billion Recovery spending: USD 286.08 billion Green spending: USD 0.12 billion
Russian Federation	The recovery spending according to the National Recovery Plan accounts for RUB 6.4 trillion in total and includes 42 Strategic Initiatives (for example: initiatives that have a positive impact on adaptation in the areas of agriculture, fisheries and food production, inland water transport infrastructure, infrastructure and transport in connection with the adaptation measures started in 2019).	Total spending: USD 40.76 billion Recovery spending: USD 0.77 billion Green spending: USD 0.00 billion
Spain	EUR 79,603,000,000	Total spending: USD 1,249.97 billion Recovery spending: USD 207.15 billion Green spending: USD 0.06 billion
Saudi Arabia		Total spending: USD 100.52 billion Recovery spending: USD 4.21 billion Green spending: USD 0.00 billion
United States	The Bipartisan Infrastructure Law (BIL), signed by President Biden on November 15, 2022, provides roughly USD 1 trillion in funding that aims to rebuild America's roads, bridges, and rails; expand access to clean drinking water; ensure every American has access to high-speed internet; tackle the climate crisis; advance environmental justice; and invest in communities that have too often been left behind.	Total spending: USD 5,455.07 billion Recovery spending: USD 1,118.77 billion Green spending: USD 0.49 billion

3. List of Recovery Archetypes from the Global Recovery Observatory to Be Utilized in the Report

Further definitions of the spending archetypes can be obtained from the GRO methodology document: [20210201-Global-Recovery-Observatory-Draft-Methodology-Document-.pdf \(ox.ac.UK\)](#).

- R Targeted recovery cash transfers
- S Tourism and leisure industry incentives
- T Electric vehicle incentives
- U Electronic appliance and efficiency incentives
- V Green market creation
- W Other incentive measures
- X Worker retraining and job creation
- Y Education investment (non-infrastructure)
- Z Health care investment (non-infrastructure)
- α Social and cultural investment (non-infrastructure)
- β Communications infrastructure investment
- γ Traditional transport infrastructure investment
- δ Clean transport infrastructure investment
- ε Traditional energy infrastructure investment
- η Clean energy infrastructure investment
- θ Local (project-based) infrastructure investment
- λ Building upgrades and energy efficiency infrastructure investment
- μ Natural infrastructure and green spaces investment
- π Other large-scale infrastructure investments
- σ Armed forces investment
- τ Disaster preparedness and capacity building investment
- φ General research and development investment
- ψ Clean research and development investment

4 List of Selected (sub-)Archetypes to Be Utilized

Sector	Policy Archetype	Name Policy Archetype	Policy sub archetype	Name Policy sub archetype	Long-term GHG
Agriculture & forestry	μ	Natural infrastructure and green spaces investm	μ1	Public parks and green spaces investment	1
Agriculture & forestry			μ2	Tree planting and biodiversity protection	2
Agriculture & forestry			μ3	Ecological conservation initiatives	2
Agriculture & forestry			μ4	Waterway protection and enhancement	1
Agriculture & forestry			μ5	Agricultural Uplift	0
Agriculture & forestry			μdiscriminate		2
Agriculture & forestry	ψ	Clean research and development investment	ψ2	Agriculture R&D programmes	2
Building	ι	Buildings upgrades and energy efficiency infrast	ι1	Green retrofitting programs (including daylighting, electricity and electrification, insulation)	2
Building			ι2	Rooftop solar support	2
Building			ι3	Other building upgrade support	0
			ιdiscrimin	Various/ unspecified grants to improve energy efficiency and to install renewable	2
Building	θ	Local (project based) infrastructure investment	θ>	General new housing investment	0
Building			θ3	Clean new housing investment	1
Building			θ4	Public building investment	0
Building			θdiscrimin	Various/ unspecified housing and infrastructure investments	0
Transport	δ	Clean transport infrastructure investment	δ1	New public transport systems or line expansions	2
Transport			δ2	Existing public transport capacity expansions	2
Transport			δ3	Electric vehicle charging infrastructure	2
Transport			δ5	Cycling and walking infrastructure	2
Transport			δ6	Efficiency initiatives to improve dirty transport	2
			δdiscrimin	Promotion of other mobility/ transport such as shared transportation, public transp	2
Transport	γ	Traditional transport infrastructure investment	γ1	Road construction	0
Transport			γ2	ICF engine automobile support	-2
Transport			γ3	Aviation infrastructure	-2
Transport			γ4	Port and ship construction	-1
Transport			γ5	Rail construction and capacity	0
Energy	η	Clean energy infrastructure investment	η1	New or refurbished renewable energy generation facilities	2
Energy			η2	New or refurbished nuclear energy generation facilities	2
Energy			η3	New biofuel and other renewable fuel infrastructure	2
Energy			η4	Upgraded (or new) transmission infrastructure	2
Energy			η5	Upgraded (or new) distribution infrastructure including smart grids	2
Energy			η6	Hydrogen infrastructure	2
Energy			η7	Battery and storage infrastructure	2
Energy			η8	Carbon capture and storage/utilisation	2
Energy			η9	Other initiatives to clean existing dirty energy assets	2
Energy			η10	Resilience of grids e.g. for more flexibility	2
Energy	ε	Traditional energy infrastructure investment	ε1	New or refurbished power plants	-2
Energy			ε2	New or refurbished refineries	-2
Energy			ε3	New or refurbished coal mines and oil/gas fields	-2
Energy			ε4	New or refurbished infrastructure for transport and transmission of fossil energy inputs/outputs	-2
Energy			ε5	Improved power access to SMEs (incl. Refurbishment for natural gas pipelines)	-2
Energy	ψ	Clean research and development investment	ψ1	Energy sector R&D programmes	2

5. Global 1.5°C Policies

The following policies are applied to all countries from 2021 onward in the global 1.5°C scenario. Policies marked with * are considered green stimulus policies.

Power sector policies:

- Feed-in tariffs for onshore and offshore wind generation (solar PV does not benefit from additional support policies beyond what is already in place).*
- Subsidies for investment costs for other renewables (geothermal, concentrated solar power, biomass, wave, and tidal), excluding hydro and solar PV. *
- Regulation of coal and gas generation. Coal is regulated so that new plants not fitted with CCS cannot be built, but existing plants can run to the end of their lifetimes. All remaining coal plants are forced to shut down in 2040. Gas plants all shut down by 2050.
- Public procurement for CCS on coal, gas, and biomass plants installations in many developed and middle-income countries where this does not already exist.*

- The use of BECCS (bioenergy with carbon capture and storage) is supported by existing policies and the introduction of further public procurement policies to publicly fund the building of BECCS plants in all countries endowed with solid biomass resources.*
- Hydro is regulated directly in most regions to limit expansion, given that in most parts of the world, the number of suitable sites is limited, and flooding new sites faces substantial resistance from local residents.

Road transport policies:

- Ban on the use of inefficient petrol and diesel vehicles.
- Capital cost subsidies on EVs. *
- Tax on petrol and diesel use in road transport.
- Tax on the purchase price of high-carbon vehicles.
- Public procurement programs for supporting the diffusion of EVs.*
- Yearly vehicle taxes linked to emissions.

Household heating policies:

- Taxes on household use of fuels for heating (coal, oil, and gas).
- Capital cost subsidies for heat pumps and solar water heaters.*
- Public procurement policies to increase the market share of the heat pump industry.*
- Ban on the sale of new coal, oil, and inefficient gas boilers.

Steel sector policies:

- Ban on the construction of new inefficient coal-based steel plants.
- Capital cost subsidies for new lower carbon plants, such as biomass and hydrogen-based iron ore reduction and smelting, and to fit CCS to existing high-carbon steel plants.*
- Subsidies on the consumption of low-carbon energy carriers.*
- Public procurement to build new low-carbon steel plants to develop markets in which they do not exist.*

Cross-sectoral policies (except sectors already mentioned above):

- Energy efficiency investments for end users are assumed to change in line with the IEA (2019), with corresponding investments in the respective sectors.*
- A global carbon price is applied to all end fuel users. The carbon price is exogenous and starts from USD 17 in 2020, rising to USD 250 in 2050 in real term.

6. Examples of Recovery Measures with a Positive Impact on Climate and Adaptation

Example 1. The Weatherization Assistance Program in the United States

The United States installed in 1976 the Weatherization Assistance Program to reduce energy costs for low-income households by increasing the energy efficiency of their homes while ensuring their health and safety. During the global financial crisis recovery, as well as during the COVID-19 pandemic recovery, investments in energy efficiency retrofits played a stimulatory role through an extended Weatherization Assistance Program. For the United States, expansion of existing programs, rather than investment in new programs, may reduce implementation costs and maximize the chances of success. Moreover, expanded programs could catalyze swift job creation in construction and manufacturing (E2, 2020). To ensure that economic returns are maximised (Allcott & Greenstone, 2012) and that marginalized populations who carry a disproportionate health and economic burden during the pandemic can reap the highest benefits, a careful targeting is required.

The United States can be seen as a key example of a country that is likely to benefit from stimulus investments in energy efficiency retrofitting programs. With one of the highest per-capita energy consumption rates in the world (World Bank, 2014), such energy efficiency programs can both reduce costs for low- and middle-income individuals and reduce GHG emissions.

Example 2. The Korean Green New Deal

The Korean Green New Deal aims to reduce GHG emissions by 16.2 million tons, relying on green industry innovation, the construction of green infrastructure, and green energy (Lee et al., 2020; Hwang et al., 2020). As explained by Oxford University (2021), the green energy component of the program includes investment in renewable energy production (wind and solar), hydrogen investment, and, in distinction to other nations, smart grid investment. Building on the South Korean Smart Grid National Roadmap, smart grids could support higher renewable energy penetration, bring more efficient electricity distribution by enabling demand response capabilities, and in this way use EVs to bolster a smart city ecosystem (see Government of the Republic of Korea, 2012).

Furthermore, it is notable that South Korea's green energy spending plan aims to "support a fair transition" and thereby cushion displaced workers (Lee and Woo, 2020). Another example for this kind of inclusive policy is Spain: The Spanish government earmarked parts of their recovery spendings to a "just and inclusive energy transition," emphasizing a green transition that promotes job creation and provides targeted support to sectors and communities whose livelihoods may be affected by the transition.

Example 3. Mexico (mainstreamed in Argentina, Colombia, Peru) – Improving cycling infrastructure for healthy people and cities

In July 2020, GIZ Mexico's Cities and Climate Change program assisted the implementation of a temporary bike lane for the city of León. Inspired by the public's positive response to the measure, the Mexican government supported further municipalities in implementing pop-up bike lanes through technical assistance in the design process, operations, communication strategies, monitoring and evaluation (Juliet Phillips, Felix Heilmann, 2021).

Building on the insights of the Mexican experience, the Inter-American Development Bank (IADB) published a guide on how to set up pop-up bike lanes and announced a plan to support three more cities in other Latin American countries: Fusagasugá and Tunja in Colombia, and Santa Fe in Argentina. According to IISD research, investments in cycling infrastructure are also a good opportunity to create green jobs.

The processes of planning and implementing pop-up bike lanes were characterized by fast decision-making and trial-and-error approaches. Implementation was realized through low-cost interventions. The focus on key routes for commuters and routes into community centers was critical to ensure residents' needs were met and bike lanes were accepted.

Example 4. Creating employment and supporting biodiversity protection through national economic stimulus programs

In May 2020, India announced as part of its Aatma Nirbhar Bharat stimulus-oriented reform campaign that it would encourage the simultaneous fostering of biodiversity, job creation, and tribal community support by allocating over USD 800 million from its Compensatory Afforestation Fund Management and Planning Authority (CAMPA). The campaign aims to support employing tribal and Adivasi people (collective term for tribes of the Indian subcontinent) for plantation work, forest management, and wildlife protection management. Consequently, it aims to reduce unemployment in rural and tribal populations while avoiding market-based financing of stimulus activities as it unlocks existing, idle public funds (Philips, Heilmann. 2021).

Concern has been raised in the past that afforestation under CAMPA has promoted monocultures rather than biodiversity. However, some recent projects have ensured a higher level of biodiversity, such as Dhubri's biodiversity park, which is set to have one thousand plant species (egreenwatch, 2021).

The campaign can be seen as a good example on improved representation of tribal representatives' decision-making processes. The World Resources Institute highlights the need to consider the complex people-environment relationships that govern land restoration projects, taking into consideration the Indian caste system and how it affects decision making (Singh, Shelar. 2020).



CLIMATE SUSTAINABILITY WORKING GROUP (CSWG) G20 2022

STUDY ON THE ROLE OF MITIGATION-ADAPTATION CO-BENEFITS FOR CREATING A MORE RESILIENT FUTURE FOR ALL

Final Report



September 2022



STUDY 1.2

STUDY ON THE ROLE OF MITIGATION-ADAPTATION CO-BENEFITS FOR CREATING A MORE RESILIENT FUTURE FOR ALL

Indonesia, September 2022

Recover Together, Recover Stronger

Authors :



Contributors :



Acknowledgments

Authors

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List of Abbreviations and Acronyms

BAU	Business as usual
CCS/CCUS	Carbon Capture and Storage/Carbon Capture Utilisation and Storage
CH ₄	Methane
CO ₂	Carbon dioxide
EbA	Ecosystem-based approaches to climate change adaptation (Ecosystem-based adaptation)
Eco-DRR	Ecosystem-based disaster risk reduction
EV	Electric vehicle
G20	Group of Twenty
GDP	Gross domestic product
GGGI	Global Green Growth Institute
GHG	Greenhouse gas
GRO	Global Recovery Observatory
IPCC	Intergovernmental Panel on Climate Change
N ₂ O	Nitrous oxide
NAP	National Adaptation Plan
NbS	Nature-based solutions
NDCs	Nationally Determined Contributions
NGO	Non-governmental organisation
R&D	Research and Development
REDD+	Reducing Emissions from Deforestation and Forest Degradation (conservation, sustainable management of forest and enhancement of forest carbon stocks, particularly in developing countries)
SDGs	Sustainable development goals
SWSA	Secured strategic water source areas
UNICEF	United Nations Children's Fund
WASH	Water, sanitation and hygiene

Executive summary

This study addresses the sustainable development co-benefits of climate policy, and how future climate policies and measures can drive co-benefits in the context of recovery from the Covid-19 pandemic (study 1.2). The work complements the G20 Climate Sustainability Working Group study 1.1 ‘Stocktaking of economic, social, and environmental impacts of sustainable recovery, including impacts on NDC implementation’.

The Covid-19 pandemic has compounded negative impacts from climate change, particularly for vulnerable groups of society, and brought to light vulnerabilities in global health and social security systems. The pandemic has also highlighted the negative impacts of disruption to education and agricultural production, with particularly severe impacts on children and women. Climate change is also likely to exacerbate such disruptions across sectors and societal groups, through impacts such as extreme weather (that can cause loss of livelihoods, injuries and reduced food and water security) or the expected increase in the prevalence of vector-borne diseases such as malaria.

Societal groups most impacted by Covid-19 are also among the groups most vulnerable to the impacts of climate change, in particular:

- **Elderly people**, through their vulnerability to vector-borne diseases and natural disasters, restricted access to and availability of healthcare, and food price volatility.
- **Children**, through disruption to education due to extreme weather and heat stress, increased water-fetching duties, climate-related migration, and increased risk of child labour (where climate-change impacts disrupt family incomes), as well as higher vulnerability to vector-borne diseases.
- **Women**, through increased risks of domestic violence, increasingly difficult water-fetching duties in arid areas, and higher health-related vulnerability to climate change than men
- **People with disabilities**, through their vulnerability in terms of access to nutrition, water, sanitation, healthcare, safety, social protection systems, education, housing, and decent work.
- **Local communities and indigenous peoples**, as the combination of environmental degradation and climate change poses a threat to the climate-sensitive livelihoods of those communities that depend the most on functioning ecosystems.

Governments are seeking to relieve populations from the impacts of the pandemic but must at the same time take urgent action to address climate change, tackling both mitigation of future global warming and adaptation to the impacts of climate change. Whilst most recovery spending in the G20 appears to contribute to sustainable development, the expected long-term reduction in GHG emissions from recovery spending is only around 1% (see study 1.1). Further climate action is needed urgently to keep within reach the

internationally agreed aim to limit global warming to well-below 2°C and pursue efforts to limit it to 1.5°C, and to avoid increasingly adverse impacts on global populations.

Climate policies and measures are highly relevant in themselves but can additionally deliver a wide range of co-benefits supporting economic recovery and addressing vulnerabilities of societal groups. A review of the literature and available evidence related to the co-benefits of climate mitigation and adaptation illustrates, for example, that the vast majority of mitigation and adaptation policies offer health benefits, by reducing air pollution, reducing agricultural emissions and toxicants, by increasing food and water security, and reducing the exposure to climate risks. But apart from health benefits, climate policies and measures have been linked with many other co-benefits:

- Mitigation policies aimed at transforming urban systems can help with poverty reduction and improving education, gender equality, clean water, and biodiversity.
- Mitigation policies aimed at the agricultural sector can support incomes, food security, water quality and biodiversity.
- Transport and energy-related mitigation policies can help with poverty reduction and improving gender equality
- Virtually all adaptation measures can protect incomes, livelihoods, and health of local populations. Many also support education, gender equality and food and water security, especially interventions that protect the energy and agricultural system.

Mitigation-adaptation synergies are a common feature of climate policy. For example, renewable energy investments, especially at local level in developing countries, have great mitigation potential by displacing fossil and biofuels, whilst enabling smart agricultural solutions that can protect yields in the future (e.g., solar-powered irrigation). Nature-based solutions and ecosystem-based approaches to climate change adaptation and disaster risk reduction have particularly strong mitigation-adaptation synergies, especially when implemented with careful consideration of short, medium and long term vulnerabilities to climate risks such as extreme weather, sea level rise and natural climate-related disasters, as well as consideration of ecosystem vulnerabilities that result from human activity.

Complementary to this study, study 1.1 on stocktaking of impacts of sustainable recovery¹ analyses how countries are currently addressing the impacts from the pandemic through recovery interventions, and to what extent recovery interventions contribute to national climate targets. Our analysis of climate policy and ‘green’ recovery interventions across the G20 shows that **there is scope to complement policy packages with targeted mitigation and adaptation measures that drive co-benefits and improve resilience to future climate, biodiversity and health shocks.**

¹ This study complements the G20 Climate Sustainability Working Group study study 1.1 ‘Stocktaking of economic, social, and environmental impacts of sustainable recovery, including impacts on NDC implementation’, study 3.1 ‘Innovative finance towards low greenhouse gas emission and climate resilience future’, study 3.2 ‘Towards low greenhouse gas emission and climate resilience future through utilizing economic value of carbon’.

The key barriers and trade-offs identified in the literature are related to institutional capacity and governance. In particular, a lack of inclusiveness and cross-sector integration increases the risk of maladaptive outcomes and unequitable distribution of co-benefits. More inclusive decision-making, which leverages local, indigenous and traditional knowledge and considers the needs of vulnerable groups, can maximise effectiveness, unlock greater co-benefits and reduce the risk of maladaptation and negative distributional impacts.

Our policy recommendations centre around the enabling conditions for effective and inclusive climate and environmental policymaking. Interventions that are coordinated across sectors and involve diverse stakeholder input can deeply transform current ways of production and consumptions, with greater potential for synergies and reduced adverse distributional outcomes. In all geographies, policy making should avoid interventions that lock societies into fossil-fuel-based technologies and ways of living.

In high-income countries, demand-side solutions remain largely untapped (e.g., enabling consumers to make more sustainable choices in transport, housing, and nutrition), despite having significant mitigation potential and strong co-benefits.

In regions most exposed to climate and biodiversity risks, adaptation measures building on local, indigenous and traditional knowledge, such as nature-based solutions and ecosystem-based approaches to climate change adaptation and disaster risk reduction (e.g. reforestation, conservation and restoration of coastal mangroves and wetlands) can unlock direct social and environmental co-benefits, protecting local incomes, food security and gender equality, whilst also supporting the transition towards net-zero targets.

Finance and institutional capacity remain key barriers to unlocking sustainable development co-benefits from climate and environmental policy. The G20 may wish to establish a process or working group to address these priority areas and increase international cooperation. Such as working group could develop actions plans and policy guidance to support governments around the world with the implementation of climate and environmental policy that specifically targets mitigation-adaptation synergies and unlocks sustainable development co-benefits.

1. Background and methodology

Climate change calls for new approaches to sustainable development that consider the complex interactions between climate, social, economic, and ecological systems. A good understanding of these interactions is crucial to policy makers, allowing them make choices that support climate resilient development. Climate resilient development combines progress on mitigating and adapting to climate change with the pursuit of Sustainable Development Goals (SDG), in particular, for those groups that are worst affected by climate change and the Covid-19 pandemic. Increased public spending to support recovery from the Covid-19 pandemic presents an opportunity to deliver both development and climate benefits if spending and interventions are well-informed and carefully designed.

As the G20 Presidency in 2022, the Government of Indonesia aims to promote cooperation in mitigation and adaptation actions in the context of stronger climate action and sustainable recovery in G20 members. This study complements the study 1.1 (Stocktaking of economic, social, and environmental impacts of sustainable recovery, including impacts on NDC implementation), which took stock of the Covid-19 recovery packages in the G20 members, and their economic and climate impacts, by providing G20 policy makers with a greater understanding of how climate policy delivers wider co-benefits and thus contributes to sustainable development, sustainable recovery, and future economic and social resilience. The overall objective of this study is to develop recommendations for G20 national climate policy and international cooperation to combine effective climate action with sustainable development and sustainable recovery from Covid-19.

This is done by conducting the following activities:

1. A review of recent evidence and literature related to the adverse compounding impacts of the Covid-19 pandemic and climate change across a range of critical economic and social systems, and the impacts and risks to vulnerable groups in society.
2. A review of recent evidence and literature related to the co-benefits of climate change adaptation and mitigation policies and measures, complemented by an empirical analysis of climate policy in the G20 and a questionnaire on climate action and sustainable recovery in the G20. This helps us understand how climate policies and measures help deliver sustainable development co-benefits, and what additional benefits could be unlocked by further action in the context of recovery from the pandemic, in particular, with regards to the sectors and groups most affected by climate change and the pandemic.
3. Based on 2, the study develops broad policy recommendations for climate action across the G20 that supports sustainable development by unlocking co-benefits, maximizing synergies and managing trade-offs.
4. Finally, the study also aims to highlight strategies for international cooperation between the G20 and beyond, to support all countries in advancing climate-resilient development.



The analysis in tasks 1 and 2 focusses on the following sectors and systems in particular: agriculture, food and nutrition, health, education, water and sanitation, social welfare systems, biodiversity. To facilitate the analysis, the study relies on a mapping by the Intergovernmental Panel on Climate Change (IPCC) Sixth Assessment Report of these sectors and systems to the SDGs. Moreover, impacts with regards to the following groups were identified as a particular priority for this study: children, women, local communities and indigenous peoples, and people with disabilities.

The study covers climate policy and measures in the G20, in the context of recovery from the Covid-19 pandemic. For the purpose of this study, we distinguish between two groups of countries in the G20, consistent with study 1.1:

- Developing countries: Argentina, Brazil, China, India, Indonesia, Mexico, Russian Federation, Saudi Arabia, South Africa, Turkey
- Developed countries: Australia, Canada, European Union, France, Germany, Italy, Japan, Republic of Korea, United Kingdom, United States of America.

To the extent that these are supported by the analysis, commonalities and differences between these two groups of countries are discussed and reflected accordingly in the policy recommendations.

2. Adverse impacts of Covid-19 and climate change on vulnerable groups and selected social sectors

a. Adverse impacts on critical social systems

This section summarises our review of compounding negative impacts from the COVID-19 pandemic and climate change on key social systems. The analysis covers the following social systems: health; education; forestry, agriculture, biodiversity, food security and nutrition; water, sanitation and hygiene; and social protection.

i. Health system

In the health system, the **Covid-19** pandemic has increased demand on hospitals and other health infrastructure around the globe, including high levels of hospitalisation and intensive care unit occupancy (World Bank, 2021). As a result, routine medical activities have been postponed or reduced in frequency (The British Academy, 2021), access to the health care system in general was hampered during the pandemic (UN/DESA, 2020), and the backlog in routine medical care is expected to weigh on health systems for years to come (e.g., see van Ginneken et al., 2022). Because of the shock to the health system, health care workers are faced with increased work pressure and, as a result are at risk of increased frequency of mental health issues, burn-out and higher risk of infections. The incidence of mental health problems has also risen more generally due to other COVID-related outcomes such as the disruption to social connections and institutions such as schools (UN, 2020; The British Academy, 2021).

Climate change is expected to lead to increased demand for health care, primarily through the increased frequency of extreme weather events and natural disasters (e.g., heat waves, floods, wildfires) resulting in cyclical peaks in demand for emergency care (Wahaj et al., 2022; World Bank, 2021), forced migration and lower food security. Forced migration due to rising sea levels, water scarcity and natural disasters can lead to poor hygiene conditions during migration, which is expected to increase the incidence of infectious diseases and lead to the transference of such diseases to other regions (UNICEF East Asia & Pacific and Vivid Economics, 2021). Reduced food security as a consequence of extreme weather events could lead to increased prevalence of health conditions linked both to the lower availability of food and the extreme weather events themselves, with particularly severe impacts in tropical countries (UNICEF East Asia & Pacific and Vivid Economics, 2021). Global warming is also associated with increased prevalence of vector-borne diseases (Brancalion et al., 2020; World Bank, 2017) as well as poor air quality and rapid urbanisation in developing countries, likely to increase the prevalence of respiratory diseases, with additional burden on health care systems as a result (UNICEF East Asia & Pacific and Vivid Economics, 2021; Olsson et al., 2021; Fuller et al., 2022; WHO, 2018).

ii. Education

The **Covid-19** pandemic has caused disruptions to education. Children have lost access to the educational system, especially in regions where remote learning is not feasible because households and schools lack internet access and the required physical assets such as laptops (World Bank, 2021). According to data from UNICEF, nearly 147 million children worldwide missed more than half of their in-person schooling 2 years into the pandemic, with more than 27 million of them missing at least three quarters of in-person schooling (UNICEF, 2022b). Even where remote learning is feasible, some children have been unable to learn due to skills gaps among their teachers or a lack of parental support. Furthermore, an increased risk of children not returning to school, and children being forced into child marriage or child labour has been observed (SDG Knowledge Hub, 2021). Overall, school closures and reduced access to schooling are expected to result in lasting learning losses for many children in both basic numeracy and literacy; Data produced by UNICEF suggests that in low- and middle-income countries, 70% of 10-year-olds are now unable to read and interpret simple texts, a significant increase compared to the pre-pandemic figure of 53% (UNICEF, 2022a).

Climate change-related disasters and extreme weather are expected to disrupt educational attainment and lead to learning losses (e.g., because schools aren't accessible during extreme weather, after damage to buildings, and during power cuts) (UNICEF East Asia & Pacific and Vivid Economics 2021). Climate change and Covid-19 also have particularly severe impacts on low-paid sectors (such as agriculture and hospitality), and therefore create financial uncertainties for families living on the edge of or in poverty. This holds the potential to significantly reduce the affordability of participation in education of their children and accelerate the marginalization of vulnerable groups (UNICEF East Asia & Pacific and Vivid Economics, 2021; The British Academy, 2021).

iii. Forestry, Agriculture, Biodiversity, Food Security and Nutrition

Covid-19 has primarily affected the agricultural sector by restricting the free movement of goods and seasonal workers, inducing supply chain disruptions, panic buying and an inefficient use of food (Rasul, 2021). The Covid-19 pandemic has therefore reversed some of the food security trends seen in recent years (UN, 2022). Apart from the risk to food security, millions of children have missed school meals, contributing to insufficient nutrition levels, affecting all geographies including poorer families in rich countries. Malnutrition can worsen individual school attendance levels and – in the longer term – cause GDP losses due to lower productivity and poorer health outcomes. (UNICEF East Asia & Pacific and Vivid Economics, 2021; EPRS, 2021; UN/DESA, 2020). Covid-related restrictions have also reduced opportunities for NGOs and government agencies to monitor forests. Some have suggested that recovery packages have relaxed forest monitoring, in order to boost the economy temporarily and to fight volatile food prices, accelerating existing adverse trends (Brancalion et al., 2020; EPRS, 2021; Hermoso et al., 2022).

Climate change is expected to result in lower yields through changes in precipitation, temperature, and more frequent extreme weather events, particularly in areas where less climate-resilient farming methods are applied, thereby jeopardising food security (UNICEF East Asia & Pacific and Vivid Economics, 2021; Brancalion et al., 2020; Rasul, 2021). High levels of water and air pollutants, which are likely to coincide with rising emissions levels, and the loss of biodiversity, will have further harmful impacts, and may contribute to rising food prices (Ortiz et al., 2021; Dasgupta, 2021). Climate change is one of the drivers of biodiversity loss (IPBES, 2019), and vice versa, the loss of biodiversity contributes to climate change. Loss of biodiversity is likely to harm affected countries eventually, by reducing their natural resilience to climate-related weather events and leading to the loss of essential ecosystem services provided by forests including air, water, temperature regulation and flood control. Forest fires increase air pollution levels, stressing the respiratory systems of local people, and therefore are likely to put an extra burden on health care systems (Brancalion et al., 2020). Food insecurity could also trigger loss of biodiversity, as some countries will try to raise yields by opening more land for agriculture.

iv. Water, sanitation and hygiene (WASH)

Water, sanitation and hygiene services at home, in schools and healthcare facilities are crucial to prevent the spread of infectious diseases such as Covid-19 (World Bank, 2020). Data suggests that handwashing facilities with water and soap are still lacking in many schools and healthcare facilities, with around two out of five people or three billion people around the world lacking access to basic handwashing facilities, particularly in least developed and fragile contexts (UNICEF, 2022b). In turn, Covid-19 and the subsequent lockdown measures have also disrupted the provision of water, sanitation, and hygiene services to many people across the world, particularly for those vulnerable to socioeconomic shocks. Price hikes and shortages in WASH commodities, lack of maintenance caused by a reduced workforce, and the loss of access to WASH services due to being unable to pay for or being quarantined in a place without access to sanitary facilities were the factors behind this disruption (UN, 2020; UNICEF, 2020).

Climate change poses a challenge to existing WASH systems in the case of infrastructure breakdown following extreme weather events. Floods and heavy rain (and sea level rise in coastal areas), can damage sanitation infrastructure, disrupt its normal functioning or make it non-operational. Droughts too can impact the effectiveness of sanitation infrastructure, namely pipe sewage systems, which are dependent on high water availability – during draughts, the untreated sewage will have a greater environmental impact if released untreated (Dickin et al., 2020). At the same time, access to clean water and sanitation are essential for the management of vector-borne diseases (malaria, Lyme disease), which are expected to become more prevalent in the future due to climate change and climate-related migration (UNICEF, 2021; UNICEF East Asia & Pacific and Vivid Economics, 2021).

Climate change driven water scarcity is also expected to impact negatively on economies around the world. Regions such as East Asia, Central Africa, Middle East, and the Sahel are at risk of losing up to 6% in GDP growth by 2050 if no action is taken to improve water management, as water shortage impacts on agriculture, health, and income (World Bank, 2016). Where water fetching is predominantly the responsibility of women and girls, climate-change induced water scarcity may exacerbate gender inequalities, especially in arid regions, and lead to higher exposure to violence, infections, and reduced education opportunities for girls (UNICEF East Asia & Pacific and Vivid Economics, 2021; UNICEF, 2021). Overall, adequate access to WASH services is one of the key determinants of climate resilience, with the poorest being disproportionately vulnerable (due to the lack of emergency water supplies, lack of sewage and drainage, sanitation shortages, increased exposure to diseases etc.) (UNICEF, 2021).

v. Social protection

The **Covid-19** pandemic has posed challenges to social security systems across the world. The labour market was severely impacted by the pandemic and the restrictions imposed to curtail the virus' expansion. In 2020, an estimated US\$ 3.7 trillion labour income earnings were lost. Low paid jobs (for instance, in tourism), and informal jobs were the most affected by the economic shock (EPRS 2021; UN/SDG, 2021). Informal workers were three times more likely to lose their jobs relative to formal workers and saw their incomes reduced disproportionately. With such a generalised loss of income, poverty increased: the number of extremely poor people worldwide increased from 119 to 124 million in 2020 – the first increase in 21 years – and the number of children under multidimensional poverty also experienced a growth of approximately 15% in low-and middle-income countries (UN/SDG, 2021). Although the crisis saw an unprecedented amount of stimulus spending in the economy worldwide, including social spending, the measures were insufficient to contain the full impact of the crisis on employment and poverty rates.

Climate change is expected to exacerbate the negative impacts of Covid-19 on social security systems. Natural disasters and extreme weather are likely to disrupt and undermine development progress in many countries, causing loss of livelihoods, unemployment (40% of the global labour force's jobs depend on the environment), migration, and increased national debt, requiring additional management through social security systems, in particular in more exposed regions (UN, 2021; UNICEF East Asia & Pacific and Vivid Economics, 2021). Climate change has more severe impacts on poorer groups and is one of the main drivers for extreme poverty across the globe; an estimated 68 million to 132 million people could be pushed into poverty due to climate change and its impacts by the year of 2030 (UN, 2021; World Bank, 2020). It has also been argued that inter-generational injustice has risen, as younger generations are likely to suffer most from increasing climate damages, whilst also having to shoulder the burden of paying back Covid-recovery related public debt (UNICEF, 2021).

b. Adverse impacts on vulnerable societal groups

Some groups are particularly vulnerable to the effects of Covid-19 and climate change. These include the elderly, children, women, people with disabilities, and local communities and indigenous peoples. They all tend to be underrepresented in decision making generally. This makes it hard for these groups to shape policy responses to climate change and the pandemic so their needs are addressed, and protect themselves from negative climate- and pandemic-related impacts (UNICEF, 2021). For each of these groups, the following overview summarises the main adverse impacts from the COVID-19 pandemic and climate change.

i. Elderly people

Covid-19 has disproportionately impacted elderly people, who are more susceptible to develop severe symptoms and have had a higher mortality rate than younger demographics. In the United States, the Covid-19 mortality rate for those of 75-84 years of age was 140 times higher than for those of 18-29 years, according to the Centre of Disease Control and Prevention (CDC, 2022). Beyond the direct impact caused by the disease, restrictions to combat the spread of the virus, have themselves taken a toll on elderly people's welfare. Social isolation, increased loneliness, as well as stress and anxiety over the uncertainty about one's own and other's wellbeing has had a considerable impact on the elderly's mental health. All the while, loss of mobility and balance, increased pain, and the worsening of untreated health conditions (as people were reluctant to leave their homes risking infection and due to health care systems being overburdened with the pandemic) contributed to a deterioration of physical health for this demographic (WHO, 2020, AgeUK, 2020).

Elderly people are also vulnerable to the effects of **climate change**, such as an increase in vector-borne diseases and natural disasters; events which are expected to become of increasing frequency due to climate change. Elderly people are also at risk of restricted access to and availability of healthcare as a consequence of climate change related disasters and extreme weather events. In fact, funding mobilised in response to these events could crowd out funding for healthcare services tailored to the elderly, as increasingly frequent natural disasters increase pressure on social services' resources and capacity (UN, 2021). Moreover, as climate change impacts food production across the world, the expected reduction in food access, availability, and quality in some regions is a point of vulnerability for elderly people; as members of this demographic group tend to be more susceptible to malnutrition, have more difficulties reaching food distribution points due to physical restrictions, and are more likely to require specific diets due to their health conditions. It should also be noted that many elderly people live in poverty and/or have fixed incomes and are thus vulnerable to rising food prices. (UN, 2021).

ii. Children

The loss of incomes in certain households during the **Covid-19** pandemic has reduced educational attainment by children, where they had to take up work and therefore reduce their time spent in formal education settings. Data suggests that Covid-19 induced job losses and lack of social protection have reversed progress in reducing rates of child labour and child marriage (UNICEF East Asia & Pacific and Vivid Economics, 2021; IPCC, 2022b: Chapter 17; EIGE, 2020; UN/DESA, 2020; UN, 2020b). Covid-19 has also led to adverse impacts on children's mental health through the disruption of their social interactions and, therefore, of social development, particularly important at a young age (UN, 2020c; The British Academy, 2021). The disruption to health systems caused by the pandemic has in some countries led to the suspension of, or backlogs in, childhood vaccinations (UN/DESA, 2020). Disruption to education during the pandemic affected marginalised and low-income households the most, where the lack of access to digital platforms and the loss of (physical) contact with teachers can lead to long term disadvantages for children, with further disruptions expected due to climate change (UNICEF East Asia & Pacific and Vivid Economics, 2021; World Bank, 2021). In addition, younger generations may be affected by knock-on fiscal implications from the Covid-recovery debt, such as future tax rises and cuts to public services (UNICEF, 2021).

Children are among the groups most affected by **climate change**. According to UNICEF's Children's Climate Risk Index (CCRI), children residing in 59 countries are at high or very high risk of exposure and vulnerability to climate change related hazards (UNICEF, 2021). This is partly a reflection of their higher vulnerability, and partly due to their lifespan extending into the future where climate impacts are likely to be more severe. In terms of human health, children tend to be more vulnerable to vector-borne diseases (for instance, two thirds of deaths caused by malaria are amongst children under five years of age) and extreme weather events, of which the incidence is expected to rise with climate change (UNICEF East Asia & Pacific and Vivid Economics, 2021). Currently, more than 90% of all children live in areas with poor air quality, which affects the health of children more severely than adults (UNICEF East Asia & Pacific and Vivid Economics, 2021; Olsson et al., 2021). Mental health problems amongst children may increase as a result of climate change (e.g., climate anxiety, more frequent among younger generations, but also mental health problems resulting from migration, loss of livelihoods and access to education in the aftermath of disasters) (Hickman et al., 2021). Climate-related migration and unfavourable malnutrition trends due to insufficient access to and use of food during climate-related disasters also harm child welfare (UNICEF East Asia & Pacific and Vivid Economics, 2021; EPRS 2021; UN/DESA, 2020; UNICEF, 2021). Finally, climate change may trigger child labour in the following decades (e.g., the loss of farming income in arid regions may lead to increased child labour to increase family incomes) (UN/DESA, 2020; UN, 2020b).

iii. Women

Women have been specifically affected by the Covid-19 pandemic, due to their greater responsibility for home-schooling, care services, and their large share of the global healthcare workforce (70% of all health care workers are female) (EPRS, 2021; UN, 2020b). Women have also been hit by job losses in sectors hit hard by the pandemic, such as hospitality, due to their large share of the workforce in these sectors. As a result, the pandemic is thought to have worsened gender inequality in society and within families (EPRS, 2021). Furthermore, the combination of economic and social stress, and lockdown restrictions has led to a worldwide increase in domestic violence, which affects mostly women. At the same time, the pandemic and its response saturated or compromised the ability of first responder services to effectively support women exposed to violence (UNICEF East Asia & Pacific and Vivid Economics, 2021). It is estimated that reported violence against women increased up to 25% (with some countries reporting increases of almost 50%) (UN, 2020a).

Climate change is also expected to adversely affect women. In contexts where there is significant firewood or water scarcity, women and girls are often allocated a larger water or firewood fetching duties than men. Climate change increases scarcity of water or fuel, which means that women and girls will be required to travel and transport resources for longer distances and for longer periods of time, which in turn leads to a greater exposure to violence and a deepening of gender inequalities, e.g., because less time is available for education. When it comes to decision-making related to environment and climate-related measures (mitigation and adaptation) it will be harder for women to safeguard against adverse effects of climate change due to their underrepresentation in related sectors and processes (UNICEF, 2021).

iv. People with disabilities

Due to **Covid-19** restrictions, people with disabilities have had less access to health and care services (The British Academy, 2021; EPRS, 2021). Often, they do not receive pandemic-related information effectively, leading to misinformation and the potential for negative mental health impacts (The British Academy, 2021). Social distancing rules can further contribute to mental health issues, affecting some people with disabilities more strongly than the general population (UN, 2020; The British Academy, 2021).

People with disabilities are vulnerable to **climate change**. Not only are they subject to higher morbidity and mortality rates in case of emergencies and natural disasters, but they are also more vulnerable in their access to nutrition, water, sanitation, healthcare, safety, social protection systems, education, housing, and decent work. With the increasing occurrences of natural disasters and extreme weather events caused by climate change, people with disabilities become increasingly more vulnerable to these risks. Moreover, climate change increases exposure to high ambient temperatures which disproportionately affect people whose disabilities are temperature sensitive (such as multiple sclerosis and spinal cord

injuries). As the risks and impact of climate change are exacerbated by poverty (in which people with disabilities are more likely to live), people with disabilities are also expected to suffer from climate change indirectly through loss of income and livelihoods, hunger, and displacement (IPCC, 2018; UN, 2020d).

v. Local communities and indigenous peoples

Local communities and indigenous people in areas exposed to forest fires are more exposed to respiratory diseases. This comes on top of an already increasing frequency and intensity of wildfires as a result of climate change (EPA, 2022; IPCC, 2022d: chapter 7). At the same time, access to treatment has been more difficult during the pandemic because local health services have struggled to treat coronavirus infections and handle backlogs in non-urgent care. It has also been observed that, during the Covid-19 pandemic, official information was often not provided in local and indigenous languages, resulting in lower trust in the government, and undermining the implementation of regulations (The British Academy, 2021).

Unsustainable land and resource use, pollution, and biodiversity loss, result in a reduction of ecosystem services that human communities can reap from the environment for their livelihoods and economic activity. In this context, the combination of environmental degradation and **climate change** poses a threat to the climate-sensitive livelihoods of those communities that depend the most on ecosystem services, including local communities and indigenous peoples. Inequity and marginalisation of specific demographics, such as indigenous peoples and local communities, also contribute to their vulnerability to climate hazards through poverty, limited access to basic services, governance limitations, and presence of violent conflict and the way these factors compound with the adverse effects of climate change (IPCC, 2022a).

3. Sustainable development co-benefits of mitigation-adaptation policy and measures in the context of Covid-19 sustainable recovery

This chapter provides a conceptual summary of the co-benefits of climate change mitigation and adaptation policies. The primary source of information are the latest reports by the IPCC's Working Groups II and III (Sixth Assessment Report), complemented with other relevant literature. In the IPCC Glossary (2019), co-benefits are defined as positive impacts on other objectives when policies and measures aim to achieve one goal, such as GHG reductions or adaptation to climate change. As a result, co-benefits can increase total benefits for society, economy and/or environment.

a. Climate change mitigation policies and measures

According to the Sixth Assessment Report of the IPCC, climate mitigation policies and measures have multiple synergies with SDGs², and some policy options can also have trade-offs with them. Key potential social and environmental co-benefits of mitigation measures include health benefits, poverty reduction, increased biodiversity and ecosystem services such as improved air quality, water quality, reduced toxic waste and reduced inequality. However, mitigation measures sometimes have trade-offs with SDGs, such as reduced biodiversity – especially when applied at large scale, for example, bioenergy or large scale use of battery storage. Both synergies and trade-offs vary by context and by scale of action (IPCC 2022d, chapter 17).

There are numerous mitigation options that are a) technically viable and b) becoming increasingly cost efficient, such as solar and wind energy, urban electrification, urban green infrastructure, reduced food loss and waste, improved forest management and demand-side policies. Different typologies and groupings of mitigation policy and measures are possible, but for the purpose of this report, measures are discussed and grouped consistent with the sector categories used in study 1.1 (Stocktaking of economic, social, and environmental impacts of sustainable recovery, including impacts on NDC implementation): energy, agriculture (and forestry and land use), industry, buildings and transport. Within each sector, the main policies, co-benefits and trade-offs are briefly described; to give a fully comprehensive overview of all potential co-benefits and trade-offs is not possible within the scope of this report.

i. Energy

Mitigation policies and measures in the energy sector typically comprise investment in clean energy infrastructure (wind, solar, hydropower, geothermal, bioenergy); and supporting fossil fuel phase-down (retrofit coal-fired plants and biomass co-firing equipment with CCUS; repurpose them to focus on providing system adequacy and flexibility while reducing operation; retire them early).

² See Appendix 1 for a list of the SDGs

Key co-benefits associated with energy sector mitigation policies are:

- Poverty reduction through improved access to decentralised renewable energy and falling costs of energy through the deployment of renewables (SDGs 1 and 7)
- Health benefits through reduced air pollution from the avoidance of fossil fuels combustion, and provision of clean energy to ensure health services such as vaccine delivery and availability that require cold storage (SDG3)
- Biodiversity benefits through reduced exploitation of ecosystems, and through displacement of fossil fuels and related pollution (SDGs 14, 15)
- Better access to education and health services supported by greater electricity access (SDGs 3, 4)
- Cleaner water, by using clean electricity, particularly solar energy, for water pumps (see e.g., Rathore et al., 2018) (SDG 6)
- Improved irrigation with the help of clean energy tools, and, as a result, increasing agricultural productivity (SDGs 1, 2)

Trade-offs associated with energy sector mitigation policies are:

- Impacts on land use and biodiversity of large-scale renewables installations
- Potential increase in the cost of electricity with carbon capture and storage (CCS)

ii. Agriculture, forestry and land use

The most common mitigation policies and measures in this area are investments in carbon sequestration activities; measures to reduce non-CO₂ agriculture emissions (CH₄, N₂O); protection, restoration and management of forests and other ecosystems (reduce deforestation, increase afforestation, improve forest and fire management); and demand-side measures such as incentivising sustainable diets, reducing food loss and waste, and improving use of wood products.

Co-benefits associated with mitigation measures in this area are:

- Preserved/enhanced biodiversity and better ecosystem health, through reduced land use and reduced deforestation (SDGs 14, 15)
- Improved water quality and supply, and air quality, through more ecological farming practices (SDGs 3, 14, 15)
- Improved soil fertility, food and wood security (SDG 1, 2)
- Improved human health and wellbeing, through intact ecosystems, reduced use of toxic products, and improved food security (SDG 3)

However, inappropriately designed and implemented agricultural measures can have negative impacts on mitigation permanence, longevity, biodiversity, wider ecosystem functioning and ecosystems services, livelihoods, food security and human wellbeing. A good example

of this is the case of afforestation, where this is planned on savannas where the biodiversity is originally high, and the loss of grass can reduce this biodiversity. Furthermore, afforested peatlands (which are often naturally treeless) may emit more than they capture and can lead to the loss of native species. Another example is large-scale bioenergy projects, which may require more water to be used compared to other technologies (IPCC, 2022d: Chapter 9).

iii. Urban systems

Urban climate change mitigation policies comprise measures to reduce or change urban energy consumption across all sectors, through spatial planning and infrastructure (e.g., improve district heating and cooling networks); measures to increase electrification and switching to net zero emission resources; and ecosystem-based policies that enhance carbon stocks and uptake through urban green and blue infrastructure (e.g., improve waste prevention and management practices).

Associated co-benefits of urban mitigation policies and measures are:

- Improved air quality and associated health benefits through better urban land management and expanding ecosystems, as well as spatial planning and improved district heating and cooling networks (SDGs 3, 15)
- Health benefits, where urban planning facilitates physical activity (through active transport and urban green spaces that encourage recreation) (SDG 3)
- Increased employment in waste management and recycling (SDG 8)
- Improved public finances, where better urban land use practices lead to reduced maintenance costs for infrastructure and public buildings
- Improved public finances, as reduced environmental degradation decreases restoration costs

A general observation is that systemic and integrated approaches that span sectors and fields of activities are required to achieve rapid decarbonisation whilst supporting sustainable development, as opposed to small-scale, incremental policy interventions that stay within the boundaries of a single sector (see IPCC, 2022d: chapter 17; Sörgel et al., 2022; Cohen et al., 2021).

Trade-offs include a potential increase in electricity demand, and subsidies are critical to address the high upfront costs of urban electrification. Furthermore, the formalisation of employment in waste management is needed to fully unlock employment effects and guarantee decent work for the workers involved.

iv. Buildings

Mitigation policies in the buildings sector typically include measures to improve building and appliances efficiency and sustainability, particularly related to thermal insulation, heating and cooling; and measures to deploy local renewable-based power generation and micro-grids, especially in developing countries.

Associated co-benefits of building-related policies and measures are:

- Additional employment, because of investments in the construction sector and the labour-intensive nature of the tasks involved (SDG 8)
- Productivity gains, and improved competitiveness of the economy
- Improved health and well-being, from reduced indoor (and outdoor) air pollution, as well as through adequate temperature inside buildings (SDG 3)
- Improved access to energy sources, especially in emerging and developing countries (SDGs 1, 7)
- Improved gender equality, where greater energy access reduces burdens on women such as firewood collection (SDG 5)
- Energy savings, benefitting household incomes and thus reducing poverty (SDGs 1, 7).

Trade-offs and risks relate to rebound effects (higher total energy demand despite better energy efficient appliances), high upfront investment costs of local renewable production, unintended consequences from the extraction of raw materials required to deploy renewable energy technologies, long pay-back period, unpredictable energy production, architectural and landscape considerations (particularly for solar and wind). Tightening regulations to reduce emissions from buildings, infrastructure and industry often involves trade-offs with affordability, consumer costs and potentially living standards in the short term. This can lead to pressure on governments to relax proposed measures.

v. Transport

Key transport sector mitigation policies include measures to support road vehicle electrification and efficiency improvements (support zero-emission vehicles, alternative fuels, and relevant R&D); investments in infrastructure required to support zero-emission vehicles fleets (such as EV charging stations and hydrogen refuelling); and investments in public and non-motorised transport (transportation demand management, transit-oriented development, facilitation of active transport modes).

Associated co-benefits of transport-related mitigation policies are:

- Reduced local air pollutants and improved human health through transport electrification (SDG 3)
- Health benefits from walkability and increased opportunities for physical activity (SDG 3)
- Reduced healthcare costs linked to pollution, cardiovascular diseases and other non-communicable diseases (SDG 3)
- Improved labour productivity and decreased congestion costs (including waste of time and money) (SDG 8)
- More equitable access to transportation services (SDG 5).

Key potential trade-offs are related to the high upfront costs to switch to electrified technologies, substantial infrastructure investment requirements, changes in material extraction patterns (e.g., mining for raw materials and rare earths required for battery production), and also the inadequate disposal of poisonous or harmful materials found for examples in batteries, that can have unintended social, health and environmental impacts.

vi. Industry

Industrial mitigation policies comprise measures to decrease demand for materials and improve materials and energy efficiency by industry; investment in circular economy practices to reduce waste; investment in industry electrification and fuel switching; as well as investment in CCUS in industry.

Associated co-benefits of industrial mitigation policies and measures include:

- Reduced post-consumption waste, enhanced clean water and sanitation through a reduction in excessive consumption and demand for products and services (SDGs 6, 12, 14, 15)
- Improved social relations between industrial sectors and local societies, improved public environmental awareness and public health level through circular practices (SDGs 3, 8)
- Improved urban and indoor air quality (at working places as well) and associated health benefits through clean electrification of industrial facilities (SDG 3)

Trade-offs include increased overall demand for electricity, risks of stranded assets for investors and producers, and a possible reduction of employment, incomes, and sales taxes from the material extraction and processing activities.

b. Climate change adaptation policies and measures

According to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), adaptation policies and measures are generally associated with positive economic outcomes, particularly in developing countries (IPCC, 2022a), however, interventions often have trade-offs or unintended costs and therefore require careful design and management. For example, preparedness plan to adapt to more frequent storms may include designing new buildings (such as schools) to storm shelters could reduce risks in coastal areas. The building design should not hinder the building functionality or prevent school and children to resume learning activity following storm or hurricane event. The following section summarises key co-benefits of adaptation policies as well as key risks and trade-offs, by selected areas of intervention.

i. Coastal adaptation

Coastal adaptation policies and measures aim to increase the resilience of coastal areas exposed to sea level rises and more frequent storms. Measures include technology-focused

interventions, such as early warning systems, water quality monitoring, and the construction of physical flood defences with hard infrastructure, ecosystem-based adaptation (e.g., mangroves, coastal wetlands), or a combination of both in a green-grey hybrid approach to stabilise coastlines and reduce risk exposure for local populations.

Associated co-benefits of coastal adaptation policies are:

- Improved sustainable aquaculture activity, which can help address poverty (SDG1) and hunger (SDG2) for local communities dependent on it
- Improved water and sanitation, supporting better health (SDGs 3, 6)
- In the case of nature-based solutions and ecosystem-based approaches to climate change and disaster risk reduction (restoration of coastal wetlands, forests, mangroves, seagrass, etc.), co-benefits are:
 - Mitigation synergies through carbon sequestration;
 - A source of income for coastal communities, thus reducing poverty and hunger risks (SDGs 1, 2);
 - Better protection from natural disasters; as well as
 - Direct benefits for biodiversity (subject to appropriate mixes of species) (SDG14s, 15)

Trade-offs can occur with the use of hard infrastructure, in particular, which is usually more costly compared to nature-based solutions and ecosystem-based approaches to adaptation, and can have negative biodiversity and social impacts. Such infrastructure is difficult to adapt to increases in risk exposure and carries the risk of locking populations into ongoing vulnerability, by encouraging them to maintain the status quo behind the erected defences (IPCC, 2022a: Chapter 3.6). Hard infrastructure interventions should be designed carefully to avoid unnecessary damage to ecosystems and limit incentives for ongoing risk taking, for example by expanding settlements in areas at risk of climate-related disasters.

ii. Agriculture, forestry and land use (AFOLU)

There is a wide range of adaptation options related to agriculture, forestry and land use (AFOLU), such as supporting more sustainable farming and forestry practices, including organic farming and afforestation with mixes of native species. Co-benefits of AFOLU adaptation options typically include poverty and hunger reduction, as well as health, gender equality and biodiversity benefits (IPCC, 2022a: Chapter 2.6). Relevant policies with pronounced co-benefits include:

- ‘Climate-smart’ interventions at farm-level (e.g., adjusting operating times, diversification, solar-powered irrigation, inter-cropping, changes to livestock management) can boost productivity (SDGs 1, 2)
- Agro-ecological farming, based on organic principles and indigenous knowledge is associated with wide-ranging co-benefits, such as biodiversity and health benefits from reduced use of toxic chemicals (including mitigation synergies), soil quality benefits and reduced risk exposure, as well as improved food security and access to healthy food (SDGs 2, 3, 6, 14, 15)

- Reducing dairy and meat consumption in favour of more plant-based diets, as well as optimised use of plant-based foods has the potential to significantly reduce resource requirements in global food production, particularly water, thus increasing farmers' resilience to climate-related resource shortages, whilst improving health outcomes (IPCC, 2022a: chapter 10; Cleveland et al. 2017)
- Forest conservation and reforestation with appropriate (native and climate resilient) species can support biodiversity, improve hydrology, and prevent soil erosion, thus improving water security for populations and reducing exposure to disasters such as landslides and floods (SDGs 14, 15)
- There are clear mitigation synergies, as many ecosystems act as carbon sinks.

The reliance on agro-ecological farming alone can carry risks such as less predictable yields, although yields from conventional farming are also affected by climate risks. Therefore, policies should combine support for agro-ecological approaches with guidance and finance for climate-smart measures that stabilise activity at farm-level (IPCC, 2022a: Chapter 2).

iii. Urban infrastructure adaptation

The main urban infrastructure adaptation policies and measures are urban green and blue areas (including parks, forests, green roofs, rivers, lakes and freshwater wetlands, minimising the sealing (artificialisation) of soil, and, in coastal areas, mangroves and saltwater or brackish wetlands) and the construction of physical infrastructure such as flood barriers, or a combination of both, shielding the livelihoods of citizens by protecting them from natural disasters and extreme weather events (IPCC, 2022a: Chapter 6; Russo & Cirella, 2021). Green and blue spaces are able to minimize the effects of heat waves by cooling the urban environment and can also act as 'sponges' during extreme rainfall, thus reducing the risk of floods. Coastal wetlands and mangroves are also able to shield urban areas from storms and associated risks (IPCC, 2022a: Chapter 6). Other urban adaptation measures include support for improved building standards to offer greater resilience to heat waves, and extend water and sanitation access to marginalised groups, especially in developing countries (Ibid.).

- Such adaptation measures can, if well implemented, improve air quality and water circulation, and attenuate extreme temperature, and therefore lead to significant benefits: Improved physical and mental health, especially in heat waves and extreme rainfall (SDGs 3, 9, 11)
- Increased well-being of urban populations as a result of access to green spaces
- Reduced urban inequalities, where protective infrastructure and improved building standards reduce the exposure of vulnerable and low-income groups to natural disasters, greater resilience to hot and cold weather, and improved sanitary conditions (SDGs 3, 6, 10)
- Mitigation synergies, where building innovation reduces heating and cooling energy consumption and thus CO₂ emissions, and through ecosystem-based measures that capture CO₂

Urban infrastructure adaptation, however, does not come without risks or caveats. As with all adaptation interventions, urban adaptation projects require careful planning (e.g., site selection) to avoid negative impacts on disadvantaged groups or the environment and to ensure benefits are equally distributed. For instance, the restoration of wetlands in populated areas needs to be combined with mosquito control to avoid the negative impacts associated with vector borne diseases that would thrive in such an environment. Policy makers also need to consider that large physical adaptation infrastructure may disrupt ecosystems, and is often inflexible, making it more difficult to respond to future unpredicted changing vulnerabilities (IPCC, 2022a: Chapter 6).

iv. Water management and use

The main policies for this type of adaptation include the promotion of solar-powered pumps for agriculture and local water access, the use of improved agricultural water management systems, solar-powered desalination of sea water, treatment and reuse of wastewater, building residential water storage capacity, and the enhanced monitoring of water sources. In the area of WASH, it entails the use of renewable energy sources for WASH-related activities and the diversification of water sources in countries faced with water scarcity to make them more resilient against extreme weather events.

Power and water management adaptation can contribute to poverty and hunger reduction, improved health, education, and gender equality:

- Improved local water access and security can have significant health-related benefits. Basic WASH services, such as handwashing opportunities, can prevent infections from climate-related diseases. Moreover, in the case of a lack of proper drainage and sewage system, heavy precipitation and floods can easily contaminate water and spread water-related diseases (e.g., diarrhoea) (UNICEF, 2021) (SDGs 3, 6)
- Boosting agricultural irrigation capability, especially in developing economies, by using solar-powered pumps or by improving water management systems (through the use of drip and sprinkler irrigation, for example), has mitigation co-benefits if it displaces fossil-fuelled pumps, whilst also increasing productivity, incomes, and food and water security (IPCC, 2022d: Chapter 6; Rathore et al., 2018) (SDGs 1, 2, 3)
- Expanding local water access and security (e.g., through solar-powered pumps) has a significant role in promoting gender equality and education; as it could allow women and children, who are tasked disproportionately with water fetching duties, to dedicate more time to their education (IPCC, 2022a: Chapter 4) (SDGs 4, 5, 6)

Nonetheless, there may be trade-offs as well. For example, the increased use of water pumps carries the risk of depleting groundwater reserves, and thus generating a collateral negative impact on biodiversity. In this context, solar-powered desalination of sea water (if toxic by-products such as hypersaline brine is being disposed of adequately and not freely discharged into the sea) and the treatment and reuse of wastewater are alternative ways of enhancing water security, particularly for urban populations (IPCC, 2022a: Chapter 4).

v. Health system adaptation

Health system adaptation measures include increasing the resilience of health systems, establishing disaster-response mechanisms, developing plans to cope with new and increased prevalence of infectious diseases (through early warning systems and monitoring, more universal healthcare access, vaccination campaigns, education) and protecting human health during extreme weather events (e.g., cooling during heatwaves) through technology or ecosystem-based solutions.

Associated co-benefits of health system adaptation policies are:

- Improved health (SDG 3)
- Poverty and hunger reduction, and better education access through reduced exposure to diseases (SDGs 1, 2, 4)
- Reduced inequalities, from better access to healthcare (e.g., elderly, poor people, remote populations), including gender inequality (SDG 10)

Health system adaptation is relevant in all geographies, but in particular where parts of the population have inconsistent access to healthcare and services, and/or inconsistent access to clean water and sanitation. Nonetheless, trade-offs can exist. For example, adaptation to extreme heat through air conditioning can have adverse impacts (the energy use can have mitigation trade-offs, whilst the external heat generation can negatively impact health in urban areas), while ecosystem-based approaches that provide for natural cooling and shading in cities tend to have fewer disbenefits but are less immediately effective.

vi. Other areas of adaptation interventions

Other areas of adaptation policies and measures include support for **livelihood diversification** and, where unavoidable, voluntary resettlement, all of which aim to reduce the risk exposure of local populations. These interventions tend to be highly context-specific, and most relevant in coastal and rural areas exposed to climate risks, where local populations are at risk of losing their primary sources of income, for example when coastal degradation makes fishery less productive, or extensive droughts in arid areas make agriculture unviable. Investment in human assets (education, health care), physical assets (mobile phones, electricity), and social assets (civil society groups, local economic cooperation through co-operatives) can support adaptation of these populations to risks, and also support the take-up of alternative activities and income sources (IPCC, 2022a: Chapter 8). As a result, the co-benefits of such interventions support SDGs by mitigating poverty and hunger, and by improving or maintaining access to healthcare and children's access to education.

Climate change is already leading to significant **human migration** (IPCC, 2022a; IOM 2015). Where adaptation interventions cannot make highly exposed areas safe to live in, policies and strategies that support voluntary, orderly and safe migration options for groups highly vulnerable to climate risks are needed. Where policies seeking to facilitate migration ensure that appropriate housing, water and sanitation, and social services are available in the

destinations, there can be economic and social co-benefits, such as limiting disruption to education and access to health services. More resilient social welfare systems in general can support a range of SDGs.

Disaster risk and management systems are relevant adaptation policies in all geographies and sectors. Providing early weather warnings improves farming productivity and thus supports incomes (poverty reduction), food security, and public health (by enabling people to prepare for extreme weather in advance), and can contribute to reducing inequalities, where information is made accessible to all. Climate risk management at a national level is thought to be most effective in delivering co-benefits when coordinated across sectors, government departments and local governments (IPCC, 2022a).

Social protection systems are essential to improving the resilience of the most vulnerable people against the impacts of climate change. Adaptation in this area essentially means that natural disasters and the increasing frequency and intensity of extreme weather events need consideration when constructing social security systems, through for example food security safety nets, cash transfer programmes, and the provision of insurance schemes (e.g., farmer insurance) (UNICEF East Asia & Pacific and Vivid Economics, 2021). By safeguarding livelihoods, social protection system adaptation delivers sustainable development co-benefits in areas like poverty and hunger reduction and access to healthcare and education.

c. Synergy between mitigation and adaptation measures

Mitigation and adaptation policies and measures are often closely related, and, if designed well, can reinforce each other. Such policies and measures delivering synergies can be thought off as (IPCC, 2022a: table 13.3):

- Climate adaptation policies and measures that help to reduce GHG emissions over time
- Climate mitigation policies and measures that improve resilience to climate risk exposure.

A good example of interventions with both mitigation and adaptation benefits, as well as other positive economic, environmental and social impacts, are **local renewable energy investments** in developing countries. Especially in developing countries in arid regions, local deployment of renewable energy technologies, such as solar-powered pumps, can help reduce reliance on fossil fuels and improve water security, by making irrigation possible where it is currently unavailable or too costly. Such interventions are thought to deliver co-benefits by displacing fossil fuels, and simultaneously providing affordable energy (freeing up financial resources and reducing poverty), providing local employment opportunities, providing opportunities to upskill the local population (IPCC, 2022d: Chapter 13).

Other types of intervention operating at the nexus between adaptation and mitigation, **are nature-based solutions and ecosystem-based approaches**, which can be defined as follows

- Nature-based solutions:
 - A broad swath of actions that serve to protect, restore, and sustainably manage natural or modified ecosystems (G20 Climate Stewardship Working Group, 2020).
 - Actions to protect, conserve, restore, sustainably use and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience and biodiversity benefits (UNEA, 2022)
- Ecosystem-based approaches to climate change adaptation:
 - Holistic approaches that use biodiversity, and ecosystem functions and services to manage the risks of climate-related impacts and disasters (G20 Climate Stewardship Working Group, 2020).
 - The use of biodiversity and ecosystem services into an overall adaptation strategy to help people to adapt to the adverse effects of climate change (Secretariat of the CBD, 2019).
- Eco-system based approaches to disaster risk reduction:
 - Sustainable management, conservation and restoration of ecosystems to reduce disaster risk, with the aim to achieve sustainable and resilient development (Secretariat of the CBD, 2019)

The synergy between adaptation and mitigation of nature-based solutions and ecosystem-based approaches lies in the potential to reduce negative climate change impacts while conserving, restoring and expanding natural carbon sinks. Examples of nature-based solutions and ecosystem-based approaches include coastal adaptation using mangroves, forests and seaweed; land adaptation through reforestation; and restoration of wetlands and mangroves and urban green spaces. The potential for other co-benefits for society and the economy lie in the interactions between humans and ecological systems. Ecosystem services can provide value to society and individuals, and are usually categorised into four main groups as (1) supporting services (e.g., productivity), (2) provisioning services (e.g., food), (3) regulating services (e.g., climate regulation), (4) cultural services (e.g., tourism) IPCC (2019). Examples of such services are cooling local areas, purifying water, supporting biodiversity, offering recreational opportunities with health benefits for the population (IPCC, 2022d: Chapter 13).

However, NbS and EbA are themselves vulnerable to climate impacts, and need careful deployment (e.g., forestation with non-native species can damage biodiversity) and inclusivity, to avoid negative outcomes, where measures lead to disruptions in the local economy, such as forced relocation or loss of livelihoods and jobs. Moreover, some ecosystems, such as blue ecosystems (e.g., mangroves) may also emit other greenhouse gases into the atmosphere despite acting as carbon sinks, hence constituting a policy with potential trade-offs in this respect, requiring consideration and management (IPCC, 2022a: Chapter 2.6).

4. Challenges and barriers to delivering policy co-benefits and synergies

The literature identifies a number of key barriers to unlocking synergies and co-benefits of climate policy.

Trade-offs

A key barrier to delivering co-benefits is that many climate policies and measures come with trade-offs. If adaptation measures fail to address the underlying root causes for vulnerability, they can undermine the achievement of SDGs, and in some cases lead to worse outcomes (for example, when adaptation incentivises ongoing exposures to risks, such as settlement in coastal areas threatened by sea-level rises). Moreover, adaptation and sustainable development can be in conflict, especially in developing countries characterised by fast urbanisation and changes in land use (for example, urban expansion and introduction of non-indigenous crops can both damage local ecosystems and biodiversity, thus reducing buffers against climate risks) (IPCC, 2022a). Mitigation policies and measures, such as shifting subsidies from a polluting industry to an environmentally friendly one, or introducing bans and regulations, can involve trade-offs regarding employment and affordability of energy, food and water (IPCC, 2022f; see also Cohen et al. 2021 regarding how trade-offs can be managed). Policies and measures can also have unintended consequences, presenting major barrier to delivering mitigation-adaptation synergies: for example, REDD+ initiatives in South America have ecosystem and mitigation benefits, but were in some places associated with involuntary displacement of people, loss of livelihoods, human-wildlife conflicts, and unequal distribution of benefits among local populations (see IPCC, 2022d: chapter 13).

Low institutional capacity and finance

Limited resources and insufficient financing are key barriers to the implementation of any policy, climate mitigation and adaptation included. This is especially true in developing and financially constrained countries. In many developing countries, there is a lack of access to sufficient funds and credit. Public authorities suffer from budget deficits, resulting in limited or insufficient resources for effective climate adaptation policies and weak capacity for institutions to implement them (Philip Antwi-Agyei, Andrew J. Dougill & Lindsay C. Stringer, 2014; Kithiia, 2011). An additional barrier related to the capacity of institutions to implement adaptation policies that can deliver co-benefits and synergies is access to the required technical expertise and human capital. Climate change, and consequently climate policy and action, is a complex field that requires intersecting knowledge and understanding from related fields. In countries where there is constrained access to this required expertise on climate change, the decision makers become restricted in their effectiveness to achieve the desired mitigation and synergies (Etongo et al., 2021; Kithiia, 2011). Finally, the absence of monitoring and quality information about the social and environmental impacts of mitigation and adaptation policies and measures can constitute a barrier to maximising the full potential for social co-benefits, by preventing national and local policy makers from

fine-tuning and improving existing measures. One example of how this can be addressed is shown by the French Government, which has developed a public dashboard of indicators tracking its recovery spending under the 'France Relance' plan, and has published a report on the results of its recovery spending one year after the plan was launched.³

Lack of inclusiveness

Policies and measures tend to be most effective (and deliver the highest co-benefits) when policy making is inclusive, co-led by the affected population, and shaped by local contexts and needs (Roy et al., 2018). Participatory approaches can increase gender equality co-benefits, whilst also improving effectiveness where indigenous and local knowledge are applied in the design of interventions. Effective adaptation further addresses the underlying drivers of vulnerabilities, which can be physical but also social (such as unequal participation in decision-making) (IPCC, 2022a: Chapter 18). When no efforts are made to design and implement policies through an inclusive approach involving beneficiaries and stakeholders, this can pose a barrier to effectiveness and the co-benefits for the communities and stakeholders involved.

Insufficient cross-sector integration

By their very nature, synergies and trade-offs usually cut across sectors of intervention and impact, whilst policies often rely on cross-sector interdependencies (e.g., transport electrifications require energy system updates such as charging points). This means that the absence of local and national policy frameworks and governance structures suitable for defining policies across sectors and considering their wider impacts is a key barrier to delivering climate policy that delivers synergies and effectively manages trade-offs (see UNEP 2020; Bernstein and Hoffmann 2019; IPCC 2022d: chapter 13.9). This may include insufficient capacity for research and analysis to inform policy; a 'silo' approach to policy-making, and financial constraints.

³ See: Report "France Relance 1 an apres le lancement", https://www.gouvernement.fr/sites/default/files/document/document/2021/09/dossier_de_presse_-_1_an_france_reliance_-_06092021.pdf?v=1631189759 – accessed on 26 July 2022; and "France Relance" dashboard, <https://www.economie.gouv.fr/plan-de-reliance/tableau-de-bord> - accessed on 26 July 2022.

5. Analysis of G20 recovery packages and their potential co-benefits

Study 1.1 has estimated that 62% of Covid-19-related recovery spending in energy, buildings, agriculture and forestry and industry in the G20 has a positive contribution to long-term GHG emission reductions. However, the macro-economic analysis suggests that the reduction in GHG emissions in the G20 from the recovery measures is only around 1% in the long term, compared to the baseline scenario. There is potential for much larger mitigation efforts, required to deliver emission reductions consistent with the Paris Agreement and reaffirmed at COP26 the importance of limiting global warming to 1.5°C, which implies reaching net zero emissions by or around the middle of the century.

The findings from study 1.1 also imply that nearly 40% of recovery spending does not have positive climate impacts, yet there is strong evidence that climate policy has co-benefits across economic and social sectors that can support recovery.

The purpose of this study is to illustrate the potential co-benefits of climate policy and how these can contribute to recovery efforts and sustainable development. Based on the theoretical understanding developed above, each G20 recovery measure identified by study 1.1 as making a moderate or strong positive contribution to GHG emission reductions is matched to an IPCC policy category from the matrix provided in Appendix 1. A synthetic index score is calculated for each policy SDG, using a weighting for strength of evidence, count of policies and measures and level of spending.

The objective of this is to provide an indication of which types of sustainable development co-benefits are associated with the ongoing 'sustainable recovery' efforts in the G20, where their strengths lie, and where further attention might be required in order to support the achievement of all SDGs through the use of climate policies and measures.⁴

4 There are some limitations which need to be considered when interpreting the results:

The GRO database is the best available source compiling information on recovery measures taken by countries across the globe, including all G20 member states. However, the GRO database does not give an overview of ALL climate policies taken by G20 member states, either before or after the monitoring period, or it may be that some measures have not been included. Some G20 countries do not have any 'green' recovery measures, according to the GRO database (e.g. Indonesia, Saudi Arabia). Furthermore, monitoring of recovery measures ended at the end of 2021, thus measures taken since are not included.

Note that the analysis only covers recovery measures (longer term), as opposed to short-term 'rescue' spending, which is also included in the GRO database.

Index scores are developed based on the IPCC's stock take of co-benefits and the strength of evidence of synergies with each of the SDGs. The results presented below should therefore be seen as giving an indication of the relative distribution of co-benefits across the GHG emissions reducing recovery measures, and do not consider the current situation related to an SDG in any given country. The results are a function of the number of measures in a certain policy category, the level of spending and the strength of evidence on the link with a given SDG.

Country specificities are not considered in the analysis, nor are potential trade-offs, as this would considerably increase the complexity of the analysis. In practice though, the effectiveness of measures in leveraging co-benefits strongly depends on local circumstances, enabling conditions and to what extent potential trade-offs are mitigated.

a. Policy categorisation

Of all recovery spending reported in the Global Recovery Observatory (GRO) database⁵, our analysis suggests that total recovery spending on identified (unambiguous) green measures is approx. USD 850bn in developed country G20 members, or 27% of all recovery spending in this group. In developing country G20 members, green spending is only around USD 37bn, or 8% of all recovery spending in that group. In the group of developing countries, sustainable recovery spending, in terms of the number of policies implemented, is concentrated in the agriculture, industry and transport sectors. In the group of developed countries, by contrast, policies are distributed across sectors in a more balanced manner, with transport accounting for the largest number of policies.

This broad overview provided in study 1.1 is similar to the picture that emerges when recovery policies are matched to IPCC mitigation policy categories (see Appendix 1). Figure 2 shows the number of policies implemented, by the policy categories used by the IPCC. It maps each of the policies and measures from the GRO database identified as having a moderate or positive impact on reducing GHG emissions to one of the policy categories used by the IPCC. Where it cannot map a policy or measure to an individual category because it is too broad or covers multiple policy categories, it maps to a broader policy area.

For the group of developed countries, the largest share of policies related to the **transport sector**, investment in public transport infrastructure in particular, followed by investments in urban sustainability and cross-cutting policies, which involve multiple industries and technologies. Across developing countries more emphasis is placed on the **agriculture sector and the energy system**, and when comparing the number of policies and measures between the two groups of countries, the graph clearly shows the difference in terms of overall reported recovery efforts as well.

⁵ The GRO database includes the national level fiscal crisis expenditure measures/global spending announced since January 2020 until present of all G20 members.

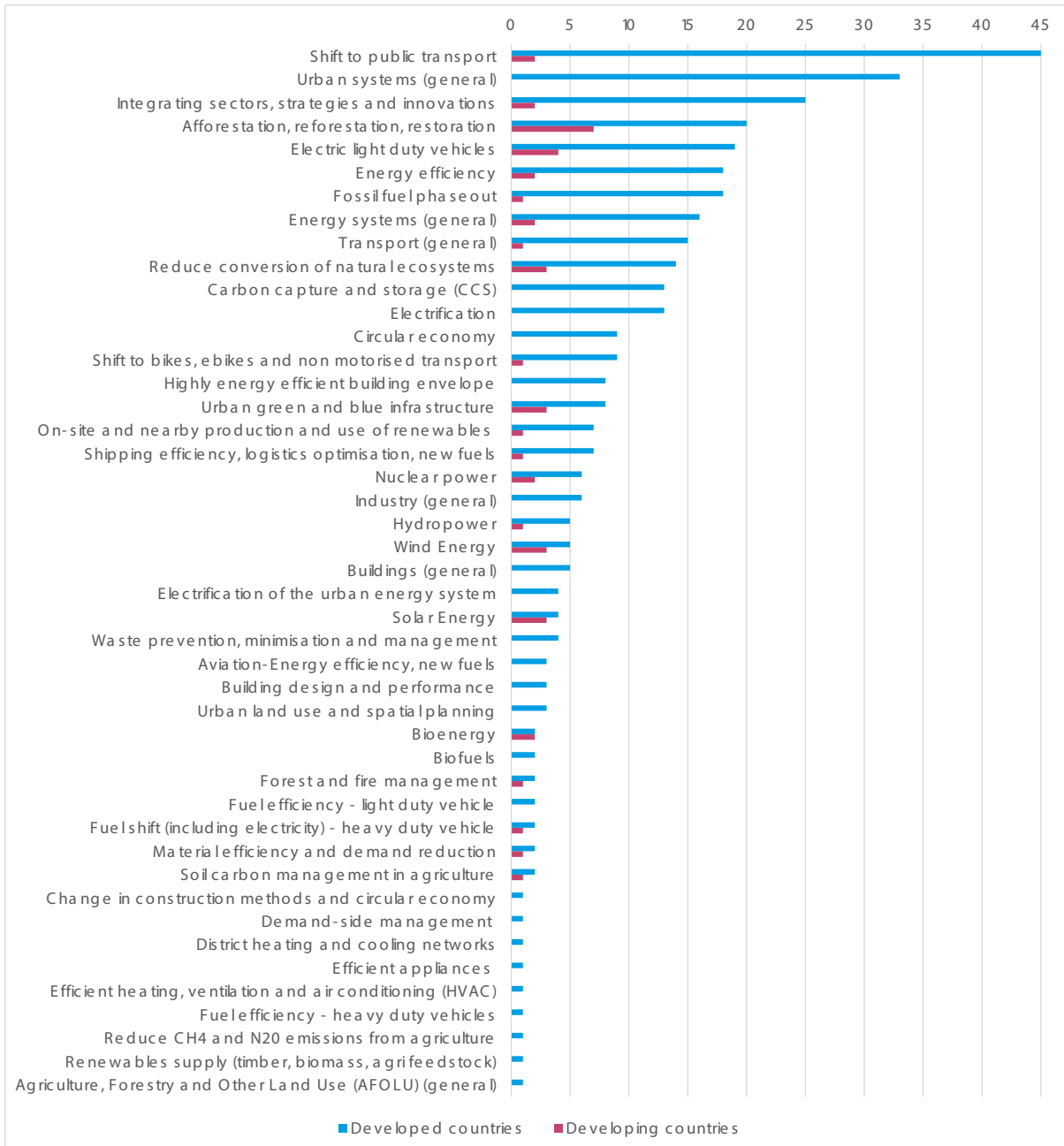


Figure 2: Number of recovery policies considered (with moderate or positive contribution to GHG emissions reductions) by IPCC categories in the G20 (GRO)

b. Co-benefits index scores

Figure 3 presents the relative strength of association of green recovery policies and their co-benefits with various SDGs, in developed and developing G20 country groups. The scale signals the strength of the relationship across the various implemented sustainable recovery policies and their associated co-benefits, and the SDGs.

The results illustrate that recovery policies implemented by developed countries are most strongly associated with co-benefits linked to **SDG 3** (good health), **SDG 11** (sustainable cities and communities), **SDG 7** (affordable and clean energy), **SDG 1** (no poverty) and **SDG 8** (decent work and economic growth). In developing countries, the implemented policies are most strongly associated with co-benefits that are the most relevant for SDG 8 (decent work and economic growth), **SDG 3** (good health), **SDG 1** (no poverty), **SDG 7** (affordable and clean energy), and **SDG 6** (clean water).

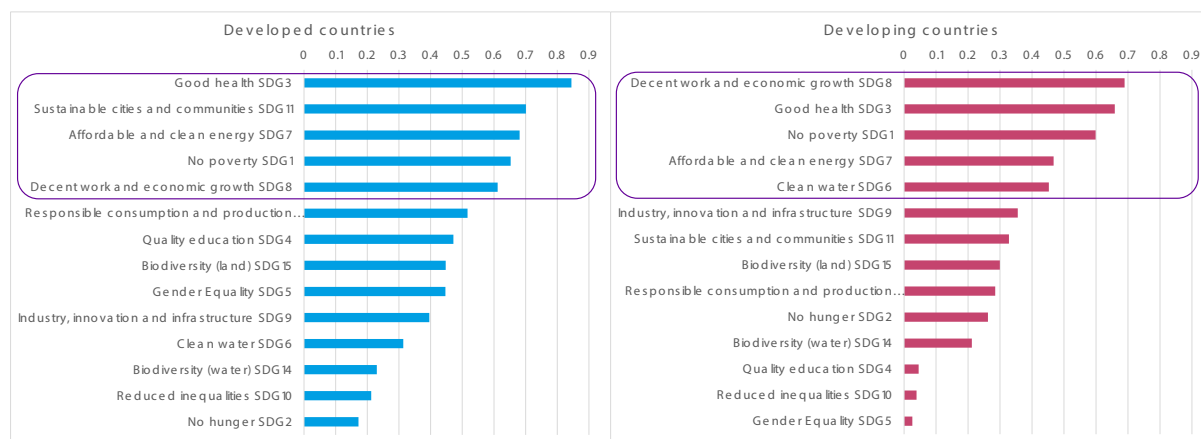


Figure 3: Comparison: indicative co-benefits profile of recovery spending in developed and developing G20 countries (ordered by decreasing level of associated co-benefits)

The recovery measures of both groups of countries are strongly associated with poverty reduction, good health and affordable, clean energy (SDGs 1, 3, 7). This is because there are some similarities in the recovery policies being implemented across the G20 (e.g., transport), but also because these three SDGs are strongly associated with many different types of climate policy measures, unlike for example gender equality and education, which have more indirect links with climate policy.

Looking at the bottom of the charts, the results indicate **low associations with co-benefits that support gender equality, socioeconomic equality and aquatic biodiversity (life below water)**, as there were few policies in the recovery packages implemented by the G20 that are associated with these types of co-benefits. However, this is also partly driven by the weaker evidence of links between climate policy interventions and these co-benefits, as assessed by the IPCC.

There are nonetheless observable differences in the co-benefits profiles of both groups of G20 members, suggesting a different emphasis and therefore, differences in the potential contribution to SDGs if the respective co-benefits are realised. A good example of this is the high index score for **SDG 11** (sustainable cities and communities) in developed countries, which is a result of relatively high efforts in urban sustainability compared to other policy categories and compared to recovery efforts in developing countries. Developed countries have implemented recovery policies whose co-benefits are strongly associated with **SDG 4** (quality education) while developing countries have almost no policies which are associated with this SDG in terms of co-benefits.

While country-level analysis of policies is not in the focus of the current study, the **case studies** below provide best practice examples of recovery measures expected to have considerable co-benefits within their national context, including for vulnerable communities. For future assessment it can be of added value to connect national policies to their associated co-benefits, and to show how a country's policy mix leads to differences in the co-benefits profile compared to the average profile of co-benefits within either the developing countries group or the developed countries group.

c. Case Studies

Case 1: United States of America — Weatherization Assistance Program⁶

Context and objectives

The Weatherization Assistance Program has a long history in the United States as it was launched in 1976. As part of a Covid recovery package, in the November of 2021 the decision was made to scale the policy up and the American Congress accepted to ensure 3.5 billion USD for this measure. The objective of the American Weatherization Assistance Program is to lower the energy demand and therefore the energy bills of the low-income households by providing energy efficiency measures. As estimated by the Department of Energy (DoE), energy efficiency measures significantly contribute to carbon dioxide reduction of the residential sector (calculated to 2.65 metric tons/year per home). This also diminishes the demand for oil (estimated to 24.1 million barrels/year).

Reference to vulnerable communities

Considering financial affordability of energy-efficiency measures is a central pillar of this programme, as low-income families have limited resources to renovate their dwellings and spend a higher share of their income on energy compared with high income households.

⁶ Sources include:

Office of Energy Efficiency & Renewable Energy: About the Weatherization Assistance Program. Available: About the Weatherization Assistance Program | Department of Energy

Office of Energy Efficiency & Renewable Energy: How to Apply for Weatherization Assistance. Available: How to Apply for Weatherization Assistance | Department of Energy

Department of Energy: Weatherization and Intergovernmental Program. Available: 48098_weatherization_assisprog_fsr4.pdf (energy.gov)

GRO Database

Low-income households have a significantly higher expenditure share of the energy costs (14.2% compared with 3.3% for other households). As a result, lower energy bills increase disposable incomes which can be used to buy other goods and services, with induced effects along supply chains. Furthermore, as established by the law, low-income households with vulnerable members, such as the elderly, children and people with disabilities, should be prioritised during the application process.

Co-benefits expected from the measure

- The programme can improve health conditions through better air quality due to decreased energy generation and reduces asthma and other adverse health effects. DoE estimates that an average worker can save USD 514 out-of-pocket medical expenses and USD 583 in pay can be saved due to less sick leave. This implies a contribution to SDG 2 (good health and wellbeing).
- The programme is expected to create new jobs, therefore supporting the efforts of moderating Covid-induced unemployment. This implies a contribution to SDG 8 (decent work and economic growth).
- The programme is expected to contribute to increased affordability of energy, thereby holding the potential to reduce energy poverty, and making dwellings more liveable. This implies a contribution to SDG 7 (affordable and clean energy).

Overall, the DoE expects the investment to have a high return for both the residential households and the government budget. It has been estimated that the energy related benefits of one unit of investment leverages 1.8 units for households. Similarly, one USD of investment leverages 1.54 USD in non-energy related resources (as state and federal budget and private sources). This implies a further contribution to SDG 8 (decent work and economic growth).

Case 2: Republic of South Africa — Catchment management and strategic water source rehabilitation⁷

Context and objectives

Based on data from the GRO database, almost 0.5 billion ZAR was allocated to this component of the presidential stimulus package in mid-August of 2020. As a comparison, the government of South Africa allocated more than 1.9 billion ZAR for environmental programs in the stimulus package of August 2020, from which more than 25% of the finance supports this policy measure.

⁷ Sources include:

South African Government: Building Society that Works. Available: Building a Society that Works - Presidential Employment Stimulus (South African Economic Reconstruction and Recovery Plan) | South African Government (www.gov.za)

Green Climate Fund: Concept Note. Available: 25230-securing-strategic-water-source-areas-south-africa-towards-enhancing-adaptation-climate-change.pdf (greenclimate.fund)

O'Callaghan et al. (2021): Global Recovery Observatory

South Africa is heavily affected by climate change as its temperature has risen more than 1.5 times faster than the global average (0.7 C) between 1960 and 2010. On top of this, water scarcity has had a significant, adverse effect on economic growth and is expected to be more severe in the future. Extreme weather events, such as droughts and abnormal precipitation are projected to increase. To illustrate the potential costs, drought resulted in USD 450 million of damages in the agricultural sector and affected 3.7 million people in the vicinity of Cape Town between 2015 and 2017.

The main goal of the 'Catchment management and strategic water source rehabilitation' programme is to handle the problem of water scarcity in South Africa. To support this, various measures are incorporated such as (1) providing information to support climate-sensitive decision making; (2) guaranteeing enhanced water security through revised planning and regulation; (3) improving ground water recharging through rehabilitating catchment areas; (4) expanding and enhancing the use of secured strategic water source areas (SWSAs). This program is also expected to combat the adverse effects of the pandemic by creating more than 15,000 new jobs and developing skills.

Reference to vulnerable communities

Among the co-benefits of the policy measure, the creation of jobs for women and unemployed youth are highlighted. Both groups have an essential role in rehabilitation programmes (such as clearing alien trees with high water demand and wetland restoration), as the policy measure intends to create direct employment opportunities for them. The programme is designed to enable community co-management with opportunities for women to get involved in decision making, with potential benefits in terms of social capital development and gender equality.

Co-benefits expected from the measure

Three main types of co-benefits can be listed:

- Creating and maintaining strategic water source areas (SWSA) is considered essential in sustaining economic growth across the country. According to the South African government, SWSA can support almost two thirds of the country's output and are estimated to affect at least 24 million people, both rural and urban downstream users. This implies a contribution to SDG 8 (decent work and economic growth) and SDG 9 (industry, innovation and infrastructure).
- The measures are expected to create new jobs and promote skill development. Meanwhile, the gender gap can be tightened, and youth unemployment can be reduced. This implies a contribution to SDG 1 (no poverty), SDG 5 (gender equality) and SDG 8 (decent work and economic growth).
- The improvement, conservation and rehabilitation of ecosystem services are the main potential environmental co-benefit, leading to enhanced groundwater retention, reversing environmental degradation and expanding river baseflows. This implies a contribution to SDGs 14 and 15 (life below water and life on land).

Case 3: Japan — Ecosystem-based Disaster Risk Reduction: promoting national resilience with respect to disaster management⁸

Context and objectives

Following the first Covid wave in August 2020, Japan decided to allocate more than 3.1 trillion JPY for 'Securing safety and relief with respect to disaster management'. This amount of investment is allocated to three main policy areas. The aim of 'Promoting national resilience with respect to disaster management' is one of them, with a budget of more than 2 trillion JPY. The investments form part of a five-year-plan to accelerate the prevention of future natural disasters, conserving the infrastructure, and investing in digitalisation, building on a long history with implementing Ecosystem-based Disaster Risk Reduction (Eco-DRR) measures. Eco-DRR measures aim to mitigate the effects of natural disasters by decreasing the exposure to hazards (by not developing disaster-prone areas) and applying ecosystem-based buffer zones which improve the safety of people and their properties. Japan has a long tradition of applying Eco-DRR solutions. Examples of ecosystems on which Japan traditionally relies include homestead woodland functioning as windbreak forest, riverside protection with plants and trees that reduce erosion and thus mitigate the impacts of floods, and the 'Waju' ring dikes that protect exposed communities.

Reference to vulnerable communities

Japan's Eco-DRR initiatives seek to consider impacts on vulnerable groups by championing inclusive approaches to intervention design. The Eco-DRR handbook highlights the importance of involving local and rural populations to build consensus around measures and to receive input from diverse local stakeholders. The handbook suggests that local engagement can be encouraged by awareness raising and information provision in easy-to-understand language, and by seeking input from local communities through anonymous surveys. This approach is likely to benefit rural populations which tend to be poorer, as well as elderly people, who make up an increasing share of Japan's population: Elderly people are also more likely to live in rural areas where declining populations are thought to lead to insufficient land management and thus higher exposure risk to disasters such as landslides, whilst older people also face a higher risk of death during natural disasters.

Co-benefits expected from the measure

Eco-DRR projects have already brought several co-benefits for Japanese society and the implementation of risk disaster management systems are expected to bring further.

⁸ Sources include:

Ministry of the Environment (Government of Japan). (2016). Ecosystem-Based Disaster Risk Reduction in Japan: A Handbook for Practitioners.

Ministry of Finance (2020). Overview of the Third Supplementary Budget for FY2020. Available: 05.pdf (mof.go.jp) – accessed 20/7/2022

O'Callaghan et al. (2021): Global Recovery Observatory

- Eco-DRR solutions have the capability of reducing construction and Operation & Maintenance (O&M) costs of existing social infrastructure facilities.
- Ecosystem services are provided during non-disastrous periods, such as enhancing local tourism and ensuring recreational spaces.
- Some subtypes of Eco-DRR can revitalise local communities, such as traditional fisheries or through producing higher quality rice.
- The implementation of Eco-DRR solutions is expected to stimulate the labour market by creating job opportunities for local communities.
- Eco-DRR solutions can also improve soil and food quality, and protect and enhance biodiversity.

A good illustration of previous successful Eco-DRR projects is wetland restoration in Kabukuri-numa. After a planning phase, previous fallow land was returned to wetland by letting rice paddies flood in the winter season, mitigating flood hazard and leveraging co-benefits. The biodiversity has enhanced as the area is a centre of migratory birds in wintertime, and because floods prevent certain plants from growing. Thanks to the higher biodiversity, the quality of rice and food security increased and the rice could be sold at an elevated price.⁹ Flooding also prevents other plants from growing. Furthermore, eco-tourism has become an important part of the local economy.

⁹ The reason is that birds' droppings are high-quality fertilizers; more worms, frogs, etc. have appeared; and birds eat weeds.

6. Recommendations to maximise co-benefits and synergies for a sustainable recovery in the G20

a. Recommendations to drive sustainable development co-benefits through recovery policy at a national level

Sustainable recovery policy should encompass both mitigation and adaptation measures. Even if emissions were to stop completely from tomorrow, there would be significant global warming and the need for adaptation measures (IPCC, 2022a). Policy recommendations presented here are based on the findings from the literature review, the mapping of recovery policies to SDGs and inputs received from G20 member states. They are organised in two groups: the first group of recommendations relates to the enabling conditions for realising sustainable development co-benefits, while the second group relate to areas of policy intervention that could increase the effectiveness of recovery efforts in driving the path towards sustainable development. While it is recognised that circumstances are context-specific and that there is no one-size-fits-all, the recommendations are intended to be cross-cutting and have validity across geographies, G20 member states and beyond.

1. **Recognise, identify and account for the presence of co-benefits** to counter the perception that mitigation and adaptation measures are costly (Köberle et al., 2021). The benefits profile of climate-friendly recovery measures can improve dramatically and strengthen the case for investment when policy making recognises the existence of co-benefits and actively seeks to identify and value them, as well as the avoided future costs (Ibid; IPCC 2022e, Box TS.7 and figure TS.30; IPCC 2022d, chapter 7). Many mitigation and adaptation interventions have environmental social co-benefits that in turn benefit vulnerable groups and can have positive fiscal effects by averting expenditure for healthcare and social protection: measures that improve water security and health outcomes benefit children as well as elderly people; in least developed countries, measures that support family income security reduce reliance on child labour and can support educational attainment for children. This also highlights the potential for a just transition towards net zero.
2. **Promote cross-sector approaches and integration** when developing recovery policies and measures, ideally as part of broad and encompassing recovery packages that consider synergies and trade-offs with wider development objectives. Evidence suggests that policies with the potential for delivery of co-benefits and mitigation-adaptation synergies usually work best when developed in a cross-sectoral approach, to ensure they reflect diverse requirements and impacts (Cohen et al. 2021). This is particularly relevant in strongly interlinked sectors, such agriculture and water, or transport and the power sector.
3. **Increase the inclusiveness of decision-making** by integrating local communities and indigenous people, women, young people, and multiple stakeholders in decision-making. This can support the identification of policy trade-offs and unintended consequences,

thus increasing the scope for climate policy co-benefits while limiting trade-offs (IPCC, 2022d: Table 13.3). Capacity building and inclusive governance that supports knowledge exchange (such as the inclusion of local and indigenous knowledge) can support policymakers in considering distributional impacts of policies and avoid negative impacts on vulnerable communities (for example in making decisions on new energy or transport infrastructure). This is important given the context-specific and localised nature of specific vulnerabilities and resilience needs (OECD, 2018). Inclusiveness can also help improve women’s participation in decision-making, which could be particularly beneficial in developing economies, where our analysis suggests that the current climate policy mix may include fewer interventions with gender equality co-benefits.

4. **Mobilise finance** because the difference between developing and developed countries in the amounts of finance mobilised for recovery interventions is striking and shows that supporting climate finance mobilisation from a wide range of sources, as per article 9 of the Paris Agreement, remains a priority, especially with regard to private finance. For reference, the UNEP’s Adaptation Gap Report, 2021 highlights that in developing countries, total mobilised private finance amounts to just 17-27% of all climate finance, with the majority of this benefitting mitigation activities – despite most countries indicating in their NDCs and NAPs that climate adaptation is a priority.
5. **Avoid recovery measures that perpetuate fossil fuel lock-ins** because moving towards net zero emissions requires policies that support the deep transformation of existing systems of production and consumption (energy, transport, housing, agriculture, water) (UNEP, 2020). Key to achieving such deep transformations is the avoidance of policies that perpetuate lock-ins (e.g. waivers or relaxation of environmental regulations; support for fossil fuel intensive companies without transformation conditions; and in some contexts, investment in transitional technologies which locks future generations into fossil-fuel use, for example in the heating, industry and transport sector), or policies that lead to ongoing high material consumption due to insufficient regulation of circularity. Such lock-ins constitute a barrier to SDG attainment by imposing ongoing and future high costs on populations and by diminishing the changes to mitigate climate change and rapidly adapt to its consequences.
6. **Strengthen policy and measures with mitigation-adaptation co-benefits:**
 - a) **Climate adaptation policies and measures, as far as documented in the reviewed data**, remain scarce compared to mitigation policies in both developed and developing countries, despite the potential to leverage strong co-benefits in support of sustainable development. However, there is an economic, environmental and social case to put more effort and investment into climate adaptation.
 - b) **In arid regions and coastal areas subject to higher climate risks**, in particular in developing countries, an increased focus on adaptation measures should be made a priority to ensure future climate resilience, with a host of long-term co-benefits ranging from poverty reduction to gender equalities.

- c) **Health-system adaptation and resilience**, which carries social co-benefits across many SDGs, merits greater policy attention in all geographies. This can support societal resilience to increasingly frequent extreme weather and disaster, and its impact on agri-food systems as well as changes in disease patterns.
 - d) **Local level support for improved cropland management** (adjusted planting cycles, use of climate-resistant crops, water storage and reuse, soil-friendly farming practices etc. etc.) is recommended, especially in areas vulnerable to droughts and flooding. Resulting productivity gains safeguard livelihoods of farming communities, contribute to poverty reduction and food security, and increase gender equality.
7. **Employ urban mitigation strategies and measures as part of climate and sustainable recovery measure.** Urban mitigation measures often have adaptation synergies and are associated with strong co-benefits such as energy and resource savings, air quality improvements, with impacts on SDGs such as poverty reduction, health and food security (IPCC, 2022d, chapter 8; IPCC, 2022a, FAQ6.4).
 8. **Strengthen mitigation measures in the agriculture, land use and forestry sector to unlock significant social co-benefits and adaptation synergies**, often delivered by protecting or restoring biodiversity. Healthy ecosystems and protection of biodiversity support the livelihoods of marginalised and indigenous peoples and local communities, and increase disaster resilience (IPCC, 2022d, chapter 7). In all geographies, **re- and afforestation, ecosystem restoration and renewable energy investments** are deeply 'green' interventions that have short-term economic growth and employment benefits (Jotzo et al., 2020). Developed countries may want to consider afforestation and ecosystem restoration in particular, as current policy appears less oriented towards nature-based interventions.
 9. **Demand-side solutions to climate** change remain relatively untapped, especially in high-income economies, yet can deliver health and income co-benefits without decreasing living standards. These include policies that enable people to reduce fossil-fuel consumption by providing more attractive active transport, alternatives to short haul flights, or attractive plant-based dietary options (Creutzig et al., 2022; UNEP, 2020). Governments may wish to actively promote sustainable behaviours and energy savings, for example by mandating clear cleaner energy efficiency labels for home appliances.
 10. **Promote nature-based solutions and ecosystem-based approaches** across sectors, and invest in research to assess the potential contributions of nature-based solutions to adaptation, disaster risk reduction and mitigation within specific contexts. Social co-benefits can be leveraged when nature-based solutions are designed and implemented in a participatory way, involving local communities and indigenous peoples. In doing this, applying social and environmental safeguards is crucial. These include gender equality benefits as women tend to be underrepresented in decision making processes, and education benefits when indigenous knowledge is actively engaged (IPCC, 2022d). The potential and importance of nature-based solutions was also highlighted and endorsed by G20 delegates at the CSWG meetings.

11. **Monitor positive and negative policy impacts**, by investing in and building capacity to monitor key metrics beyond just emission reductions, such as biodiversity impacts, water quality, and social impacts. This includes the development of data collection and monitoring systems, as well as the sharing of data, across all levels of government. Better metrics and monitoring will enhance the understanding and visibility of co-benefits and SDG attainment, while also enabling adaptive approaches to policymaking and adjustments as and where needed. There are potential synergies with efforts to improve monitoring and evaluation of recovery spending, as recommended by study 1.1.

b. Recommendations for international co-operation to drive co-benefits of sustainable recovery policy.

There are actions that the G20 can take to strengthen international co-operation in the adoption of policies that support climate objectives, mitigation-adaptation synergies, as well a sustainable recovery with benefits for all.

A. The G20 may wish to intensify policy cooperation to maximise policy co-benefits and synergies to drive a sustainable recovery. This could be done by establishing a cooperation framework focused on climate policy co-benefits, which could have specific thematic priorities:

1. Our analysis suggests that adaptation measures currently receive much less attention than mitigation. **The G20 could therefore strengthen its cooperation framework and knowledge exchange around best practice adaptation measures and governance arrangements**, focussing specifically on measures and institutional processes that support synergies and co-benefits, and guide countries on policy implementation.
2. **Such a G20 cooperation framework could focus on collaboration in selected intervention areas associated with high co-benefits and mitigation-adaptation synergies.** This could involve the **development of action plans** to inform and update national strategies, putting greater emphasis on sustainable development benefits of climate policy. It would need:
 - a) **A discussion forum or working group focused on nature-based solutions and ecosystem-based approaches**, that complements existing international platforms and offers countries the opportunity to share knowledge about co-benefits, policy synergies, and risks and trade-offs, and develop guidance for policy makers, including on social and environmental safeguards. Nature-based solutions are characterised by strong mitigation-adaptation synergies and associated with significant environmental and social co-benefits. However, trade-offs must be carefully managed (e.g., where ecosystem restoration leads to forced migration of communities or local labour markets impacts).
 - b) **A discussion forum or working group focused on urban mitigation and adaptation policies**, their co-benefits, synergies, and on the development of an

action plan and guidance for national and local governments. There are huge opportunities to improve urban quality of life while increasing climate resilience, especially in rapidly urbanising areas in developing countries, by integrating climate considerations in urban planning, and by investing in interventions that deliver mitigation-adaptation synergies and quality of life benefits.

3. **The G20** could implement such a cooperation framework by establishing a partnership and agenda **under the Climate Sustainability Working Group**, to oversee the development of action plans and engage with countries and stakeholders. It should make strong links with existing related initiatives under the UNFCCC and 2030 Agenda, and stakeholders such as the IPCC or researchers affiliated with it, to leverage existing knowledge and resources, minimise duplication and ensure new guidance and action plans are consistent with the latest research findings. A similar discussion forum, but focussing on carbon pricing, has been proposed by study 3.2¹⁰, and there are potential synergies in creating these fora in parallel.

B. The G20 may wish to collaborate in the following areas to champion the integration of co-benefits in climate policy making around the world:

1. The G20 could take global leadership of inclusive governance and international co-operation:

- a) **In international capacity building, the G20 should support countries in establishing inclusive governance arrangements.** This will help countries design more effective policies by incorporating local and indigenous knowledge and avoid negative and unintended consequences on women, children, local communities and indigenous peoples and other vulnerable groups.
- b) **The G20 could lead the development of tools and policy guidance to support all countries** with the design of inclusive climate policies and that deliver sustainable recovery co-benefits, including to SDGs, particularly those that strengthen the participation and resilience of vulnerable groups, such as children, women and local communities and indigenous peoples to pandemics and climate change impacts. This could be in the form of handbooks or step-by-step manuals for policy makers but also for private sector and civil society actors.

2. The G20 could set an example of effective knowledge and technology exchange:

- a) **Intensify international cooperation and exchange of knowledge** around successful intervention areas which are associated with high mitigation-adaptation synergies and co-benefits, through the dedicated sub-working groups within the Climate Sustainability Working Group suggested above.
- b) **Intensify countries' regional collaboration on interventions and systems that advance mitigation-adaptation co-benefits, particularly, where cross-border**

¹⁰ The G20 Climate Sustainability Working Group study 3.2 'Towards low greenhouse gas emission and climate resilience future through utilizing economic value of carbon'.

circumstances limit the effectiveness of national policies, for example wild-fire risk prevention and climate risk monitoring and early warning systems, management of future migration, and management of water resources. These types of interventions have significant long-term social, environmental, and economic co-benefits.

- c) Governance arrangements that facilitate cross-sector collaboration are key enablers to developing transformational climate policy and to minimising adverse distributional impacts. Therefore, **the global exchange of knowledge and development of good cross-sector collaboration practices led by the G20** are beneficial tools. This may also include the development of internationally consistent and easy-to-adopt monitoring indicators.

3. The G20 could champion the deployment of innovative finance:

- a) **Finance remains one of the key barriers to effective climate action.** The much lower overall amounts of recovery spending mobilised across developing countries in the G20, and their lower share of 'sustainable recovery' spending give a clue to this. As also highlighted by study 1.1, the G20 could work with Development Finance Institutions to support developing countries in accessing available climate finance and help them invest it in measures that boost climate-resilience and benefit the most vulnerable communities.
- b) **The G20 should cooperate to identify and mobilise finance** from a variety of sources to fund policies and measures with the potential delivery of co-benefits and mitigation-adaptation synergies through existing financing mechanisms and innovative financing frameworks. Such cooperation should build on the recommendations developed by the innovative financing work stream of the Climate Sustainability Working Group. This may also involve cooperation and capacity building with developing countries to support them mobilise private investment in sustainable recovery measures, as recommended by studies 1.1 and 3.1¹¹. All countries could benefit from introducing 'green' and sustainable budgeting mechanisms, for example, by consistently appraising the climate impact of new policies and prioritising policies accordingly, and aligning public spending with SDGs (as recommended by study 3.1). The G20 could act as role models in implementing these principles in their budgeting processes.

¹¹ The G20 Climate Sustainability Working Group study 3.1 'Innovative finance towards low greenhouse gas emission and climate resilience future'.

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Appendices

1. List of Agenda 2030 Sustainable Development Goals

SDG number	Goal description
1	No poverty
2	Zero hunger
3	Good health and well-being
4	Quality education
5	Gender equality
6	Clean water and sanitation
7	Affordable and clean energy
8	Decent work and economic growth
9	Industry, innovation and infrastructure
10	Reduced inequalities
11	Sustainable cities and communities
12	Responsible consumption and production
13	Climate action
14	Life below water
15	Life above water
16	Peace, justice and strong institutions
17	Partnership for the Goals

Based on the UN website: <https://sdgs.un.org/goals>



CLIMATE SUSTAINABILITY WORKING GROUP (CSWG) G20 2022

STRENGTHENING ACTION AND PARTNERSHIP FOR SUSTAINABLE OCEAN INITIATIVES

Final Report



September 2022



STUDY 2.1

STRENGTHENING ACTION AND PARTNERSHIP FOR SUSTAINABLE OCEAN INITIATIVES

Indonesia, September 2022

Recover Together, Recover Stronger

Authors :



Contributors :



Acknowledgments

Authors

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Disclaimer

This G20 Climate Sustainability Working Group [Strengthening action and partnership for sustainable ocean initiatives] is a result of the collaborative efforts of all G20 members and guest countries and in no way entails the endorsement of all views contained therein, but rather reflects the result of a fruitful knowledge and information sharing experience. This document is a technical report designed to highlight opportunities and accelerators from G20 members and guest countries. These experiences may serve as inspiration or examples of innovative solutions for countries that are exploring or facing similar options and/or challenges.



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List of Acronyms

AIS	Archipelagos and Island States
CCA	Climate Change Adaptation
EBRD	European Bank for Reconstruction and Development
EEZ	Exclusive Economic Zone
EIB	European Investment Bank
GDP	Gross Domestic Product
GEF	Global Environment Facility
GFCR	Global Fund for Coral Reef
GHG	Greenhouse Gas
GPO	Global Partnership for Oceans
HAC	High Ambition Coalition
ICM	Integrated Coastal management
ICZM	Integrated Coastal Zone Management
IOC	Intergovernmental Oceanographic Commission
IPCC	Intergovernmental Panel on Climate Change
IUCN	International Union for Protection of Nature
IUU	Illegal Unreported and Unregulated (Fishing)
LEAP	Local Early Action Plan
LME	Large Marine Ecosystem
MPA	Marine Protected Area
MSP	Marine Spatial Planning
NAP	National Adaptation Plan
NbS	Nature-based Solutions
NDC	Nationally Determined Contribution
NGO	Non-Governmental Organization
OCIA	Ocean and Climate Initiatives Alliance
PEMSEA	Partnership for Environmental Management of Southeast Asia
PIMPAC	Pacific Islands Managed and Protected Area Community
REAP	Region-wide Early Action Plan
SDG	Sustainable Development Goal
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
WWF	World Wildlife Fund for Nature

Executive Summary

The ocean-climate nexus is a complex web of interrelationships between causes and impacts. The ocean plays a critical role in the global climate system. It takes in more than 90% of the excess heat trapped by rising GHG levels but, equally as important, it also absorbs between 20 and 30% of anthropogenic CO₂ emissions while producing about half of the earth's oxygen through the photosynthetic activity of marine plants and algae. Global mean sea level has been rising with acceleration in recent decades, while extreme weather events are increasing in frequency and density. The above are some of the risks to our oceans and coastal zones impacting many coastal communities, mainly the poor ones, around the world. Climate change impacts, such as increased temperature and ocean acidification, trigger a number of changes in the oceans' physical, chemical, and biological systems and related processes, resulting in significant implications for ocean users and the coastal communities and economies that depend on healthy oceans. Changes in the physical and chemical structure of the ocean are having impacts on marine ecosystems, as well as on coastal economies such as fishing and tourism. Adaptation efforts have started to try to counter climate change impacts as well as help build ecosystem and socioeconomic resilience.

Together, G20 members produce more than 80% of the global GDP. This gives the G20 enormous economic power to influence major global processes and diverse tools to initiate and implement change in critical areas that affect the entire global population. Consequently, the G20 members also have common but also differentiated responsibilities to protect the ocean and take the lead in implementing action towards mitigation and adaptation to the impacts of climate change in the ocean within their geographical borders. Historically, international climate efforts have largely overlooked the ocean-climate nexus and the potential of ocean-based climate solutions, but the momentum towards more profound change in this respect started with the Paris Climate Conference in 2015.

The aim of the study is to identify opportunities to enhance cooperation and partnerships among G20 members for a more robust response to critical ocean climate related issues that require urgent action. It identifies and analyses both the unilateral ocean climate measures within G20 members and the collective actions (bilateral and multilateral) of existing ocean climate measures within and among G20 members. It explores, based on the lessons learned and identified gaps in implementation of existing initiatives and modalities for a functional partnership. Finally, it informs the G20 members about the strategic directions and recommend steps to be taken to develop an action plan needed to realise the proposed partnership.

Key Findings

1. There is a **variety of international (bilateral and multilateral) partnerships and actions** involving governments that engage with ocean climate measures. There are also initiatives that engage with local partners, as well as multisector initiatives that do not directly involve governments.
2. Some of the partnerships are implemented through specific programmes that are led and financed by one of the G20 countries. Furthermore, **no ocean climate initiative is currently employed that involves all of the G20 members.**
3. Most of the current globally based partnerships are meant to be action oriented, but they have **limited means, primarily financial ones, to implement concrete actions** on the ground with tangible results that may be attractive for partnership members.
4. **None of the existing partnerships is exclusively focused on ocean climate issues.** While it can be argued that climate change is a cross sectoral issue that cannot be dealt with in isolation, in order to be fully effective, it has to be integrated with other ocean governance tools such as Marine Protected Areas Management, Marine Spatial Planning and/or Integrated Coastal Zone Management.
5. Many of the **existing partnerships lack an integrated strategic framework to implement action focused on ocean climate change**, which is a necessary precondition to maximise opportunities for effective ocean action. Many of the initiatives are focused on implementing specific aspects of climate change mitigation and adaptation, but not implementation of measures within an integrated ocean governance framework.
6. **All of the G20 members have climate policies and plans and most of them employ unilateral ocean climate measures.** Some developed countries, such as the US, Germany and France, have fully adopted ocean-related climate initiatives and incorporated them into national strategies based on scientific evidence. Australia, Russia and Saudi Arabia have also implemented initiatives to protect and use their marine ecosystem services to address climate change.
7. **Countries that do employ unilateral ocean climate measures generally employ several core mitigation and adaptation strategies.** The unilateral ocean climate measures that address mitigation include, among other, blue carbon storage through restoration and protection of marine ecosystems (e.g., seagrass); capacity increase of renewable energy in the marine environment (e.g., offshore wind, wave power, tidal power, etc.); greater efficiency in marine shipping and port operations; oceanographic data collection to inform climate modelling; and applied research into sustainable, blue technologies. The unilateral ocean climate measures that address adaptation include coastline protection through marine ecosystem restoration and protection (e.g., coral reefs and mangroves); oceanographic data collection to inform climate risk response and management; consultations with local communities and indigenous peoples to inform development and implementation of ocean climate measures; and the development and use of innovative technologies, such as the research, breeding, and transplantation of heat-tolerant coral.

Key Challenges

- 1. *Regional fragmentation:*** Many of the current bilateral or multilateral ocean climate initiatives are regionally based, which somehow limits their ability to incorporate many of the G20 members' climate change measures. A larger G20 constituency in the multilateral partnerships could increase their potential to solve critical ocean climate issues, considering the socio-economic as well as political power that these countries have to influence change and create a stronger momentum than what it is today. In the absence of their larger involvement within a single initiative, the impact of these initiatives/partnerships could remain limited both geographically and structurally.
- 2. *Inadequate financing to implement action:*** Most of the current globally based partnerships are meant to be action-oriented, but they have limited means, primarily financial ones, to implement concrete actions on the ground with tangible results that may be attractive to partnership members. National initiatives are often better funded, but they probably have a limited direct impact at a global level. If most of the multilateral partnerships will continue having limited funding in the future, that could, potentially, result in their reduced impact and loss of interest of potential new partners to join these initiatives. This does not mean that multilateral partnerships should be transformed into financial mechanisms. Rather, multilateral partnerships may be further developed to facilitate bringing together potential donors and users of resources in order to adequately finance efficient and effective ocean climate solutions in the future.
- 3. *Limited focus on ocean climate change:*** Climate change increases the vulnerability of oceans and coastal zones, and its mitigation and adaptation involve disaster risk management, water security, coastal resilience and human development, among others. None of the existing partnerships is exclusively focused on ocean climate issues. While it can be argued that climate change is a cross-sectoral issue that cannot be dealt with in isolation and that in order to be fully effective it has to be integrated with other ocean governance tools such as Marine Protected Areas management, Marine Spatial Planning and/or Integrated Coastal Zone Management, it may make sense that a potential global partnership puts implementation of climate change related ocean solutions at the centre of its activities, though supported by the above-mentioned tools and management approaches.
- 4. *Limited integrated strategic framework to achieve ocean climate mitigation and adaptation objectives:*** Many of the existing partnerships lack an integrated strategic framework to implement action focused on ocean climate change, which is a necessary precondition to maximise opportunities for effective ocean action. Many of the initiatives are focused on implementing specific aspects of climate change mitigation and adaptation, but not the implementation of measures within an integrated ocean governance framework.

Recommendations

During the first stage of the partnership's implementation, it is recommended that the following activities be carried out:

- **Prepare a Communiqué to create partnership during the Indonesia Presidency:** The adoption of the decision is a necessary precondition to start the process of establishing a partnership. The decision should be formulated by the Indonesia Presidency and agreed upon by all G20 members. The decision should briefly state the objectives of the initiative, justification/value added, basic activities, and basic elements of its functioning and organization.
- **Soft-launch G20 Ocean-Climate Partnership** involving all G20 members and other partners at the G20 EDM-CSWG Ministerial Meeting.
- **Promote the partnership and its values** by organising workshops at the G20 meetings under the G20 Indonesia Presidency as well as other important international events.
- **Carry out partnership workshops** and extend invitations to all G20 members and other interested parties (countries, organizations, NGOs, academic institutions, etc.). The purpose of the workshops is to present the value added to the partnership as well as seek ideas for its activities.
- **Organize knowledge-sharing sessions** where ocean-based solutions will be presented, particularly those supported by and through the partnership. These knowledge-sharing sessions may raise the interest of potential partners who wish to join the partnership.
- **Launch G20 Ocean-Climate Global Partnership at COP27 in Egypt.**

In addition to the above recommendations, the G20 members should undertake activities in a longer-term in order to cement the importance and value of the G20 Ocean Climate Partnership:

- Promote the integration of nature-based solutions and ecosystem-based ocean, as well as coastal services in ocean governance.
- Promote the importance of ocean-based solutions for mitigation of and adaptation to climate change.
- Develop capacities for ocean governance with a focus on ocean climate change and the integration of relevant ocean-based solutions.
- Develop knowledge and information sharing platforms with a focus on ocean climate change that will be extended to partners beyond G20 members.
- Promote the value of ecosystem-based management as a governance framework for implementing ocean-based solutions. In this respect, extend the geographical focus of the partnership to adjacent coastal areas.



- Develop partnership's strategy on ocean climate change embedded within the ocean governance framework. This should be done in collaboration with relevant international organizations that are already promoting ocean governance.
- Promote other tools that are relevant for mitigation of and adaptation to ocean climate change (ICZM, MSP, ecosystem services valuation, coastal climate change vulnerability assessment, etc.).
- Facilitate the dialogue between stakeholders to raise the profile of the ocean climate issue.

1. Introduction

1.1 Background and context

The ocean plays a critical role in the global climate system. It takes in more than 90% of the excess heat trapped by rising GHG levels but, equally as important, it also absorbs between 20 and 30% of anthropogenic CO₂ emissions while producing about half of the earth's oxygen through the photosynthetic activity of marine plants and algae. Global mean sea level has been rising with acceleration in recent decades, while extreme weather events are increasing in frequency and density (IPCC, 2019). The above are some of the risks to our oceans and coastal zones impacting many coastal communities, mainly the poor ones, around the world.

The ocean-climate nexus is a complex web of interrelationships between causes and impacts (Figure 1). Climate change impacts, such as increased temperature and ocean acidification, trigger a number of changes in the oceans' physical, chemical, and biological systems and related processes, resulting in significant implications for ocean users and the coastal communities and economies that depend on healthy oceans. Changes in the physical and chemical structure of the ocean are having impacts on marine ecosystems, as well as on coastal economies such as fishing and tourism. Adaptation efforts have started to try to counter climate change impacts as well as help build ecosystem and socioeconomic resilience.

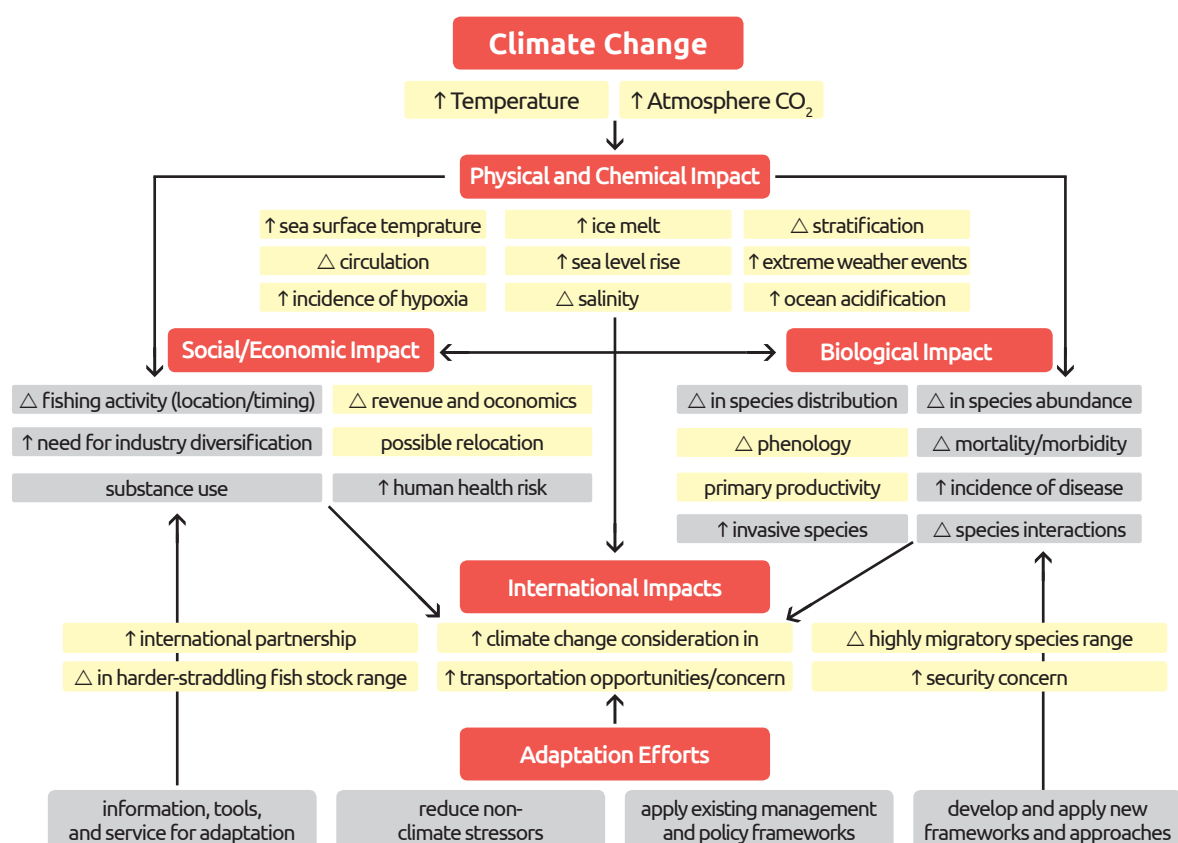


Figure 1: Impacts of climate change on marine ecosystems (Source: Howard et al., 2013)

The impacts of climate-related changes in the ocean have long been recognized as a challenge to efforts to develop and implement climate change mitigation and adaptation responses at all governance levels, from global to local (IPCC, 2019). This has been reiterated most recently by the IPCC WGII with the publication of its Sixth Assessment Report, which concludes with high a level of confidence that anthropogenic climate change has exposed ocean and coastal ecosystems to conditions that are unprecedented over millennia. It has greatly impacted life in the ocean and along its coasts. Most worryingly, current ocean conditions are projected, with virtual certainty, to continue in the future, significantly diverging from pre-industrial times altering, among other, many ecosystem services provided by marine systems (IPCC, 2022).

Together, G20 members produce more than 80% of the global GDP. This gives the G20 enormous economic power to influence major global processes and diverse tools to initiate and implement change in critical areas that affect the entire global population. Consequently, the G20 members also have common but also differentiated responsibilities to protect the ocean and take the lead in implementing action towards mitigation and adaptation to the impacts of climate change in the ocean within their geographical borders.

Historically, international climate efforts have largely overlooked the ocean-climate nexus and the potential of ocean-based climate solutions. That is beginning to change—and the ocean-climate dialogue is a major opportunity to continue “mainstreaming” ocean issues in the climate regime. The momentum towards more profound change in this respect started with the Paris Climate Conference in 2015. As of December 2021, 128 countries have submitted the new NDC targets.

On the positive side, the IPCC report concludes that momentum is growing towards transformative international and regional governance that will support comprehensive, equitable ocean and coastal adaptation (IPCC, 2022). Current efforts should be a push for a more collaborative ocean climate action by the G20 members where they will play a more active role than in the past to support sustainable ocean initiatives that will contribute to meeting the stated ocean climate change mitigation and adaptation objectives, in particular those in the context of the Paris Agreement objectives and also the Sustainable Development Goals 13 and 14, taking into account national and regional circumstances.

1.2 Objectives and scope

The aim of the study is to identify opportunities to enhance cooperation and partnerships among G20 members for a more robust response to critical ocean climate related issues that require urgent action.

The specific objectives of the study are:

1. To identify and analyse the current status of multilateral and unilateral ocean climate change related G20 members’ initiatives.
2. To identify gaps and challenges in existing initiatives that may lead to laying out new framework for action by the G20 members.

3. To understand how a different sustainable ocean initiative can strengthen and accelerate the achievement of the G20 members' climate change objectives.
4. To give recommendations to strengthen action and partnerships for sustainable ocean initiatives
5. To identify different frameworks for capacity development on different aspects of sustainable ocean climate initiative

The study identifies and analyses both the unilateral ocean climate measures within G20 members and the collective actions (bilateral and multilateral) of existing ocean climate measures within and among G20 members. It explores, based on the lessons learned and identified gaps in implementation of existing initiatives and modalities for a functional partnership. Finally, it informs the G20 members about the strategic directions and recommend steps to be taken to develop an action plan needed to realise the proposed partnership.

1.3 Opportunities: Initiatives to strengthen action on ocean climate change

The ocean climate action collaboration, which should be the result of growing momentum to make a change in international efforts to start reversing the negative climate change trends, could result in a form of a partnership whose aim should be to bring together and mobilize G20 members to step up implementation of ocean climate action, reflecting national circumstances, needs and priorities. The main rationale for a new partnership is that despite many existing partnerships on general or specific issues of ocean/marine conservation, resources management, or scientific collaborations on ocean matters, currently there is no dedicated partnership, global or regional, which is primarily targeting ocean climate change issues, including actions for climate change mitigation and adaptation. Developing such a framework focused on ocean climate issues would be the major value added of the partnership.

Several global events that took place in 2022 have helped create a positive context for more collaborative actions towards improving the status of the oceans in general and, more specifically, for the promotion of joint actions to step up efforts to implement measures to reduce and mitigate the impacts of climate change on the oceans as well as to adapt to these impacts. It is important to note that all the above initiatives have taken the ecosystem-based approach as the guiding principle to manage climate change mitigation and adaptation, hence the necessary extension of the ocean to the adjacent coastal areas.

Representatives of more than 100 countries from all sea basins and representing more than half the world's exclusive economic zones have met, following the invitation of the French Government, in Brest in February 2022 at the first **One Ocean Summit**. During the conference, the High Ambition Coalition on BBNJ was launched with the objective of filling the global ocean governance gaps as well as to call for action to reach the robust BBNJ agreement in 2022. By adopting the Brest Commitments for the Oceans, they have decided to join forces to face climate change and agreed, inter alia, on the following:

- To mobilize international community and take collective action for a more sustainable ocean;
- To place the oceans at the heart of the international political agenda and define a common policy for a better governance of the oceans; and
- To join forces in a response to adapt to the effects of climate change.

The 2022 UN Ocean Conference was a major event aimed at the promotion of SDG14. It was co-hosted by Portugal and Kenya and held in Lisbon in June. The conference came at a critical time when the world is seeking solutions to address many deep-rooted ocean issues, among which the issue of climate change acts very prominently. The conference declaration recognised that the ocean is fundamental to life on the planet and has a vital role in the climate system. It reaffirmed that climate change is one of the greatest challenges of our time, and that mankind is deeply alarmed by the adverse effects of climate change on the ocean and marine life, including the rise in ocean temperatures, ocean acidification, deoxygenation, sea level rise, the decrease in polar ice coverage, shifts in the abundance and distribution of marine species, including fish, the decrease in marine biodiversity, as well as coastal erosion and extreme weather events and related impacts on islands and coastal. It emphasised the importance of scaling up science-based and innovative areas of action to support the implementation of SDG14, which includes creation of partnerships at global, regional and sub-regional levels to implement, inter alia, a concerted ocean-based climate action.

The parties of the **United Nations Framework Convention on Climate Change** (UNFCCC) have recognised the importance of the oceans in the Convention and the Paris Agreement. The process of integration of oceans as an indispensable element of climate action gained momentum during the COP25 (Madrid, 2019) when governments recognised the need to strengthen the understanding of, and action on, ocean and climate change and called for the ocean and climate change dialogue. At COP26 (Glasgow, 2021), governments set in place an annual dialogue to strengthen ocean and climate change action. During the first Dialogue, the governments were invited to undertake more ambitious methods and integrate oceans into their strategies to enable sustainable implementation and financing. At the second Dialogue (Bonn, 2022), participants agreed that there is a lack of funding for ocean-based climate action and that overcoming that lack requires creative thinking and innovative solutions. They also called for strengthening inter-institutional cooperation.

Common to all of the above international initiatives is that by calling for action to address the ocean-climate nexus, they offer an opportunity to G20 members to take on this issue. In doing so, G20 members need to look at what the existing partnerships and initiatives are doing and explore the potential for making synergies and complementarities, while also avoiding overlaps.

2. International and national G20 members' policies, strategic directions and approaches towards ocean climate action

2.1 Brief overview of international and national ocean initiatives and/or partnerships relevant to the climate change mitigation and adaptation

2.1.1 Global and regional initiatives and partnerships

From the stocktaking analysis, it is clear that there is a variety of international (bilateral and multilateral) partnerships and actions involving governments that engage with ocean climate measures. As well, there are initiatives that engage with local partners and multisector initiatives that do not directly involve governments.

There is a plethora of examples of multilateral ocean climate initiatives that G20 members are involved in, such as the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), which helps improve marine ecosystem resiliency through restoration and protection. Other examples of multilateral ocean climate initiatives include the Charlevoix blueprint for healthy oceans, seas, and resilient coastal communities, which is used to fund coastal resilience projects, collect and share environmental data, and contribute to the management of vulnerable marine ecosystems; the Archipelagic and Island States Forum, led by Indonesia, addresses climate as one of its four main goals by working with 47 archipelagic and states through programs such as the AIS Blue Start-up Hub, Joint Research Program, and Innovators Scholarship; and the High Ambition Coalition for Nature and People, which includes over 100 countries that have pledged to protect at least 30% of their marine territory by 2030 as a means to help create stable, resilient ecosystems. More examples of multilateral partnerships and actions can be found in Table 1.

Some examples of bilateral ocean climate partnerships and actions include several programs run by the United States to help island states address climate change—Energy Transitions Initiative, Global; Pacific Climate Ready project; Caribbean Energy and Resilience initiative; a partnership between Indonesia and the Republic of Korea to manage and monitor blue carbon sinks through the KOR-IND Marine Technology Cooperation Research Centre; and Australian efforts to support Pacific island countries (e.g., Climate and Oceans Support Program in the Pacific).

Multi-stakeholder ocean climate initiatives are also present and can help galvanise rapid changes in ocean resource development and management by engaging directly with the private sector. For example, the World Bank partnered with the investment bank Credit Suisse to help close the funding gap for SDG 14. The World Bank issued a Sustainable Blue Bond (US\$28.6 million) that acted as collateral for a Low Carbon Blue Economy Note made available to Credit Suisse's private investors to fund sustainable ocean initiatives, including those pertaining to climate change (i.e., marine protected areas).

Table 1: An overview of multilateral and bilateral partnerships

NAME	BRIEF DESCRIPTION OF THE PARTNERSHIP
Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)	Working in partnership with local and national governments, international development organizations, companies, scientific institutions, and regional initiatives, PEMSEA has applied integrated coastal management (ICM) solutions over 38% of the region’s coastline, across 12 countries. Climate change-related work includes ecosystem rehabilitation and protection, as well as adaptive and resilient communities.
The Charlevoix blueprint for healthy oceans, seas and resilient coastal communities	At the 2018 G7, the leaders of G7 commit to: Support better adaptation planning, emergency preparedness and recovery; Support innovative financing for coastal resilience; Launch a joint G7 initiative to deploy Earth observation technologies and related applications in order to scale up capacities for integrated coastal zones management; Increase the availability and sharing of science and data; Address IUU fishing and other drivers of overexploitation of fish stocks; Support strategies to effectively protect and manage vulnerable areas of our oceans and resources; Commit to building on previous G7 commitments and taking a lifecycle approach to plastics stewardship on land and at sea, moving towards more resource-efficient and sustainable management of plastics.
G7 Ocean Deal	The G7 concluded an environment communiqué with strong references to ocean protection and the G7 Ocean Deal under the G7 German Presidency. The Ocean Deal was adopted by the heads of state and government in Elmau. With the G7 Ocean Deal, an ambitious political declaration to advance the urgently needed protection of the oceans was made. In addition, the G7 are sending an important signal in the Super Year of the Oceans with numerous high-level political conferences regarding Marine Protected Areas, CBD, BBNJ, Plastics Pollution and Deep Sea Mining. The Ocean Deal also addresses nature based solutions, blue finance, IUU Fisheries and ocean science.
Global Fund for Coral Reef	The GFCR is a blended finance mechanism (\$625 million) that helps fund revenue-generating projects that address the multi-layered threats to coral reef systems around the globe. For addressing climate change, the GFCR supports projects that protect coral refugia from the impacts of climate change and projects that aid in the restoration of degraded coral habitat through research and use of innovative technologies and through adaptive management approaches. The two financing mechanisms of the GFCR are a grant window—initial funding to incubate projects, support local initiatives, and de-risk the private sector—and an investment window—financial resources used to scale identified projects from the grant window. GFCR Grant Window received contributions from the Prince Albert II of Monaco Foundation, the Paul G. Allen Family Foundation and Germany, Canada, France and the UK.
International Coral Reef Initiative	International Coral Reef Initiative (ICRI) is a global partnership between Nations and organizations which strives to preserve coral reefs and related ecosystems around the world. Its actions have been pivotal in continuing to highlight globally the importance of coral reefs and related ecosystems to environmental sustainability, food security and social and cultural wellbeing. ICRI emerged out of the recognition that coral reefs and related ecosystems found in tropical and sub-tropical regions are facing serious degradation, primarily due to anthropogenic stresses.

NAME	BRIEF DESCRIPTION OF THE PARTNERSHIP
High Ambition Coalition for Nature and People	This partnership is an intergovernmental group of over 100 countries. The HAC is co-chaired by France and Costa Rica, while the United Kingdom acts as an Ocean co-chair. Pledge to protect at least 30% of terrestrial and marine territory by 2030; this will help with carbon sequestration and storage.
Global Oceans Alliance	The Global Ocean Alliance is a 72 country strong alliance, led by the United Kingdom. The Alliance supports the target to protect at least 30% of the global ocean in Marine Protected Areas and Other Effective Area-based Conservation Measures by 2030.
Coral Reef Triangle on Coral Reefs, Fisheries and Food Security	A multilateral partnership of six countries (Indonesia, Malaysia, Papua New Guinea, Philippines, Solomon Islands, and Timor Leste) to address ocean-related issues, including climate change. CTI-CFF Climate Change Adaptation (CCA) Working Group is responsible for implementing Goal 4 of the CTI-CFF Regional Plan of Action, Climate Change Adaptation Measures Achieved. The CCA has developed two climate change action plans; Region-wide Early Action Plan (REAP) for the coral triangle and the Local Early Action Plan (LEAP).
Ocean and Climate Initiatives Alliance	UNESCO-IOC, 150 Member States Ocean signatories contribute to the establishment of multi-stakeholder and international initiatives, such as Climate Risks and Early Warning Systems, Blue Carbon initiative, Global Coral Reef Partnership, Global Mangrove Alliance, International Coral Initiative, Deep Ocean Climate Mitigation and Adaptation, Global Ocean Acidification Observing Network, Global Ocean Oxygen Network and Decade, International Alliance to Combat Ocean Acidification, Small Islands Organization Initiative, Lighthouse Initiative, MPA-ADAPT, MPAs Climate Change Sentinels, and T-MedNet. The OCIA is funded by the French Agency for Biodiversity.
Archipelagic and Island States (AIS) Forum	The AIS Forum is a Government of Indonesia initiative with UNDP playing a secretariat role before being a treaty-based organization and involving 47 Archipelagic and Island States from around the globe. The AIS Forum has four main goals, and the first goal is to promote the use of smart and innovative solutions to address climate change (mitigation and adaptation). The AIS Forum has established several initiatives to help meet this goal, including the AIS Blue Start-up Hub, Joint Research Program, and Innovators Scholarship.
Pacific Islands Managed and Protected Area Community (PIMPAC) AND Community Conservation Network	A long-term program designed to form links between stakeholders—local managers; non-governmental organizations; local communities; and federal, state, and territorial agencies—and to improve capacity sharing as the means to enhance the management of marine protected areas in the Pacific. PIMPAC, alongside the Community Conservation Network, created “Adapting to a Changing Climate: Guide to Local Early Action Planning (LEAP) and Management Planning”, which is a community-based action plan that uses four core steps to address climate change. LEAP has been adopted and adapted globally by various organizations, such as The Nature Conservancy and the Coral Triangle Initiative
World Bank’s Sustainable Development Bond	The World Bank partnered with the investment bank Credit Suisse to help close the funding gap for SDG 14: The World Bank created a Sustainable Development Bond (US\$28.6 million) that acted as collateral for a Low Carbon Blue Economy Note that was offered to Credit Suisse’s private investors. Specifically, projects funded under the Sustainable Development Bond include sustainable fisheries, marine protected areas, and ocean waste upcycling.

NAME	BRIEF DESCRIPTION OF THE PARTNERSHIP
Blue Leaders	The Blue Leaders are an ambitious group of countries calling for urgent action to save the global ocean in the face of the climate crisis, overfishing, pollution, and other threats. It is committed to two major goals: (1) Securing a new international target to protect at least 30% of the global ocean through a network of highly and fully protected marine areas by 2030.; and (2) The rapid and successful conclusion of a new High Seas Treaty that provides for establishment of fully and highly protected marine areas in the high seas and strengthens management of human activities outside protected areas.
High Ambition Coalition for an ambitious BBNJ agreement	A High Ambition Coalition on Biodiversity Beyond National Jurisdiction (BBNJ) that was joined by over 40 Heads of State (including all EU Member States), to achieve an ambitious outcome of the BBNJ negotiations in 2022.

Another important group of multilateral partnerships is the Large Marine Ecosystem initiatives (Figure 2). A number of these have resulted in GEF supported implementation partnerships, such as the Mediterranean Large Marine Ecosystem Partnership (Box 1). Large Marine Ecosystems (LMEs) are wide areas of ocean space along the Earth’s continental margins, spanning 200,000 square kilometres or more and extending from estuaries and river basins seaward to the outer margins of major currents or the edge of continental shelves. Taken together, LMEs provide direct services estimated at nearly US\$3 trillion each year. However, their continued degradation threatens human health, food security, and economic development. These ecosystems are transboundary in nature by virtue of interconnected currents, pollution, and the movement and migration of marine living resources. LMEs represent multi-country, ecosystem-based management units for taking remedial actions toward the recovery and sustainability of degraded goods and services, including the impacts of climate change on oceans and coastal areas. Out of 66 LMEs, 14 LMEs are financed by GEF, implemented by UN organizations and executed by a large number of international and national partner organizations and institutions.

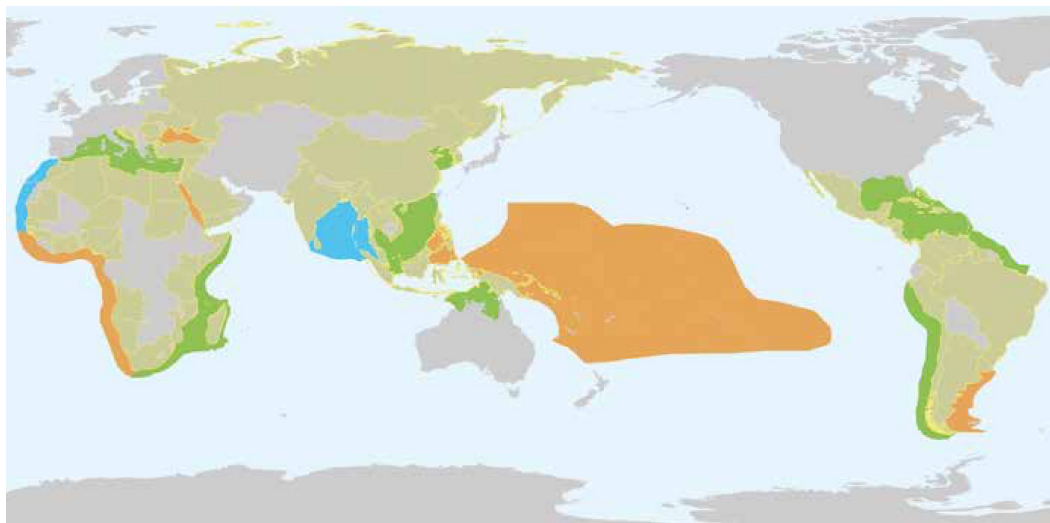


Figure 2: Large Marine Ecosystems partnerships supported by GEF

Box 1: Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership)

The Strategic Partnership for the Mediterranean Sea Large Marine Ecosystem (MedPartnership) is a collective effort of leading environmental institutions and organizations together with countries sharing the Mediterranean Sea (21 countries, including four G20 members, and EU) to address the main environmental challenges that Mediterranean marine and coastal ecosystems face. The MedPartnership was led by the United Nations Environment Programme/Mediterranean Action Plan (UNEP/MAP) and financially supported by the Global Environment Facility (GEF) and other donors, including the European Commission and all participating countries. The MedPartnership catalysed action to create an enabling environment for the necessary policy, legal, and institutional reforms in the partner countries, as well as investments, to improve environmental conditions of pollution and biodiversity hotspots and other priority areas under stress; promote the sustainable use of marine and coastal resources through integrated approaches; reduce pollution from land-based sources; enhance the protection of 'critical' habitats and species; and integrate climate considerations into national marine and coastal planning.

Some of the partnerships are implemented through specific programmes that are led and financed by one of the G20 members. Furthermore, no ocean climate initiative is currently underway that involves all of the G20 members. For instance, the AIS Forum, led by Indonesia, is a global initiative that supports ocean-based climate change mitigation and adaptation efforts. However, only three G20 members are island states, which limits the reach of the AIS Forum's ocean climate initiatives.

There are a number of scientific partnerships that are focusing on specific scientific issues related to ocean-climate nexus. These include Global Partnership for Oceans (GPO), Partnership for Observation of the Global Ocean, Climate Action Pathway, High Level Panel for a Sustainable Ocean Economy, Pacific Rim Ocean Climate Action Partnership, Ocean Climate Initiatives Alliance, A Partnership to Protect the Ocean, Ocean Visions, International Partnership on MPAs, Biodiversity and Climate Change. While these partnerships have achieved significant results in promoting the ocean climate issue, they often lack political clout and financial resources to make a greater impact.

2.1.2 National initiatives

All of the G20 members have climate policies and plans, and most of them apply unilateral ocean climate measures (Table 2). Through the responses to the G20 member questionnaire, some developed countries, such as the US, Germany, and France, have fully adopted ocean-related climate initiatives and incorporated them into national strategies based on scientific evidence. Australia, Russia, and Saudi Arabia have also implemented initiatives to protect and use their marine ecosystem services to address climate change.

In conclusion, countries that do employ unilateral ocean climate measures generally employ several core mitigation and adaptation strategies. The unilateral ocean climate measures that address mitigation include, among other, blue carbon storage through restoration and protection of marine ecosystems (e.g., seagrass); capacity increase of renewable energy in the marine environment (e.g., offshore wind, wave power, tidal power, etc.); greater

efficiency in marine shipping and port operations; oceanographic data collection to inform climate modelling; and applied research into sustainable, blue technologies. The unilateral ocean climate measures that address adaptation include coastline protection through marine ecosystem restoration and protection (e.g., coral reefs and mangroves); oceanographic data collection to inform climate risk response and management; consultations with local communities and indigenous peoples to inform development and implementation of ocean climate measures; and the development and use of innovative technologies, such as the research, breeding, and transplantation of heat-tolerant coral.

Table 2: G20 member countries' actions on ocean climate change mitigation and adaptation

G20 Member	Ocean Mitigation	Ocean Adaptation
Argentina ^{1 2}	Argentina has established its national system of marine protected areas since 2014, this network could also ensure productive ecosystems continue to sequester carbon.	<ol style="list-style-type: none"> 1. Argentina highlights the adaptation sectors in biodiversity conservation, energy, transport, and tourism, which includes ocean-related sectors, in its 2nd NDC. 2. Argentina developed the Monitoring, Evaluation, and Reporting System (MER) for Marine-Coastal Zones for the Climate Change Adaptation Component of the National Climate Change Information System (SNICC). 3. Argentina established its national system of marine protected areas, which aimed at conserving ocean biodiversity in the long term.
Australia ^{2 3 4}	Australia's Ocean Leadership package (\$100 million) has several goals, including conserving and managing blue carbon ecosystems. It generates a positive net benefit of US\$22.8 ± 3.8 bn yr ⁻¹ for the rest of the world through coastal ecosystem carbon sequestration and storage in its territory (Christine B, el. 2021). The investment package will target 'blue carbon' ecosystems that involve seagrass and mangroves, which play a key role in drawing carbon out of the atmosphere.	<ol style="list-style-type: none"> 1. Australia's Ocean Leadership package will also support Australian Marine Parks, expand the Indigenous Protected Areas into Sea Country and protect marine life. 2. The Australian Government provided funding to the National Climate Change Adaptation Research Facility (NCCARF) to develop CoastAdapt

1 From UNFCCC

2 From stocktaking of line ministries' websites

G20 Member	Ocean Mitigation	Ocean Adaptation
Brazil ^{1 2}	<p>The SiMCosta system and the Integrated System for Monitoring and Sustained Observation of Oceans has as one of its aims the evaluation of ocean-related climate change mitigation alternatives that were applied in Brazil.</p>	<ol style="list-style-type: none"> 1. Brazil is committed to protecting coastal and marine ecosystems through the Brazilian Blue Initiative (over 85% of mangroves are already protected). 2. Brazil emphasizes marine ecosystem services within its national climate adaptation plan.
Canada ^{1 4}	<ol style="list-style-type: none"> 1. Canada committed to protecting 25% of the land and 25% of the oceans in Canada by 2025 and is working towards 30% of each by 2030. (Canada's 3rd NDC) 2. The government of Canada supports R&D in marine industries' clean growth and lower carbon alternatives. (Pan-Canadian Framework on Clean Growth and Climate Change) 	<ol style="list-style-type: none"> 1. Canada committed to protecting 25% of the land and 25% of the oceans in Canada by 2025 and is working towards 30% of each by 2030. 2. The government of Canada invested in supporting climate impact vulnerability assessments, and both physical and natural infrastructure for climate change adaptation in coastal areas.
China ¹	<ol style="list-style-type: none"> 1. China promotes the development of the marine energy industry. 2. China has strengthened the spatial planning and use control of land, strictly adhered to the ecological protection red line, strictly controlled the occupation of ecological space, and stabilized the role of existing wetlands, oceans, and other ecosystems in carbon sequestration. 3. China has systematically surveyed the distribution of marine carbon sink (blue carbon) ecosystems nationwide, protected and restored existing blue carbon ecosystems, and carried out various blue carbon pilot projects and marine ecological protection and restoration projects to give full play to the role of blue carbon in mitigating climate change. Enhance the carbon sequestration capacity of mangroves, seagrass beds, salt marshes, etc. 	<ol style="list-style-type: none"> 1. China has carried out vulnerability assessment, sea level change impact survey, and coastal erosion monitoring and evaluation in coastal provinces and other key areas, constructed coastal protective forest belts and tide control projects, and improved the ability of coastal zones and coastal ecosystems to resist climate disasters. 2. China announced its National Blue Bay Remediation Action Plan in 2016 to protect coastal ecosystems and marine biodiversity, improve seawater quality, and protect nearby residents from intensive coastal development. The plan supports remediation projects with identifiable benefits, with financial investment from the central government and co-financing by local governments. These projects provide social benefits and meet public needs both in the short term and the long term. The action plan includes an independent effort to remediate a contaminated bay. The national government leads local governments in conducting the remediation project, but local governments must develop their own individual plans to meet their specific requirements.

G20 Member	Ocean Mitigation	Ocean Adaptation
		<p>3. In 2017, China completed the re-approval of the alert tide level values in 11 coastal provinces nationwide, organized the preparation of the risk assessment and zoning technical method systems for five disaster types: storm surge, tsunami, sea ice, waves, and sea level rise, and improved the level of scientific prevention of marine disasters in coastal localities.</p> <p>4. In 2020, China completed the First Scientific Assessment Report on Oceans and Climate Change, which assessed the basic conditions of China's marine environment and sea level. In 2020, China completed the First Scientific Assessment Report on Ocean and Climate Change, which assessed the basic conditions of China's marine environment and sea level, and predicted the future trends of ocean and climate change.</p> <p>5. Action Plan for the Desalination and Utilisation of Seawater (2021-2025)</p>
European Union ^{2 4}	The EU Structural and Investment Funds 2014-2020 involves a wide range of areas ranging from social policies to territorial cohesion, fisheries, and agriculture.	<p>1. The EU would like to strengthen coastlines to strengthen resilience and to promote natural climate change coastal barriers as an adaptation strategy.</p> <p>2. The EU will include climate change considerations in the future agreement on the conservation and sustainable use of marine biodiversity in areas beyond national jurisdiction;</p> <p>3. The EU Structural and Investment Funds 2014-2020 involves a wide range of areas ranging from social policies to territorial cohesion, fisheries, and agriculture.</p>
France ³	<p>Global Coalition on Blue Carbon, Brest Commitments, ClydeBank declaration, Declaration on zero-emissions shipping, etc.</p> <p>Good application of ocean-related climate initiatives in the national climate change strategy, with a particular focus on marine renewable energy, decarbonized shipping, marine conservation, and NbS.</p>	<p>1. Ocean Science initiatives</p> <p>2. The Priority Research Program on Ocean and Climate aims to structure French research forces to better understand this ecosystem and better protect it.</p>

3 From G20 Member Questionnaire: Strengthening action and partnership for sustainable ocean initiatives

G20 Member	Ocean Mitigation	Ocean Adaptation
Germany ^{2,3,4}	<p>1. Research Mission “Marine carbon sinks in decarbonisation pathways (CDR_{mare}; since August 2021) founded by the Federal Ministry of Education and Research (BMBF): CDR_{mare} will investigate whether and to what extent the ocean can play a significant role in the removal and storage of CO₂ from the atmosphere. It will also consider the linkages with and impacts on the marine environment, Earth system, and society, as well as appropriate approaches for monitoring, attributing, and accounting for marine carbon storage in a changing environment.</p> <p>Germany also supports the sustainable use of coastal and marine resources as a method for preserving biodiversity by working with coastal communities through the Blue Action Fund, which was established in 2016 by the Federal Ministry for Economic Cooperation and Development (BMZ).</p> <p>In 2017, the BMZ established the “Save Our Mangroves Now!” partnership with WWF, IUCN and Wetlands International to restore biodiversity, protect livelihoods and mitigate against climate change impacts.</p> <p>In 2018, the BMZ founded the MeerWissen Initiative to support transdisciplinary African-German research partnerships, e.g. for restoration of seagrass beds as Nature-based-Solutions (NbS).</p>	<p>1. Research Mission “Protection and sustainable use of marine areas” (sustainMare; since December 2021) founded by the Federal Ministry of Education and Research (BMBF): sustainMare will investigate how sustainable use can be ensured in the future while simultaneously protecting the oceans. Through inter- and transdisciplinary research approaches, the knowledge about multiple stressors and the effects of climate change on the marine ecosystem is to be increased and concrete recommendations for action for and with different target groups are to be developed with the help of future scenarios.</p> <p>2. Germany also supports the sustainable use of coastal and marine resources as a method for preserving biodiversity by working with coastal communities through the Blue Action Fund, which was established in 2016 by the Federal Ministry for Economic Cooperation and Development (BMZ).</p> <p>3. The Blue Action Fund is funded to support non-governmental organisations in expanding the area and quality of marine protected areas.</p> <p>4. The “Save Our mangroves Now!” partnership supports the protection and restoration of mangrove ecosystems for coastal protection and generation of livelihoods in the WIO region and globally.</p> <p>5. The MeerWissen Initiative supports African-German marine research partnerships to establish a knowledge base for marine conservation in Africa. The 3rd Call targets NbS through research on mangrove and seagrass restoration as natural form of coastal protection.</p>
India ¹	<p>India has a detailed policy in place that focuses research and development on clean energy-related technologies, including ocean-related. (wind and solar power).</p>	<p>India imposed restrictions to protect the sensitive coastal ecosystems and prevent their exploitation, including the construction of coastal protection infrastructure and cyclone shelters as well as the plantation of mangroves.</p>

G20 Member	Ocean Mitigation	Ocean Adaptation
Indonesia ¹	<ol style="list-style-type: none"> 1. Increased carbon sinks through rehabilitation and planting of mangrove and seagrass ecosystems (blue carbon). 2. Reduction of GHG emissions from fishing vessels through conversion to low emission fuel, CNG. 3. Increasing biodiesel consumption to reduce GHG emissions in the marine sector 4. Reduced GHG emissions from pond opening through the use of a silvo-fishery system or by using solar-powered windmills 5. Large-scale use of cold storage with environmentally friendly cooling systems integrated with a rooftop PV system 	<ol style="list-style-type: none"> 1. Enhance the role and contribution of blue carbon ecosystems (mangroves, seagrasses) in climate change mitigation and adaptation through efforts to reduce conversion rates, rehabilitate, and build new blue carbon ecosystems. 2. Increasing public understanding and awareness of the function and importance of coastal ecosystems, as well as community involvement in the implementation of ecosystem rehabilitation in coastal areas. 3. Regulate the formation, tasks, and functions of the Sub-directorate of Disaster Mitigation and Climate Change Adaptation in coastal areas and small islands.
Italy ²	Italy encouraged Energy saving through various incentives aimed at industrial and domestic consumers.	Italy has one of the more developed programs in the Mediterranean to protect special areas of the coast and ocean.
Japan ^{2 4}	<ol style="list-style-type: none"> 1. Japan detailed its climate change mitigation measures regarding ocean in the Plan for Global Warming Countermeasures . 2. Japan passes the Act No. 89 of 2018 on Promoting Utilization of Sea Areas in Development of Power Generation Facilities Using Maritime Renewable Energy Resources for the utilization of specific maritime areas related to the development of power generation facilities while making efforts to harmonize with other measures related to the ocean. 	<ol style="list-style-type: none"> 1. Japan detailed its climate change adaptation measures regarding ocean such as fisheries and coastal/ocean ecosystem conservation in Climate Change Adaptation Plan (revised in Oct. 2021). 2. Japan is seeking to conserve coastal and marine habitats by integrating climate change predictions into conservation planning and management. 3. Japan national government and local governments collaborate to promote climate change adaptation measures at local levels for fisheries and coastal ecosystem which bring synergy to disaster risk reduction.
Mexico ¹	Mexico's BlueMX focuses on Blue Carbon Projects within Mexico.	Mexico aims to restore and maintain coastal and marine ecosystems for greater resilience against the intensifying impacts of climate change and for the benefit of sequestering carbon.

⁴ From Climate Change Laws of the World

G20 Member	Ocean Mitigation	Ocean Adaptation
Republic of Korea ^{1,4}	<ol style="list-style-type: none"> 1. The Republic of Korea has partnered with the Government of Indonesia on a variety of ocean-related issues, including monitoring and management of blue carbon sinks. 2. The ROK increased carbon sinks by preserving and developing farmland and developing seaweed to absorb greenhouse gases in the atmosphere. 	<ol style="list-style-type: none"> 1. The Republic of Korea has integrated climate change into the protection and conservation of coastal ecosystems. 2. The ROK adapted climate change short-term and long-term impact into laws related to natural disaster and fishery (Countermeasures against Natural Disasters Act, etc.).
Russia ^{1,3,4}	<ol style="list-style-type: none"> 1. Russia will increase the absorptive capacity of various ecosystems, such as wetlands. 2. Russia will create a carbon quota system and certificates of origin for power generated from low-carbon sources. 3. Development of the Northern Sea Route to reduce greenhouse gas emissions 	<ol style="list-style-type: none"> 1. Russia is working to protect the Russian Arctic's unique island and marine ecosystems by working on the interaction between marine ecosystems and climate, with a special focus on the Arctic, disaster risk reduction, and natural territory protection. 2. Russia has also carried out the following ocean-related climate initiatives, <ul style="list-style-type: none"> - conducting research on the impact of the World Ocean on the ecosystem and climate of the planet (primarily on the territory of the Russian Federation), on the state of human health, including the impact of ship environmental factors on it; - conducting comprehensive scientific research and monitoring of the state and changes in the Arctic marine environment under conditions of active anthropogenic impact, taking into account the role and place of the Arctic Basin in global climate processes; - preventing the possible emergence of natural and climatic threats of a global nature in the Antarctic; - developing integrated scientific research in the Antarctic, considering its role and place in global climate processes;

G20 Member	Ocean Mitigation	Ocean Adaptation
Saudi Arabia ¹³	<ol style="list-style-type: none"> 1. Saudi Arabia will seek to localize a significant portion of the renewable energy value chain in the Saudi economy, in terms of Green Hydrogen. 2. Saudi Arabia is developing a National Hydrogen Strategy to define research priorities and relevant demonstration actions. 3. Desalination of seawater provides about 70% of the potable (domestic) water supply in Saudi Arabia. 4. Saudi Arabia has launched its Saudi Green Initiative, including a wide range of initiatives targeted at protecting the environment “Land and Sea” as well as reducing emissions. 	<ol style="list-style-type: none"> 1. Saudi Arabia will implement coastal management strategies that are designed to reduce coastal erosion, increase the sinks for blue carbon, maintain related ecosystems and address the threats that climate change poses to marine livelihoods. 2. Saudi Arabia supports the planting of mangrove seedlings along its coasts. 3. Saudi Arabia strengthens and enhances the coral reef restoration program throughout the north-western Arabian Gulf. 4. Saudi Arabia has launched its Saudi Green Initiative, including a wide range of initiatives targeted at protecting the environment “Land and Sea” as well as reducing emissions
South Africa ¹²	South Africa is running its national carbon sink assessment.	South Africa enhanced the Monitoring of Climate Change impacts on Biodiversity and Ecological Infrastructure.
Türkiye ¹⁴	<ol style="list-style-type: none"> 1. Increasing the capacity of solar-powered electricity production to 10 GW until 2030 2. Increasing the capacity of wind energy production to 16 GW until 2030 3. Tapping the full hydroelectric potential Implementing green port and green airport projects to ensure energy efficiency. 	Türkiye set up laws and regulations regarding marine protected areas.
United Kingdom ^{1,2,4}	<ol style="list-style-type: none"> 1. The UK Government’s vision for the marine environment is for a clean, healthy, safe, productive, and biologically diverse ocean and seas. The sustainable use, protection and restoration of the UK’s marine environment is underpinned by the UK Marine and Coastal Access Act (2009), the Environment Bill and Fisheries Act, UK Marine Policy Statement, UK Marine Strategy, commitment to an ecologically coherent and well-managed network of Marine Protected Areas, and the Joint Fisheries Statement. The UK Government and Devolved Administrations work closely together on the UK Marine Strategy. 	<ol style="list-style-type: none"> 1. Marine protected areas now cover 24% of the coasts and seas of the UK’s domestic waters, while the government is committed to creating MPAs (through Blue Belt) for 4 million square kilometres of the UK’s overseas territories.

G20 Member	Ocean Mitigation	Ocean Adaptation
	<p>2. In November 2019, the Welsh Government published the first Welsh National Marine Plan. This sets out policy for the next 20 years to achieve healthy and resilient seas and marine ecosystems in support of a thriving, sustainable economy. The Plan provides the strategic framework to enable renewable energy generation at sea.</p>	<p>2. The draft Marine Plan for Northern Ireland, published in April 2018, supports the UK Marine Protection Strategy and the UK Government’s vision for the marine environment. The sustainable development of Northern Ireland’s marine area is further underpinned by the Marine Act (Northern Ireland) 2013⁴⁰ and the Marine and Coastal Access Act 2009.⁴¹ The Plan represents the first step in sustainably managing Northern Ireland’s marine area in supporting economic, environmental, and social objectives.</p>
<p>United States¹ ²³</p>	<p>1. The US linked blue carbon with its NDC. It is working to extend the capacity of incorporating coastal blue carbon into national greenhouse gas inventories to developing countries in order to amplify the use of blue carbon as a nature-based climate solution on a global scale.</p> <p>2. The US recognizes the role of the broader suite of ocean-based climate solutions, including scaling-up offshore renewable energy and reducing emissions from shipping and ports, in increasing climate ambition and creating jobs.</p>	<p>1. The US is now engaged in a broad-based initiative to conserve 30% of the nation’s lands and waters by 2030.</p> <p>2. Some States have developed their climate adaptation plans and adaptation guidebooks.</p> <p>3. The NOAA Science Report demonstrates NOAA’s commitment to advancing the opportunities for both ocean prosperity and protection with the new blue economy, the importance of sound climate science to inform society, and Diversity, Equity, Inclusion, and Accessibility (DEIA).</p> <p>4. The US supports a wide range of projects and programs that are improving our understanding of the ocean’s role in climate change, advancing ocean-based solutions, and developing products and services that enable climate-informed decision-making.</p> <p>5. NOAA Climate, Ecosystems, and Fisheries Initiative (CEFI): The CEFI is a cross-NOAA effort to increase the production, delivery, and use of climate information in fisheries management.</p>

Unilateral initiatives that involve internal partners can also lead to the development and implementation of ocean climate measures. For instance, Canada has pledged to work with its Indigenous population (First Nations, Inuit, and Metis) to find climate solutions that also address the national issue of reconciliation.

Boxes 2, 3 and 4 present a more detailed insight into some of the G20 members’ implementation of ocean climate change strategic decisions and solutions

Box 2: European Union

The European Union has a comprehensive set of strategic directions aimed at climate change mitigation and adaptation in general as well as for the coastal and marine areas. For the former, the European Green Deal (EGD) is the major strategic umbrella aimed at transforming the EU into a resource-efficient economy and, for adaptation more specifically, the EU has decided on its Climate Adaptation Strategy as part of the EGD. For the latter, major strategic documents are Joint Communication on the EU's International Ocean Governance agenda, Directive 2014/89/EU of the European Parliament and of the Council of 23 July 2014 establishing a framework for maritime spatial planning and the Marine Strategy Framework Directive. Major points in abovementioned documents related to ocean climate change mitigation and adaptation are:

- reach climate neutrality by 2050 including decarbonising fishing and other maritime activities
- support third countries in implementing their ocean-related action in national follow-up to the commitments under the Paris Agreement and promote nature-based solutions.
- lead on the agreement of ambitious and time-bound global greenhouse gas (GHG) emission reduction targets, standards, and measures for international maritime transport within the IMO.
- reduce GHG emissions from EU maritime transport by increasing the use of renewable and low-carbon fuels (FuelEU Maritime, currently in the legislative process) and introducing carbon pricing (extending EU ETS to the maritime sector, currently in the legislative process).
- support the development of offshore renewable energy by sharing the EU's expertise with third countries and supporting research and development of new markets. In line with the Global Gateway, the EU will also support investments in offshore renewable energy.
- step up its efforts in preserving the ocean's natural 'blue carbon' function through protecting and restoring marine and coastal ecosystems and enshrining ecosystem restoration targets in law.
- integrate climate change considerations in the works of the scientific committees of RFMOs, RSCs and other bodies and instruments dealing with the conservation and management of marine living resources such as the future BBNJ Agreement, and actively promote the designation of additional MPAs, including by CCAMLR.
- promote more research on climate-driven ecosystem tipping points, strive to increase understanding of cumulative ecosystem implications from a combination of drivers, particularly, warming, deoxygenation and acidification, boost research on ocean carbon and sea-level rise and associated nature-based solutions, and increase innovation related to sustainable ocean-based mitigation and adaptation.
- promote the ratification and effective implementation of the London Protocol and the CBD Decision X/33 and pursue better understanding of how their principles of adequate scientific basis, risk assessment and precautionary principle apply to ocean-based CDR activities

Box 3: Indonesia

Indonesia is a party to two important multilateral partnerships implementing activities related to ocean climate change: Partnerships in Environmental Management for the Seas of East Asia (PEMSEA) and Archipelagic and Island States Forum. At the national level, Indonesia has adopted two major strategies: Long-Term Strategy for Low Carbon and Climate Resilience 2050 (LTS-LCCR 2050) and Low Carbon Development Initiative. Strategic directions and approaches relevant to the ocean climate are:

- Emphasis on fostering sustainable ocean development that integrates climate change mitigation and adaptation (e.g., coral and mangrove restoration)
- Indonesia's NDC has strong mitigation and adaptation components; it integrates coastal and marine ecosystems into climate change adaptation and mitigation efforts using the Convention on Biological Diversity's Communication, Education, and Public Awareness (CEPA) Programme to spread awareness about coastal ecosystem protection and mitigation of natural disaster risk, restoring degraded coastal ecosystems, enhancing the resilience of coastal communities by improving livelihood opportunities, and strengthening coastal wetlands through integrated mangrove management

Box 4: Australia

In addition to participating in international initiatives, Australia has adopted several climate change and ocean policies and strategies: National Climate Resilience and Adaptation Strategy, Sustainable Oceans and Coasts National Strategy (2021-2030), Ocean Leadership Package, and Long-term Emissions Reduction Plan. Strategic directions emanating from the above documents are:

- The Ocean Leadership package (\$100 million) has several goals: conserve and manage blue carbon ecosystems, conduct applied scientific research, implement innovative solutions to climate change, enhance resilience of coral reef ecosystems, and improve marine management through collaborative engagement with Indigenous communities
- Australia is committed to addressing regional climate change mitigation and adaptation in the Indo-Pacific through funding initiatives that support blue carbon sequestration through coastal ecosystem protection and restoration. Australia's Government also supports regional climate change mitigation efforts through data collection (e.g., Climate and Oceans Support Program in the Pacific) and is committed to contributing to international projects that address coral reef management
- Australia has protected 44.34% of its marine territory
- Australia submitted its updated NDC in 2021, which reaffirmed the country's commitment to net-zero emissions by 2050 and to reduce greenhouse gas emissions by 26–28% below 2005 levels by 2030—the country is likely to exceed this target by 9 points (i.e., 30–35% reduction on 2005 levels by 2030). Australia's NDC does not currently have a strong focus on using coastal and marine areas as part of its climate change mitigation and adaptation efforts; however, the ocean is mentioned (e.g., blue carbon storage) in Australia's Long-term Emissions Reduction Plan

2.2 Key challenges for an ocean climate partnership

The above analysis of the international and national ocean climate initiatives leads to several important conclusions. There is an abundance of international partnerships engaged in ocean climate action. All of them are organized on a voluntary basis, and in most of them, only a limited number of G20 members are engaged. One important initiative is the G7 Ocean Deal, with great potential considering the resources the participating countries have, but that initiative has not yet evolved into a more formal partnership. Several partnerships have been established around specific ecosystems, such as Large Marine Ecosystems or islands, while another group has focused on specific resources, such as coral reefs. Very few partnerships are focused on utilizing a financial mechanism to implement action.

As the most exploited ecosystems in the world, there is a scientific consensus that coastal marine ecosystems are increasingly threatened by anthropogenic activities and pressures, such as marine resource use, building measures, and global climate change (IPCC, 2018). The natural recovery of marine ecosystems will help central and local governments address the risks posed by climate change. There are a great number of national initiatives aimed at mitigating or adapting to ocean climate change. In terms of mitigation, their actions focus on instruments and/or solutions such as Marine Protected Areas, some of them aiming at protecting 30% of their marine space by 2030; utilising Blue Carbon aimed at sequestering GHG emissions; implementing area-based tools such as MSP; and others. In terms of adaptation, the implemented measures include improved monitoring of climate change trends in oceans and coastal areas; climate vulnerability assessment; enhancing resilience of coastal areas by constructing coastal defences; reducing the disaster risk; raising awareness; implementing management tools such as ICZM; and others. Measures and solutions implemented at a national level are potentially a solid input that G20 members could feed into an ocean climate partnership.

However, the IPCC AR6 shows that we need to invest more efforts to address the challenge of climate change. The above initiatives have not fully responded to the needs of a more comprehensive ocean climate action partnership, and countries are often limited to consistent implementation or legislative or political support regarding ocean climate actions. There is still a gap between interactive climate change impacts and how to integrate them into governance. Below, several key challenges in the existing partnerships that are focused on ocean and climate change issues are highlighted:

Challenge 1: Regional fragmentation

From the stocktake of bilateral and multilateral ocean climate initiatives, it is clear that many nations are trying to address climate change through the monitoring and management of aquatic resources. However, many of the current bilateral or multilateral ocean climate initiatives are regionally based, which somehow limits their ability to incorporate many of the G20 members' climate change measures. For example, the Partnerships in Environmental Management for the Seas of East Asia (PEMSEA), which has helped communities address climate change by conducting marine ecosystem rehabilitation and protection, includes only

four G20 members. A larger G20 constituency in the multilateral partnerships could increase their potential to solve critical ocean climate issues, considering the socio-economic as well as political power that these countries have to influence change and create a stronger momentum than what it is today. In the absence of their larger involvement within a single initiative, the impact of these initiatives/partnerships could remain limited both geographically and structurally. Also, a stronger G20 members' participation in an initiative could stimulate other countries as well as other partners to join the initiative.

Challenge 2: Inadequate financing to implement action

Most of the current globally based partnerships are meant to be action-oriented, but they have limited means, primarily financial ones, to implement concrete actions on the ground with tangible results that may be attractive to partnership members. A positive example, however, could be the GEF-financed LME partnerships. For example, the Mediterranean Partnership (MedPartnership), which has evolved now into a multi-million-dollar Med Programme, has a component to enhance sustainability and climate resilience in the Mediterranean coastal areas. It is supported by the European Bank for Reconstruction and Development (EBRD) and the European Investment Bank (EIB), which will offer investment loans to implement climate solutions.

National initiatives are often better funded, but they probably have a limited direct impact at a global level. If most of the multilateral partnerships will continue having limited funding in the future, that could, potentially, result in their reduced impact and loss of interest of potential new partners to join these initiatives. This does not mean that multilateral partnerships should be transformed into financial mechanisms. Rather, multilateral partnerships may be further developed to facilitate bringing together potential donors and users of resources in order to adequately finance efficient and effective ocean climate solutions in the future. The aforementioned strengthening and making inter-institutional cooperation more effective becomes crucial here.

Challenge 3: Limited focus on ocean climate change

Climate change increases the vulnerability of oceans and coastal zones, and its mitigation and adaptation involve disaster risk management, water security, coastal resilience and human development, among others. For example, the increased frequency and intensity of disaster risks under extreme weather conditions such as severe tropical cyclones overlaid with sea level rise are negatively impacting marine ecosystems and are detrimental to their ecosystem services.

None of the existing partnerships is exclusively focused on ocean climate issues. While it can be argued that climate change is a cross-sectoral issue that cannot be dealt with in isolation and that in order to be fully effective it has to be integrated with other ocean governance tools such as Marine Protected Areas management, Marine Spatial Planning and/or Integrated Coastal Zone Management, it may make sense that a potential global partnership puts implementation of climate change related ocean solutions at the centre of its activities, though supported by the above-mentioned tools and management approaches.

Challenge 4: Limited integrated strategic framework to achieve ocean climate mitigation and adaptation objectives

Many of the existing partnerships lack an integrated strategic framework to implement action focused on ocean climate change, which is a necessary precondition to maximise opportunities for effective ocean action. Many of the initiatives are focused on implementing specific aspects of climate change mitigation and adaptation, but not the implementation of measures within an integrated ocean governance framework. Ocean climate partnership, which will be led by G20 members but will also include other countries and partners, may be able to provide that integrated strategic framework. The current situation without the integrating framework is not conducive to efficient implementation of internationally agreed decisions, in particular those related to large ocean areas.

2.3 Perspectives and potential elements for a new ocean partnership strategy and role of G20 members

As a general conclusion, it could be stated that no large global or regional partnership exists that is focused predominantly on ocean climate action. Many, though, do promote ocean governance as an indispensable tool to manage the ocean in an integrated manner, which is the sine qua non of any partnership initiative focused on implementing action on climate change adaptation and mitigation.

To ensure that G20 members can effectively address climate change through ocean climate measures, stronger and more inclusive ocean climate initiatives need to be created. A G20 ocean climate action partnership could take into consideration, but not limit itself to the existing multilateral, global and regional partnerships such as Sustainable Ocean Initiatives, Marine Region Forum, Regional Seas Program, Large Marine Ecosystem Partnership and others.

Considering the complex context of the oceans and the size of the climate change challenges, the potential partnership could involve, in addition to G20 members and when necessary, other multiple, cross-sectoral stakeholders and integrate a variety of interests, but also be more horizontal in nature. The potential partnership's scope should avoid overlap and duplication of efforts with other complementary G20 activities and initiatives, as well as efforts under other for a, which will make the partnership itself more operational. Having the above in mind, the potential areas of activities of such partnership could be, in addition to coordination of various ocean climate change initiatives of the G20 members, the following:

- supporting their capacity building for ocean climate actions;
- monitoring of the implementation of climate action initiatives;
- filling the knowledge gaps and technology gaps, e.g. by fostering North-South and South-South knowledge exchange platforms;
- enhancing linkages between the multilateral and/or unilateral ocean climate adaptation and mitigation frameworks; and others.

The partnership, while focusing on ocean climate action, could also consider issues of marine governance, integrated coastal zone management and marine spatial planning, ocean-based economy, marine protected areas and marine biodiversity conservation, and marine pollution. On a more operational level, the partnership could be a support facility for collaborative work and facilitate the following, among others:

- knowledge exchange, data sharing, operational ocean climate monitoring;
- creation of a financial incentive mechanism primarily focused on climate relevant measures, which will allow G20 members to channel their current funds;
- support to working with multilateral aid agencies or other channels such as private sector;
- undertake scientific research and development cooperation on various topics such as ocean-based solutions, marine ecosystem-based services, etc.

G20 ocean climate partnership could thus be an “enabler” of the solutions to climate change mitigation and adaptation based on a rich body of ocean science and assist countries to implement climate change mitigation and adaptation solutions. Ocean-based solutions for climate change mitigation include blue carbon storage, ecosystem protection and restoration to enhance ecosystem services, as well as measures to enhance the role of deep-sea and mesopelagic ecosystems in carbon sequestration. Ocean-based solutions for climate change mitigation are enhancing the resilience of coastal communities to sea-level rise and coastal hazards and various measures to enhance the resilience of coastal and ocean ecosystems.⁵

Good Practices such as UK Crown Estate’s Offshore Wind Evidence and Change (OWEC) Programme, The Blue Carbon Initiative, Brazilian Blue Initiative, and Indonesia’s Blue CARES project have elaborated on how ocean-based solutions can significantly contribute to carbon dioxide emissions reduction and carbon sequestration.

On the other hand, the resilience of coastal communities to sea level rise and coastal hazards can be enhanced by using ocean-based ecosystem adaptation measures, as the EU-supported Horizon Europe Mission Area aims to create a climate-resilient Europe that protects lives and assets.

One method by which the partnership’s objectives could be accomplished is by **scaling up** existing regional partnerships and actions. For example, the Local Early Action Planning (LEAP) guide was originally created by the Pacific Islands Managed and Protected Area Community (PIMPAC) in collaboration with the Community Conservation Network but has since been adapted and adopted globally by the Coral Reef Triangle on Coral Reefs, Fisheries and Food Security (CTI-CFF) and The Nature Conservancy (Gombos, Atkinson, and Wongbusarakum, 2013; and Coral Triangle Initiative on Coral Reefs, Fisheries and Food Security, 2022). While the above can be a specific case, nonetheless, it shows how a relatively

⁵ The ocean-based solutions for climate change mitigation and adaptation are explained in more detail in the parallel CSWG study 2.2 “Promoting Ocean-based Solutions to Climate Change Through Enhanced Cooperation in Science, Research, and Innovation”



local initiative can be scaled up to a global level. For this G20 initiative, the above example shows that an existing regional partnership, which has the issue of ocean climate deeply embedded in its programme of activities, could be utilised by G20 members and, supported by their resources, to raise the level of its activities to the global level, fulfilling, at the same time, the objectives of G20 members, taking into account national circumstances.

Another method for expanding G20 members' involvement in ocean climate measures, of course, could be to **create a new**, global collaborative partnership by building it upon the preliminary process under the UNFCCC, as presented in section 1.3. Whatever option is accepted, either by working to expand or by creating a new ocean-based climate partnership, G20 members will be in a better position to address the impacts of ocean climate change—today and tomorrow.

Based on our survey on strengthening action and partnerships for sustainable ocean initiatives, we received a clear answer from Russia and France regarding the partnership. Both of them are willing to cooperate with other G20 members on ocean-related climate initiatives, with France suggesting that the content of the cooperation would first need to be broadly agreed upon.

3. Framework for G20 ocean climate partnership initiative

The aim of this chapter is to outline more precisely the definition and basic operational principles for the functioning of the potential G20 climate ocean partnership. Cooperation and collaboration between the G20 members and other partners is fundamental for the success of the global implementation of ocean climate change solutions.

3.1 From lessons learned to a potential G20 ocean climate partnership

Based on the results of the international and national initiatives stocktake, responses received from the governments, and the discussion that has taken place during several G20 meetings, a number of gaps and challenges in the existing approach by G20 members to ocean climate change action have been identified. These lessons learned are also leading to recommendations for the creation of the G20 ocean climate partnership (Figure 3).

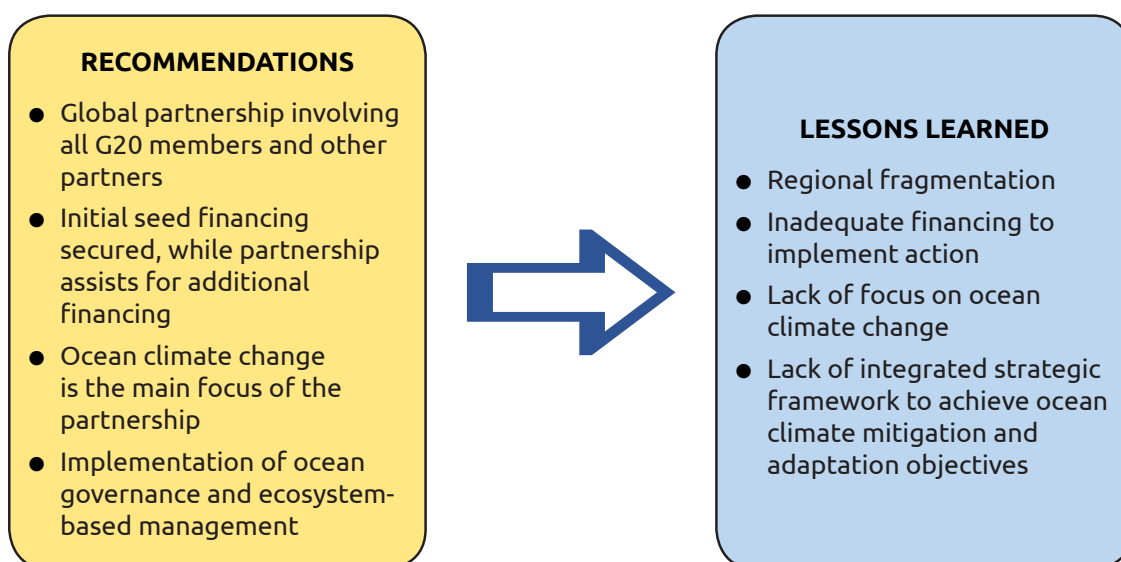


Figure 3: Lessons learned and recommendations for the partnership

A partnership in the context of this initiative is understood as a voluntary and collaborative effort of the G20 members, as well as other potential entities, in which participants agree to work together to achieve the common purpose of realising the potential of ocean-based mitigation and adaptation solutions to climate change and undertake tasks to better deliver the respective commitments under their NDCs in relation to oceans, and effectively implement the actions under existing international agreements, multilateral and bilateral agreements, and unilateral action plans.

The initiative to build a new partnership for ocean climate action could also be the G20 member states' contribution to the implementation of SDG 17, which in particular calls on the Member States of the United Nations to "strengthen the means of implementation and revitalise the global partnership for sustainable development."

From the responses to the G20 Member questionnaire, there is an understanding that G20 ocean climate partnership should be built incrementally, based on consensus on its need achieved among all G20 member states as well as on the value added G20 members have to agree it will bring to their efforts. It should be based on the pursuit of common objectives, which have to be agreed upon in an early phase.

The expected long-term outcome of the partnership should be a strengthened joint action of G20 members and their partners in ocean-based climate action, in collaboration with other global initiatives; extensive use of nature-based solutions and ecosystem-based approaches in the oceans and adjacent coastal areas to mitigate and adapt to the impacts of climate change; better delivery rate of G20 member states' commitments to international, multi-lateral, and bilateral agreements; and, ultimately, a significant contribution to addressing the impacts of climate change trends in the oceans.

3.2 A framework for a potential ocean partnership

The efforts, primarily supported through the UNFCCC process (see Section 1.3), will require strengthened interactions between the different entities and actors working on the various aspects. Not all G20 members are adequately equipped to manage their ocean data and information. Data access and technical capacity for ocean science remain unequally distributed among the G20 members. Thus, open access and data sharing are critical for capacity building and climate resilience. Against this background, the G20 can serve as a dialogue and cooperation platform, inject political momentum and thus play the key role of an intermediary between international climate policy processes. In particular, it can further enhance the systematic mainstreaming of climate change in G20's climate-related ocean work areas. Improved exchange and coordination between G20 members could generate synergies and amplify efforts. Similarly, the enhanced availability of information, knowledge, and support through a centralized knowledge sharing platform could help G20 members increase their capacity to enhance ocean-climate action.

The overall objective of the G20 Global Partnership for Ocean-based Actions for Climate Adaptation and Mitigation (in further text: G20 Ocean-Climate Partnership) is to engage and assist G20 members to build capacity and promote international cooperation on the ocean and climate through:

- Enhancing the experience on data sharing, science and technology, RD&D;
- Promoting cooperation in science, research, innovation, and technology transfer in the ocean-climate nexus;
- Promoting ocean-based solutions; and
- Strengthening actions for sustainable ocean initiatives at the global level to catalyse the role of ocean towards low GHG emissions and climate resilience, as well as capacity-building, technical assistance, and financial assistance.

The G20 Ocean-Climate Partnership, as proposed in this study, should be a non-exclusive one, and it should be open to multiple partners at any time. Its governance structure should be loose, based on the interests of the countries that wish to participate in it. This means that while the ultimate objective is to have all G20 members participating in the partnership's activities, the fact that a country is a member of the G20 does not make it obligatory for them to become a member of this partnership. The quality of the partnership's activities, the value added that the countries see in the partnership, as well as the correspondence of the partnership's activities and objectives with the countries' objectives, may be the prime factors that will influence not only the G20 members, but also outside partners, to join the partnership.

G20 Ocean-Climate Partnership is required to enhance ocean mitigation, adaptation, loss, and damage and build coastal resilience. Technology transfer and knowledge sharing are important to catalyse the role of the ocean in the decarbonization world, as well as capacity-building, technical and financial assistance. The partnership should thus be an "enabler" of the solutions to climate change mitigation and adaptation based on a rich body of ocean science and assist countries in implementing climate change mitigation and adaptation solutions. Ocean-based solutions for climate change mitigation measures enhance the resilience of coastal communities to sea-level rise and coastal hazards, as well as the resilience of coastal and ocean ecosystems.

3.3 Proposed steps and feasible designs for capacity development

A capacity gap analysis of G20 members and other potential partners should be prepared. The analysis should identify major subjects relevant to ocean climate action. In this respect, the findings of other studies, in particular Study 2.2. on the promotion of ocean-based solutions to climate change, offers guidance. Based on the outcomes of that study, the gap analysis should assess the status of the capacities in G20 members to deal with the implementation of nature-based solutions, ecosystem services valuation and integration in decision-making, ocean governance tools and techniques (ICZM, MSP, GIS, etc.) and others, and identify the urgent needs for capacity building in G20 members but also in other potential partners. As a result of the gap analysis, a capacity building strategy and action plan should be developed, including the identification of priorities.

4. Proposed high level recommendations for sustainable G20 ocean climate partnership initiatives

4.1 High level action plan to develop a sustainable G20 ocean partnership

During the first stage of the partnership's implementation, it is recommended that the following activities be carried out:

- Prepare a Communique to create partnership during the Indonesia Presidency: The adoption of the decision is a necessary precondition to start the process of establishing a partnership. The decision should be formulated by the Indonesia Presidency and agreed upon by all G20 members. The decision should briefly state the objectives of the initiative, justification/value added, basic activities, and basic elements of its functioning and organization.
- Soft-launch G20 Ocean-Climate Partnership involving all G20 members and other partners at the G20 EDM-CSWG Ministerial Meeting (September 1, 2022).
- Promote the partnership and its values by organising workshops at the G20 meetings under the G20 Indonesia Presidency as well as other important international events.
- Carry out partnership workshops and extend invitations to all G20 members and other interested parties (countries, organizations, NGOs, academic institutions, etc.). The purpose of the workshops is to present the value added to the partnership as well as seek ideas for its activities.
- Organize knowledge-sharing sessions where ocean-based solutions will be presented, particularly those supported by and through the partnership. These knowledge-sharing sessions may raise the interest of potential partners who wish to join the partnership.
- Launch G20 Ocean-Climate Global Partnership at COP27 in Egypt.

The above activities will provide a comprehensive overview of the ocean-climate nexus among G20 members. It seeks to enhance, promote, and strengthen effective ocean-climate action through research, development, and demonstration (RD&D) and strong collaboration and engagement of multi-stakeholders at a global level on the ocean-climate nexus. Similarly, the enhanced availability of information, knowledge, and support through a centralized platform could help G20 members increase their capacity to enhance ocean-climate action. These activities will progress in a stepwise manner, starting with at least two to three workshops, with more to be added, as necessary, under the Indonesian G20 Presidency in 2022.

The first workshop will focus on the joint expression of G20 members' interest in the ocean-climate nexus by the Ministry of Environment and Forestry Indonesia. It will support the first stage of implementation of the activities within relevant work areas, and the G20 will launch a G20 Global Partnership for Ocean and Climate to discuss the urgency of ocean-climate actions and the follow-up action for the next presidency.

Following this, the second and/or subsequent workshops will consider the technical aspects of introducing and implementing various ocean and climate topics. The Indonesian Presidency offers to facilitate focusing on reflecting the state of ocean-climate science and technical exchanges with representatives from G20 members who have ocean-based country measures both in mitigation and adaptation.

Subsequent workshops could shift to ocean-climate data, research, innovation, and technology (RD&D) as the basis for international policy decision-making and possible partnerships. The design of this workshop series will be beneficial to taking up G20 and COP presidencies.

4.2 High level longer-term recommendations to strengthen G20 Ocean Climate Partnership

In addition to the above recommendations, the G20 members should undertake activities in a longer-term in order to cement the importance and value of the G20 Ocean Climate Partnership:

- Promote the integration of nature-based solutions and ecosystem-based ocean, as well as coastal services in ocean governance.
- Promote the importance of ocean-based solutions for mitigation of and adaptation to climate change.
- Develop capacities for ocean governance with a focus on ocean climate change and the integration of relevant ocean-based solutions.
- Develop knowledge and information sharing platforms with a focus on ocean climate change that will be extended to partners beyond G20 members.
- Promote the value of ecosystem-based management as a governance framework for implementing ocean-based solutions. In this respect, extend the geographical focus of the partnership to adjacent coastal areas.
- Develop partnership's strategy on ocean climate change embedded within the ocean governance framework. This should be done in collaboration with relevant international organizations that are already promoting ocean governance.
- Promote other tools that are relevant for mitigation of and adaptation to ocean climate change (ICZM, MSP, ecosystem services valuation, coastal climate change vulnerability assessment, etc.).
- Facilitate the dialogue between stakeholders to raise the profile of the ocean climate issue.

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CLIMATE SUSTAINABILITY WORKING GROUP (CSWG) G20 2022

PROMOTING OCEAN-BASED SOLUTIONS TO CLIMATE CHANGE THROUGH ENHANCED COOPERATION IN SCIENCE, RESEARCH, AND INNOVATION

Final Report



September 2022



STUDY 2.2

PROMOTING OCEAN-BASED SOLUTIONS TO CLIMATE CHANGE THROUGH ENHANCED COOPERATION IN SCIENCE, RESEARCH, AND INNOVATION

Indonesia, September 2022

Recover Together, Recover Stronger

Authors :



Contributors :



Acknowledgments

Authors

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Executive summary

As a key regulator of climate and weather, the ocean plays a crucial role in the Earth's climate system. The IPCC Reports demonstrate the impacts of climate change on the ocean. While severely affected by human activities, the ocean moderates the climate by taking up over a quarter of global CO₂ emissions annually; it provides a range of solutions to climate change mitigation and adaptation and to enhance resilience. Such solutions include, carbon sequestration, which could provide approximately one-fifth of the carbon mitigation needed to meet the Paris Agreement goals by 2050, reducing global greenhouse gas emissions by up to 4 billion tons of carbon dioxide equivalent in 2030 and up to 11 billion tons in 2050. G20 members are encouraged to identify common areas of cooperation and investments in ocean science, marine technology, and innovation that are necessary for an enhanced understanding of the ocean-climate nexus.

Nature-Based Solutions (NBS) and ecosystem-based approaches should be integrated into policymaking. This includes investing in blue carbon storage for climate change mitigation and increasing marine protected areas to preserve key ocean ecosystems, especially around mangroves, saltmarshes, seagrasses and coral reefs.

Countries should also increase their efforts towards a more collaborative ocean climate action in the form of a G20 ocean climate partnership to support sustainable ocean initiatives that will contribute to meeting the stated ocean climate change mitigation and adaptation objectives.

This study presents findings and recommendations, to inform G20 decisionmakers in the design and implementation of policies to address climate change, relying on sound ocean science and assets, including technological developments and human capacity.

Existing challenges in G20 Member States

1. **G20 members are currently not on track** to deliver Sustainable Development Goal 14 by 2030. For thirteen out of nineteen G20 members, 'major challenges remain' in achieving SDG 14 (score stagnating or increasing at less than 50% of required rate). In six Member States 'significant challenges remain' (score moderately improving, insufficient to attain goal).
2. **Ocean-based solutions are underutilized.** Ocean-based solutions to address climate change remain largely unexplored, undervalued, and underutilized by policymakers and decisionmakers. The full capacity of *nature-based solutions and ecosystem-based approaches* has not been leveraged.
3. There are poor **data and statistics** on the ocean, its ecosystems, and their interaction with human pressures. This negatively affects a government's ability to make evidence-based decisions on the management and use of coastal and marine resources.
4. Lack of **scientific and technical capacity.** Installed capacities and infrastructure for ocean science are weak. This is true for data management and accessibility, but also in terms of ocean literacy among administrations, and relevant stakeholders.

5. Lack of **integrated and adaptive management** for achieving a sustainable ocean economy. *Effective monitoring and enforcement of policies* are needed to achieve environmentally and socially sound compliance.
6. Inadequate **financing of ocean science and technology**. There is insufficient financing of ocean science, research, and technology, both in absolute and in relative terms. Globally, only 1.7% of gross domestic expenditure on research and development (GERD) is allocated to ocean science.

Key Findings

1. Only twelve G20 Member States have developed an ocean science strategy or plan, and seven publish a national science report. Eleven countries have a national strategy to achieve the 2030 Agenda and only one country (Mexico) has a strategy to specifically address SDG14.
2. Only six countries allocated budgets of over US\$200 million to ocean science. The availability and allocation of funding for ocean science varies widely between the G20 members. When ocean science spending is calculated as a percentage of GDP, eleven of the thirteen G20 members that reported ocean spending, provide significantly less than 0.5% of GDP on ocean science.
3. Technical capacity of ocean science remains unequally distributed among G20 members and around the world. There is a large spread in the number of ocean science personnel, ranging from 87.7 ocean scientists per million inhabitants to only 0.8 with an average of 62.0 ocean scientists per million. Disaggregated data by sex indicates that the percentage of female ocean science researchers for these countries varies. The average of 41% among G20 members is only slightly higher than the global average of 39%, and yet, far from an absolute balance at 50%.
4. Only two thirds of the governments supporting the Paris Agreement included Nature-based Solutions actions in their national climate plans. In 2020, the World Bank's Nature-based solutions portfolio included seventy projects, and most of them focused on water and disaster risk management.
5. All of the G20 nations have climate policies and plans and most of them employ unilateral ocean climate measures. Some developed countries, such as the US, Germany and France, have fully adopted ocean-related climate initiatives and incorporated them into national strategies based on scientific evidence. Australia, Russia and Saudi Arabia have also implemented initiatives to protect and use their marine ecosystem services to address climate change.

Recommendations

- 1. Strengthen cooperation** enabling an appropriate environment for the generation of ocean-based solutions. This requires three key components: *ocean technology transfer, capacity development, and resource mobilization*.
 - a. Fundamental ocean technologies encompass the development of a digital twin of the ocean, robust data collection and sharing, and enhanced global ocean observation systems. Cooperation among G20 members in the transfer of technologies is fundamental to the promotion of ocean-based solutions. This transfer process must also be accompanied by capacity development activities.
 - b. Strengthen financing, resource allocation and mobilization. Increase the national budgets allocated to ocean science and ocean educational programs. Optimize resources (financial and in-kind) by identifying priorities for sound investment in effective ocean-based solutions, including co-investment. Likewise, it is recommended to build partnerships with the private sector and private foundations to mobilize additional funds.
- 2. Promote nature-based solutions and ecosystem-based approaches.** Invest in research and technology for blue carbon storage and blue carbon accounting to help protect marine ecosystems and to achieve the goal of climate change mitigation. Protect and restore coastal ecosystems such as mangroves, coral reefs, seagrasses and saltmarshes to enhance the health and integrity of these ecosystems and to increase their effectiveness in climate change mitigation and adaptation, and in building resilience to climate change and natural hazards impacts. Engage indigenous peoples, local communities, and all relevant stakeholders in the decision-making process.
- 3. Enhance science-policy interfaces.** Facilitate the dialogue between scientists and policy makers to support the design and implementation of evidence-based policies. This includes promoting relevant dialogue platforms, elevating the importance of the ocean in the Paris Agreement and the Glasgow Climate Pact, and engaging all stakeholders in the policymaking process. The Ocean Decade can be used as a framework to generate the transformative science needed to inform these processes. Promote an increase in the number of ocean scientists career professionals, strengthening gender equality in ocean science. Strategically allocate resources based on scientific findings. This may encompass, among others, investment in zero-emission maritime transport and renewable energies.

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Abbreviations and acronyms

AGU	American Geophysical Union
AI	Artificial Intelligence
AIPOIP	Australia-India Indo-Pacific Oceans Initiative Partnership
AIS	Archipelagic and Island States Forum
AODN	Australian Ocean Data Network
AOML	US Atlantic Oceanographic and Meteorological Laboratory
AORA	Atlantic Ocean Research Alliance
APFSD	Asia-Pacific Forum on Sustainable Development
APN	Asia-Pacific Network for Global Change Research
AR	Assessment Report
BAF	Blue Action Fund
BAS	UK British Antarctic Survey
BBNJ	Biological Diversity of Areas Beyond National Jurisdiction
BEIS	UK Department for Business, Energy and Industrial Strategy
BMZ	German Federal Ministry for Economic Cooperation and Development
CBDR	Common But Differentiated Responsibilities
CCAMLR	Commission for the Conservation of Antarctic Marine Living Resources
CEFAS	UK Centre for Environment, Fisheries and Aquaculture
CMA	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
CMP	Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol
CO ₂	Carbon Dioxide
COP	Conference of the Parties
CSIRO	Commonwealth Scientific and Industrial Research Organisation
CSWG	G20 Climate Sustainability Working Group
CTI-CFF	Coral Reef Triangle On Coral Reefs, Fisheries and Food Security
Defra	UK Department for Environment, Food and Rural Affairs
DITTO	Digital Twin of the Ocean
DTO	Digital Twin of the Ocean
ECOP	Early Career Ocean Professionals



EMODNet	European Marine Observation and Data Network
ENSO	El Niño–Southern Oscillation
ESCAP	United Nations Economic and Social Commission for Asia and the Pacific
EU	European Union
GCF	Green Climate Fund
GCN	Global Core Network (of 290 sea level stations around the world)
GDP	Gross Domestic Product
GEBCO	General Bathymetric Chart of the Oceans
GEF	Global Environment Facility
GERD	Gross Domestic Expenditure on Research and Development
GES	Good Environmental Status
GFCR	Global Fund for Coral Reefs
GHG	Greenhouse gas
GLOSS	Global Sea Level Observing System
GOAP	Global Ocean Accounts Partnership
GOOS	Global Ocean Observing System
GOSR	Global Ocean Science Report
GPS	World Bank Global Program for Sustainability
HAC	High Ambition Coalition For Nature and People
HLPFSD	High-Level Political Forum on Sustainable Development
ICMBio	Brazil’s Chico Mendes Institute for Biodiversity Conservation
IGBP	International Geosphere-Biosphere Programme
IMBER	Integrated Marine Biosphere Research
IMOS	Australia’s Integrated Marine Observing System
IOC-UNESCO	Intergovernmental Oceanographic Commission of United Nations Educational, Scientific and Cultural Organization
IOD	Indian Ocean Dipole
IODE	International Oceanographic Data and Information Exchange
IOM	Integrated Ocean Management
IPBS	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
IPCC	Intergovernmental Panel on Climate Change

ISC	International Science Council
IUCN	International Union for the Conservation of Nature
JCOMM	Joint Technical Commission for Oceanography and Marine Meteorology
JICA	Japan International Cooperation Agency
JNCC	UK Joint Nature Conservation Committee
JPI Oceans	Joint Programming Initiative Healthy and Productive Seas and Oceans
JST	Japan Science and Technology Agency
KfW	German Development Bank
MMO	UK Marine Management Organisation
MoEF	Ministry of Environment and Forestry of The Republic of Indonesia
MPA	Marine Protected Area
MSFD	EU Marine Strategy Framework Directive
NbS	Nature-based Solutions
NCRIS	Australia's National Collaborative Research Infrastructure Strategy
NDC	Nationally Determined Contribution
NOAA	US National Oceanographic and Atmospheric Administration
OBIS	Ocean Biogeographic Information System
OCIA	Ocean and Climate Initiatives Alliance
OCP	Ocean & Climate Platform
ODA	Overseas Development Assistance
OOS	One Ocean Summit
ORRAA	Ocean Risk and Resilience Action Alliance
OT	Overseas Territory
OW	Offshore Wind
OWEC	Offshore Wind Evidence and Change
PEMSEA	Partnerships in Environmental Management for the Seas of East Asia
PgC	Pentagrams of Carbon
PIMPAC	Pacific Islands Managed and Protected Area Community
RCW	UNFCCC Regional Climate Weeks
SATREPS	Japan Science and Technology Research Partnership for Sustainable Development Program
SBI	Subsidiary Body for Implementation



SBSTA	Subsidiary Body for Scientific and Technological Advice
SCOR	Scientific Committee on Oceanic Research
SDGs	Sustainable Development Goals
Sea4society	Searching for solutions for Carbon-sequestration in coastal ecosystems
SIDS	Small Island Developing States
SROCC	IPCC Special Report on the Ocean and Cryosphere in a Changing Climate
UK	United Kingdom
UN	United Nations
UNCLOS	United Nations Convention on the Law of the Sea
UNEA	United Nations Environment Assembly
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UTAS	University of Tasmania
VNR	Voluntary National Report
WAVES	Wealth Accounting and the Valuation of Ecosystem Services
WIOMSA	Western Indian Ocean Marine Science Association
WMO	World Meteorological Organization
WOA	World Ocean Assessment

1. Introduction

1.1 Objectives and Scope

Being a key regulator of climate and weather, the ocean plays a fundamentally important role in the Earth's climate system. The objective of this study is to present findings and recommendations aimed at assisting G20 policy decision makers to address climate change, informed by sound ocean science and appropriate allocation of resources.

Considering their collective representation of more than 80% of the global GDP, 75% of international trade, and 60% of the world population, G20 members have the opportunity to contribute to progress on climate change mitigation and adaptation through effective cooperation on ocean research, science, and technology, producing results on a large scale. 45% of the world's coastline are shared among the G20 members, and they have jurisdictional responsibility over 21% of exclusive economic zones (Shugart-Schmidt et al., 2015). Accordingly, the G20 members have a special responsibility towards the ocean, an ecosystem they all share.

However, to-date, limited investment and cooperation in addressing and understanding the ocean-climate nexus has hindered the capacity of G20 governments to incorporate the latest developments in ocean science and technology into their climate policymaking. There has also been a lack of ocean-climate dialogue in prior G20 engagements. The Indonesia presidency of the G20 in 2022 coincides with the second year of the UN Decade of Ocean Science for Sustainable Development (herein referred to as the Ocean Decade). It comes at an opportune moment to promote the important role of the ocean as a driver of the earth's climate system and as a means for sustainable development. As an archipelagic nation, Indonesia is in a unique position to lead this dialogue, as its economy can relate to developed nations in volume, while still relating to issues experienced by smaller nations, such as small island developing states (SIDS) in the Pacific Region, experiencing climate change impacts such as rising sea levels and extreme weather events.

This study aims to provide recommendations to enhance cooperation in science, research, innovation, and technology that promote ocean-based solutions to tackle climate change, while supporting global climate policy frameworks and contributing to the strategic allocation and optimisation of resources, particularly within the overarching structure of the Ocean Decade.

The study identifies common areas of cooperation and investments in ocean science, marine technology, and innovation that are necessary for an enhanced understanding of the ocean-climate nexus and can inform the development of policies and strategies towards climate resilience and mitigation. Likewise, the identification of key areas of opportunity may benefit from a more strategic allocation of resources. By promoting the cooperation and participation of G20 members in the Ocean Decade, the recommendations in this report will be supported by an existing framework that can lead to action. The findings of this study will support G20 members to:

- Strengthen the facilitation and ocean-climate dialogue under the UNFCCC process;
- Elaborate on the potential to raise climate change ambitions through the adoption of ocean-based solutions for the benefit of all G20 members, and further cooperation with other intergovernmental processes; and
- Integrate a people-centred approach, promoting bilateral and multilateral cooperation.

The study was designed and delivered jointly by the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO. A senior consultant was engaged for the purposes of research, technical inputs, data collection, and drafting. Throughout the process, the content and its quality remained under the overall guidance and monitoring of both ESCAP and IOC.

1.2 Problem Statement and Opportunity

The ocean and the climate are strongly linked. Climate change affects the ocean in several important ways. The ocean absorbs more than half of the excess heat in the atmosphere, much of which is being stored at depth. A warming of the ocean leads to the thermal expansion of the water, causing a rise in sea level and changes in ocean currents. Warming also leads to increased stratification and a reduced ability to hold oxygen, causing deoxygenation. The increasing water temperature further impacts on biology in ways that are not fully resolved when considering the impact of multiple stressors, including ocean acidification and deoxygenation.

Sea-level rise and changes in ocean currents can lead to more extreme weather events. Melting ice on land further contributes to sea-level rise and causes a reduction in the salinity of the ocean. The loss of sea ice affects ocean circulation and mid-latitude weather patterns, Arctic amplification, coastal erosion, and the loss of critical habitat.

As increasing amounts of carbon dioxide are dissolved in the ocean, and eutrophication increases, the water becomes more acidic. Warming ocean temperatures can cause coral bleaching, and ocean acidification can further weaken the shells and the external skeletons of calcifying animals. Deoxygenation, caused by increasing eutrophication due to excess nutrient load in runoff, leads to an increasing number of ocean 'dead zones', areas of water that lack sufficient oxygen to support marine life. As outlined in the Special Report on the Ocean and Cryosphere in a Changing Climate/SROCC (IPCC, 2019), ocean warming, acidification, deoxygenation, ice melt, and sea level rise are systemic changes that are already having devastating impacts on ocean and coastal life and coastal communities' lives and livelihoods. Climate change, eutrophication, plastic and marine pollution, and fishery collapse pose a severe threat to the sustainability of the oceans (United Nations, 2021a).

Nearly 680 million people, approximately 10 % of the global population, are affected by the impacts of climate change, including Small Island Developing States (SIDS), developing countries, and G20 members (IPCC, 2019). The Projected Representative Concentration

Pathway (RCP) 8.5 adopted by the IPCC’s Fifth Assessment Report (AR5) (IPCC, 2015) predicts further acidification, an increase in mean sea surface temperature globally, additional marine heatwave days, rising heat content in the ocean water, decreasing ocean oxygen, continued ice sheet mass losses, and consequently, a rising global mean sea level.

Despite these challenges, we are currently not using the full potential of ocean-based solutions to address climate change and achieve sustainability goals. Not only that, but the benefits the oceans provide are increasingly undermined by human activities. With funding allocation for ocean science being only a global average of 1.2 % of national research budgets (IOC-UNESCO, 2017a), the ocean and its vast potential for addressing climate change remains largely unexplored, undervalued and underused.

Recent efforts to enhance scientific understanding of the ocean and climate nexus are yet to be reflected properly in policy, dialogue, and action. Urgent action is needed to invest in ocean science and to facilitate the exchange of technology and information to support the scaling-up of the protection of coastal and marine environments, support for small-scale fishing communities, and the sustainable management of the oceans. Indonesia’s leadership in positioning this in the G20 dialogue is an important positive step forward.

Table 1 Timeline of ocean-related science and policy processes

Ocean Days (2009)	Starting with the 15 th UN Climate Change Conference of the Parties (COP 15), eight Oceans Days to-date have focused on promoting the oceans agenda at COPs and on developing cooperation and coherence in policies and programmes at multiple levels in order to implement a comprehensive strategy on oceans and climate, both within and outside the UNFCCC process.
SDGs (2015)	Goal 14 (‘Life Below Water’) of the Sustainable Development Goals (SDGs) adopted in 2015 is to ‘Conserve and sustainably use the oceans, seas, and marine resources for sustainable development’ (United Nations, 2015a). Target 14.a aims to ‘Increase scientific knowledge, develop research capacity and transfer marine technology, considering the Intergovernmental Oceanographic Commission (IOC) Criteria and Guidelines on the Transfer of Marine Technology, in order to improve ocean health and to enhance the contribution of marine biodiversity to the development of developing countries, in particular small island developing states and least developed countries.’
Paris Agreement (2015)	The Paris Agreement (United Nations, 2015b), adopted by 196 Parties at the United Nations Framework Convention on Climate Change (UNFCCC), Climate Change Conference (COP 21) in December 2015 with a view to ‘holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, emphasizes the importance of ensuring the integrity of all ecosystems, including the ocean, and biodiversity protection. Article 5 of the Paris Agreement states that ‘Parties should take action to conserve and enhance, as appropriate, sinks and reservoirs of greenhouse gases...’

<p>WOA (2016, 2021)</p>	<p>The First and Second World Ocean Assessments (WOA I and WOA II) (United Nations, 2016; United Nations, 2021a; United Nations, 2021b) provided scientific information on the state of the marine environment in a comprehensive and integrated manner to support decisions and actions for the achievement of the SDGs, in particular Goal 14, as well as the implementation of the UN Decade of Ocean Science for Sustainable Development. The Assessments indicate that the ocean’s carrying capacity is near or at its limit and make the case for urgent action on a global scale to protect the world’s oceans from the many pressures they face.</p>
<p>UN Ocean Conference (2017, 2022)</p>	<p>The 2017 UN Ocean Conference, the first UN conference on this issue, supported the implementation of SDG 14. The conference played an important role in creating awareness and understanding of the ocean-climate nexus. The second Ocean Conference held in Lisbon, Portugal, in 2022 had the overarching theme “Scaling up ocean action based on science and innovation for the implementation of Goal 14: stocktaking, partnerships and solutions”. The Conference sought to promote science-based solutions such as green technology and innovative uses of marine resources in addressing the threats to health, ecology, economy, and governance of the ocean – such as acidification, marine litter and pollution, illegal, unreported, and unregulated fishing, and the loss of habitats and biodiversity.</p>
<p>Ocean Panel (2018)</p>	<p>Established in 2018, the High Level Panel for a Sustainable Ocean Economy (Ocean Panel) is an initiative by 17 world leaders (Australia, Canada, Chile, Fiji, France, Ghana, Indonesia, Jamaica, Japan, Kenya, Mexico, Namibia, Norway, Palau, Portugal, UK and USA), eight of which are G20 members. Working with government, business, financial institutions, science community, and civil society, the Ocean Panel aims to catalyse and scale bold, pragmatic solutions across policy, governance, technology, and finance to develop an action agenda for transitioning to a sustainable ocean economy. The use of science and data to drive decision-making is one of five building blocks for realising the new vision of effective protection, sustainable, production and equitable prosperity (Stuchtey et al., 2020).</p>
<p>COP 25 (2019)</p>	<p>The 25th UN Climate Change Conference of the Parties (COP 25) in 2019 (also referred to as the “Blue COP”) brought the oceans more firmly into the climate negotiations. The COP 25 Oceans Action Day, hosted by the Governments of Japan, Chile, and the UK, assessed existing ocean and climate action and identified the gaps that need to be addressed. The events also considered the need to ensure that discussions on the ocean-climate nexus take into account the magnitude and importance of this interface¹.</p>

1 <https://enb.iisd.org/events/oceans-action-day-cop-25/highlights-and-images-main-proceedings-7-december-2019>

SROCC (2019)	<p>The Special Report on the Ocean and Cryosphere in a Changing Climate (SROCC) (IPCC, 2019) highlighted that the services and options provided by ocean ecosystems can be supported by protection, restoration, precautionary ecosystem-based management of renewable resource use, and the reduction of pollution and other stressors. It also stressed the importance of integrated water management and ecosystem-based adaptation approaches in lowering climate risks locally and providing multiple societal benefits. However, the report also pointed to ecological, financial, institutional, and governance constraints for such actions, and cautioned that in many contexts, ecosystem-based adaptation will only be effective under the lowest levels of warming and therefore must be considered in parallel with efforts to reduce greenhouse gas emissions. The SROCC highlighted response options, include networks of protected areas to help maintain ecosystem services, including carbon uptake and storage; terrestrial and marine habitat restoration and ecosystem management tools; strengthening precautionary approaches; restoration of vegetated coastal ecosystems, such as mangroves, tidal marshes, and seagrass meadows (coastal ‘blue carbon’ ecosystems) to provide climate change mitigation through increased carbon uptake and storage; and ocean renewable energy to support climate change mitigation, comprising of energy extraction from offshore winds, tides, waves, thermal and salinity gradients and algal biofuels.</p>
Changing Sails Report (2020)	<p>ESCAP’s Changing Sails report (ESCAP, 2020) highlights the lack of data on oceans as one of four key focus areas for urgent action to halt and reverse the declining health of oceans and marine ecosystems. The other key areas are; growing demand for inclusive and green maritime shipping; deteriorating fish stocks and gaps in fishery management; and the mounting pressure of marine plastic pollution.</p>
COP 26 (2021)	<p>The Glasgow Climate Pact², an outcome of the 26th UN Climate Change Conference of the Parties (COP 26) in 2021, included specific actions to bring more coherence and focus to work on the ocean and land and recognised the need for ocean science to inform climate policies. It also welcomed the summary report from the first Ocean and Climate Change Dialogue (UNFCCC, 2021), mandated by COP 25 and held in December 2020, and invited the Subsidiary Body for Scientific and Technological Advice (SBSTA) Chair to hold an annual dialogue, starting with SBSTA 56 in June 2022, to strengthen ocean-based action. An informal summary report on each annual dialogue is made available to Parties at the subsequent session of the COP (UNFCCC, 2021).</p>
Ocean Decade (2021-2030)	<p>The United Nations Decade of Ocean Science for Sustainable Development 2021-2030 (Ocean Decade) aims to generate the knowledge necessary to inform global climate policy frameworks and provide an enabling environment for cooperation among Member States. Ocean Decade Challenge 5 is to ‘<i>Unlock ocean-based solutions to climate change</i>’. It focuses on ‘<i>achieving an enhanced understanding of the ocean-climate nexus and generating knowledge and solutions to mitigate, adapt, and build resilience to the effects of climate change across all geographies and at all scales, and to improve services, including predictions for the ocean, climate, and weather</i>’ (IOC-UNESCO, 2021a).</p>

² <https://ukcop26.org/the-glasgow-climate-pact>

Global Ocean Science Report (2021)	The latest Global Ocean Science Report (IOC-UNESCO, 2021b) found funding for ocean science to be largely inadequate. According to the report, the lack of support for ocean science, research, and technology undermines the ability to harness ocean-based solutions to climate change. Based on a questionnaire of 45 countries (not inclusive of all G20 members), on average, only 1.7 % of national research budgets are allocated to ocean science.
SDG Report (2021)	The 2021 Sustainable Development Goals Report (United Nations, 2021a) found that funding for marine research is very small when compared to the enormous economic contribution of the world’s oceans. In addition, the proportion of gross domestic expenditure on research and development devoted to ocean science is decidedly smaller than that of other major fields of research and innovation.
UNEA-5 (2022)	The fifth session of the United Nations Environment Assembly (UNEA-5) in Nairobi in 2022 concluded with 14 resolutions to strengthen actions for nature to achieve the SDGs. In line with the UN Decade for Ecosystem Restoration, one of the resolutions focuses on nature-based solutions (NbS), which are defined as actions to protect, conserve, restore, sustainably use, and manage ecosystems, including coastal and marine ecosystems. The resolution calls on UNEP to support the implementation of such solutions, that safeguard the rights of communities and indigenous peoples.

1.3 Research Methodology

For the development of this study, different sources were used for the collection of inputs. This includes, among others, existing publications by ESCAP, IOC-UNESCO and international assessments such as IPCC’s Special Report on the Ocean and Cryosphere in a Changing Climate and Sixth Assessment Report (AR6). Furthermore, a set of case studies was selected to display major challenges and opportunities in the ocean, currently faced or addressed by G20 members. For this purpose, a questionnaire was designed, with targeted requests for information and case studies to G20 members on investments in ocean science, technology transfer, and capacity development initiatives within the ocean-climate nexus. The collection of national inputs was fundamental to the development of Chapter 2 and Chapter 5, in particular.

In addition to the data collected by G20 members, this study relied on scientific papers selected through a literature review. The study benefited from existing and ongoing publications by ESCAP and UNESCO, as well as from publicly available data from governmental and academic repositories.

The content of this study was developed around the following guiding questions:

1. Which ocean-based climate mitigation policies, research strategies, and solutions are currently being implemented in G20 members and could be replicated in other member states?
2. Which types of investments (financial or in-kind) and how much are being allocated to address ocean-based measures for mitigation and adaptation to climate change?

3. How can more developed country members share and transfer marine technology and data more efficiently for the benefit of all G20 members?
4. What can G20 members do to secure the effective incorporation of sound ocean science into policymaking?
5. In which areas can G20 members strengthen their cooperation to align strategies to address the ocean-climate nexus?
6. In which areas of ocean science, data management, and marine technology transfer can capacity development programs strengthen financing, resource allocation, and mobilization?

The geographical scope of this study is limited to G20 members, namely: Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russia, Saudi Arabia, South Africa, Türkiye, the United Kingdom, the United States, and the European Union. However, the recommendations in the report are anticipated to be useful for broader regional and global cooperation. This study also benefited from inputs submitted by observers and guest members, such as Spain and Fiji, who participated in the discussions as well.

1.4 Raising Awareness of Ocean Ecosystem Services and the Ocean-Climate Nexus

Our constantly increasing understanding of the relationship between the ocean and the climate is opening up opportunities for addressing climate change and enhancing resilience. The ocean provides multiple untapped and powerful opportunities to mitigate and adapt to climate change, provided environmental and social safeguards are met.

This report aims to raise awareness of the ways in which conservation, restoration, and the sustainable use of ocean ecosystem services can help G20 members and the global community to achieve the 1.5°C warming target of the Paris Agreement and the SDGs.

The ocean is vital to terrestrial and marine habitats and their interconnection via diverse elements of the climate system, which include the exchange of water, energy, and carbon (Pörtner et al., 2022). The ocean affects weather and climate through solar radiation storage, the uptake and redistribution of natural and anthropogenic carbon dioxide (CO₂), heat and moisture distribution, and by driving weather systems via conveyor belts of warm and cold water, transporting heat toward the poles and cooling off tropical areas³.

Therefore, the ocean must play an important role in the global response to climate change. Communities around the world rely directly or indirectly on the ocean's capacity to mitigate climate change. Ocean-based solutions to climate change can vastly contribute to the reduction of carbon dioxide emissions. For example, coastal habitats have the capacity to sequester two to four times the amount of carbon per area than terrestrial forests. According to the UNFCCC (2021), the ocean has absorbed approximately 90 % of the excess

³ <https://oceanexplorer.noaa.gov/facts/climate.html>

heat generated by rising greenhouse gas emissions trapped in the Earth's system and taken in 30% of carbon emissions.

A healthy ocean can have positive impacts on each aspect of sustainability reflected in the 2030 Agenda (IPCC, 2019). Ocean action and climate action are intrinsically linked and must be strengthened through breaking down silos and enhanced collaboration (UNFCCC, 2021). To date, the ocean has been a critical buffer against climate change, but tipping points are being reached and the health of coastal and marine ecosystems is declining.

The ongoing Covid-19 pandemic further demonstrates the importance of a sustainable recovery and the urgency of reaching net zero so as to minimise the consequences of climate change, as well as biodiversity loss, marine pollution, and other major challenges confronting humanity. Investing in a green (and blue) recovery also maximises chances to achieve the sustainable development of all countries. Nature-based solutions can be at the foundation of harnessing the ocean to build a more resilient society in the face of climate change. Protecting and restoring marine ecosystems is critical to human well-being, ocean health, and climate change (IOC-UNESCO, 2022a).

Nature-based solutions and ecosystem-based approaches offer a range of opportunities to mitigate and adapt to climate change, restore and enhance ocean and coastal ecosystem goods and services, and enhance livelihoods and economic conditions (UNFCCC, 2021). Examples include preserving and restoring blue carbon ecosystems, establishing and maintaining climate-smart Marine Protected Areas (MPAs), supporting climate-resilient fisheries and small-scale fisheries and aquaculture, ecosystem-based adaptation, and sustainable natural resource management. Additional co-benefits provided to people by the ocean include food and water supply, renewable energy, and benefits for health and well-being, cultural values, tourism, trade, and transport.

2. Promoting ocean-based solutions to climate change

The first **One Ocean Summit (OOS)**⁴, hosted by the French Presidency of the Council of the European Union and at the initiative of the President of the French Republic, in Brest from 9 to 11 February 2022, sought to step up the international community's ambition on maritime issues and put into practice our shared responsibility for the ocean.

Representatives of more than 100 countries from all ocean basins and representing more than half the world's exclusive economic zones, have stated their determination to preserve the ocean by contributing to the **Brest Commitments for the Oceans**⁵, alongside the Secretary-General of the United Nations, the Director-General of UNESCO and the Secretary-General of the International Maritime Organization (IMO). The Commitments aim to take action to preserve biodiversity, stop overexploitation of marine resources, fight pollution, and mitigate climate change. Eleven of the G20 members (Canada, China, France, Germany, India, Italy, Japan, Mexico, the Republic of Korea, the United Kingdom, and the United States) contributed to the OOS.

The Republic of Palau and the United States co-hosted the 7th Our Ocean Conference on April 13-14, 2022. The Conference was a key moment for countries, civil society, and industry to commit to concrete and significant actions to protect the ocean. This year's Conference closed with 410 commitments worth \$16.35 billion across the six issue areas of the conference. Since 2014, the Our Ocean Conference has mobilized more than 1,800 commitments worth approximately \$108 billion.

G20 members, under the leadership of Indonesia, recognise the importance of promoting ocean-based solutions to climate change, and many countries have started to take steps to invest in science, research, and technology at the national, regional, and G20 level.

The following sections will provide an overview of the status of ocean-based solutions to address climate change in the G20 members, present case studies submitted by countries on innovative science, technology, and successful ocean-based measures, and highlight gaps and opportunities to further promote research and development and to strengthen collaboration amongst G20 members.

2.1 The Status Quo of Ocean-based Solutions in the G20

The status of ocean-based solutions to address climate change in the G20 was assessed based on a questionnaire circulated to Member States as part of the study, as well as publicly available information on websites and in publications. Criteria for assessing the level of support for ocean-based solutions included i) the presence of a national ocean science strategy and national ocean science report, ii) the presence of a national strategy to achieve

⁴ <https://au.ambafrance.org/One-Ocean-Summit-for-a-more-sustainable-ocean>

⁵ https://www.diplomatie.gouv.fr/IMG/pdf/brest_commitments_for_the_oceans_cle0dde15.pdf

the 2030 Agenda and SDG 14 (Life Below Water) (Box 1), iii) ocean-based measures for climate change mitigation and adaptation, iv) scientific and/or technological development, v) capacity development needs, vi) ocean science spending, and vii) the number of female and male personnel employed in the ocean science sector.

Eleven delegations have sent inputs with differentiated degrees of detail. Inputs from guest and observer delegations (Fiji and Spain) were also received and valued. They will be considered as background and reference. Generally, the information provided focuses on ocean science strategies and policies.

The information received included some *quantitative* information, but mostly consisted of *qualitative* inputs. A few delegations provided information on budgets and workforces. However, having more quantitative information from primary sources, for example on recent budget allocations, would have resulted in tailored recommendations with more precise parameters.

Box 1 Table SDG 14 'Life Below Water'

	Conserve and sustainably use the oceans, seas, and marine resources for sustainable development.
Target 14.1	Reduce Marine Pollution
Target 14.2	Protect and Restore Ecosystems
Target 14.3	Reduce Ocean Acidification
Target 14.4	Sustainable Fishing
Target 14.5	Conserve Coastal and Marine Areas
Target 14.6	End Subsidies Contributing to Overfishing
Target 14.7	Increase the Economic Benefits from Sustainable Use of Marine Resources
Target 14.a	Increase Scientific Knowledge, Research, and Technology for Ocean Health
Target 14.b	Support Small Scale Fishers
Target 14.c	Implement and Enforce International Sea Law

SDG target 14.a. focuses on developing adequate capacity in ocean science and specifies the need for increasing scientific knowledge. The IOC-UNESCO has been designated as the custodian agency for the corresponding indicator. The Global Ocean Science Report 2020 (GOSR) is the recognised method and repository of related data to measure progress towards the achievement of SDG target 14.a. A core objective of the Ocean Decade (IOC-UNESCO, 2018) is to improve the scientific knowledge base through capacity development for the regions and groups that are presently limited in capacity and capability.

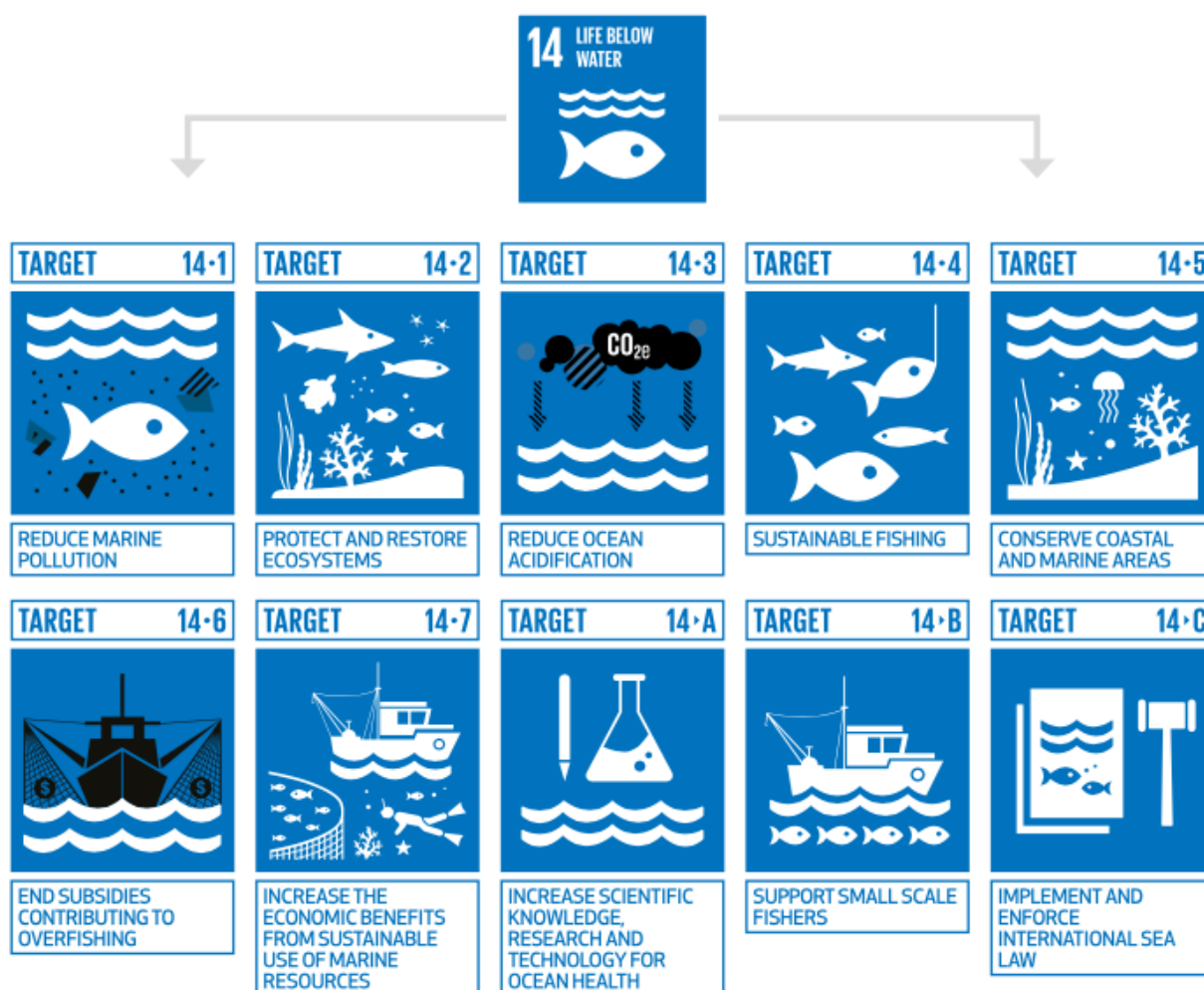



















































Figure 1 SDG 14 Targets and Short Descriptors.
Source: (IOC-UNESCO, 2022a).

Table 2 G20 members' national strategies and reports related to ocean science.

G20 member	National ocean science strategy/plan	National ocean science report	National strategy to achieve the 2030 Agenda and SDG 14	Voluntary National Review (VNR)
Argentina				
Australia				
Brazil				
Canada				

China				
EU			N/A	N/A
France				
Germany				
India				
Indonesia				
Italy				
Japan				
Republic of Korea				
Mexico			 	
Russia				
Saudi Arabia				
South Africa				
Türkiye				
United Kingdom				
United States				Not planned

Source: GOSR portal and questionnaire.

As shown in the Table , twelve G20 members have developed an ocean science strategy or plan, and seven have published a national science report. Eleven countries have a national strategy to achieve the 2030 Agenda and only one country (Mexico) has a strategy to specifically address SDG 14. All G20 members, except for the USA, conduct a Voluntary National Review (VNR).

The **Sustainable Development Report 2022** (Sachs et al., 2022) shows that in 13 of the 19 G20 members, ‘major challenges remain’ in achieving SDG 14 (score stagnating or increasing at less than 50% of the required rate). In six Member States ‘significant challenges remain’ (score moderately improving, insufficient to attain the goal) (Table 2).

Table 3 SDG 14 score of G20 members in 2022 Sustainable Development Report.

G20 member	SDG 14 score
Argentina	● Major challenges remain
Australia	● Significant challenges remain
Brazil	● Major challenges remain
Canada	● Significant challenges remain
China	● Major challenges remain
France	● Significant challenges remain
Germany	● Significant challenges remain
India	● Major challenges remain
Indonesia	● Major challenges remain
Italy	● Major challenges remain
Japan	● Major challenges remain
Mexico	● Major challenges remain
Republic of Korea	● Major challenges remain
Russia	● Major challenges remain
Saudi Arabia	● Major challenges remain
South Africa	● Major challenges remain
Türkiye	● Major challenges remain
United Kingdom	● Significant challenges remain
United States	● Significant challenges remain

2.2 Case Studies of Ocean-based Solutions Presented by G20 Members

The purpose of the case studies submitted by G20 members through the questionnaire was to highlight opportunities and success stories representing different coastal and marine ecosystems that may serve as examples to be replicated elsewhere. They may also identify common challenges that require further interventions.

2.3 Ocean-based Solutions for Climate Change Mitigation

This section reviews climate change mitigation strategies relevant to ocean and coastal ecosystems, based on existing publications and information obtained from G20 members through the questionnaire. These include blue carbon storage, ecosystem protection and restoration, and the role of deep-sea and mesopelagic ecosystems in carbon sequestration and climate services.

Hoegh-Guldberg et al. (2019) estimated that ocean-based solutions to climate change can vastly contribute to the reduction of carbon dioxide emissions. According to the authors, ocean-based activities could provide up to one-fifth of the carbon mitigation needed to meet

the Paris Agreement goals by 2050, reducing global greenhouse gas emissions by up to 4 billion tonnes of carbon dioxide equivalent in 2030 and up to 11 billion tonnes in 2050. These reductions equate to the emissions of all the world's coal-fired power plants (Stuchtey et al., 2020). Harnessing these solutions is therefore crucial in meeting the 1.5°C global warming target of the Paris Agreement.

However, there are also concerns about the potential unintended consequences of some ocean based carbon dioxide removal approaches that are largely untested to-date. The American Geophysical Union (AGU) recently announced an initiative to develop an ethical framework for climate intervention, which includes ocean-based carbon dioxide removal as a first measure (AGU, 2022). The goal of this initiative is to convene stakeholders at the upcoming COP 27 to develop this further. Engaging in this dialogue will be important for G20 members.

Box 2 The UK Crown Estate's Offshore Wind Evidence and Change (OWEC) Programme

This is a five-year programme (launched in December 2020 with £25 million funding) of strategic projects and activities to facilitate the sustainable and coordinated expansion of Offshore Wind (OW). The programme is led and funded by The Crown Estate, with the Department for Environment, Food and Rural Affairs (Defra) and the Department for Business, Energy and Industrial Strategy (BEIS) as programme partners, and in collaboration with the Devolved Administrations, Statutory Nature Conservation Bodies, Regulators, Non-Government Organisations and OW developers. The programme includes environmental considerations as well as strategic logistical and commercial considerations, with the overall aim of facilitating the sustainable and coordinated expansion of UK-wide offshore wind. The first round of projects has now been let and has begun.

For further information see: <https://www.thecrownestate.co.uk/en-gb/what-we-do/on-the-seabed/offshore-wind-evidence-and-change-programme/>

2.3.1. Harnessing the Blue Carbon Storage Capacity of the Ocean

Blue carbon is a term that describes the carbon naturally sequestered by the world's oceans. The carbon is captured by living organisms and is stored in the underlying sediments of mangroves, salt marshes, and seagrass for millennia (Nelleman et al., 2009). Representing more than 55% of the green carbon (carbon removed by photosynthesis and stored in the plants and soil of terrestrial ecosystems), coastal and ocean ecosystems have a large carbon sink capacity and hence play a crucial role in mitigating climate change through carbon sequestration. UNESCO (2021a) estimates that coastal habitats have the capacity to sequester two to four times the amount of carbon per area than terrestrial forests.

The ocean has accumulated approximately 90% of the excess heat generated from rising greenhouse gas emissions from human activities and absorbed 30% of atmospheric CO₂ emissions (UNFCCC 2021). The IPCC (2021) estimates that over the past six decades, the land and ocean have taken up about 56% per year (globally) of CO₂ emissions from human activities.

A prime example is found in Indonesia's seagrasses and mangroves, which when combined, account for 3.4 petagrams of carbon (PgC), approximately 17% of the world's blue carbon reservoir. It has been estimated that in the timeframe of a decade, Indonesia's marine protected area have yielded US\$540 million in social welfare benefits in avoided loss and damage from climate change (Miteva et al., 2015).

Blue carbon storage in ocean ecosystems is a powerful resource and can vastly contribute to climate change mitigation alongside reductions in greenhouse gas emissions. It is therefore critical that governments embrace blue carbon in order to achieve the SDGs and the 1.5°C goal of the Paris Agreement. However, the world's ocean carbon sinks are rapidly declining because of coastal eutrophication, reclamation, engineering and urbanization (Duarte, 2009).

According to Nelleman et al. (2009), protection, improved management, and restoration of the ocean's blue carbon sinks would result in preventing the annual loss of up to 450 Tg Carbon yr⁻¹, or equivalent to a corresponding 10% of the global emissions reductions needed.

Ocean-based climate change response options could be strengthened by establishing networks of protected areas to help maintain ecosystem services, including carbon uptake and storage (medium confidence) (IPCC, 2019). The SROCC states that the restoration of vegetated coastal ecosystems, such as mangroves, tidal marshes, and seagrass meadows (coastal 'blue carbon' ecosystems), could provide climate change mitigation through increased carbon uptake and storage of around 0.5% of current global emissions annually (medium confidence). Further, improved protection and management can reduce carbon emissions from these ecosystems. However, uncertainties remain in our ability to quantify these coastal ecosystems and further work is needed to fill these knowledge and data gaps (IPCC, 2019).

Box 3 The Blue Carbon Initiative

The International Blue Carbon Initiative is a coordinated, global program focused on mitigating climate change through the conservation and restoration of coastal and marine ecosystems. Coastal ecosystems are some of the most productive on Earth. They provide people with essential ecosystem services, such as coastal protection from storms and nursery grounds for fish. They provide another integral service - sequestering and storing "blue" carbon from the atmosphere and oceans - and are therefore an essential ingredient in the mitigation of global climate change.

For more information visit: <https://www.thebluecarboninitiative.org>

Box 4 Brazilian Blue Initiative

The Brazilian Blue Initiative, announced in March 2018, aims to promote the conservation of the country's coastal ecosystems under climate change and human pressure through effectively managing and expanding marine protected areas, according to The Chico Mendes Institute for Biodiversity Conservation (ICMbio). It is a strategic framework for a vision of sustainable development and conservation of marine and coastal zones. For Brazil's vast mangrove ecosystems, this means enhanced safeguards within the context of larger mosaics of protected areas.

For more information visit: <https://www.mangrovealliance.org/brazilian-blue-initiative-initiative-post/>

Box 5 Germany's Blue Carbon research projects

Germany's research mission "CDRmare" (CDR: Carbon dioxide removal) will investigate whether and to what extent the ocean can play a significant role in the removal and storage of CO₂ from the atmosphere. It will also consider the linkages with and impacts on the marine environment, Earth system, and society, as well as appropriate approaches for monitoring, attributing, and accounting for marine carbon storage in a changing environment.

Germany's research mission "Protection and Sustainable Use of Marine Areas" (sustainMare) is investigating how sustainable use can be ensured in the future while simultaneously protecting the oceans. Through inter- and transdisciplinary research approaches, the knowledge about multiple stressors and the effects of climate change on the marine ecosystem is to be increased and concrete recommendations for action for and with different target groups are to be developed with the help of future scenarios.

<https://cdrmare.de/en/die-forschungsverbuende/>; <https://www.sustainmare.de/index.php.en>

Box 6 Indonesia's Blue CARES project

Indonesia is part of a joint research project with the Philippines and Japan as part of the Japanese Technical Cooperation Project for Comprehensive Assessment and Conservation of Blue Carbon Ecosystems and Their Services in the Coral Triangle (Blue CARES). The project is conducted under the Science and Technology Research Partnership for Sustainable Development (SATREPS), a program funded by the Japan International Cooperation Agency and Japan Science and Technology Agency (JICA-JST). The project aims to mitigate biodiversity loss and realize environmental improvement in Indonesia and the Philippines by focusing on Blue Carbon policies. This is a joint academic research project among Indonesia, the Philippines, and Japan.

For more information visit: https://www.jst.go.jp/global/english/kadai/h2802_pilipinas.html

2.3.2 Protecting and Restoring Coastal and Marine Ecosystems to Enhance Ecosystem Services

The protection and restoration of coastal and marine ecosystems such as mangroves, seagrass, and salt marshes offer a wide range of co-benefits (Hoegh-Guldberg et al., 2019). In addition to contributing to solutions to climate change through their ability to sequester and store carbon in soils and vegetation and support adaptation, coastal and marine ecosystems provide a range of other critical ecosystem services. Examples include protection from storms during extreme weather events for hundreds of millions of people, nurturing biodiversity, detoxifying pollutants, providing habitat for fish, supplying food, fibre, and traditional medicines, providing people with livelihoods, and being an intrinsic part of the culture and heritage of the people living in coastal areas (Hoegh-Guldberg et al., 2019; Stuchtey et al., 2020).

Stuchtey et al. (2020) argue that a healthy ocean is vital to improving global health and increasing global prosperity for everyone as it expands opportunities for all people, including women and marginalized groups, and makes the world a better place to live for all. The IPCC (2019) has high confidence that the protection, restoration, and precautionary ecosystem-based management of renewable resource use, along with the reduction of pollution and other stressors, can support the far-reaching services and options provided by ocean ecosystems. The IPCC also stresses that habitat restoration and ecosystem management tools such as assisted species relocation and coral gardening are most successful when they are community-supported and science-based, whilst also using indigenous and local knowledge. Hoegh-Guldberg et al. (2019) note that the protection and restoration of coastal and marine ecosystems has the highest number of and most strongly positive impacts on all the environmental dimensions they assessed, indicating that there is potential to achieve many environmental co-benefits, including increased biodiversity-related services, coastal resilience, and climate change adaptation benefits.

Stuchtey et al. (2020) propose a rethink in our relationship with the ocean through the creation of a sustainable ocean economy through the common goals of effective protection, sustainable production, and equitable prosperity (the three Ps) (Figure 2). The sustainable ocean economy is in stark contrast to the traditional conservation philosophy of minimising destruction and an extractive approach that focuses on exploiting the ocean to create wealth.

Protecting coastal and marine biodiversity would help the ocean continue to provide the ecosystem services humanity depends on. A restored and protected ocean would help mitigate the impact of storms and sea level rise, saving lives and livelihoods, and reducing economic costs of damage and recovery.

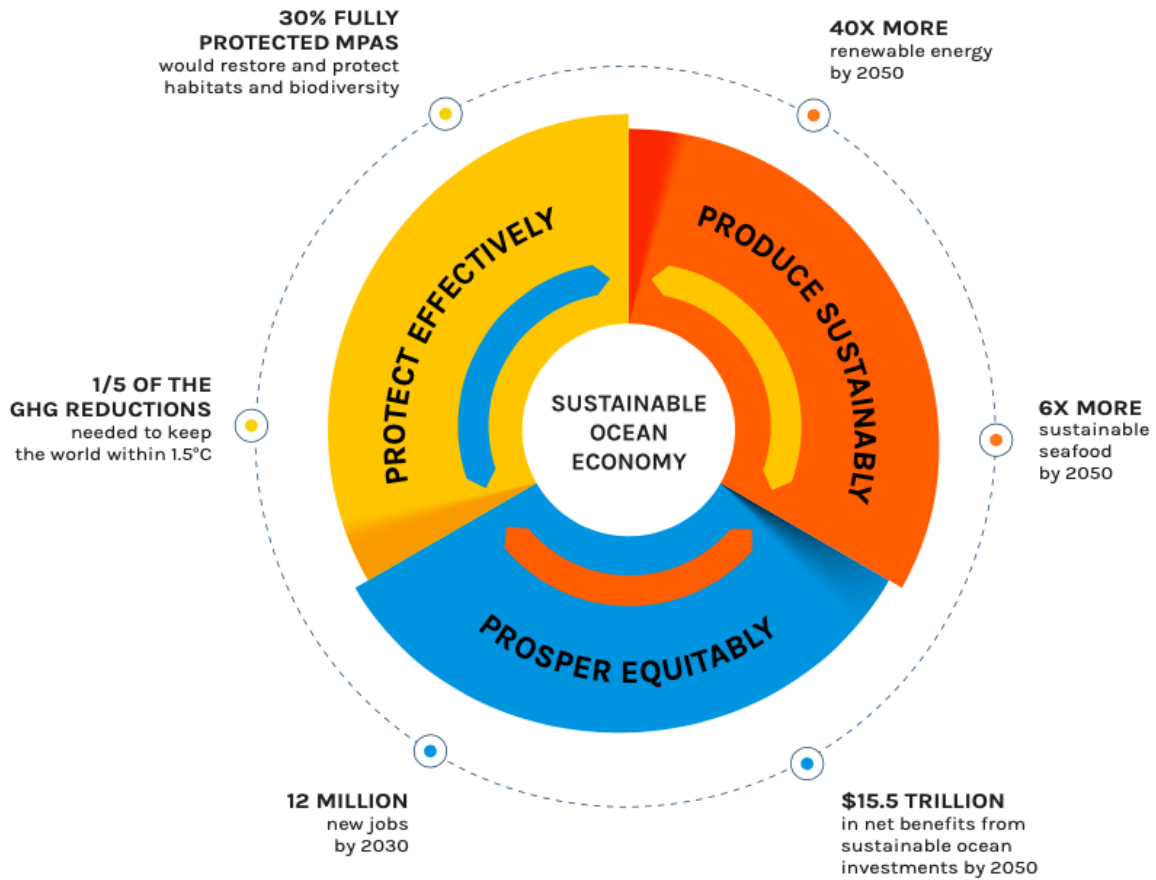


Figure 2 Sustainable Ocean Economy

Source: (Stuchtey et al., 2020).

In 2021, the *average coverage* of protected areas in relation to marine areas (Exclusive Economic Zones) was 19.64%. The data shows a global *average increase* in *Marine Protected Areas* of 15.1% between 2000 and 2020. Most countries show a positive trend, particularly France (+60.91%), Germany (+41.76%), and Mexico (+35.32%). However, Sachs et al. (2021) note that despite the increase in the share of protected areas, biodiversity threats and deforestation, caused partly by unsustainable supply chains, are driving reversals or stagnation of progress on SDG 14 and SDG 15 (Life on Land).

Mean area that is protected in marine sites important to biodiversity

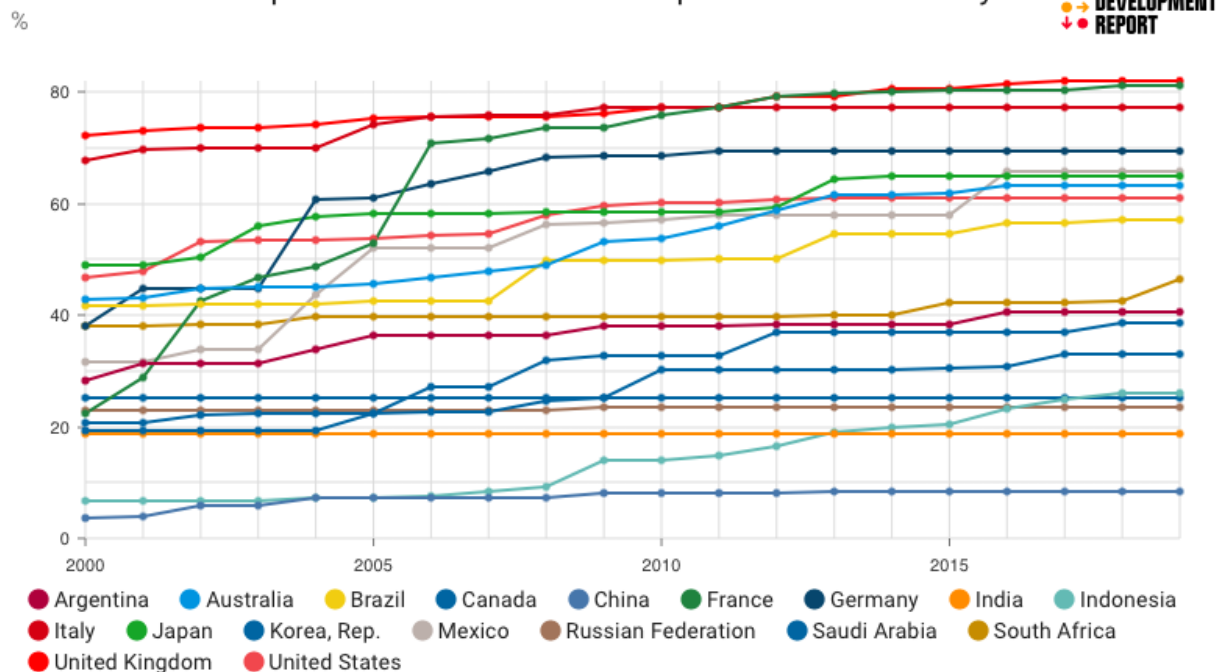


Figure 3 Mean area that is protected in marine sites important to biodiversity in G20 members.

Source: <https://dashboards.sdindex.org/explorer>

Table 4 Designated marine protected area in G20 members in 2022

G20 member	% Designated marine protected area	% Fully/highly protected from fishing
Argentina	47.0	11.0
Australia	45.0	18.0
Brazil	26.0	3.3
Canada	6.8	<1
China	<1	<1
France	22.0	1.5
Germany	45.0	<1
India	<1	<1
Indonesia	3.0	<1
Italy	2.3	<1
Japan	2.2	<1
Korea, Rep.	1.8	<1
Mexico	22.0	4.7

Russian Federation	2.7	<1
Saudi Arabia	3.4	<1
South Africa	15.0	<1
United Kingdom	68.0	39.0
United States	26.0	24.0

Source: World Database on Protected Areas: <https://www.protectedplanet.net/en/thematic-areas/wdpa?tab=WDPa>, Australian Department of Climate Change, Energy, the Environment and Water Marine Protection Atlas: <https://mpatlas.org>

Box 7 South Africa SATREPS project

The South Africa SATREPS project focused on the 'Prediction of Climate Variations and their Application in the Southern African Region' and was conducted from April 2009 - March 2013. Based on a bilateral agreement between Japan and the Republic of South Africa under Japanese JICA-JST SATREPS funds, this was a new type of application research collaboration aimed at preventing or reducing the risks of such extreme weather conditions as drought, heavy rains, and floods. This activity was an important pilot study of applying our world-leading achievements so far, made mainly on the Indian Ocean Dipole (IOD) (both tropical and sub-tropical ones) and El Niño–Southern Oscillation (ENSO) predictions.

For more information visit: https://www.jamstec.go.jp/apl/satreps_sa/e/

Box 8 The UK Blue Belt Programme

The UK's Blue Belt Programme supports the British Overseas Territories (OTs) to enhance marine protection and sustainable management in their marine environments. The programme has been supported by more than £30m since 2016, and funding has been confirmed for the next three years. The Blue Belt of marine protection around the OTs now covers over 4 million km², and the Programme is supporting the OTs to improve their scientific understanding of these huge areas of ocean, to ensure they are properly managed and conserved. The lead UK delivery partners are the Centre for Environment, Fisheries and Aquaculture (Cefas) and the Marine Management Organisation (MMO), but the Joint Nature Conservation Committee (JNCC), The British Antarctic Survey (BAS) and others have delivered projects under the Programme.

For more information visit: <https://www.gov.uk/guidance/the-blue-belt-programme>

2.3.3 The Role of Deep Sea and Mesopelagic Ecosystems in Carbon Sequestration

The deep sea ecosystem is characterised as habitats ranging from 3000–6000 m depth (IPCC, 2019). It plays a major role in climate change mitigation. The deep sea provides a buffer to climate change by storing vast amounts of heat and CO₂ produced by human activities. At the same time, these processes expose vulnerable ecosystems to the combined stresses of warming, ocean acidification, deoxygenation, and altered food inputs (Levin and Le Bris, 2015).

The mesopelagic zone, also called the twilight zone, is the layer of water between 200 and 1,000 metres below the ocean surface, just beyond the reach of sunlight (Woods Hole Oceanographic Institution, 2022). The twilight zone plays an important role in transferring carbon from surface water to the deep ocean, preventing it from returning into the air as a greenhouse gas. About 90% of the carbon that gets into the twilight zone remains there, but a small percentage of it sinks into the deep ocean. Once there, it can remain sequestered from the atmosphere for hundreds or even thousands of years.

The UN Convention on the Law of the Sea (UNCLOS) adopted in 1982 and the international legally binding instrument under UNCLOS on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ) (UNGA resolution 69/292) promote the preservation and sustainable use of marine biodiversity in areas beyond national jurisdiction. However, these efforts have to-date focused on improving the conservation of surface-water fisheries and the genetic resources of the seabed, not the twilight zone and its ecosystem services, which are currently not well understood.

To avoid overexploitation of deep-sea ecosystems, it is critical to learn more about the organisms that live here and their ecological interactions. Such information would enable policymakers to design regulations to protect deep sea and mesopelagic ecosystems and the surface-water species that depend on them - and also potentially allow for sustainable harvest of some species.

The deep sea could potentially provide additional ocean-based carbon storage options, such as direct injection into the deep ocean (Hoegh-Guldberg et al., 2019). However, there are many ecological and ethical considerations for these approaches, which is why research and investments in understanding the deep ocean are so important. An enhanced understanding of the deep ocean is also critical for improving earth system models.

2.4. Ocean-based Solutions for Climate Change Adaptation

This section looks at ocean-based solutions that support climate change adaptation and resilience-building measures for coastal communities and coastal ecosystems in the face of rising sea levels and other climate-related hazards.

2.4.1 Enhancing the resilience of coastal communities to sea-level rise and coastal hazards

The G20 members are concerned about climate change and disaster impacts in coastal areas. A 2020 policy brief led by Saudi Arabia (Singh et al., 2020) explored opportunities for establishing an initiative within the G20 to address disaster risk reduction ('G20-DRR'). Its aim was to provide a decision support system and a centralised dissemination platform for quality-controlled, transparent national climate impact assessments by fostering global collaboration between institutions, researchers, and experts.

According to Kulp and Strauss (2019), 200 million people around the world will live below sea level by 2100. An additional 160 million people will be affected by higher annual flooding due to rising ocean levels. These numbers are much higher than those published in previous studies, which used different coastal elevation models and assumed that only 250 million people in total would be affected by these adverse events. Of the 200 million people directly affected by sea level rise, 70% will live in just eight countries in Asia, including China (43 million), Bangladesh (32 million) and India (27 million). Vietnam, Indonesia, Thailand, the Philippines and Japan will also be strongly affected (ibid).

The IPCC report on 'Climate Change 2022 Impacts, Adaptation, and Vulnerability' (Pörtner et al., 2022) states that there are close to one billion people living in low-lying coastal zones which are threatened by the impacts of climate change, including SIDS, developing countries, and G20 members. Low-lying coastal communities are home to nearly 680 million people (approximately 10% of the global population), and this is projected to pass the one billion threshold by 2050. This figure includes SIDS, which are home to approximately 65 million people.

Sea-level rise will severely impact people living in the Pacific SIDS because the population is concentrated close to the shoreline (Castillo et al., 2022). For instance, 98% of the population of Kiribati, 98% of the population of the Marshall Islands, and 99% of the population of Tuvalu live within 500m of the coast. In twelve Pacific countries (Cook Islands, Kiribati, Marshall Islands, Nauru, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu, and Vanuatu), around 55% of the population live within 500 m of the coast, and 20% reside within 100 m (Kumar et al., 2018).

Kumar (2020) estimates that between 0.66 to 1.7 million people in the Pacific Islands, 46% of the population of Bangladesh, and many more coastal populations will be forced to migrate owing to rising sea levels by 2050. The loss of ecosystems and their services has cascading and long-term impacts on people globally, especially for traditionally marginalised groups, including women, youth, Indigenous People, local communities, and ethnic minorities.

Scenario modelling undertaken by Clement et al. (2021) indicates that if the trajectory of high greenhouse gas emissions and unequal development continues unchallenged, an average of 170 million people across six regions will be subjected to internal migration by 2050 (Figure 4).

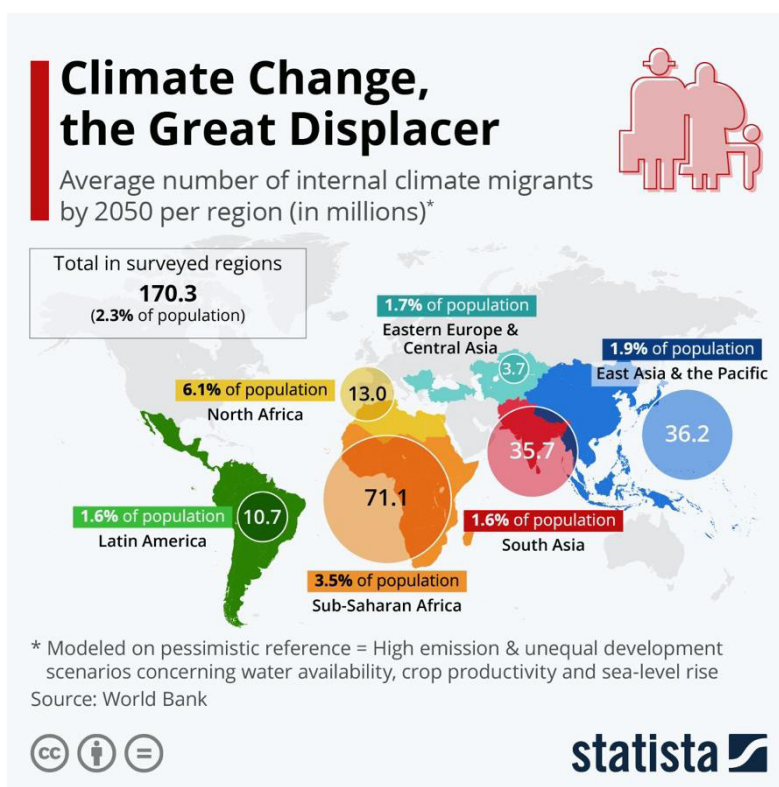


Figure 4 Average number of internal climate migrants by 2050 per region

Source: <https://www.statista.com/chart/26117/average-number-of-internal-climate-migrants-by-2050-per-region/>

The resilience of coastal communities to sea-level rise and coastal hazards can be enhanced using ocean-based ecosystem-based adaptation measures. Mangroves, salt marshes, and other vegetated coastal ecosystems provide protection from coastal hazards such as storm surges, tropical cyclones, floods, and tsunamis by slowing water flow rates, absorbing the energy of such events.

Coastal ecosystems are also an important climate change adaptation tool - by trapping sediment and accreting vertically over time, these ecosystems reduce the impacts of sea-level rise and flooding by preventing coastal erosion, inundation, and habitat loss (Duarte et al., 2013; Hoegh-Guldberg et al., 2019). Hochard et al. (2019) note that communities with more extensive mangrove forests experience significantly lower losses from exposure to cyclones than communities without mangroves.

Referring to countries in the Asia-Pacific Region, ESCAP (2022b) suggested that countries with significant coastal wetlands can recognize the values provided by these ecosystems as a potentially significant contribution to both the mitigation and adaptation goals of their NDCs.

2.4.2 Enhancing the resilience of coastal and ocean ecosystems to climate change

Major climate change impacts on coastal and ocean ecosystems include ocean warming, sea-level rise, and extreme weather events, which in turn lead to coral bleaching, species migration, coastal erosion, wetland flooding, aquifer and agricultural soil contamination, degradation of marine ecosystems, and loss of habitat and biodiversity (IPCC, 2019).

Nature is a fundamental part of ocean resilience to climate change and protecting and restoring nature is critical to human well-being, ocean health and climate change (Hoegh-Guldberg et al., 2019; Because the Ocean Initiative, 2019; Stuchtey et al., 2020; Cooley et al., 2022). Nature-based solutions that enhance the resilience of coastal and ocean ecosystems to climate change include preserving and restoring blue carbon ecosystems, establishing and maintaining climate-smart MPAs, supporting climate-smart small-scale fisheries and aquaculture, ecosystem-based adaptation, sustainable natural resource management, and protecting and restoring coastal ecosystems.

Vegetated habitats buffer acidification (Hoegh-Guldberg et al., 2019) and an increased abundance of marine species is expected to enhance the productivity of surrounding areas, which can help buffer against climate impacts and increase their resilience (Gattuso et al. 2018). In addition to lowering climate risks locally, ecosystem-based adaptation approaches provide multiple societal benefits such as carbon storage, improved water quality, biodiversity conservation, and livelihood support (*high confidence*) (IPCC, 2019). However, ecosystem-based adaptation, while vital for coastal protection, will only be manageable under the lowest levels of warming (IPCC, 2019).

In a report commissioned by the Ocean Panel, Konar and Ding (2020) calculated that every \$1 invested in mangrove conservation and restoration generates a benefit of \$3. Additionally, conservation of existing mangroves yields higher benefits (88:1) than restoring degraded ones (2:1), indicating that conserving mangroves now is cheaper than restoring them later (Konar et al. 2020).

The Blue Action Fund (BAF) was established by the German Federal Ministry for Economic Cooperation and Development (BMZ) and the German Development Bank (KfW) in 2016. Since then the BMZ has contributed 80 million Euros to the Fund. Other national funding partners are Sweden and France. The Green Climate Fund (GCF) has also been contributing since 2019. The aim of the BAF is to improve the protection of the world's oceans and coasts and thereby stem the dramatic loss of marine biodiversity. Local development will be fostered and sustainable livelihoods in coastal communities will be promoted. The BAF is the world's largest public fund dedicated to conserving and improving marine protected areas and sustainable fisheries. It makes grants to non-governmental organisations and local actors to enable them to significantly expand their activities aimed at conserving the oceans' biological diversity and using it sustainably.

For more information see: <https://www.bmz.de/en/development-policy/biodiversity/marine-conservation/blue-action-fund-89006>

Box 9 Germany's Blue Action Fund and International Climate Initiative

Through the International Climate Initiative (IKI), Germany supports approaches in developing and emerging countries to implement and ambitiously develop the Nationally Determined Contributions (NDCs) anchored in the Paris Agreement. This includes measures to adapt to the impacts of climate change and to conserve and rebuild natural carbon sinks, taking into account environmental, economic and social concerns. With regards to biodiversity, the IKI also supports its partner countries in achieving the goals of the Convention on Biological Diversity (CBD). The IKI supports mitigation and adaptation projects including ocean conservation measures in partner countries, advances ocean governance and aims to identify local, national and regional solutions for ocean biodiversity conservation, MPAs and sustainable use with a clear link to climate change impacts.

For more information see: <https://www.international-climate-initiative.com/en/iki-media/news/protection-and-sustainable-use-of-the-worlds-oceans/>

Box 10 Australia's Billion Dollar Reef Protection Package

The Australian Government committed to invest AU\$1 billion over 9 years (2021-2022 to 2029-2030) in order to protect and restore the Great Barrier Reef. This investment includes AU\$92.7 million to research and deploy world-leading reef resilience science and adaptation strategies to climate change. The remainder of these resources will go towards improving water quality, controlling invasive species, management and conservation initiatives, Traditional Owner and community-led projects towards conservation and restoration.

For more information visit: <https://www.awe.gov.au/parks-heritage/great-barrier-reef/billion-dollar-reef-protection-package>

Box 11 Horizon European Mission Area Adaptation to Climate Change, Including Societal Transformation

This Horizon Europe Mission Area aims to create a climate-resilient Europe and protect lives and assets. The impact of the EU's support will be maximised by catalysing innovative research solutions, demonstrating the relevance for society and citizens, and accelerating social transformation by addressing new communities beyond usual stakeholders. By 2030, the mission is expected to prepare Europe to deal with climate disruptions; accelerate the transformation to a climate-resilient future; and build deep resilience by scaling up actionable solutions triggering societal transformations.

For more information visit: <https://www.catalyze-group.com/fund/horizon-europe/mission-area-adaptation-to-climate-change-including-societal-transformation/>

2.5. Expanding the Global Ocean Observing System

Coordinated observing of the ocean is important in improving our climate models and is fundamental to achieving the goals of the *Decade of Ocean Science for Sustainable Development*. Currently, there are regional gaps and a need for consistent, compatible, and interoperable data to ensure that these observations can be used by scientists and decision-makers across the globe.

Expanding the Global Ocean Observing System (GOOS) and facilitating access to data will hence be an important step in strengthening the collection and sharing of ocean data between G20 members and the wider global community. GOOS leads and supports a community of international, regional, and national ocean observing programs, governments, UN agencies, research organizations and individual scientists. An important feature of the GOOS is that the data are available not only to scientists and policymakers in all countries, but also to anyone in the general public.

GOOS is led by IOC-UNESCO and co-sponsored by the World Meteorological Organization (WMO), UNEP, and the International Science Council (ISC)⁶. The operational data collection of the GOOS is managed and coordinated by the Physical Oceanography Division at the National Oceanographic and Atmospheric Administration (NOAA) Atlantic Oceanographic and Meteorological Laboratory (AOML).

Box 12 European Marine Observation and Data Network

The European Marine Observation and Data Network (EMODnet) is a network of organisations supported by the EU's integrated maritime policy. These organisations work together to observe the sea, process the data according to international standards and make that information freely available as interoperable data layers and data products.

Its "collect once and use many times" philosophy benefits all marine data users, including policymakers, scientists, private industry, and the public. It has been estimated that such an integrated marine data policy will save at least one billion Euros per year, as well as opening up new opportunities for innovation and growth.

EMODnet provides access to European marine data across seven discipline-based themes: bathymetry, biology, chemistry, geology, human activities, physics, and seabed habitats.

For more information visit: <https://emodnet.ec.europa.eu/en>

⁶ https://www.goosocean.org/index.php?option=com_content&view=article&id=278&Itemid=413

2.6. Key Challenges for Research and Development Cooperation

This section highlights key challenges in research and development cooperation in ocean science amongst the G20 members identified in our gap analysis.

Challenge 1: Ocean-based solutions are underutilized

A review of relevant documents shows that despite the recent advances in ocean science and an increased understanding of the ocean-climate nexus, ocean-based solutions to address climate change remain largely unexplored, undervalued, and underutilised by policymakers and decisionmakers. The full potential of ocean-based solutions to achieve climate change and sustainability goals still eludes us as a systematic assessment of nature-based solutions and ecosystem-based approaches and their impacts has yet to be conducted. At the same time, the largely untapped and powerful benefits that the oceans provide are increasingly undermined by human activities, which hampers the ability of the ocean to help us mitigate and adapt to climate change, and to build more resilient and sustainable communities.

Only two thirds of the governments supporting the Paris Agreement included Nature-based Solutions and ecosystem-based approaches actions in their national climate plans. In 2020, the World Bank's nature-based solutions portfolio included seventy projects, most of them focused on water and disaster risk management.

Challenge 2: Poor data on the ocean and its ecosystems and their interaction with human pressures

Poor data availability on the ocean and its ecosystems negatively affects countries' ability to make evidence-based decisions on the management and use of coastal and marine resources. Available data is usually not associated or appropriately linked to a thorough understanding of human dynamics beyond the human footprint.

The Sustainable Development Report 2021 (Sachs et al., 2021) notes that considerable gaps in official statistics remain in terms of country coverage and timeliness for SDG 14, as well as some of the other goals - SDG 4 (Quality Education), SDG 5 (Gender Equality), SDG 12 (Responsible Consumption and Production), and SDG 13 (Climate Action).

One of the recommendations made by the G20 Academies of Sciences for the 2019 Osaka G20 meeting (Xu and Karlsson, 2019) was the establishment of an improved data storage and management system that ensures open access by scientists globally. Not all G20 members are adequately equipped to manage their ocean data and information. As a result, some of the developing countries within the G20 are reliant on other countries to conduct the modelling and projections needed for climate mitigation and adaptation. Open access and data sharing are critical for capacity building and climate resilience.

Challenge 3: Lack of scientific and technical capacity

Installed capacities and infrastructure for ocean science are weak. This is true for data management and accessibility, but also in terms of ocean literacy among administrations, and relevant stakeholders. The technical capacity of ocean science remains unequally distributed among G20 members and around the world. As shown in Section 3.2., there is a large spread in the number of ocean science personnel across the 13 G20 members that submitted data to the GOSR2020 questionnaire, ranging from 87.7 ocean scientists per million in South Africa to only 0.8 in India, with an average of 62.0 ocean scientists per million. The percentage of female ocean science researchers for these G20 members varies from 30% in South Africa to 54% in Türkiye. The average of 41% among G20 members is only slightly higher than the global average of 39%, and yet, far from an absolute balance at 50%.

Challenge 4: Lack of integrated and adaptive management for achieving a sustainable ocean economy

Even though the need for better governance of human activities in the ocean has been widely recognized for some time and is also incorporated in the SDGs, there are many challenges relating to the implementation of existing governance frameworks. There is a lack of integrated and adaptive management of ocean-based activities, including the effective monitoring and enforcement of policies to achieve environmentally and socially sound compliance. Ensuring the sustainability and resilience of coastal and marine ecosystems while integrating and balancing different ocean uses to optimise the overall ocean economy can be achieved by applying integrated ocean management (IOM), a holistic, ecosystem-based and knowledge-based approach (Winther et al., 2020). Collaborative and participatory approaches to designing MPAs with local communities are important to ensure there are co-benefits to the ecosystem and the livelihoods and well-being of communities.

Challenge 5: Financing of ocean science and technology

Globally, only 1.7% of national research budgets are allocated to ocean science. These range from around 0.03% to 11.8%. Peru, followed by South Africa (5.6%), Ireland (5.3%), Norway (4.4%), and Portugal (3.5%). USA reports the highest budget for ocean and coastal activities, more than \$12 billion, followed by Japan (US\$600 million) and Australia (US\$511 million) in 2017. Five G20 members have budgets of over US\$200 million: France (US\$333 million), Germany (US\$312 million), the United Kingdom (US\$293 million), the Republic of Korea (US\$228 million), and Canada (US\$220 million).

3. Creating an environment for generating and promoting ocean-based solutions to climate change

An appropriate environment for the generation of ocean-based solutions requires three key components: ocean technology diffusion, capacity development, and resource mobilization. Fundamental ocean technologies encompass the development of a digital twin (a virtual model designed to accurately reflect a physical object), robust data collection and sharing, and enhanced global ocean observation systems. Cooperation among G20 members in the diffusion of technologies is fundamental to the promotion of ocean-based solutions. This diffusion process must also be accompanied by capacity building activities.

The aim of this chapter is to identify gaps and areas for cooperation in technology diffusion and capacity development that can leverage the G20 cooperation mechanism. This includes access to data, data collection and sharing, observation systems, as well as corresponding ocean literacy and technical support to take advantage of such scientific developments. The chapter will also explore how additional investment of resources and innovative partnerships can help to ensure successful implementation of research cooperation.

3.1. Access to Ocean Science Technology and Data

Several delegates of G20 members have highlighted the need for cooperation on technology development and transfer. The north-south and south-south sharing of ocean-related technology is critical in achieving the goals of the 2030 Agenda and in harnessing the opportunities provided by the ocean in climate change mitigation and adaptation.

Table 5 Access by G20 member to new ocean science technologies

G20 member	Human operated vessel (submersible)	Un-manned surface vessel (USV)	Mooring buoy	Remotely operated vehicle (ROV)	Autonomous underwater vehicle (AUV)	Underwater glider	Wave glider	Flying Drone
Argentina								
Australia		X	X	X	X	X		
Brazil	X	X	X	X	X	X	X	X
Canada		X	X	X	X	X	X	X
China	X		X		X	X	X	
France	X		X		X	X		X
Germany	X	X	X	X	X	X	X	X
India								
Indonesia								
Italy		X	X	X	X	X	X	

Japan	X	X	X	X	X	X	X	X
Mexico								
Republic of Korea		X	X	X	X	X	X	X
Russian Federation	X			X	X			
Saudi Arabia								
South Africa	X	X	X	X	X	X	X	
Türkiye	X	X	X	X	X	X		X
United Kingdom		X	X	X	X	X	X	X
United States	X	X	X	X	X	X	X	X
Total	9	11	13	12	14	13	10	9

Source: GOSR2020 (IOC-UNESCO, 2021b).

3.1.1 Creating a Digital Twin of the Ocean

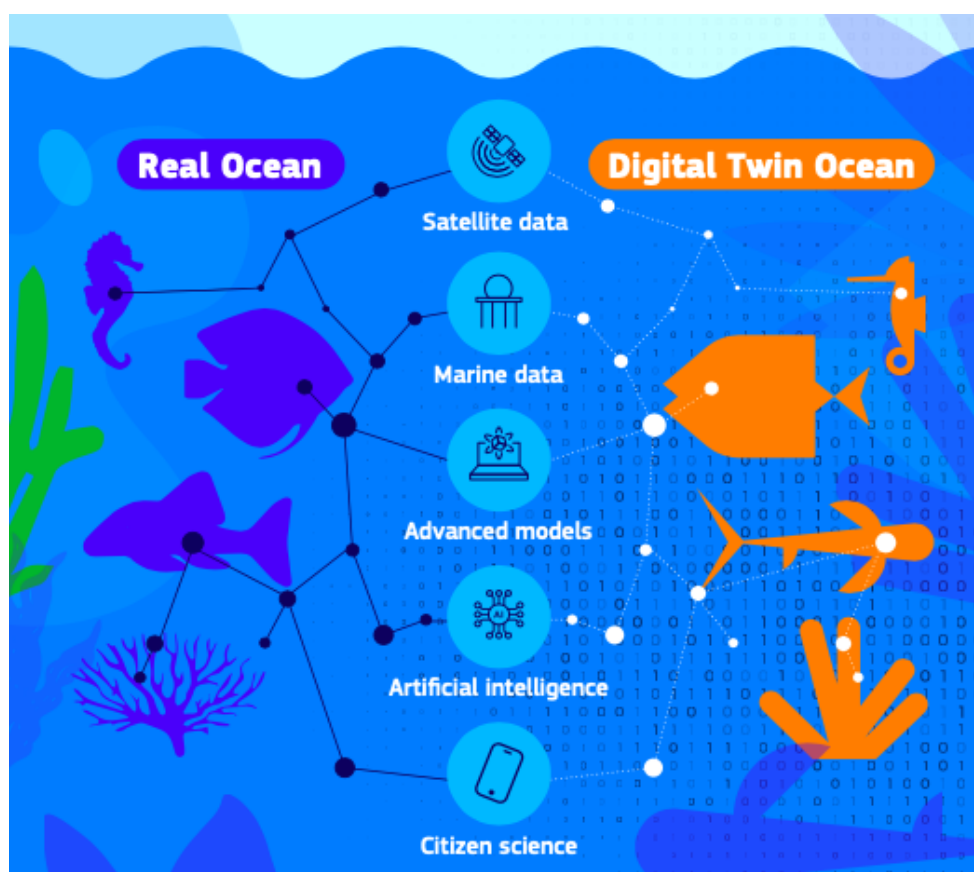
A digital twin of the ocean is a high-resolution, multi-dimensional, and near real-time virtual representation of the ocean that combines ocean observations, artificial intelligence (AI), and models on high-performance computers. A Digital-Twin is able to quantify benefits and environmental change and provide powerful visualisations.

The Digital Twin of the Ocean⁷ (DITTO) is an endorsed UN Ocean Decade program led by the GEOMAR Helmholtz Center for Ocean Research Kiel and Kiel University. DITTO aims to establish and advance a digital framework on which all marine data, modelling and simulation, along with AI algorithms and specialised tools including best practice, will enable a shared capacity to access, manipulate, analyse, and visualise marine information. It will enable users and partners to create ocean-related development scenarios addressing issues such as energy, mining, fisheries, tourism, and nature-based solutions. DITTO will empower ocean professionals, including scientific users, to create their own local or topical digital twins of ‘their ocean issue’ by using standard workflows.

The European Commission is funding the creation of a ‘Digital Twin of the Ocean’ (European DTO) to support better decision-making. According to the European Commission, the DTO is a digital space providing access to vast amounts of data, models, artificial intelligence and other tools, which will allow the replication of the properties and behaviours of marine systems, including ocean currents and waves, marine life and human activities, and their interactions, in and near the sea. By connecting data and models through tailor-made

⁷ <https://www.oceandecade.org/actions/digital-twins-of-the-ocean-ditto/>

applications, scientists, marine experts, policymakers, entrepreneurs, and user-driven applications can test different specific scenarios. This allows us to better understand the ocean, predict its response to changes, simulate alternative scenarios, and make the best informed decisions (European Union, 2022).



Source: https://ec.europa.eu/info/files/digital-twin-ocean_en
 Figure 5 The European Digital Twin of the Ocean

3.1.2 Enabling Access to Data

Access to data is critical in creating the capacity of decision-makers to make informed decisions, ensuring the long-term sustainability of the ocean and the achievement of climate change goals. The GOSR (IOC-UNESCO, 2021b) observed that the demand for easier access to the findings of ocean science is increasing. At the same time, the report found that countries are inadequately equipped to manage their ocean data and information and that this is hampering open access and data sharing. Therefore, the GOSR recommended that the identification and mainstreaming of incentives for open data access be pursued as two key transformations during the Ocean Decade. The online GOSR portal provides access to primary data provided by IOC-UNESCO Member States on the status of their efforts in ocean science via the GOSR2020 questionnaire.

Box 13 Australian Ocean Data Network

The Australian Ocean Data Network (AODN) Portal provides access to all available Australian marine and climate science data and provides the primary access to Australia's Integrated Marine Observing System (IMOS) data, including access to the IMOS metadata. IMOS is enabled by the National Collaborative Research Infrastructure Strategy (NCRIS). It is operated by a consortium of institutions as an unincorporated joint venture, with the University of Tasmania as Lead Agent.

For more information visit: <https://portal.aodn.org.au>

3.1.3 The Role of the Global Ocean Observing System in Sharing Ocean Technology and Data

The Global Ocean Observing System (GOOS) is a model example of an organised collaborative science and research initiative at the global scale that has enhanced advances in ocean science (IOC-UNESCO, 2021b). GOOS plays a critical role in conducting coordinated global observations, ocean and climate modeling, and predictions.

3.1.4 Sharing Knowledge and Data on Ecosystem Conservation and Restoration

Because of their strongly positive impacts on a wide range of environmental dimensions and their many environmental and social co-benefits, ecosystem conservation and restoration have been identified as one of the most important measures in the toolbox of ocean-based solutions for achieving sustainability and climate change goals (Hoegh-Guldberg et al., 2019). Knowledge and data sharing on ecosystem conservation and restoration are therefore critical so as to inform robust science, policy and practice. Ladouceur et al. (2022) note that synthesis of knowledge and data is critical for helping ecologists better understand how context affects restoration outcomes, to increase the predictive capacity of restoration actions, and to help provide better information for evidence-based decision-making, and to scale-up approaches to meet targets for restoration.

3.2. Building Capacity for Ocean Science

Investing in ocean science capacity is critical in achieving the goals of the Paris Agreement and the 2030 Agenda. The GOSR presents the status of research capacity in ocean science. The questionnaire developed for the GOSR2020 (IOC-UNESCO, 2021b) included a request to provide information on ocean science capacity building activities related to the 2030 Agenda, with a particular focus on SDG 14. GOSR2020 contains information about ocean science personnel in general, including data on the age distribution and gender of researchers, and information about ocean capacity development needs in the country. Table 5 and Figure 6 show the number of ocean science personnel per million inhabitants for 13 G20 members that responded to the GOSR2020 questionnaire. The data indicate a wide spread in the number of ocean science personnel across the countries, with an average of 62.0. The countries with the highest numbers of ocean science personnel per million inhabitants are South Africa

(87.7), France (69.3), and the United Kingdom (49.6). India and Brazil have the lowest number of ocean science personnel, with 0.8 and 3.0 researchers per million, respectively.

Table 6 Total number of ocean science personnel employed in G20 members.

G20 member	Year	Total ocean science personnel, male and female	Total population	Number of national ocean science researchers employed per million inhabitants.
Australia	2017	426	24,601,860	17.3
Brazil	2014	606	202,763,744	3.0
Canada	2017	1,574	36,545,236	43.1
France	2017	4,637	66,918,020	69.3
Germany	2017	1,207	82,657,002	14.6
India	2013	971	1,280,842,119	0.8
Italy	2017	2,673	60,536,709	44.2
Japan	2017	1,591	126,785,797	12.5
Republic of Korea	2017	1,854	51,361,911	36.1
South Africa	2017	5,000	57,009,751	87.7
Türkiye	2017	933	81,116,451	11.5
United Kingdom	2017	3,275	66,058,859	49.6
United States of America	2013	13,134	316,059,947	41.6

Source: GOSR portal (<https://gosr.ioc-unesco.org/theme/research>)

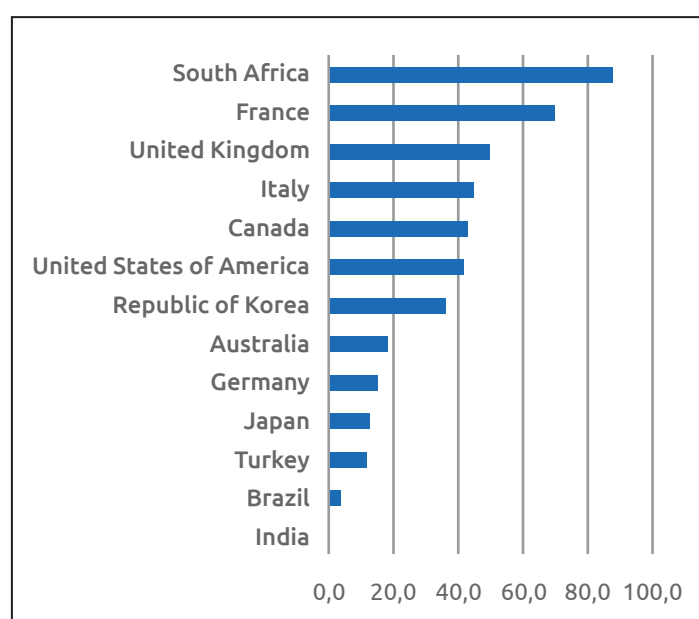


Figure 6 Number of national ocean science researchers employed per million inhabitants in G20 members.

Table 7 Total number of ocean science personnel employed in G20 members by gender.

G20 member	Year	Total ocean science personnel, male	Total ocean science personnel, female	Total population	Number of male ocean science researchers employed per million inhabitants	Number of female ocean science researchers employed per million inhabitants	Percentage of female ocean science researchers
Australia	2017			24,601,860			
Brazil	2014			202,763,744			
Canada	2017	793	781	36,545,236	21.7	21.4	50
France	2017			66,918,020			
Germany	2017	640	567	82,657,002	7.7	6.9	47
India	2013			1,280,842,119			
Italy	2017	1,575	1,098	60,536,709	26.0	18.1	41
Japan	2017			126,785,797			
Republic of Korea	2017	1,194	660	51,361,911	23.2	12.9	36
South Africa	2017	3,500	1,500	57,009,751	61.4	26.3	30
Türkiye	2017	429	504	81,116,451	5.3	6.2	54
United Kingdom	2017	2,118	1,157	66,058,859	32.1	17.5	35
United States of America	2013	8,778	4,356	316,059,947	27.8	13.8	33

Source: GOSR portal (<https://gosr.ioc-unesco.org/theme/research>), World Bank population data bank (<https://databank.worldbank.org/source/population-estimates-and-projections>).

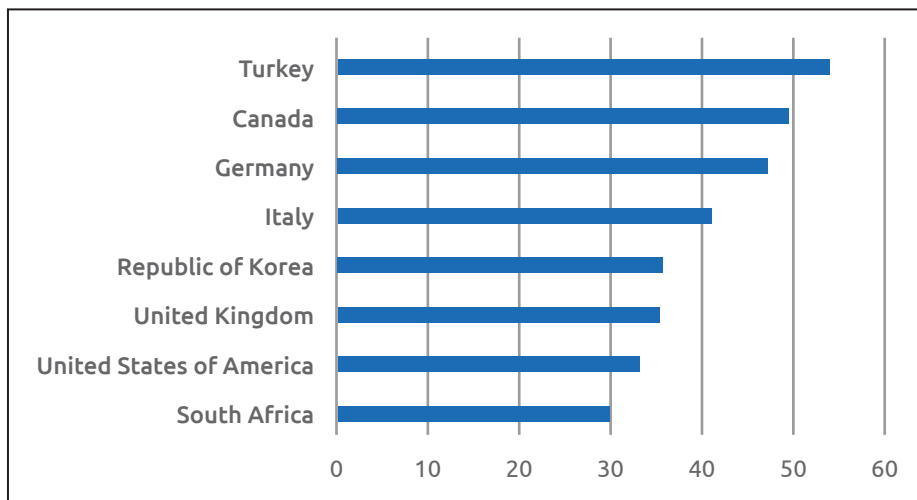


Figure 7 Percentage of female ocean science researchers in G20 members.

Table 6 shows the number of ocean science personnel by gender for eight G20 members that provided information for the GOSR2020 questionnaire. Figure 7 indicates that the percentage of female ocean science researchers for these countries varies from 30% in South Africa to 54% in Türkiye. The average of 41% is slightly higher than the global average of 39% (IOC-UNESCO, 2021b). The Ocean Decade offers an unprecedented opportunity to fast-track gender equality and the empowerment of women in ocean science by embedding gender equality as a cross-cutting principle in the planning, implementation, and application of ocean science (Sun et al., 2022).

3.2.1 Supporting the Next Generation of Ocean Scientists and Advocates

Promoting early-career scientist networks in the field of ocean science and facilitating the involvement of young scientists in determining research priorities will be critical to building capacity, promoting intergenerational equity, and advancing our understanding of the ocean-climate nexus.

The Ocean Decade recognises the importance of early career ocean professionals (ECOP) as the next generation and future leaders of ocean sustainability. A UN-endorsed ECOP programme is working to incorporate new ways of thinking into global ocean sustainability and stewardship challenges. The ECOP programme will achieve this by empowering ECOPs with meaningful networking and professional development opportunities with each other and with local to global institutions through the framework of the UN Ocean Decade. The vision of the ECOP Programme is to elevate and strengthen the diverse perspectives of new generations of ocean professionals through a collective voice, ensuring that knowledge is transferred between experienced and early-career ocean professionals to promote ocean sustainability for “The Ocean We Want”.

3.2.2 Enhancing Ocean Literacy

IOC-UNESCO defines ocean literacy as “an understanding of the ocean’s influence on you and your influence on the ocean”⁸. Ocean literacy is important because it helps enhance the understanding of what can be done to protect the health of the ocean.

The IOC is working to support ocean research institutions around the world to strengthen public engagement and build greater ocean literacy through its Ocean Literacy Portal⁹. The Portal serves as a one-stop shop, providing resources and content available to all, with the goal of creating an ocean-literate society able to make informed and responsible decisions on ocean resources and ocean sustainability. It provides the necessary Ocean Literacy resources to develop the knowledge, skills, values, and behaviours needed to create an ocean literate community. A collection of education and information resources, projects, tools, methods, reports, programs, and materials regarding global ocean knowledge, useful to understand ocean processes, functions, and issues.

⁸ <https://ioc.unesco.org/our-work/ocean-literacy>

⁹ <https://oceanliteracy.unesco.org/?post-types=all&sort=popular>

The focus of the ***Ocean Literacy for All*** initiative is to develop a global partnership to raise awareness of the conservation, restoration, and sustainable use of our ocean and its resources and to build an improved public knowledge base across the world population regarding our global ocean. This portal has been developed to help you find the best resources the world has to offer on Ocean Literacy and to provide tools and approaches to transform ocean knowledge into action.

The Ocean Literacy for All Toolkit (IOC-UNESCO, 2017b) was produced by UNESCO's Regional Bureau for Science and Culture in Europe and IOC as a result of joint work and contributions by members of the global partnership led by IOC. The first volume presents the context of ocean literacy and describes its framework made of 7 essential principles, interviews with ocean literacy practitioners, and the path for the development of successful ocean literacy in the context of the 2030 Agenda. The second volume presents 14 activities that could provide tested examples and support for the implementation of marine education initiatives. The toolkit offers examples that could be adapted for different geographical and cultural contexts.

3.2.3. Other Data Sharing and Capacity Building Initiatives

G20 members may benefit from existing data sharing initiatives and capacity development activities offered through platforms such as the following:

The ***International Oceanographic Data and Information Exchange***¹⁰ (IODE) of the IOC of UNESCO was established in 1961. Its purpose is to enhance marine research, exploitation, and development, by facilitating the exchange of oceanographic data and information between participating Member States, and by meeting the needs of users for data and information products. During the past 50 years, IOC Member States have established more than 80 oceanographic data centers in as many countries. This network has been able to collect, control the quality of, and archive millions of observations of the global ocean, and makes these available to all Member States.

The ***Global Sea Level Observing System***¹¹ (GLOSS) is an international program conducted under the auspices of the Joint Technical Commission for Oceanography and Marine Meteorology (JCOMM), the WMO and the IOC. GLOSS aims at the establishment of high quality global and regional sea level networks for application to climate, oceanographic and coastal sea level research. The program became known as GLOSS as it provides data for deriving the "Global Level of the Sea Surface". The main component of GLOSS is the Global Core Network (GCN) of 290 sea level stations around the world for long-term climate change and oceanographic sea level monitoring, which makes these available to all Member States.

The ***Ocean Biogeographic Information System***¹² (OBIS) is a global open-access data and information clearing-house on marine biodiversity for science, conservation, and sustainable

¹⁰ <https://www.iode.org>

¹¹ <https://gloss-sealevel.org>

¹² <https://obis.org>

development. More than 20 OBIS nodes around the world connect 500 institutions from 56 countries. Collectively, they have provided over 45 million observations of nearly 120,000 marine species, from bacteria to whales, from the surface to 10,900 meters in depth, and from the tropics to the poles. The datasets are integrated and can be searched and mapped by species name, higher taxonomic level, geographic area, depth, time, and environmental parameters. OBIS originated from the decade-long Census of Marine Life (2000-2010) and was adopted as a project under IOC-UNESCO's IODE program in 2009.

The **General Bathymetric Chart of the Oceans**¹³ (GEBCO) aims to provide the most authoritative, publicly-available bathymetric data sets for the world's oceans. GEBCO consists of an international group of experts who work on the development of a range of bathymetric data sets and data products, including gridded bathymetric datasets, a world map, and Gazetteer of Undersea Feature Names. GEBCO is involved in training a new generation of scientists in ocean bathymetry through the Nippon Foundation/GEBCO.

The **Atlantic Ocean Research Alliance**¹⁴ (AORA) between Canada, the European Union and the United States was launched by the signatories of the Galway Statement on Atlantic Ocean Cooperation in May 2013¹⁵. The AORA intends to advance the shared vision of an Atlantic Ocean that is healthy, resilient, safe, productive, understood and treasured so as to promote the well-being, prosperity and security of present and future generations.

The **Ocean Risk and Resilience Action Alliance**¹⁶ (ORRAA) pioneers innovative financial products that drive investment in marine and coastal natural capital, reduce ocean and climate risks, and build resilience in coastal communities. ORRAA's goals are to, by 2030:

- Secure \$500m of investment into ocean-focused nature-based solutions
- Surface 50 new investable and scalable financial products that drive that investment
- Build the resilience of at least 250 million people in communities adapting to climate change

Connecting the finance and insurance sectors, governments, environmental organisations, academics and communities adapting to climate change, ORRAA helps to secure a regenerating Ocean for a resilient future.

Pioneered by the Great Barrier Reef Foundation, the **Resilient Reefs Initiative**¹⁷ is a global partnership bringing together local communities, Reef managers, and resilience experts to develop new solutions for adapting to the effects of climate change and local threats. A world first, Resilient Reefs directly responds to the call to action from those charged with managing the world's most treasured Reefs – recognising that communities that depend on these Reefs are also threatened, and need to be part of the solution. While the

13 <https://www.gebco.net>

14 https://allatlanticocean.org/aora_csa

15 https://ec.europa.eu/commission/presscorner/detail/en/IP_13_459

16 <https://www.oceanriskalliance.org>

17 <https://www.barrierreef.org/what-we-do/projects/resilient-reefs>

interdependency of Reefs and their communities has long been recognised, Resilient Reefs is the first global program to deliver integrated Reef and community resilience planning at scale. Resilient Reefs draws on the successful 100 Resilient Cities initiative (a US\$163 million project of the Rockefeller Foundation), which created deep structural change to bolster communities and infrastructure against systemic shocks and stresses of climate change in the urban environment. The Resilient Reefs Initiative brings the lessons from that groundbreaking resilience-building program into the management agencies for Reefs and coastal communities.

3.3. Strengthening Financing, Resource Allocation and Mobilization

This section looks at the financial resources invested by G20 members to ocean science. National governments are currently the key sources of financing for ocean science (IOC-UNESCO, 2021b). While the volume of national investment in ocean science differs around the world, the average is only 1% of national research budgets (IOC-UNESCO, 2017a). This is a small proportion compared to the estimated US\$1.5 trillion contribution of the ocean to the global economy in 2010, which is expected to double to US\$3 trillion by 2030 (OECD, 2016).

In 2017, the USA reported the highest budget for ocean and coastal activities, a figure which includes ocean science as well as other ocean and coastal government programmes, with more than US\$12 billion, followed by Japan (US\$600 million) and Australia (US\$511 million) in 2017 (IOC-UNESCO, 2021b). Six countries allocated budgets of over US\$200 million to ocean science: Norway (US\$367 million), France (US\$333 million), Germany (US\$312 million), the UK (US\$293 million), the Republic of Korea (US\$228 million) and Canada (US\$220 million) (Table 7, Figure 8).

However, the availability and allocation of funding for ocean science varies widely between the G20 members, with much lower budgets in some countries such as Brazil (US\$15 million), the United Kingdom (US\$30 million), Russia (US\$58 million), and Italy (US\$64 million). When ocean science spending is calculated as a percentage of GDP, the United Kingdom spends the highest proportion (1.1% of GDP), followed by the USA (0.07% of GDP), and Australia (0.04% of GDP). Eleven of the thirteen G20 members that reported ocean spending, provide significantly less than 0.5% of GDP on ocean science.

Table 8 Total ministry ocean science spending of G20 members.

G20 member	Year	Total ocean science spending USD	Country GDP (current US\$)	Ocean science spending relative to GDP
Australia	2017	\$508,644,496.80	1.33 trillion	0.0382
Brazil	2017	\$15,007,575.66	2.06 trillion	0.0007
Canada	2017	\$219,892,714.35	1.65 trillion	0.0133
France	2017	\$338,253,660.91	2.60 trillion	0.0130

Germany	2017	\$316,549,051.01	3.69 trillion	0.0086
India	2013	\$127,969,418.21	1.86 trillion	0.0069
Italy	2017	\$63,931,069.43	1.96 trillion	0.0033
Japan	2017	\$579,599,023.25	4.93 trillion	0.0118
Republic of Korea	2017	\$227,833,969.53	1.62 trillion	0.0141
Russian Federation	2017	\$58,426,992.45	1.57 trillion	0.0037
South Africa	2017	\$67,596,483.70	381.45 billion	0.0177
United Kingdom	2017	\$30,184,338.59	2.7 billion	1.1179
United States of America	2016	\$12,467,700,000.00	18.75 trillion	0.0665

GOSR portal (<https://gosr.ioc-unesco.org/theme/research>), World Bank Open Data (<https://data.world-bank.org>).

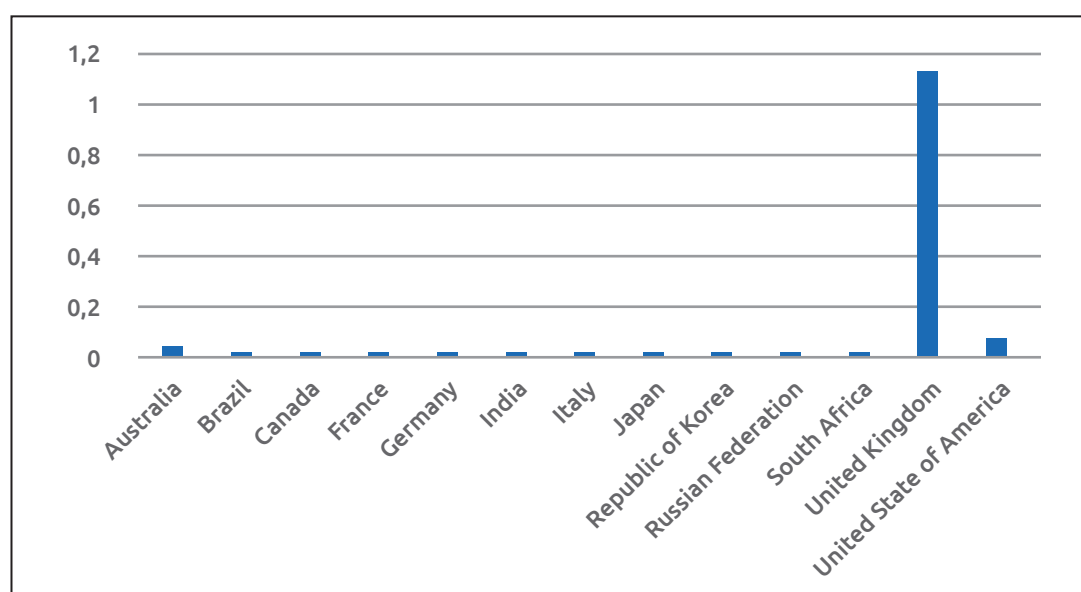


Figure 8 Total ministerial spending on ocean science of G20 members relative to GDP.

According to the GOSR2020 (IOC-UNESCO, 2021b), ocean science funding is very small compared to many other fields of research and innovation. The GOSR2020 shows that in 2017, the share of gross domestic expenditure on research and development (GERD) dedicated to ocean science was on average only around 1.7% of total GERD. Table 8 shows that the proportion of total research budget allocated to research in the field of marine technology for 2016 or 2017 for ten of the G20 members was very small – far less than 1%, except for the USA which had a much higher budget of 4.83%.

Table 9 Proportion of total research budget allocated to research in the field of marine technology (SDG Target 14.a)

G20 member	Year	Value (%)
Brazil	2016	0.04
Canada	2017	0.81
France	2017	0.53
Germany	2017	0.25
Italy	2017	0.19
Japan	2017	0.33
Republic of Korea	2017	0.25
Russian Federation	2017	0.14
United Kingdom	2017	0.06
United States of America	2016	4.83

Source: <https://country-profiles.unstatshub.org/>

The number of private foundations and corporate donation programmes involved in ocean activities is growing (IOC-UNESCO, 2020; IOC-UNESCO, 2021b). In 2017, approximately US\$500.5 million were allocated to ocean-related projects globally, out of which US\$149.4 million were allocated to more than 1,000 marine science projects. In comparison, a total of US\$668.2 million were provided to marine science projects by private foundations and donors through more than 6,000 different grants between 2013 and 2017. Looking at the G20 members, Japan reported US\$47.9 million in business and US\$83.8 million in non-profit spending on ocean science, and South Africa US\$15.0 million and US\$3.8 million, respectively.

However, IOC-UNESCO (2022a) observes that SDG 14 has received the least amount of funding of all of the SDGs. The lack of philanthropic funding and official development assistance (ODA) towards supporting SDG 14 relative to the other SDGs is concerning (Singh et al., 2018; Scotland, 2022; OECD, 2022). Data collected through the SDG Financing Lab shows that as of 2019, SDG 14 remains the least funded SDG by the top 25 donating Foundations (OECD, 2022). This represents 0.01% of all SDG funding from development finance and 0.56% of all philanthropic finance since 2016 (Scotland, 2022).

Table 10 Multilateral international ocean science initiatives

Multilateral International Initiatives	Summary	G20 member
<p>Global Ocean Observing System (GOOS)</p> <p>www.goosocean.org</p>	<p>GOOS is led by IOC-UNESCO, and co-sponsored by the WMO, UNEP and ISC. GOOS leads and supports a community of international, regional, and national ocean observing programmes, governments, UN agencies, research organizations and individual scientists.</p>	<p>Argentina, Canada, France, Germany, India, Indonesia, Italy, Japan, ROK, Türkiye, UK, USA</p>
<p>Partnerships in Environmental Management for the Seas of East Asia (PEMSEA)</p> <p>http://pemsea.org</p>	<p>PEMSEA's mission is to foster and sustain healthy and resilient coasts and oceans, communities and economies across the Seas of East Asia through integrated management solutions and partnerships.</p>	<p>China, Indonesia, Japan, ROK</p>
<p>Charlevoix blueprint for healthy oceans, seas and resilient coastal communities</p> <p>www.mofa.go.jp/files/000373849.pdf</p>	<p>The Blueprint aims to fund coastal resilience projects, collect and share environmental data, and contribute to the management of vulnerable marine ecosystems</p>	<p>Canada</p>
<p>High Ambition Coalition for Nature and People (HAC)</p> <p>www.hacfornatureandpeople.org</p>	<p>The HAC is an intergovernmental group of 70 countries. It is co-chaired by France and Costa Rica, while the United Kingdom acts as an Ocean co-chair. The HAC pledges to protect 30% of terrestrial and marine territory by 2030: this will help with carbon sequestration and storage.</p>	<p>Canada, France, Germany, India, Italy, Japan, Mexico, ROK, UK</p>
<p>Ramsar Convention on Wetlands</p> <p>www.ramsar.org</p>	<p>The Convention on Wetlands is the intergovernmental treaty that provides the framework for the conservation and wise use of wetlands and their resources. The Convention was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975. Since then, almost 90% of UN member states, from all the world's geographic regions, have acceded to become "Contracting Parties".</p>	<p>Canada, Japan</p>
<p>Global Ocean Alliance Oceans 5</p> <p>www.oceans5.org/project/30x30-ocean-alliance/</p>	<p>Oceans 5 makes direct grants, leverages matching grants, provides in-kind services, and shares strategic guidance to support projects and campaigns to constrain overfishing and establish marine reserves.</p>	<p>Canada, Germany, Italy, UK</p>
<p>Ocean Risk and Resilience Action Alliance (ORRAA)</p> <p>https://oceanriskalliance.org</p>	<p>ORRAA's mission is to drive at least \$500 million of investment into coastal and ocean natural capital and surface at least 50 new financial products by 2030, positively impacting the resilience of at least 250 million climate-vulnerable people in coastal areas around the world.</p>	<p>Canada, UK</p>

<p>Archipelagic and Island States Forum (AIS)</p> <p>www.aisforum.org</p>	<p>The AIS Forum is a joint initiative between UNDP Indonesia and the Government of Indonesia and involves 47 Archipelagic and Island States from around the globe. The AIS Forum has four main goals: the first is to promote the use of smart and innovative solutions to address climate change (mitigation and adaptation). The AIS Forum has established several initiatives to help meet this goal, including the AIS Blue Start-up Hub, Joint Research Program, and Innovators Scholarship.</p>	<p>Indonesia</p>
<p>Net Zero Producers Forum</p> <p>www.energy.gov/articles/joint-statement-establishing-net-zero-producers-forum-between-energy-ministries-canada</p>	<p>The Forum develops pragmatic net-zero emission strategies, including methane abatement, advancing the circular carbon economy approach, development and deployment of clean-energy and carbon capture and storage technologies, diversification from reliance on hydrocarbon revenues, and other measures in line with each country's national circumstances.</p>	<p>Canada, Saudi Arabia, USA</p>
<p>Pacific Islands Managed and Protected Area Community (PIMPAC)</p> <p>www.pimpac.org</p>	<p>PIMPAC is a long-term capacity-sharing program and social network of site-based managers, non-governmental organisations, local communities, federal, state, and territorial agencies, and other stakeholders working together to collectively enhance the effective use and management of managed and protected areas in the Pacific Islands.</p>	
<p>Coral Reef Triangle on Coral Reefs, Fisheries and Food Security (CTI-CFF)</p> <p>www.coraltriangleinitiative.org</p>	<p>CTI-CFF is a multilateral partnership of six countries working together to sustain extraordinary marine and coastal resources by addressing crucial issues such as food security, climate change and marine biodiversity.</p>	<p>Indonesia</p>
<p>Ocean and Climate Initiatives Alliance (OCIA)</p> <p>https://ocean-climate-alliance.org</p>	<p>Supported by IOC-UNESCO, France and other 'Because The Ocean' signatories, the OCIA federates multi-stakeholder and international initiatives. OCIA believes that uniting ocean actions is key to delivering a coherent and holistic ocean and climate agenda to turn the tide on the ocean's decline. The core objectives of the Alliance include:</p> <ul style="list-style-type: none"> ● Identifying synergies between international initiatives and acting as a catalyst for progress, ● Ensuring that civil society's voice is heard in the international fora (UNFCCC, Global Climate Action Agenda, SDG14), ● Reducing knowledge gaps on ocean and climate and providing a platform to stimulate scientific awareness. 	<p>Japan</p>

<p>Global Ocean Ecosystem Dynamics project (GLOBEC)</p> <p>www.igbp.net/news/features/features/systemdynamicsglobec.5.1b8ae20512db-692f2a680005121.html</p>	<p>The GLOBEC project is a core project of the International Geosphere-Biosphere Programme (IGBP), the Scientific Committee on Oceanic Research (SCOR), and IOC-UNESCO. The goal of GLOBEC has been to advance understanding of the structure and function of the global ocean ecosystem, its major subsystems, and its responses to physical forcing so as to develop a capability to forecast the responses of marine ecosystems to global change.</p>	<p>Japan</p>
<p>Integrated Marine Biosphere Research (IMBeR)</p> <p>https://imber.info</p>	<p>IMBeR is a large global research project which focuses on ocean sustainability in the context of global change. IMBeR aims to understand past, present, and future changes to the ocean. In particular, it aims to produce knowledge on how a sustainable ocean for the benefit of society can be achieved. IMBeR supports collaborative, disciplinary, interdisciplinary, transdisciplinary, and integrated research that addresses key ocean science issues generated by and/or impacting society.</p>	<p>Japan</p>
<p>Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR)</p> <p>www.ccamlr.org/en/organisation/home-page</p>	<p>CCAMLR was established by an international convention in 1982 with the objective of conserving Antarctic marine life. This was in response to increasing commercial interest in Antarctic krill resources, a keystone component of the Antarctic ecosystem, and a history of over-exploitation of several other marine resources in the Southern Ocean.</p>	<p>China, France, Germany, India, Italy, Japan, ROK, South Africa, UK, USA</p>
<p>Marine Strategy Framework Directive (MSFD)</p> <p>https://ec.europa.eu/info/research-and-innovation/research-area/environment/oceans-and-seas/eu-marine-strategy-framework-directive_en</p>	<p>The MSFD was put in place to protect the marine ecosystem and biodiversity upon which our health and marine-related economic and social activities depend. To help EU countries achieve a good environmental status (GES), the directive sets out 11 illustrative qualitative descriptors. The joint communication on international ocean governance¹⁸ proposes concrete measures at the international level, for example to address environmental, fisheries, and climate issues.</p>	<p>EU, France, Germany, Italy, Türkiye</p>
<p>International Partnership on Marine Protected Areas, Biodiversity and Climate Change</p> <p>www.mpabioclimate.org</p>	<p>The International Partnership on MPAs, Biodiversity and Climate Change is an alliance of government agencies and organisations from across the world, working together to progress the evidence base around the role of MPAs and biodiversity in tackling climate change. The Partnership's vision is for global decision makers to implement MPA networks as nature-based solutions for biodiversity conservation and climate change mitigation, adaptation, and resilience.</p>	<p>France, UK, USA</p>
<p>Wealth Accounting and the Valuation of Ecosystem Services (WAVES)</p> <p>www.wavespartnership.org</p>	<p>WAVES is a World Bank-led global partnership that aims to promote sustainable development by ensuring that natural resources are mainstreamed in development planning and national economic accounts. WAVES is now part of the broader World Bank umbrella initiative, the Global Program for Sustainability (GPS).</p>	<p>Indonesia</p>

¹⁸ https://www.eesc.europa.eu/sites/default/files/resources/docs/join-2016-49_en.pdf

Table 11 Ocean science resource mobilization and funding mechanisms

Funding mechanism	Summary
<p>Horizon Europe (EU Horizon 2020)</p> <p>https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-2020_en</p>	<p>Horizon 2020 was the EU’s research and innovation funding programme from 2014-2020 with a budget of nearly €80 billion. Horizon Europe is the EU’s key funding programme for research and innovation, with a budget of €95.5 billion. It tackles climate change, helps to achieve the SDGs and boosts the EU’s competitiveness and growth. The programme facilitates collaboration and strengthens the impact of research and innovation in developing, supporting and implementing EU policies while tackling global challenges. It supports the creation and better dispersion of excellent knowledge and technologies.</p> <p>EU Mission: Restore our Ocean and Waters</p> <p>As one of its objectives, the Mission will contribute to make the blue economy climate-neutral and circular with net-zero maritime emissions.</p> <p>https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/funding-programmes-and-open-calls/horizon-europe/eu-missions-horizon-europe/healthy-oceans-seas-coastal-and-inland-waters_en</p>
<p>Belmont Forum</p> <p>https://www.belmontforum.org</p>	<p>The Belmont Forum is an international partnership that mobilizes funding for environmental change research and accelerates its delivery to remove critical barriers to sustainability.</p>
<p>Joint Programming Initiative Healthy and Productive Seas and Oceans (JPI Oceans)</p> <p>https://www.jpi-oceans.eu/en</p>	<p>JPI Oceans is a pan-European intergovernmental platform that increases the efficiency and impact of research and innovation for sustainably healthy and productive seas and oceans.</p> <p>Ocean Sustainability Hub</p> <p>The new Belmont Forum Ocean Sustainability Hub provides an opportunity for awardees from the Transdisciplinary Research for Ocean Sustainability CRA’s 13 funded projects to highlight their findings and showcase publications, presentations, images, and other outputs.</p> <p>https://www.belmontforum.org/connect/oceans2018</p>

<p>Western Indian Ocean Marine Science Association (WIOMSA)</p> <p>https://www.wiomsa.org</p>	<p>WIOMSA was established as a regional, non-profit, membership organization in 1993 and registered in Zanzibar, Tanzania in 1994 as a non-governmental organization. The organization is dedicated to promoting the educational, scientific, and technological development of all aspects of marine sciences throughout the Western Indian Ocean (WIO) region, with a view toward sustaining the use and conservation of its marine resources. WIOMSA has a particular interest in linking the knowledge that emerges from research to the management and governance issues that affect marine and coastal ecosystems in the region.</p>
<p>Global Environment Facility (GEF)</p> <p>https://www.thegef.org</p>	<p>The GEF was established on the eve of the 1992 Rio Earth Summit to help tackle our planet's most pressing environmental problems.</p> <p>The search returned 37 ocean-related projects.</p>
<p>Global Fund for Coral Reef (GFCR)</p> <p>https://globalfundcoralreefs.org</p>	<p>The GFCR is creating a new paradigm for protection of an ecosystem on the brink of extinction with a myriad of implications, while enhancing the resilience of coral reef countries and communities. Through blended finance and innovative public-private partnerships, the Fund is catalysing a sustainable financial ecosystem for the conservation and development of coral reefs.</p>
<p>Asia-Pacific Network for Global Change Research (APN)</p> <p>https://www.apn-gcr.org</p>	<p>APN is an intergovernmental network of 22 countries working towards an Asia-Pacific region that is successfully addressing the challenges of global change and sustainability.</p> <p>Theme on air, land, coasts and oceans</p> <p>Interactions among the land, air, coasts, and oceans, whether caused by natural or human factors at different timescales, have profound implications for global environmental change and for sustainability.</p> <p>https://www.apn-gcr.org/themes/air-land-coasts-and-oceans/</p>
<p>Pacific Alliance</p> <p>https://alianzapacifico.net/en/what-is-the-pacific-alliance/</p>	<p>The Pacific Alliance is an initiative of regional integration comprised of Chile, Colombia, Mexico, and Peru, officially established in 2011. Its objectives are:</p> <ul style="list-style-type: none"> ● Build in a participatory and consensual way an area of deep integration to move progressively towards the free mobility of goods, services, resources and people. ● Drive further growth, development, and competitiveness of the economies of its members, with a focus on improving well-being, overcoming socioeconomic inequality and promote the social inclusion of its inhabitants.

<p>Pacific Alliance</p> <p>https://alianzapacifico.net/en/what-is-the-pacific-alliance/</p>	<ul style="list-style-type: none"> ● Develop into a platform for political articulation, economic and commercial integration, and projection to the world, with a focus on the Asia-Pacific region.
<p>Australia-India Indo-Pacific Oceans Initiative Partnership (AIPOIP)</p> <p>https://india.highcommission.gov.au/ndli/AIPOIP1.html</p>	<p>AIPOIP helps shape maritime cooperation in the Indo-Pacific to support an open, inclusive, resilient, prosperous, and rules-based maritime order.</p>
<p>UK Blue Planet Fund</p> <p>https://www.gov.uk/government/publications/blue-planet-fund/blue-planet-fund</p>	<p>The UK's £500 million Blue Planet Fund supports developing countries to protect the marine environment and reduce poverty.</p>
<p>World Bank Blue Economy Program</p> <p>https://www.worldbank.org/en/programs/problue/overview</p>	<p>PROBLUE is a new Multi-Donor Trust Fund, housed at the World Bank, that supports the development of integrated, sustainable and healthy marine and coastal resources. With the Blue Economy Action Plan as its foundation, PROBLUE contributes to the implementation of SDG 14 and is fully aligned with the World Bank's twin goals of ending extreme poverty and increasing the income and welfare of the poor in a sustainable way.</p>
<p>UNEP Regional Seas Programme</p> <p>https://www.unep.org/explore-topics/oceans-seas/what-we-do/regional-seas-programme</p>	<p>UNEP, particularly through its Regional Seas Programme, acts to protect the oceans and seas and promote the sustainable use of marine resources. The Regional Seas Conventions and Action Plans are the world's only legal framework for protecting the oceans and seas at the regional level.</p>
<p>United Nations Decade of Ocean Science for Sustainable Development (2021-2030)</p> <p>https://en.unesco.org/ocean-decade</p>	<p>The United Nations has proclaimed a Decade of Ocean Science for Sustainable Development (2021-2030) to support efforts to reverse the cycle of decline in ocean health and gather ocean stakeholders worldwide behind a common framework that will ensure ocean science can fully support countries in creating improved conditions for sustainable development of the Ocean, through resource mobilization, forging new partnerships, and awareness raising.</p>
<p>UN Decade on Ecosystem Restoration</p> <p>https://www.decadeonrestoration.org</p>	<p>The UN Decade on Ecosystem Restoration is a rallying call for the protection and revival of ecosystems all around the world, for the benefit of people and nature. It aims to halt the degradation of ecosystems and restore them to achieve global goals. Only with healthy ecosystems can we enhance people's livelihoods, counteract climate change, and stop the collapse of biodiversity.</p>

4. Ocean science informing climate policy frameworks

Scientific developments are produced by a variety of stakeholders, including scientific institutions, the private sector, academia, and civil society organizations. One of the challenges is to ensure that ocean science is translated into effective policymaking by informing climate policy frameworks. This includes promoting relevant dialogue platforms, elevating the importance of the ocean in the Paris Agreement, and engaging all stakeholders in the policymaking process. The Ocean Decade can be used as a framework to generate the transformative science needed to inform these processes.

4.1. Using Ocean Science to Inform Climate Policy Frameworks

G20 members, under the leadership of Indonesia, have the opportunity to promote and further strengthen the application of ocean science to inform climate policy in the G20 and globally through the UN Ocean Decade and associated ocean-climate Decade Actions.

Science-policy interfaces are defined as social processes that encompass relations between scientists and other actors in the policy process, and which allow for exchanges, co-evolution, and joint construction of knowledge with the aim of enriching decision-making (van den Hove, 2007).

A dynamic science-policy interface is an important instrument to support well-informed decision-making while also engaging the right actors (UNEP, 2018). Science-policy interfaces are needed due to the increasing complexity of environmental challenges and the need for better coordination and collaboration between multiple stakeholders with divergent viewpoints and priorities. UNEP (2018) identified three key elements for an effective science-policy interface: a) Motivated and capable individuals, able to utilize and exchange evidence and expertise to influence decision outcomes; b) Availability of the appropriate data and expertise; and c) Productive exchange of this evidence between individuals in the pathways. Without such mechanisms, the efficacy of policies and/or the viability of their implementation is greatly reduced.

A good practice example of a mechanism aimed at creating an effective science-policy interface is the Ocean Panel, of which eight G20 countries (Australia, Canada, France, Indonesia, Japan, Mexico, United Kingdom and the United States of America) are members. The Ocean Panel works with government, business, financial institutions, the science community, and civil society to catalyze and scale bold, pragmatic solutions across policy, governance, technology, and finance to ultimately develop an action agenda for transitioning to a sustainable ocean economy. It is the only ocean policy body made up of serving world leaders with the authority needed to trigger, amplify, and accelerate action worldwide for ocean priorities. The Ocean Panel Expert Group includes over 250 ocean science experts from 48 countries and an advisory network consisting of over 135 participants across 35 countries representing the private sector, non-governmental organizations, and intergovernmental organizations.

The 2030 Agenda is another example in which science-to-policy processes are applied. For instance, to meet the SDG14 targets, members are required to establish a percentage of MPAs. However, in order for these MPAs to be effective, their exact location must be determined by considering the biodiversity and impacts on local communities. In this identification process, the government must consult with scientists, local communities, universities, and local organizations to ensure that this selection is underpinned by a scientific process, not arbitrarily or for other economic reasons, or convenience.

Box 14 The Ocean & Climate Platform

The Ocean & Climate Platform (OCP) was created on June 8, 2014, on the occasion of World Ocean Day, with the support of IOC-UNESCO and an informal group from civil society. Since 2014, the OCP has been working to bridge the gap between scientific knowledge and policy making. The key objective is to ensure that the scientific messages on the interactions between the ocean, climate and biodiversity are acknowledged and taken into account by both policy-makers and the general public. Its work is organised around three main objectives: outreach and mobilization, scientific knowledge dissemination, advocacy and international mobilisation.

For more information visit: <https://ocean-climate.org/en/home-2>

Box 15 The Because the Ocean Initiative

The Because the Ocean Initiative was launched by 23 countries at COP 21 in Paris in 2015. These countries all signed the first Because the Ocean Declaration¹⁹, which supported a then just proposed Special Report on the Ocean by the IPCC and the convening of a high-level UN Ocean conference in support of the implementation of SDG 14 and promoted an Ocean Action Plan within the UNFCCC.

A second Because the Ocean Declaration²⁰ was launched during COP 22 in 2016 in Marrakech. In the declaration, the 33 signatory countries “encourage UNFCCC Parties to consider submitting Nationally Determined Contributions (NDCs) that promote, as appropriate, ambitious climate action in order to minimize the adverse effects of climate change in the ocean and to contribute to its protection and conservation.”

The Because the Ocean Initiative has encouraged progress on the incorporation of the ocean into the climate change policy debate, with a special focus on the inclusion of ocean action into NDCs under the Paris Agreement, and more widely into climate strategies. Following extensive consultations, a guidance document, Ocean for Climate: Ocean-Related Measures in Climate Strategies (Because the Ocean Initiative, 2019) was published following the release of the IPCC SROCC.

For more information visit: <https://www.becausetheocean.org>

¹⁹ <https://www.becausetheocean.org/first-because-the-ocean-declaration/>

²⁰ <https://www.becausetheocean.org/second-because-the-ocean-declaration/>

Box 16 Global Ocean Accounts Partnership

The Global Ocean Accounts Partnership (GOAP) is a global, multistakeholder partnership established to enable countries and other stakeholders to go beyond GDP to measure and manage progress towards ocean sustainable development. Co-chaired by ESCAP and Fisheries and Oceans Canada, GOAP brings together governments, international organisations and research institutions to build a global community of practice for ocean accounting. The GOAP Secretariat is currently hosted by the University of New South Wales and partnership activities are funded by the World Bank Blue Economy Program, the UK Blue Planet Fund, Australia's Oceans Leadership and the Australia-India Indo-Pacific Oceans Initiative Partnership. GOAP's objectives are to:

Build a global community of practice for ocean accounting to ensure the diverse values of the ocean are recognized in all decision-making about social and economic development.

Achieve a globally recognized and standardized ocean accounting guidance by 2023.

Support at least 30 countries by 2030 to build complete sequences of national ocean accounts.

Facilitate the development, maintenance, and global uptake of ocean accounts in decision making, development planning, policies, laws, and other ocean governance processes.

GOAP is an Action Group of the Ocean Panel. It ensures its objectives accelerate, scale, and implement the Ocean Panel's commitments, as well as SDG 14, SDG 15.9 (valuing nature in decision-making), SDG 17.19 (measurement of progress complementing GDP), and other relevant international agendas to measure and manage progress towards ocean sustainable development. GOAP assists in sourcing financial or in-kind support for the development and implementation of ocean accounting initiatives. GOAP catalyzes and connects ocean account experts to establish a global Expert Panel and Technical Working Groups and to create knowledge products to advance the development and global uptake of ocean accounting. It also provides a communication and collaboration platform for its members to engage in mutual capacity building and share knowledge on ocean accounting.

For more information visit: <https://www.oceanaccounts.org>

Box 17 Guidelines for Blue Carbon and Nationally Determined Contributions

The Blue Carbon and Nationally Determined Contributions: Guidelines on Enhanced Action outlines how countries can incorporate blue carbon in their Nationally Determined Contributions.

These guidelines were developed by the Blue Carbon Initiative, International Partnership for Blue Carbon, Conservation International, International Union for the Conservation of Nature (IUCN), IOC-UNESCO, NDC Partnership, Silvestrum Climate Associates, The Nature Conservancy, and The Pew Charitable Trusts with the generous support of Erol Foundation, Flora Family Foundation, and Oceano Azul.

Blue carbon ecosystems – mangroves, seagrass and tidal marshes - can contribute to countries' commitments to achieving the goals of the Paris Climate Agreement. Some 151 countries around the world contain at least one coastal blue carbon ecosystem, and 71 countries contain all three, making blue carbon a broadly applicable approach for addressing climate change.

The guidelines support countries seeking to promote and preserve the climate benefits of blue carbon ecosystems by providing technical guidance on the multiple avenues for including these ecosystems within updated nationally determined contributions (NDCs) to the Paris Climate Agreement. Given the multiple justifications for including coastal blue carbon in NDCs and the varying levels of relevant national capacity, this guidance describes a range of options. The document recommends a “tiered approach”, similar to that employed by IPCC guidance, to demonstrate how a variety of motivations and starting points represent viable pathways for the inclusion of coastal blue carbon ecosystems in NDCs.

For more information visit: <https://www.thebluecarboninitiative.org/policy-guidance>

Box 18 Argentina’s Pampa Azul policy

Argentina’s Pampa Azul is a policy to coordinate public sector resources to conduct scientific research on South Atlantic ecosystems. It is a strategic and multidisciplinary initiative of Argentina, which brings together the authorities of seven ministries with the national scientific community and other relevant actors and is aimed at promoting scientific knowledge, and promoting technological innovations that contribute to the strengthening of industries linked to the sea and the economic development of the Argentine maritime regions, among other objectives. Pampa Azul also seeks to strengthen and increase international cooperation on marine scientific research and innovation, with a view to generating up-to-date scientific information that is relevant to expand the global understanding of oceans and their sustainability. Although the main focus of attention is the South Atlantic, Pampa Azul initiative is intended to promote research with a global and regional perspective as well. Thus, the goals and challenges related to the UN Decade of Ocean Science for Sustainable Development (2021-2030), within the framework of the 2030 Agenda, are considered.

For more information visit: <https://cancilleria.gob.ar/en/pampa-azul-initiative-was-relaunched>

Box 19 Australia’s Ocean Leadership

Australia is delivering a \$100 million leadership program to protect the ocean. The initiative is aimed at managing ocean habitats and coastal environments to build resilience to climate change and help adapt natural, social and built systems. The program includes protecting marine life, supporting Australian Marine Parks and expanding Indigenous Protected Areas into Sea Country.

A key component is targeting ‘blue carbon’ ecosystems that involve seagrass, tidal marshes and mangroves playing a key role in drawing carbon out of the atmosphere. This will improve the health of coastal environments in Australia and the region and export Australia’s internationally recognized expertise in ocean accounting, while boosting regional employment and enabling Australia to account for the value of these habitats to climate, biodiversity and people.

For more information see: <https://www.dcceew.gov.au/climate-change/policy/ocean-sustainability>

4.2. Promoting Ocean Climate Change Dialogue Platforms

Providing platforms for multidisciplinary international science and policy dialogues is an important element of promoting ocean-based solutions for climate change mitigation, adaptation, and resilience. The Ocean Decade's global and regional conferences and various other international and regional science conferences provide opportunities for bringing together scientists and stakeholders from all relevant sectors to generate the scientific knowledge and to develop the partnerships needed for informing policies to support a well-functioning, productive, resilient, and sustainable ocean (Pendleton et al., 2019; Pendleton et al., 2020). Lubchenco and Gaines (2019) argue that a new narrative can help frame our thinking and action on the ocean by replicating, accelerating, and escalating existing successes while driving innovative and transformative changes.

- The ***Ocean and Climate Change Dialogue***²¹, hosted under the auspices of the SBSTA, focuses on the critical role of the ocean in the climate system and the need for ocean science to inform climate policies. An analysis of the submissions and discussions of the Ocean and Climate Dialogue at COP 25 in 2020 conducted by Dobush et al. (2022) highlights the need for a continued transdisciplinary international dialogue on the ocean and climate change which elevates the ocean-climate-biodiversity nexus via collaborative science, finance, and policy. The first ***Ocean Climate Change Dialogue***²² held in Bonn in June 2022, highlighted the vital importance of the ocean to livelihoods and biodiversity as a fundamental component of the climate system, while highlighting the need for greater ocean-related climate action. The 2022 dialogue discussed a range of ocean-based solutions, from renewable energy, to fisheries, to protecting biodiversity, and how to enable these solutions. It also presented some of the critical linkages and considerations for ocean-based climate action, including the sequestration capacity of blue carbon ecosystems and the knowledge of coastal indigenous communities.
- The ***UN World Ocean Day*** on June 8²³ raises awareness of the benefits humankind derives from the ocean and our individual and collective duty to use its resources sustainably.
- The ***Asia-Pacific Day for the Ocean*** hosted by ESCAP offers an opportunity to review technological developments and new scientific innovations. The Fourth Asia-Pacific Day for the Ocean took place on October 27, 2021 and focused on the 'ocean-climate nexus: blue carbon' as one of four themes. This year, on November 29, 2022, the fifth edition of the event could serve as a platform to discuss follow up of the G20 outcomes in Asia-Pacific.

21 <https://unfccc.int/topics/ocean/ocean-and-climate-change-dialogue>

22 <https://unfccc.int/news/bonn-dialogue-urges-ocean-based-climate-action>

23 <https://unworldoceansday.org/about/>

- The UNFCCC **Regional Climate Weeks**²⁴ (RCWs) are virtual events that bring together participants for discussions on advancing climate action. According to the website, the RCWs 2021 emerged as a platform for regional stakeholders to have their voices heard and contributed to the success at COP26. The Virtual Thematic Sessions took the pulse of climate action in each region, explored climate challenges and opportunities, and showcased ambitious solutions.
- The **Asia-Pacific Forum on Sustainable Development**²⁵ (APFSD) is an annual and inclusive intergovernmental forum and a regional platform for supporting countries, in particular those with special needs, in the implementation of the 2030 Agenda while serving as a regional preparatory meeting to the high-level political forum. The Forum provides a regional perspective on the implementation of the 2030 Agenda by identifying regional trends and consolidating and sharing best practices and lessons learned. The theme of the 9th APFSD in March 2022 was “Building back better from COVID-19 while advancing the full implementation of the 2030 Agenda in Asia and the Pacific”. The Forum included an in-depth review of SDG 14, which will be reviewed by the High-Level Political Forum on Sustainable Development (HLPF) in 2022, amongst others.
- The 2022 **UN Ocean Conference**²⁶ held in Lisbon, Portugal, in June 2022, was the second global conference dedicated to SDG 14 and the first featuring the Ocean Decade. Its theme is ‘Scaling up Ocean Action Based on Science and Innovation for the Implementation of Goal 14: Stocktaking, Partnerships, and Solutions’. The Conference focused on science, technology, and innovation, and is thus a crucial opportunity to further elevate the role of ocean science in not only finding solutions to climate change, but also enhancing and preserving the biodiversity of the ocean, sustainably feeding the population, ending poverty and inequality, and stimulating a thriving and sustainable ocean economy (IOC-UNESCO, 2022a).

Box 20 Future Seas 2030

Future Seas is a unique collaboration, spearheaded by the Centre for Marine Socioecology, of over 100 researchers from the University of Tasmania (UTAS), the Commonwealth Scientific and Industrial Research Organisation (CSIRO) and other institutions. Within UTAS, members come from the Colleges of Arts, Law, and Education, Health and Medicine, and Sciences & Engineering (specifically the Institute for Marine and Antarctic Studies and the School of Technology, Environments, and Design). The collaboration includes psychologists, public health and education experts, philosophers, ecologists, oceanographers, climate modelers, economists, social scientists, engineers, information and communications technology researchers, and social scientists, as well as governance, law, and policy experts. The Future Seas 2030 initiative is listed as a voluntary commitment for the 2022 UN Oceans Conference.

For more information visit: <https://futureseas2030.org>, ADDIN ZOTERO_ITEM CSL_CITATION

²⁴ <https://unfccc.int/climate-action/regional-climate-weeks>

²⁵ <https://www.unescap.org/events/apfsd9>

²⁶ <https://www.un.org/en/conferences/ocean2022>

4.3. Strengthening Cooperation on Using Ocean Science to Inform Climate Policy

Recent efforts in the Ocean and Climate Dialogue and other related activities have focused on breaking down the existing silos between ocean and climate change science and policy. A critical element in the process of enhancing convergence between these two science and policy areas is a focus on ecosystem-based approaches. Cooperation on the use of ocean science to inform climate policy must consider the best decisions for ecosystem health and integrity, regardless of national jurisdictions. The G20 should embrace this approach, as protecting coastal and marine ecosystems will contribute to achieving the SDGs and ultimately benefit all G20 members. Focusing on ecosystems necessarily requires taking a systems approach and will help to strengthen transboundary cooperation as coastal and marine ecosystems are regionally and globally connected. Because of this interconnectedness of ecosystems, G20 members should facilitate cooperative and concrete actions that support strong stewardship and good governance of the ocean.

In general terms, the cooperation and collaboration among scientists and between scientists and policymakers aimed at enhancing the science-policy interface on ocean-based solutions for climate change mitigation, adaptation, and resilience can be strengthened using a number of strategies (IOC-UNESCO, 2017c; IOC-UNESCO, 2021b; Pendleton et al., 2019):

- Communication, dialogue, trust and regular exchanges between different science communities (e.g. natural, social, economy, human health, legal), governments and their agencies, other users of the marine environment and its resources, and the public help to consolidate ocean science communities.
- International conferences provide opportunities to enhance dialogue and to share knowledge and expertise across a wide range of research, disciplines, institutions and sectors.
- Large international interdisciplinary research teams, joint research funding, and co-authorship of scientific papers foster collaboration between scientists from different countries, disciplines, and sectors. Such partnerships are recognized as a key strategy for more effective resource use and increased participation in ocean science, thus reinforcing its application in policy.
- Transdisciplinary and integrating oceanographic research and systematic assessments can improve the delivery of science and technological results and data, with knowledge that is applicable for achieving sustainable development and supporting related adaptive management.
- International, regional, and international cooperation promote partnerships, improve research capacities, and optimize research infrastructure and human potential.
- Cooperative networks are able to align disciplines that traditionally did not work together (e.g. atmospheric and oceanic chemistry with biology, ecology, and biogeochemistry), leading to an improved integrative understanding of the earth's system, including past and potential future changes.

- Evidence-based policy and decision-making can be supported by aligning science priorities with national commitments towards the sustainable development agenda.
- Financial and in-kind support facilitate international board memberships, exchange programs, advisory positions in national and regional bodies, as well as guest researcher positions in the academic sector.
- Ocean data standards and guidelines, the removal of barriers for open access to ocean data, and the coordination and integration of the collection, management, analysis, and sharing of interdisciplinary data networks allow scientists and planners to create the strategies and scenarios needed to achieve development goals.
- Support women and young scientists through strengthened and directed capacity building, linked to technology transfer, including new technologies, sustained observations with related training through research, and collaboration between different postgraduate programs around the world.
- Incorporate both Indigenous traditional ecological knowledge and ocean observing and scientific research into policy and decision-making processes.
- Support the collective efforts to raise the collective level of ambition and resolve to realize the international legally binding instrument under the United Nations Convention on the Law of Sea on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ), by joining the coalition of world leaders and governments gathered in Brest, France on the occasion of the One Ocean Summit.

Box 21 Transformative Ocean Science

TRANSFORMATIVE OCEAN SCIENCE

The notion of transformation is central to the Ocean Decade. The Decade, both in terms of action and outcomes, needs to move beyond business as usual to a true revolution in ocean science. In the context of the Decade, we need transformative ocean science that:

- ▶ uses the 2030 Agenda as a central framework to identify and address the questions that are most important to society;
- ▶ is co-designed and co-delivered in a multi-stakeholder environment and that involves the generators of knowledge and the users of knowledge;
- ▶ is solutions-focused;
- ▶ where needed, is big, audacious, forward-looking and spans geographies;
- ▶ reaches across disciplines and actively integrates natural and social science disciplines, as well as the arts and humanities;
- ▶ embraces local and indigenous knowledge holders;
- ▶ is transformative because of who is doing it or where it is being done, including in both less developed and developed countries;
- ▶ strives for generational, gender and geographic diversity in all its manifestations;
- ▶ is communicated in forms that are widely understood across society and that trigger behaviour change; and
- ▶ is shared openly and available for re-use.

Source: (IOC-UNESCO, 2021a).

5. Opportunities for G20 cooperation and policymaking

The analysis of survey responses and case studies submitted by G20 members, complemented by a review of relevant documents, identified a number of opportunities for research cooperation and policymaking in ocean science. Figure 9 provides a summary of the recommendations and proposed actions to strengthen the G20 leadership in ocean science to support ocean-based solutions to climate change and their links with the gaps identified in Section 2.6.

These gaps will need to be addressed so as to more effectively understand the role of the ocean in the climate system and the potential solutions that coastal and marine ecosystems can provide in achieving climate change and sustainable development goals. The recommendations and proposed actions we have identified for the G20 members to consider directly address the most important gaps and underappreciation of ocean-based solutions, a lack of ocean and climate data that underpins climate change mitigation and adaptation planning and implementation, a lack of scientific and technical capacity, a lack of adequate financing of ocean science, and a lack of effective ocean governance, monitoring, and reporting.

Figure 9 shows how implementing the three recommendations and proposed activities can address the range of complex and interacting gaps we currently see. Under Indonesia's leadership of the G20 in 2022, the consideration and adoption of these recommendations and proposed actions will create opportunities for aligning strategies and enhancing technology and scientific cooperation, as well as optimizing resources (financial and in-kind), mobilizing resources, and identifying priorities for investment. G20 members may leverage existing UN specialized agencies and networks, such as those of the IOC-UNESCO and the GOAP. Furthermore, the analysis presented in this report may help individual G20 members to identify areas for the allocation of resources and capacity development.

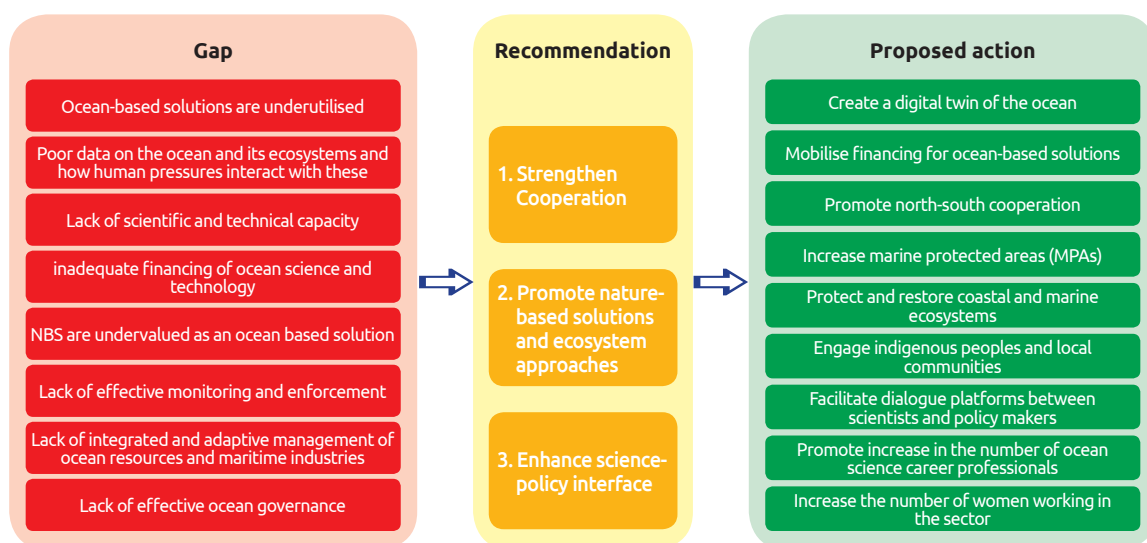


Figure 9 Gaps, Recommendations and Proposed Ocean Actions for G20 Members

5.1. Strengthening Cooperation in Ocean-based Climate Action

The first recommendation is to raise ambition and to strengthen cooperation on ocean science and technology amongst G20 members. Cooperation can be strengthened through the following proposed activities:

1. Facilitate activities that can support the achievement of a digital twin of the ocean. This can include bilateral, trilateral, and multilateral cooperation between national statistics agencies and ocean observation agencies.
2. Mobilize financing for cooperation in ocean science and technology.
3. Promote technology transfer and capacity development activities.
4. Strengthen cooperation on ocean science and technology to promote international and multilateral cooperation. This will leverage existing projects and use a twinning approach while understanding and applying common but differentiated responsibilities (CBDR).
5. The UN Ocean Decade provides a unique opportunity to bring together G20 members to collectively advance their ocean science initiatives and observation capabilities that can lead to ocean action. There are already numerous endorsed programs which address some of these critical gaps and have representation of institutions from across G20 members. The Ocean Decade can serve as a framework for the implementation of these recommendations. As of July 2022, 16 of the 20 Member States (Australia, Brazil, Canada, Chile, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Russian Federation, Türkiye, the United Kingdom, and the United States) have either established or are in the process of creating National Decade Committees, in addition to 11 EU Member States. Other G20 members are encouraged to form national committees to allow for strengthened coordination among G20 member activities throughout the Ocean Decade.

Box 22 The Ocean Decade

The Ocean Decade as a Convening Framework

Proclaimed in 2017 by the UNGA, the Ocean Decade is a framework to identify, generate, and use critical ocean knowledge that is needed to manage the ocean sustainably and achieve global aspirations for climate, biodiversity, and human well-being (IOC-UNESCO, 2017c; IOC-UNESCO, 2022).

Through its vision of ‘The science we need for the ocean we want’, the Ocean Decade provides an inclusive, equitable, and global framework for diverse actors to co-design and co-deliver transformative ocean science to meet ten Ocean Decade Challenges. Through a collaborative, solutions-oriented approach, the Ocean Decade will contribute essential knowledge to global, regional, and national policy frameworks, including the 2030 Agenda and the SDGs (IOC-UNESCO, 2022b). The Ocean Decade brings together stakeholders from diverse sectors to address these Challenges by generating co-designed and co-produced knowledge, establishing partnerships in networking and experience sharing, mobilisation of financial and in-kind support, and awareness-raising.

The Global Stakeholder Forum, an interactive online platform that is central to the Ocean Decade website, enables people from around the world to actively engage with the Ocean Decade community and submit their Decade Actions. The Global Stakeholder Forum provides dedicated virtual collaboration space for National Decade Committees, public groups addressing cross-cutting themes, and regional and thematic Communities of Practice.

Understanding the ocean-climate nexus and unlocking ocean-based solutions to climate change is critical to achieving the overall vision of the Ocean Decade. Accordingly, three new Decade Collaborative Centres (DCC), which are regional or thematic decentralised coordination structures, were officially endorsed at the UN Ocean Conference in Lisbon. All three are hosted by G20 member countries. The Ocean Visions – UN Decade Collaborative Centre for Ocean Climate Solutions, hosted by Ocean Visions Inc., Georgia Tech, and the Georgia Aquarium (located in the USA), will focus on supporting co-designed solutions and innovation to address climate change and unlock new sources of funding. The DCC for the Ocean-Climate Nexus, hosted by the First Institute of Oceanography of the Ministry of Natural Resources in China, will focus on identifying and filling data and knowledge gaps in the ocean-climate relationship, evaluating and screening for the most effective model testbed schemes, coordinating relevant stakeholders nationally and globally, capacity building, and exchanging results, best practices, and data products. The third DCC for Coastal Resilience in a Changing Climate, hosted by the University of Bologna in Italy, will support interdisciplinary coordination to build the resilience of coastal communities through co-designed approaches with diverse stakeholders and through contributions to coastal climate change adaptation plans.

5.2. Promoting the Integration of Adaptation and Mitigation to Climate Change

The second recommendation is to promote the integration of adaptation and mitigation for climate change. To achieve this, this study proposes the following activities:

1. Invest in research and technology for blue carbon storage and blue carbon accounting to help protect marine ecosystems and to achieve the goal of climate change mitigation.
2. Protect and restore coastal ecosystems such as mangroves, coral reefs, seagrass, and salt marshes to enhance the health and integrity of these ecosystems and to increase their effectiveness in climate change mitigation and adaptation, and in building resilience to climate change and natural hazard impacts.

5.3. Enhancing the Science-Policy Interface

Recommendation 3 to the G20 members is to enhance the science-policy interface for ocean-based solutions to address climate change. In order to achieve this goal, the study proposes the following activities:

1. Facilitate the dialogue between scientists and policymakers to support the design and implementation of evidence-based policies.
2. Promote an increase in the number of ocean scientists professionals, strengthening gender equality in ocean science. According to UNESCO's 'Global Ocean Science Report' of 2020, the number of female ocean researchers averaged 39% globally. However, in the Asia-Pacific region, women are still, by and large, underrepresented in ocean science professions, averaging only about 30%.

Delegations are encouraged to continue the discussions on ocean and climate interlinkages in future G20 sessions. This can be achieved by keeping the ocean as one of the priority areas for the following terms, subject to the discretion of the incumbent presidency. Consequently, this would provide an opportunity to monitor the adoption and implementation of these recommendations, with ad hoc technical assistance to G20 members.

Finally, in the implementation of these recommendations, the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP) and the Intergovernmental Oceanographic Commission (IOC) of UNESCO stand ready to assist G20 members and provide further technical assistance on the issues discussed in this study.

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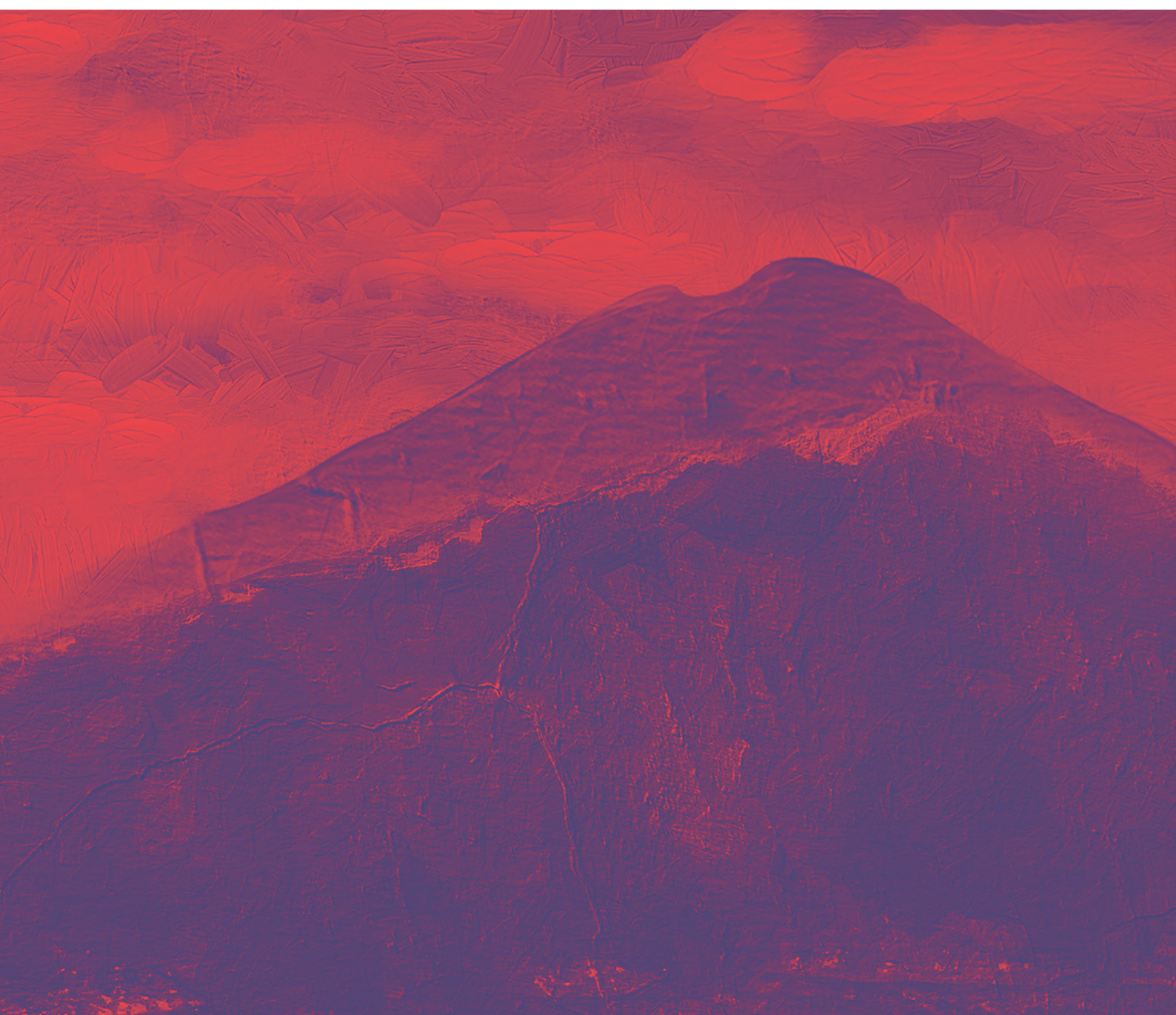
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CLIMATE SUSTAINABILITY WORKING GROUP (CSWG) G20 2022

INNOVATIVE FINANCE TOWARDS LOW GREEN HOUSE GAS (GHG) EMISSION AND CLIMATE RESILIENCE FUTURE

Final Report





STUDY 3.1

INNOVATIVE FINANCE TOWARDS LOW GREEN HOUSE GAS (GHG) EMISSION AND CLIMATE RESILIENCE FUTURE

Indonesia, September 2022

Recover Together, Recover Stronger

Authors :



unicef 
for every child

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Acknowledgments

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¹ The paper was written by Dr. Christoph Nedopil



Executive Summary

To put the world on track with the objectives of the Paris Agreement and the 2030 Agenda and truly achieve this transition, the world needs a systemic transformation of finance involving all public and private stakeholders in government, business, and society with no easy silver bullet of a single finance instrument.

G20 members representing over 85% of the world's GDP, around two thirds of its population and responsible for about 75% of greenhouse gas emissions, have a key role to play in addressing these challenges holistically and provide direction for leaders, regulators, business executives, investors, non-governmental organizations, and all societies.

Finance from both public and private sources needs to be mobilized and shifted from unsustainable to green activities. The G20 members need to scale up climate-friendly finance and investments, reduce counterproductive subsidies, create barriers for non-aligned investments through broader key policy actions, and benefit by accelerating technology solutions and industrial development programs of green energy, food systems, social infrastructure, sustainable trade and resilient infrastructure, etc. Scaling up investments in sustainable activities will yield and boost productivity and generate powerful co-benefits such as protecting ecosystems and biodiversity in both the short and long runs.

Therefore, advancing enablers and solutions of climate finance that leverage all kinds of existing and innovative finance instruments and mechanisms is critical to financing green and sustainable transition. Finance will have to be invested smartly, with focused rigor in terms of the climate benefits whilst also maximizing socio-economic co-benefits to achieve a just transition addressing particularly vulnerable groups.

The study is developed for the G20 Climate Sustainability Working Group (CSWG) and addresses actions within the areas of innovative climate finance that drive smart policy-finance interaction for mitigation and adaptation finance, as well as sustainable development more broadly to include social aspects.

The study recognizes previous G20 and ongoing work on climate and green finance and is informed by discussions within related working groups e.g., Sustainable Finance Working Group (SFWG), Development Working Group (DWG), and other studies within CSWG e.g., Study 3.2 on carbon economic value and adds distinct content. This study further benefited from consultation meetings and responses to a questionnaire sent from G20 members².

2 The study received survey response from Indonesia, Japan, Mexico, Russia, Saudi Arab, UK, and USA.

	SFWG	DWG	CSWG Study on Carbon Economic Value	CSWG Study on Climate finance
Target audience	<ul style="list-style-type: none"> Financial regulators 	<ul style="list-style-type: none"> Development 	<ul style="list-style-type: none"> Environmental ministries, market regulators 	<ul style="list-style-type: none"> Environmental/ climate ministries
Key content	<ul style="list-style-type: none"> Transition finance Improving credibility of financial institutions Scaling of sustainable finance instruments 	<ul style="list-style-type: none"> Development finance instruments 	<ul style="list-style-type: none"> Emission Trading Scheme, carbon tax pricing, voluntary carbon markets 	<ul style="list-style-type: none"> Public -private finance nexus Policy-finance nexus, e.g., for harmonized standards Climate-nature nexus Development and social aspects

The findings of this study to drive smart climate policy-finance interaction with a focus on ministries responsible for climate and environment under the premise to race to the top and leave no one behind while recognizing local differences are as follows:

- Improving interoperability of various standards for private and public finance can help reduce transaction cost, ensure positive impact, reduce greenwashing, and build trust for green finance by:
 - Developing a “traffic light classification system” that includes a red finance taxonomy to complete existing green finance taxonomies. This would be applied for public and private finance and includes definitions of counterproductive and hard-to-abate economic activities across sectors that need to be phased out as quickly as possible;
 - Developing legal standards on environmental thresholds and performance indicators (i.e., technical screening criteria) that are enforced to minimize environmental risks;
 - Developing standards for measuring, verifying and reporting (MRV) data on environmental performance of investment and spending for better comparison to provide better comparability and reduce green-washing;
 - Utilizing green technologies and making environmental data publicly and easily available to improve transparency and trust in green finance and to facilitate informed climate finance decision making;
 - Improving the foundation for global markets and relevant asset classes to accelerate carbon-negative and nature/climate-positive investments, for example through the accelerated establishment of global carbon offset markets, ecosystem solutions, and common understanding of the fair application of carbon border adjustment mechanisms. This can include the use of proceeds from such mechanisms to support the transition in least developed countries.

- Private sector can be mobilized through new and existing climate finance mechanisms by:
 - Allocation of public finance to support sustainable and green development goals while avoiding significant harm to any SDG, e.g., fiscal spending, subsidies, state-owned enterprises (SOEs), public funds, and state-owned financial institutions. This will also provide investment incentives for private sector;
 - Supporting SOEs and sovereign issuers to scale up green financial instruments (e.g., green bonds, green sukuk), that in turn supports local green capital markets, particularly in developing countries;
 - Implementing ambitious, holistic and tailored green policy targets and supporting regulation (e.g., climate laws, phase-out of coal, deployment of renewables, sector transition plans, and climate adaptation) to provide clear and reliable policy directions and reduce risks of unclear targets for financial sector engagement;
 - Crowding in private capital for higher risk green projects through accelerated utilization of global infrastructure development facilities (e.g., GIF, MCDF) and other applicable climate finance instruments (e.g., green public funds, blended finance, guarantee facilities, public-private partnerships/PPP) that support de-risking of finance;
 - Supporting scientific based analysis and advocacy to enable facilities and regulatory and financial measures for accelerated phase-out of unsustainable assets and rapid scaling of pilots;
- Development and social transition aspects can be better integrated in climate finance by:
 - Ensuring a globally just transition through responsibilities of different economies that particularly supports children and vulnerable groups through mitigation and adaptation financing and capacity building;
 - Enhancing analysis of environment assets and evidence-based approaches to reduce COVID-19 related debt impacts particularly in developing countries including through smart and green sovereign debt collaboration (e.g., debt-for-SDG, debt-for-nature, debt-for-climate, sustainability-linked debt swaps).
 - Providing further climate finance support (e.g., USD100 billion commitment) and technical capacity for developing countries' green transition and capital mobilization (e.g., green capital market development, green facilities) for both mitigation and adaptation measures.

The report first gives an introduction on the transition journey ahead for climate finance in G20 members. It then provides a background on the current stage of climate finance, current ambitions of G20 members for smart policy-finance interaction. The recommendations build on the analysis and provide practices on how to improve policy-finance action to shift finance from polluting to green, to mobilize both public and private finance, and to improve climate finance in developing countries.

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List of Abbreviations

Abbreviation	Name
ACT	Accelerating Coal Transition
ADB	Asian Development Bank
ASEAN	Association of Southeast Asian Nations
BRIGC	Belt and Road Initiative International Green Development Coalition
CBAM	Carbon Border Adjustment Mechanism
CBD	Convention on Biological Diversity
CBDC	Central Bank Digital Currencies
CBI	Climate Bonds Initiative
CCUS	Carbon Capture, Utilisation and Storage
CDP	Carbon Disclosure Project
CfD	Contracts for Difference
CGT	Common Ground Taxonomy
CIF	Climate Investment Funds
COP	Conference of the Parties
CSRD	Corporate Sustainability Reporting Directive
CSWG	Climate Sustainability Working Group
DAC	Development Assistance Committee
DFID	Department for International Development
DFIs	Development Finance Institutions
DNS	Debt-for-Nature Swaps
DSSI	Debt Service Suspension Initiative
DWG	Development Working Group
ESG	Environmental, Social, and Governance
ESI	Energy Savings Insurance
ETM	Energy Transition Mechanism
ETS	Emission Trading System
EU	European Union
FAs	Financial Advisors
FAST	Finance to Accelerate the Sustainable Transition
FF	Foundation Framework

FMPs	Financial Market Participants
FSA	Financial Services Agency
G20	Group of Twenty
GCCF	Governance of Climate Change Finance
GCF	Green Climate Fund
GEF	Global Environmental Facility
GFANZ	Glasgow Financial Alliance for Net-Zero
GFIT	Green Finance Industry Taskforce
GHG	Green House Gas
GIF	Global Infrastructure Facility
GIIN	Global Impact Investing Network
GRI	Global Reporting Initiative
HKMA	Hong Kong Monetary Authority
IBPES	Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services
ICMA	International Capital Market Association
IDB	Inter-American Development Bank
IDFC	International Development Finance Club
IFC	International Finance Corporation
IMF	International Monetary Fund
INFFs	Integrated National Finance Frameworks
IPCC	Intergovernmental Panel on Climate Change
ISSB	International Sustainability Standards Board
ITMOs	Internationally Transferable Mitigation Outcomes
JSE	Johannesburg Stock Exchange
LAC	Latin America and the Caribbean
LLPs	Limited Liability Partnerships
MAS	Monetary Authority of Singapore
MCDF	Multilateral Cooperation Center for Development Finance
MDBs	Multilateral Development Banks
MFF	Multiannual Financial Framework
MRV	Measuring, Validating and Reporting
NDCs	Nationally determined contributions
NFRD	Non-Financial Reporting Directive
NGEU	Next-Generation-EU



NGFS	Network for Greening the Financial System
ODA	Overseas Development Assistance
OECD	Organization for Economic Co-operation and Development
OJK	Financial Services Authority
PPP	Public-Private Partnerships
PRB	Principles for Responsible Banking
PRI	Principles of Responsible Investment
PSI	Principles for Sustainable Insurance
SASB	Sustainability Accounting Standards Board
SBFN	Sustainable Banking and Finance Network
SBN	Sustainable Banking Network
SDG	Sustainable Development Goals
SDRs	Special Drawing Rights
SEC	Securities and Exchange Commission
SFDR	Sustainable Finance Disclosure Regulation
SFWG	Sustainable Finance Working Group
SGX	Singapore Exchange
SI	Sustainable Infrastructure
SMEs	Small and Medium Enterprises
SOEs	State-owned Enterprises
TCFD	Task Force on Climate-Related Financial Disclosures
TNFD	Taskforce on Nature-related Financial Disclosures
UK	United Kingdom
UN	United Nations
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNEP FI	United Nations Environment Programme Finance Initiative
UNFCCC	United Nations Framework Convention on Climate Change
UNICEF	United Nations Children's Fund
US	United States
VCM	Voluntary carbon markets

1. Introduction

Major crises, from COVID-19 to conflicts and fragilities, have set back the achievement of sustainable development goals, and even worse, risk undermining sustainable development trajectories: policy makers need to tackle the urgent crises and provide economic and social resilience. This must not come at the expense of long-term climate and biodiversity crises. According to Save the Children ² a child born in 2020 will be exposed to twice as many wildfires, 2.8 times as many crop failures, 2.6 times as many drought events, 2.8 times as many river floods, and 6.8 times more heatwaves over their lifetime than a person born in 1960. In addition, limiting global warming to 1.5°C above pre-industrial levels reduces the risk of additional lifetime exposure to heatwaves by 45 percent, drought by 39 percent, river floods by 38 percent, crop failures by 28 percent, and wildfires by 10 percent for children born in 2020.

To put the world on track with the objectives of the Paris Agreement and the 2030 Agenda, G20 members representing over 85% of the world's GDP, around two thirds of its population and responsible for about 75% of greenhouse gas emissions ¹, have a key role to play. They can address these challenges holistically and provide a sustainable direction for leaders, regulators, business executives, investors, non-governmental organizations and all societies. It is critical that governments accelerate their commitments to the Paris Agreement's next five-year cycle to limit global warming. They also can provide inclusive climate financing as well as social protection and support for vulnerable groups and their communities such as child and/or gender responsive financing, so that they can adapt to and recover from climate shocks more effectively.

More G20 members are working on developing and implementing core climate policies and much more needs to be done to reduce greenhouse gas (GHG) emissions (see Figure 1). By scaling up climate friendly finance and investments, reducing counterproductive subsidies, creating barriers for non-aligned investments through smart key policy actions, G20 members can accelerate technology solutions and industrial development programs of green energy, food systems, sustainable infrastructure, and trade.

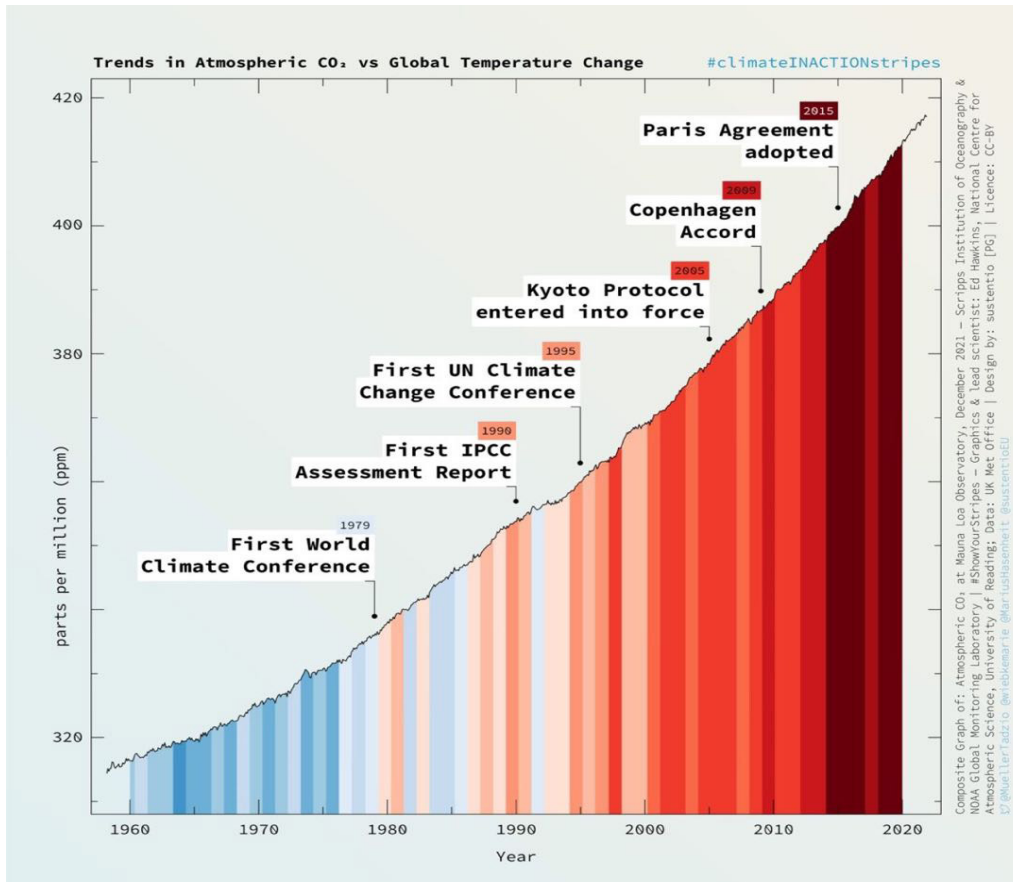


Figure 1: Trends in Atmospheric CO₂ concentration and political agreements (Source: Sustenio³)

Investments in low-carbon technologies, ecosystem solutions, and sustainable and resilient infrastructure can spur green growth and economic recovery, address inequalities, and accelerate the transformation towards climate-resilient economies. In contrast, a continuation of current policy with public and private financial flows supporting non-aligned economic activities, is **akin to pouring oil onto the fires of climate change**.

In the Article 2.1c, Parties commit to “making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.” Now is the time to deliver on this commitment by converging post-COVID economic recovery programs with the transition to a low carbon climate-resilient global economy. By aligning all components of innovative finance, all kinds of funding opportunities can be seized – bilateral, multilateral climate funds, multilateral development banks (MDBs), other development finance institutions (DFIs), as well as domestic finance. By fully aligning public finance with sustainable development goals, much larger volumes of private investment can be mobilized.

2. Climate Finance Landscape Background

Addressing climate change and building a sustainable future for now and the world’s future generations requires smart, tailored, and urgent policy action to drive an unprecedented global transformation of infrastructure, ecosystem resilience, food system and industrial development. The basis for this transformation is a massive shift of investments in technologies for low-carbon energy development, environmental and ecology protection, sustainable production and consumption, risk-informed and resilient infrastructure development.

2.1 Climate finance flows and gaps

Global climate finance ⁴ flows of US\$632 billion were recorded in 2019-2020 (which doubled from US\$365 billion in 2013-2014) – with equal contributions from the public and private sectors (see Figure 2).

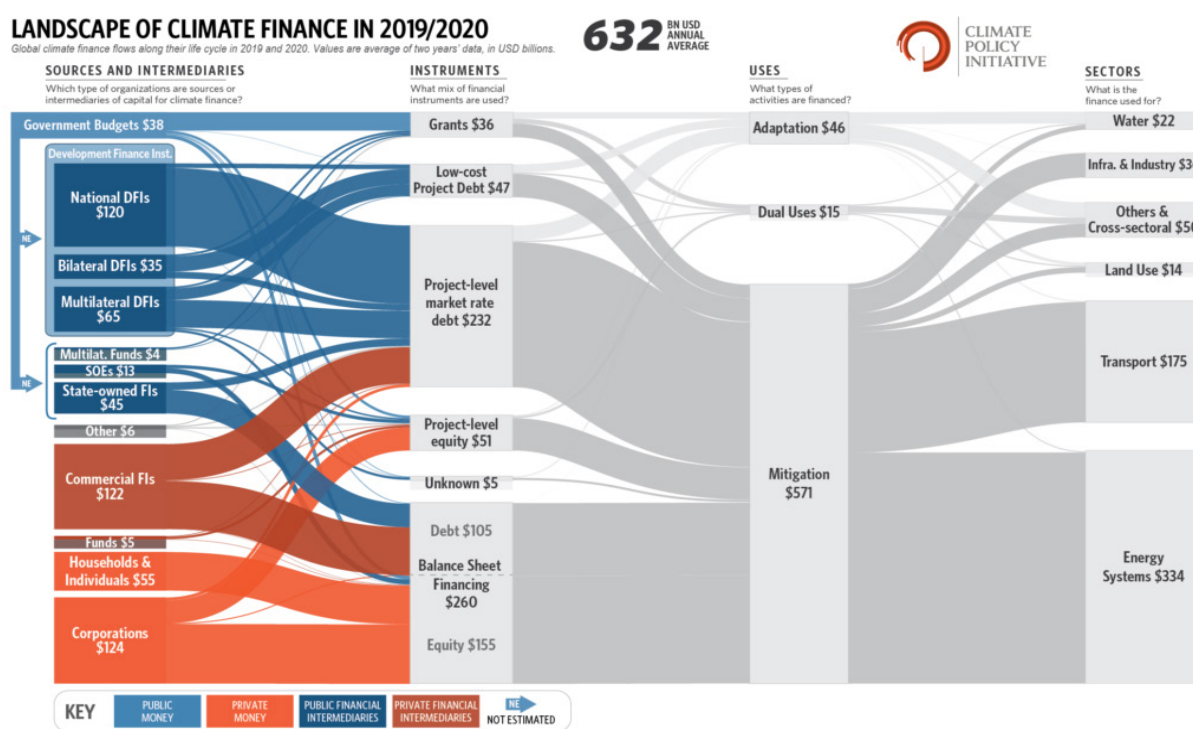


Figure 2: Landscape of Climate Finance in 2019-2020 (Source: Climate Policy Initiative ⁴, 2021)

Almost half of global climate finance in 2019-2020 was spent in East Asia & Pacific (US\$292 billion), followed by Western Europe (US\$105 billion) and US & Canada (US\$83 billion). Latin America, South Asia, Middle East and African countries together accounted for about US\$100 billion in climate finance (see Figure 3).

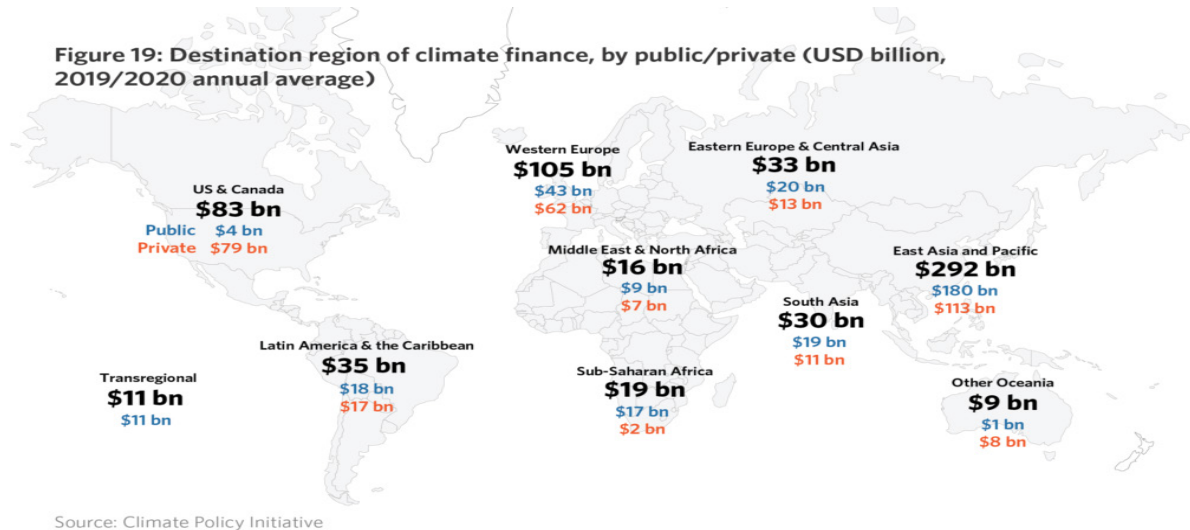


Figure 3: Destination region of climate finance, by public/private (US\$ billion, 2019/2020 annual average) (Source: Climate Policy Initiative)

For climate protection alone, Climate Policy Initiative (2021)⁴ estimates a global climate finance gap of US\$3.6 to \$4.1 trillion annually. McKinsey (2022)⁵ estimates that investment needs to increase by US\$3.5 trillion yearly to US\$9.2 trillion to achieve net zero transition goals.

Finance for adaptation falls short. The Paris Agreement lays out a goal to balance finance between adaptation and mitigation. International community has called for 50% of the total share of climate finance to be spent on adaptation projects that help people adapt to climate change, especially for developing nations. Adaptation currently only receives 21% of all international climate finance – only \$16.8 billion in 2018, compared to an estimated need of \$70 billion annually and upwards of \$140-300 billion dollars by 2030 and \$280-500 billion by 2050 (see Figure 4).

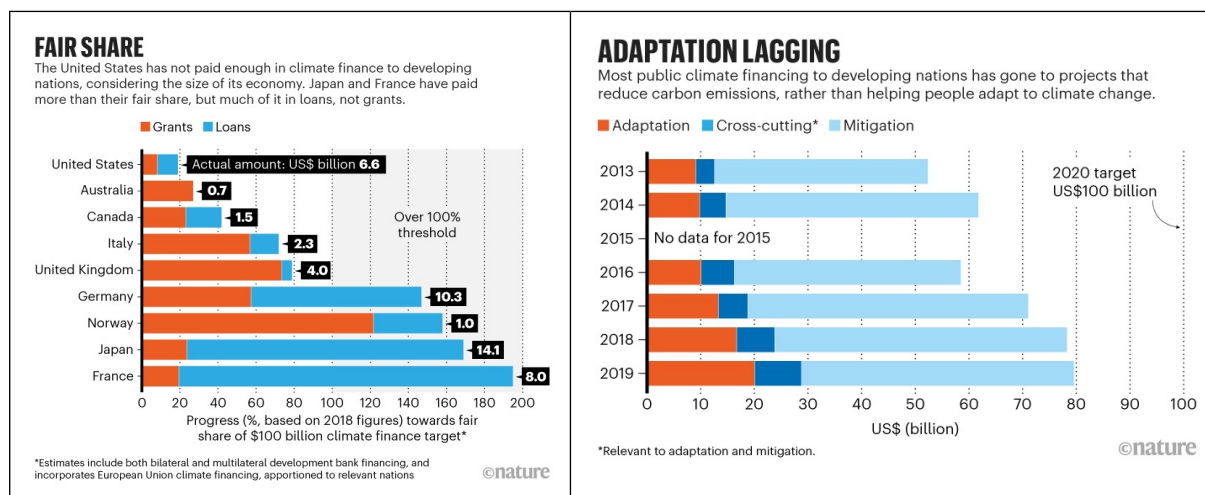


Figure 4: Climate finance source to developing nations (Source: Timperley, 2021⁸)

Within the G20 members in their 2021 Leaders Statement, the UNFCC and IPBES, as well as during COP26 in Glasgow, global recognition of the need to integrate biodiversity and climate considerations has been accelerating. Both aspects should ideally be tackled together to generate co-benefits (e.g., through ecosystem solutions, nature-climate solutions), utilize green financing more efficiently, and avoid further harm to either through insufficient integration. Taking this integration into consideration, biodiversity finance can promote climate protection, yet global biodiversity finance⁶ flows in 2019 amounted to only US\$143 billion compared to US\$536 billion financing need for ecosystem solutions⁷, according to UNEP (2021). Similarly, the 2020 Financing Nature report⁶ estimates a biodiversity financing gap of US\$598 to US\$824 billion per year.

2.2 Counterproductive public and private finance

The lack of finance stands for climate action and environmental protection is exacerbated by continued public and private finance flowing into unsustainable sectors.

Public finance contributes to climate change through state-owned enterprises, state-owned financial institutions, and public spending. While the G20 has committed to phasing out inefficient and counterproductive fossil fuel subsidies in 2009⁹, global governments spent US\$5.9 trillion (or 6.8% of GDP) on fossil fuel subsidies in 2020 according to a 2022 IMF study, and fossil fuel subsidies were expected to rise, according to a 2021 OECD study¹⁰. Similarly, with the agricultural sector being the second most important contributor to greenhouse gas emissions (when including land use change) it is also important to note that among the Aichi Target 3 of phasing out incentives including subsidies harming biodiversity by 2020 was only met by 25 out of 196 nations while about 90% of subsidies¹¹ given to farmers tend to damage nature and fuel the climate crisis according to a 2021 UN report.

In addition, **SOEs are among the world's largest corporate emitters of greenhouse gases**, often due to a focus on traditional energy and transport assets: according to a 2022 joint Oxford and Columbia University study ¹², SOEs in the power, industry and transport sectors alone emit at least an aggregate of 6.2 gigatons of CO₂e annually (Scope 1), making them cumulatively larger emitters than any other single country except China. Similarly, CDP estimates ¹³ that the largest global SOEs are responsible for 42% of global greenhouse gas emissions.

On the private side, the **world's 60 biggest banks have provided US\$3.8 trillion ¹⁴ of financing for fossil fuel companies** between 2015 and 2020 with US\$751 billion alone in 2020. By October 2021, Bloomberg ¹⁵ reported US\$459 billion fossil finance organized by the largest banks in the first 9 months of 2021.

At the same time, improving **green capital markets based on regulatory guidance, supervision strategies, and voluntary banking sector approaches** have significantly expanded green finance instrument issuance¹⁶ (e.g., loans, bonds) in many developed and some emerging G20 members¹⁷. Yet, green finance only constitutes less than 10% of the market, even in the EU ¹⁸, while many developing economies' (green) capital markets ¹⁹ are in need for further regulatory support, capacity and development to attract more issuances and investors.

2.3 The cost and risk of failing in climate action

2.3.1 Social and economic risk of climate change

A low level of addressing climate change risks up to 25% of global GDP by 2100, according to the NGFS (2020) ²⁰. Particularly, less developed countries would experience a higher relative economic loss relevant for people's livelihoods, according to the IMF (2021) ²¹ and the number of affected nations, according to S&P Global (2022) ²². This risks exacerbating global inequalities and driving 68 to 135 million people into poverty by 2030, according to the World Bank (2020) ²³. The climate crisis also affects children's rights, who risk being locked into poverty without strong adaptation policy, particularly in countries that are risk of natural disasters, according to UNICEF (2021) ²⁴ (see Figure 5). Extreme climate crises increase social inequality because women and girls are more likely to live in poverty (70% of total global poor population) ²⁵, depend more on access to natural resources and bear a disproportionate responsibility for securing food, and fuel yet have less access to essential services, and face systematic violence that escalates during periods of instability.

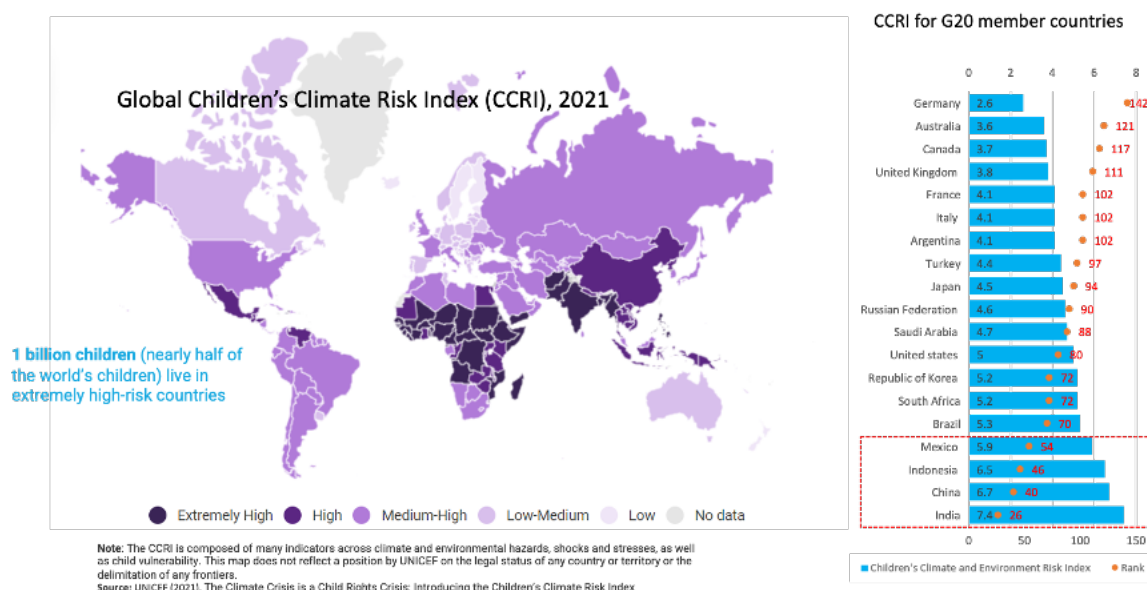


Figure 5: Impacts of climate change on children - Global Children's Climate Risk Index (UNICEF ²⁴)

Urgent action is advised with costs rising exponentially the later action is taken: The cost of climate change mitigation and adaptation tends to rise exponentially the later climate change is mitigated: the UN estimates annual adaptation costs ²⁶ in developing countries at US\$70 billion should decisive actions be taken in 2021; this figure is expected to reach US\$140-300 billion for decisive actions delayed to 2030 and US\$280-500 billion in 2050.

Contrary, by investing in climate change mitigation and adaptation net-gains of 15 million jobs could be achieved by 2050, according to a 2022 McKinsey ⁵ study. It would require re-training and possibly re-location of workforce to development, production, and operation site of new industries.

2.3.2 Climate-biodiversity nexus

A particular opportunity and necessity to address the climate crisis is to tackle it together with the biodiversity crisis, according to a 2021 statement by IBPES and IPCC ²⁷. Climate change and biodiversity loss are mutually linked, with climate change leading to biodiversity loss and biodiversity loss leading to climate change. Increasing net-zero and nature-positive investments to address the biodiversity and climate challenges has been reflected in the Global Biodiversity Framework's Target 19 ²⁸ of the UN Biodiversity Conference (COP15) ²⁹, the Glasgow Climate Pact ³⁰ of the UN Climate Change Conference (COP26).

Some climate-positive actions for mitigation and adaptation might exacerbate biodiversity loss (e.g., grey infrastructure, some technological solutions, and single-crop carbon offsets), which further exacerbates social and economic risks (e.g., loss of ecosystem services such as water, pollination, soil quality).

Attention is necessary, as some **supposed biodiversity investments harm both biodiversity and climate** (e.g., planting trees in ecosystems that have not historically been forests, or reforestation with monocultures). Accordingly, investment in carbon- and species-rich ecosystems on land and in the ocean (e.g., forests, wetlands, peatlands, grasslands, mangroves), increase of sustainable agriculture and forestry practices (e.g., diversification of plants), and protection of existing ecosystems are areas that best combine climate-, nature-, and social benefits.

2.4 Responsibilities for development and social considerations

Achieving the sustainable transition requires action from all countries. To reduce carbon emissions, particularly developed countries and countries with growing absolute emissions need to accelerate finance for the low-carbon and green transformation.

Least developed countries and developing countries need to utilize received financial support in achieving the physical and social transformation to adapt to climate change, while protecting and restoring natural resources and ecosystem services. The pledge of providing US\$100 billion per year from developed to developing countries in climate finance needs to be upheld and efficiently used to accelerate the reduction of greenhouse gas emissions based on the NDCs.

Last but not least, a solution to financing the global climate crisis cannot work without addressing the debt crisis for many low-income countries, where sovereign debt levels reached US\$860 billion in 2020 ³¹.

3. Experiences in G20 members to catalyze and promote climate finance

Regulators, law makers, financial associations, and private organizations in G20 members and beyond have proposed, developed, and applied policies, systems, and instrument to accelerate finance for the green transition, that can serve as a role model for accelerating climate and green finance application.

These ongoing practices are highly context specific and often cannot be easily compared or standardized. The ambition is therefore to ensure relevant impact, while it is important to harmonize where possible to ensure comparability, cross-border facilitation, and capital flows.

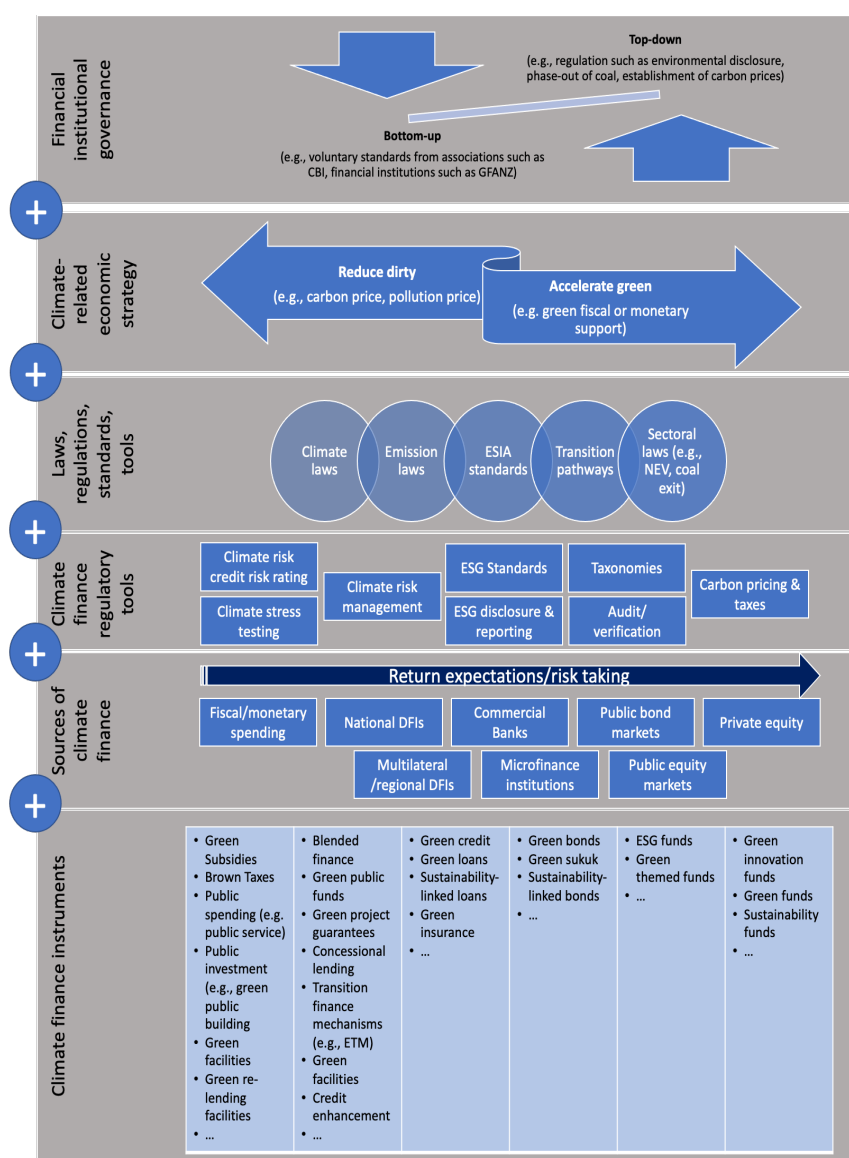


Figure 6: Green financial frameworks (Source: Author)

Key elements of a structured climate finance system are supposed to include (see Figure 6):

- Climate finance governance – top-down (e.g., China); bottom-up systems (e.g., through voluntary standards), and mixed-systems (e.g., EU);
- Dual goal of emission reduction and scaling of green opportunities;
- Climate related laws and regulations impacting climate finance (e.g., climate laws);
- Climate-finance related regulatory tools, e.g.,
 - central bank and financial regulatory measures;
 - common definitions of real economy activities that need to be financed (e.g., through green finance and sustainable finance taxonomies);
 - climate risk evaluation and management (e.g., TCFD, TNFD), and disclosure standards to provide transparency in reporting and avoiding greenwashing (e.g., the EU’s Non-Financial Reporting Directive on corporate sustainability disclosure);
 - carbon pricing.
- Climate finance sources (e.g., public, private, development finance);
- Climate finance instruments (e.g., green bond, green credit, green sukuk, green fund);
- Integration of green financial system.

3.1 Climate finance governance

The policy environment of climate finance of the G20 members are organized depending on different institutional settings and development phases, which determine the power of the various players and the levers to influence development paths of climate finance. Broadly, they can be distinguished between top-down systems driven by governments (e.g., China), cooperative systems (e.g., EU) or bottom-up systems driven by market-players (e.g., United States).

A top-down governance system of green finance in China is rooted in its underlying political economy model labelled as ‘Grand Steerage’ of the economy³². For green finance, the state takes an active role in providing guidance, regulations, and financial backing through various line ministries. This allows for rapid growth of the green financial system with support from state-owned enterprises and state-owned financial institutions: after the establishment of the Green Financial System in 2015, China became one of the largest green bond markets with SOEs accounting for 42% of the green bond issuances volume. While China’s green financial volume is among the largest in the world, its different regulators are responsible for various aspects of the green financial system with gradual integration of the different instruments and rules.

The EU’s multi-layered green financial system (see Figure 7) is a hybrid model. The system is based on multilateral framework (e.g., Paris Agreement), EU frameworks (e.g., EU Taxonomy, Fit-for-55), EU regulations (e.g., Sustainable Finance Disclosure Regulation, EU Taxonomy), national ambitions of EU member states and financial markets, as well as voluntary approaches of financial institutions and other stakeholders (e.g., Glasgow Financial Alliance for Net-Zero, GFANZ) or independent commitments by financial institutions.

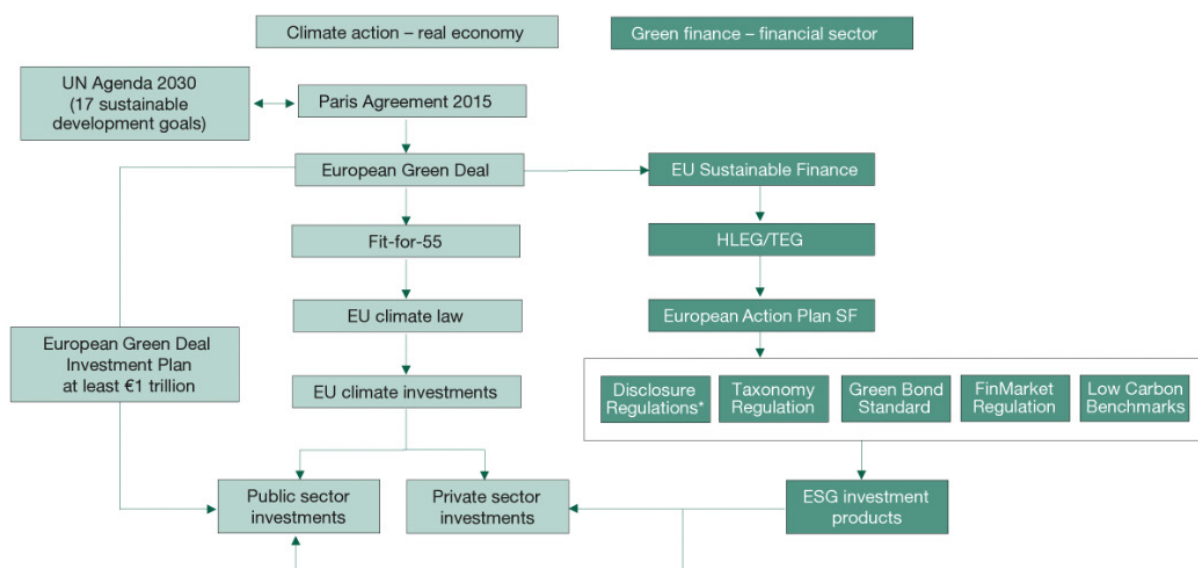


Figure 7: The EU's Sustainable Finance Strategy (Source: Intereconomics³³)

The bottom-up system, meanwhile, is driven by industry associations, individual organizations, and initiatives. These aim to drive ambitions, share capacity and knowledge, as well as to provide transparency and accountability among its members and possibly to the public. These initiatives are often supported by multilateral or international organizations, including private organizations (see Appendix 4 for selected initiatives). For example, At COP26 in 2021, the Glasgow Financial Alliance for Net Zero (GFANZ) established a global network for different types of financial institutions to commit and share climate ambitions publicly, and to provide knowledge to its members.

3.2 Climate laws

The climate finance architectures and/or approaches in G20 members are to different extent geared toward the dual ambition of reducing harmful activities (e.g., through carbon pricing and climate laws) and accelerating green activities (e.g., through growth of green finance and relevant fiscal/monetary support measures). A basis for all green financial systems is the overwriting climate ambitions of the country that determines investor's appetites and financial and technological innovation. The G20 members have mostly increased their climate ambition, but their climate targets are not sufficient to meet the Paris goals with multiple G20 members having non-binding and non-climate neutral targets beyond 2050 (see Figure 8).

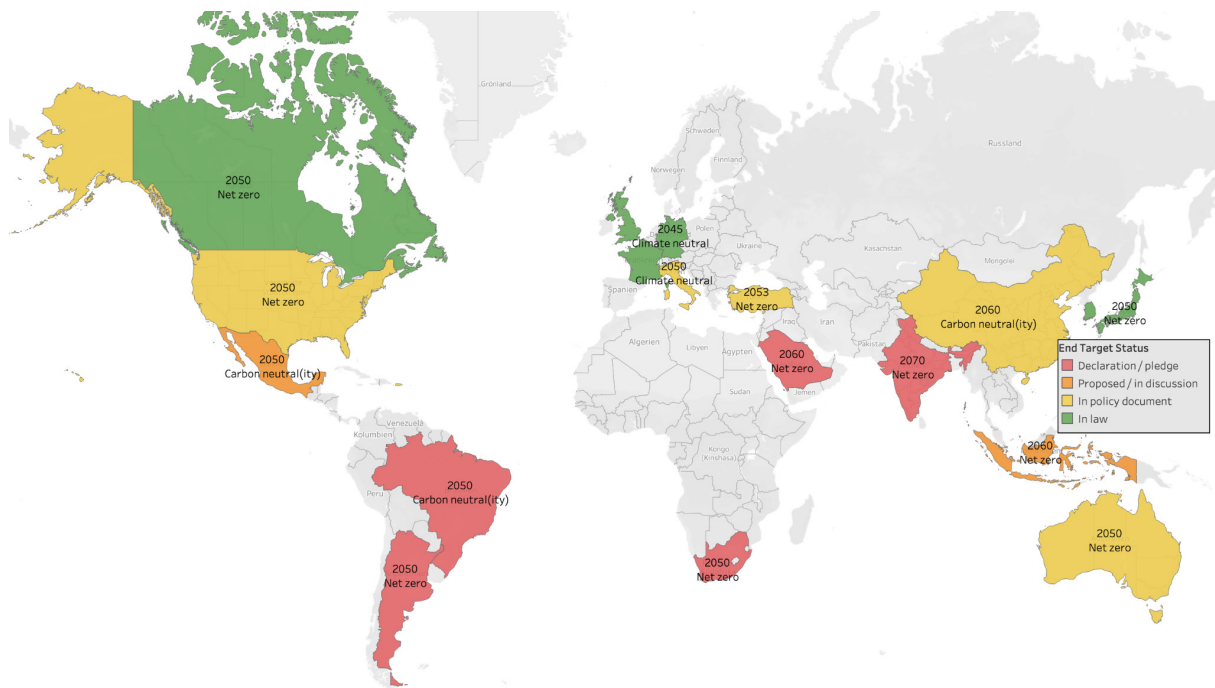


Figure 8: Climate targets in G20 (EU has 2050 climate-neutral target in law but was not included in the graph) (Data: Net Zero Tracker, Graphic: author)

A number of G20 members have also issued specific laws to accelerate either the phase-out of specific polluting sectors (e.g., Germany’s coal exit law), or to accelerate the use of greener technologies (e.g., EU’s energy plan, China’s national renewable energy targets).

3.3 Climate-finance regulatory tools

3.3.1 Definitions of green finance through taxonomies

Many G20 members and other global economies have developed green finance taxonomies as part of their green finance systems as a standard to define green economic activities (see Figure 7 and **Appendix 1**). Taxonomies and standards provide shared definitions for investors and policy makers, and reduce transaction cost³⁴ for investors aiming to invest in endorsed assets. Particularly market-driven standards allow for cross-border finance. Taxonomies have been issued by national and supra-national (e.g., EU) governments, as well as private institutions, such as the Climate Bonds Initiative (CBI), ASEAN Green Bond Standard, ICMA Green Bond Principles.



Figure 7: Global green Taxonomies (Source: Climate Bonds Initiative, 2022³⁵)

To further allow for cross-border finance, efforts to harmonize green taxonomies are ongoing. Progress has been made through the IPFS under the leadership of the EU and China in 2022 through the Common Ground Taxonomy³⁶ and as well as through the G20 SFWG. Nevertheless, harmonization continues to be challenging³⁷ due to different development status of countries, different approaches to green finance in terms of the financial system and definitions of green activities.

Apart from providing “green standards”, a new, and promising, approach to shift finance is to define **counterproductive economic activities**. Amongst others, Indonesia³⁸, Singapore and China for its overseas investments³⁹, have issued such “red” taxonomies as part of “traffic light systems”. In these taxonomies, fossil fuel finance, for example, would be labelled red as a signal for investors and policy makers to restrict financing. With challenges on agreeing particularly on transition taxonomies, agreeing on economic activities that need rapid phase-out can be a viable pathway.

An important aspect of applying green taxonomies are **external reviews**. Currently, private sector solutions dominate the green external review market offering different approaches, such as second-party opinions, third-party certifications, ratings for environmental, social and governance performance (ESG rating), assurance, and audit, etc.

As concerns have arisen regarding the reliability and comparability of green labels, countries have started to put in place, or have upgraded, regulatory frameworks to guide private external review activities (EU, China). China’s Green Bond Assessment and Verification Guidelines⁴⁰ provide an example how a central bank can support qualification of external institutions’ assessments and certifications of green bonds.

3.3.2 Selected risk management, reporting and disclosure standards

Various G20 members and others have introduced standards to improve non-financial disclosure on the national, market and sector level (see **Appendix 3 for an overview**) - also referred to as “ESG” disclosure. These standards aim to provide more transparency on environmental impacts and environmental risk exposure to financial and commercial actors and thus provide both incentives for improving environmental performance and reducing environmental risks, as well as transparency for informed financial decision-making.

In G20 members, these standards are driven by various entities, such as governments (e.g., EU Sustainable Finance Disclosure Regulation), markets (e.g., Shenzhen Stock exchange), member organizations with support from multilateral institutions (e.g., Global Reporting Initiative), as well as by NGOs in collaboration with market players and governments (e.g., TNFD, CDP). These standards provide frameworks for different aspects of disclosure (e.g., climate, biodiversity risks and impacts), and address different types of market players (e.g., financial institutions, broader economy).

As various reporting standards are often in competition or co-opetition and therefore not standardized, an increasingly complex network of reporting standards has become available. This allows companies and financial institutions to choose ambitious or less ambitious standards, and thus increases the risk of greenwashing.

National risk management and disclosure frameworks are therefore being developed. For example, the Japanese Financial Services Agency (FSA) in April 2022, released draft Supervisory Guidance on Climate-related Risk Management and Client Engagement. This guidance documents viewpoints of supervisory dialogues regarding financial institutions’ climate-related risk management and engagement with their clients to support the clients’ responses to climate-related opportunities and risks. Similarly, the EU provided various frameworks for non-financial disclosure (see Table 1Table 1).

Table 1: Non-financial disclosure in the EU (Source: European Union ⁴¹)

Scope	Large corporations and all listed companies	Financial market participants offering investment products, and financial advisers	Financial market participants; all companies subject to Corporate Sustainability Reporting Initiative
Instrument	Corporate Sustainability Reporting Directive (CSRD) proposal	Sustainable Finance Disclosure Regulation (SFDR)	Taxonomy Regulation
Disclosure	Report based on formal reporting standards and subject to external audit	Entity and product level disclosure on sustainability risks and principal adverse impacts	Turnover, capital, and operating expenditures in the reporting year from products or activities associated with Taxonomy
Status	Under negotiation, expected to apply from 2023	Applies from 10 March 2021	Applies from January 2022

In May 2021, the Ministry of Economic Development of Russian Federation approved methodological recommendations for adoption climate change that consists of four documents, including recommendations for climate risk assessment. These recommendations are the basis for creating a national climate risk management system in Russia.

3.3.3 Ecosystem solutions

Ecosystem solutions play an important role for carbon sequestration which could result in carbon credits. China has also underscored the importance of carbon sequestration linked to nature-based solutions ⁴⁸. The February 2022 UNEA-5 ⁴⁹ resolution marks the first time a multilateral body has adopted by consensus a universal definition of such ecosystem services. The recent State of Nature in the G20 report ⁵⁰ of UNEP and others underscores the importance of making the financial case for ecosystem services. Greater engagement by private investors is needed to close financing gaps in this domain. Estimates by the 2021 State of Finance for Nature report ⁷ suggest US\$133 billion is invested annually in ecosystem solutions. Of this total, 86 percent or US\$115 billion is public financing related to conservation, regeneration of forests, peat lands, agriculture, water conservation, and natural pollution control systems. The report estimates that private sector ecosystem solution financing is much lower, at 14 percent of total annual financing – or US\$18 billion per year – with investments dominated by biodiversity offsets, sustainable supply chains, impact investment and private philanthropy investments.

The report identifies five priorities to increase financing for ecosystem solutions:

- Increase Overseas Development Assistance (ODA);
- Reform agricultural subsidies;
- Mandate Multilateral Development Banks (MDBs) to increase ecosystem solutions financing;

- Link developing country debt relief with ecosystem solutions investments;
- Support results-based ecosystem solutions public financing linked to green bonds.

3.3.4 Carbon pricing

Pricing the environmental rights including carbon emission is an increasingly relevant tool to incentivize de-carbonization and nature-positive outcomes, and simultaneously to disincentivize emissions and natural exploitation. [For detailed analysis relevant to this topic, please also refer to CSWG Study 3.2]

Emission trading systems (ETS)

By 2021, 65 carbon pricing schemes were applied in 45 national jurisdictions and 34 subnational jurisdictions, covering about 21.5% of global GHG emissions. As can be seen in Figure 8, The EU emission trading system (EU ETS) (and similarly the UK ETS after separating from the EU ETS) is the most mature with relatively high prices of above EUR100 per ton of CO₂e.

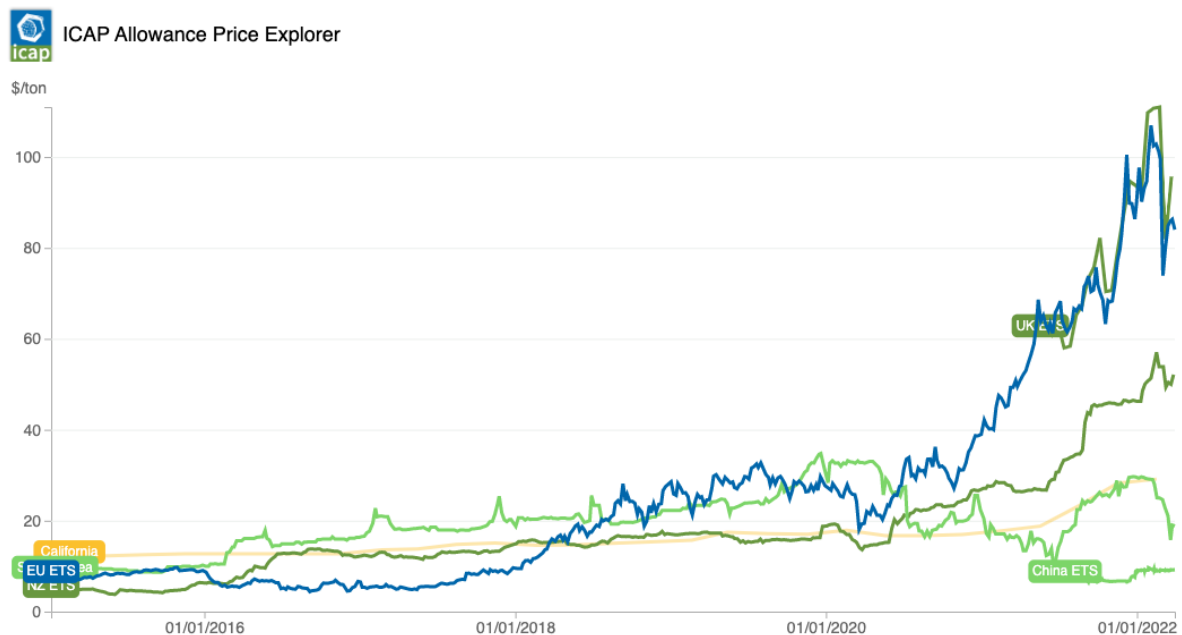


Figure 8: Carbon prices (USD/ton) in EU, California, and China (Source: ICAP)

Voluntary carbon markets (VCM) that allow companies (and individuals) to reach their pledges of carbon neutrality by buying carbon offsets also in lieu of regulated carbon markets. In 2021, VCM for airlines have grown by 900% and corporate carbon offsets by 170% ⁴². McKinsey together with the International Institute of Finance estimates ⁴³ that voluntary carbon markets could increase by a factor of 15 or more by 2030 and by a factor of 100 by 2050. Carbon credits could come from four categories: avoided nature loss (including

deforestation); nature-based sequestration, such as reforestation; avoidance or reduction of emissions such as methane from landfills; and technology-based removal of carbon dioxide from the atmosphere

Paying for importing carbon

Paying for “importing” carbon is another concept to price carbon emissions. In March 2022, the EU Council agreed on the Carbon Border Adjustment Mechanism (CBAM) ⁴⁴. Also other countries, notably the US in July 2021 ⁴⁵ and the UK in September 2021 ⁴⁶ introduced plans or evaluations of carbon border adjustment mechanisms. The ambition is to reduce carbon leakage and price consumption-based rather than production-based carbon emissions. This has been a source of contention from some developing countries with high exports into developed countries over who should be accountable for emissions. At the same time, some developing countries have expressed fears of such mechanisms adding costs to exports ⁴⁷ and the idea that revenues from pricing carbon could flow back into developing economies in supporting a green transition.

International carbon markets

Carbon markets and carbon offsets have been further strengthened by the agreement on Article 6 of the Paris Agreement at COP26 in Glasgow in 2021. Through the introduction of internationally transferable mitigation outcomes (ITMOs) and Article 6, paragraph 4, emission reductions (A6.4ER) with governance to avoid double-counting of carbon reduction credits and providing more flexibility than previous CDM. However, implementation of Article 6 and international carbon markets rests on complex governance structures, pricing issues and technical capacity challenges ⁴², not only in developing economies. Furthermore, ensuring additionality of ITMOs continues to be a challenge with risks in under-ambitious NDC (i.e., overperforming on NDCs and generating ITMOs) and perpetuity (e.g., afforestation projects).

3.4 Climate financing sources

G20 members have access or have developed various public and private sources of climate finance. These include, for example:

- public fiscal spending (e.g., through subsidies in renewable energy);
- green public funds through development banks or national green funds (e.g., China’s National Green Development Fund ⁵¹, or UK’s Green Investment Bank);
- development finance institutions, such as bilateral or multilateral development banks including their facilities (e.g., World Bank’s Climate Support Facility or the Green Climate Fund);
- private financial institutions, including
 - o microfinance institutions particularly in developing economies (e.g., UNEP’s microfinance for ecosystem-based adaptation MEBA ²⁶ supported by the German government);

- commercial financial institutions issuing green loans and insurances (and micro-insurances as supported e.g., by the ADB) for environmental insurances.
- public capital markets:
 - green bond markets;
 - equity markets with a focus on environmental, social and governance performance (such as the EU green capital markets union ¹⁸).
- private equity, including impact funds.

The appropriate source of climate and green finance is contingent on factors, including availability of funds (e.g., capital markets tend to be more developed in developed countries, while microfinance is applied more widely in developing countries, bank credit is applied across the world in different degrees), risk and return requirements of investors (e.g., public finance can provide negative return financing, while private equity would expect high returns), and scalability of finance (e.g., very unique or small projects require specialized sources of finance, while scalable infrastructure finance is more standardized).

3.5 Climate finance instruments

Climate and green finance instruments aim to provide asset classes or tools to finance aligned projects. G20 members have developed and applied numerous instruments tailored to accelerate public and private financing for sustainable activities for different asset classes (see Appendix 2 for a more comprehensive list of climate and green finance instruments). These address individual, public, private and public-private finance (see Table 2).

Table 2: Examples of climate and green finance instruments

Individual/micro enterprises	Commercial debt	Commercial equity	Public	Public-private/development
<ul style="list-style-type: none"> ● Green credit support ● Green microfinance ● Green mortgage 	<ul style="list-style-type: none"> ● Green credit/green loans ● Green bonds ● Sustainability-linked loans ● Transition bonds 	<ul style="list-style-type: none"> ● ESG funds ● Impact finance 	<ul style="list-style-type: none"> ● Green sovereign bonds (e.g., Germany, China, Indonesia) ● Sustainability-linked sovereign debt (e.g., Indonesia) ● Debt-for-nature swaps (USA) ● Guarantees ● Subsidies 	<ul style="list-style-type: none"> ● National green funds ● Blended finance ● Guarantees ● Project development facilities ● Credit enhancement facilities

Further instruments are tailored at specific environmental goals, for example through “payment for ecosystem services” to scale up financing for ecosystems, or national or subnational “carbon markets” to price carbon or more broadly climate emissions (e.g., in Germany, South Korea, parts of the US, subnational in Japan etc.).

A particular set of financial instruments and strategies that is gaining prominence are related to **early retirement of heavy polluting assets**, such as coal-fired power plants. Indonesia, as one country, is preparing Energy Transition Mechanism to retire coal power plant and transition it to new and renewable energy. Various private, public and development financial instruments⁵² are being explored and have been applied (e.g., in Germany) to accelerate the retirement of such assets.

As part of this, **Just Transition Mechanisms** have been devised, e.g., South Africa's International Just Energy Transition Partnership⁵³ with the support of France, Germany, UK, US and EU.

Climate finance instruments are ideally matching specific risk-return profiles of projects, investor preferences and market conditions. Accordingly, the relevance of the application of specific climate finance instruments is context dependent (e.g., green bonds are more applicable in developed capital markets, while microfinance is more relevant to provide finance in informal markets). Particularly **in emerging markets, green capital markets are often in need for further development**¹⁹ and specific financial market-based instruments are less applicable or need more support (e.g., through government-led green bond issuance, such as in Indonesia, China). Other instruments are more applicable, such as green micro-finance, bank lending and blended finance, as well as support through guarantees or other green facilities.

Also, sovereign lenders (e.g., government, state-owned enterprises, state-owned financial institutions) can utilize green capital markets (e.g., through the issuance of green sovereign bonds). Many G20 members have issued green sovereign bonds (or green sukuk) on the national and sub-national level, as well as through SOEs, including France, Germany, Mexico, China, Indonesia. If issued on local capital markets, these green sovereign bonds have strong potential to support local green capital market development⁵⁴.

The availability of the instruments is dependent on regulatory approvals and support (e.g., Japan is providing financial support for issuing green bonds, China's scaling of green bond and green credit markets is based on strong policy support and application through SOEs). The scalability of the instruments depends on available project pipelines and market conditions.

Many of these instruments have been utilized without "green" aspects for decades, and thus need to be tailored to integrate effective climate aspects. Some innovative instruments, particularly on the derivatives markets, such as green asset-backed securities, still require more market discovery for proper pricing.

3.6 Climate finance in developing countries

Providing finance for infrastructure and capacity development from developed G20 members to developing countries for climate mitigation and adaptation, ideally integrated with nature protection and ecosystem solutions in developing countries, has been an important pillar in the protection and restoration of the global nature and climate.

3.6.1 Development finance commitments

Developed countries at COP26 have reaffirmed their commitment to provide USD 100 billion per year in climate finance in developing countries. Global funds have also been supported, such as the Global Environmental Facility (GEF) having provided more than USD139 billion in finance for nature in developing countries, and similarly the Green Climate Fund (GCF) that had provided USD10 billion in finance for climate-related projects. Bilateral engagements from G20 members through development banks, many of which are organized through the International Development Finance Club (IDFC), also committed to improve climate-finance and SDG implementation, e.g., through its five voluntary principles. By September 2020, over 48 financial institutions, including 23 bilateral, regional, and national development banks, as well as 13 commercial financial institutions were part of the Initiative.

3.6.2 Local green capital market development

Green capital market development in developing countries has been supported by G20 members, and multilateral financial institutions to catalyze private and public finance for green development.

Support has been given for design and capacity building (e.g., IFC's Sustainable Banking and Finance Network) and through underwriting green bond issuances in developing countries (e.g., ADB's US\$20 million investment in Georgia's railway green bond) ⁵⁴.

Local green capital markets have also been developed by green bond issuances from state-owned or state-backed companies and financial institutions based on their lower risk profile and larger issuance size, e.g., in China and Indonesia.

3.6.3 Sovereign debt in developing countries

As COVID-19 continues to interrupt economic activities, induce higher public spending, and decrease tax revenues, **sovereign debt issues in certain countries have become more challenging.** Sovereign debt risks have further been exacerbated by recent disturbance of supply chain and geopolitical tensions. In 2020 it has noted that the debt burden ⁵⁵ of low-income countries rose 12 per cent ³¹ to a record US\$860 billion in 2020. The International Monetary Fund (IMF) sounded alarm bells in December 2021, warning that 60 per cent ⁵⁶ of low-income countries are at high risk or already in debt distress, up from 30 per cent in 2015. Sovereign debt ratings ⁵⁷ in 2021 and 2022 have fallen particularly in developing countries. The sovereign debt crisis has strained the availability of resources for conservation, while social considerations, such as the provision of jobs and job security, have led to stimulus efforts that potentially result in unsustainable economic growth (e.g., by focusing on grey infrastructure, brown energy).

In response to the sovereign debt issue, several initiatives have been launched since the pandemic:

- The G20 Debt Service Suspension Initiative (DSSI) provided US\$10.3 billion in debt-service relief to 40 countries. DSSI was available to 73 low-income countries, and was not extended beyond December 2021.
- The IMF-World Bank “Common Framework,” intended to coordinate debt restructuring among Paris Club and non-Paris club creditors, currently involves only three countries (Chad, Ethiopia, and Zambia).
- The IMF agreed to release US\$650 billion in Special Drawing Rights⁵⁸ to help countries during the crisis. In November 2021 at the China-Africa FOCA summit, China pledged US\$10 billion⁵⁹ (of its share of US\$40 billion in new SDRs) to help African countries recover from the pandemic.
- On 18 April 2022, the IMF approved a new, Resilience and Sustainability Trust⁶⁰ to help countries manage structural risks linked to climate change and the ongoing pandemic: roughly three-quarters of countries are eligible to apply for support through the new fund, which has initial pledges of US\$40 billion.

While welcomed, recent initiatives are likely insufficient in the face of sharply worsening debt sustainability conditions. Among the suggestions is to turn to more comprehensive lessons of the past, notably the Highly Indebted Poor Countries Initiative and HIPC+, or updating a new version of Brady Bonds⁶¹. The Tackling the Triple Crisis Proposal⁶² **proposes using debt swaps to help debtor countries meet climate, nature, and other goals. Debt-for-nature swaps (DNS) have been discussed as a concept to ameliorate multiple of these problems at the same time:** it could reduce debt burdens, particularly in developing countries with high external public debt, and direct funds to conservation or restoration in these countries to create employment. DNS are a financial tool initially developed and applied in the 1980s to deal with this dual problem of nature loss and sovereign debt by exchanging sovereign debt for the conservation or restoration of nature. Accelerating environmental destruction and the accompanying need to mobilize billions to finance nature protection led to a resurgence of calls to apply DNS, including from large creditor regions, such as in September 2021 from the European Commission and the OECD. The US through the Development Finance Corporation (DFC) together with The Nature Conservancy has supported the government of Belize at the end of 2021 in a US\$364 million financial transaction⁶³ that will enable the country to reduce its debt burden and generate an estimated US\$180M for marine conservation. China, as the largest bilateral creditor in developing countries⁶⁴, is also evaluating the application of various forms of debt restructuring, including debt forgiveness on non-interest-bearing loans, and debt-for-sustainability swaps⁶⁵. Similarly, Indonesia agreed with Germany and Global Fund to a US\$50 million debt-for-health swap⁶⁶ in 2021.

Without solving the debt crisis quickly and decisively, sustainable development regarding social, environmental and economic progress will likely regress in many developing countries, particularly in light of accelerating inflation and exchange-rate volatility due to armed conflicts and supply chain issues.

4. The Way Forward

Taken the current climate and green finance gap, and seeing current climate finance ambitions of G20 members, lessons can be drawn, and challenges can be identified. These can be summarized as:

4.1 A transformative effort

As the combined effort of G20 members shows, transforming finance requires the comprehensive and rapid development and application of fiscal, monetary, regulatory, and voluntary instruments, tools, and systems. Through incentives and disincentives, these tools aim to reduce finance flows into counterproductive activities and accelerate sustainability-aligned finance by creating commonly accepted standards and reducing transaction costs through interoperability. At the same time, these tools need to ensure a just transition across countries and societies, secure and improve future generations' wealth, while minimizing greenwashing risks to avoid erosion of public and investors' trust in green transition.

Shifting away from financing unsustainable activities is key with a focus on sectors and activities that currently most contribute to climate change and biodiversity loss which is closely related to climate change ambitions. Many of these sectors are overlapping for biodiversity and climate issues, in particular, the energy sector (transport, buildings and industry), agriculture and food systems, cement, chemicals, and waste (see Figure 9).

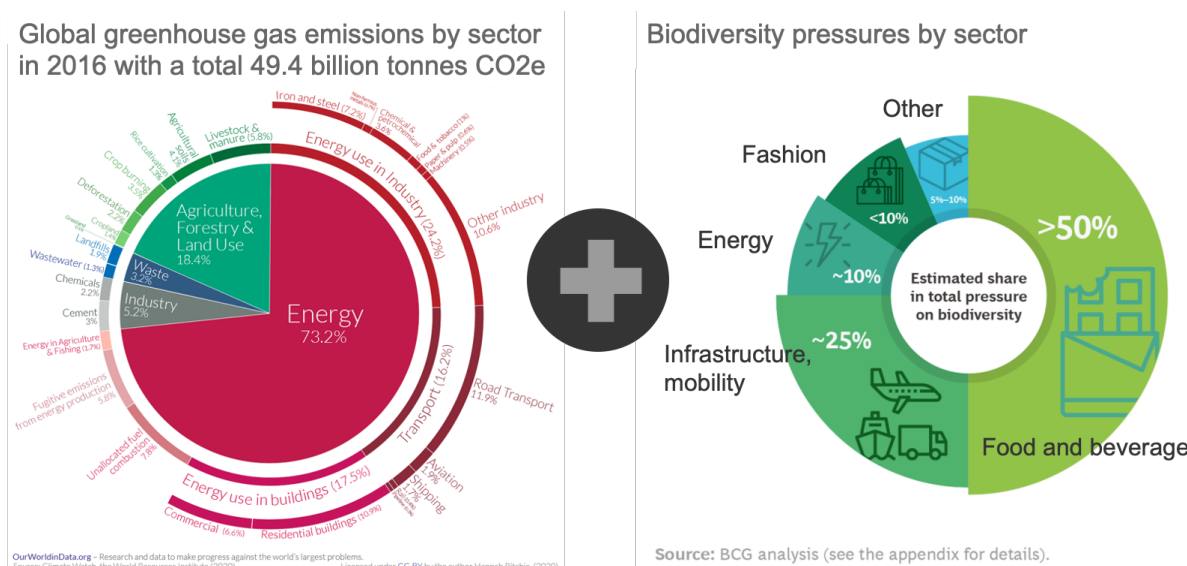


Figure 9: Global Greenhouse Gas Emissions by Sector in 2016 (Source: Our World in Data 2020 ⁷¹)

Ministries and regulators responsible for climate and environment have an opportunity to set environmental standards and thresholds, data standards, as well as create architectures of carbon markets and environmental rights markets. Close cooperation with related ministries responsible for public finance and SOEs, banking, financial markets, and economy, in addition to private sector stakeholders, promises the most effective results.

As institutional settings vary between G20 members, any systematic approach between top-down and bottom-up approaches will be specific to each country. The overall approach is ideally harmonized among the G20 members to create lower cross-border financing barriers.

Scaling of green finance requires synergies between top-down and bottom-up action:

The top-down action sets policy signals and regulatory frameworks, such as disclosure regulations, public finance strategies, environmental standards (e.g., emission standards), or environmental rights trading markets (e.g., carbon markets), as well as monetary and fiscal incentives. The bottom-up actions set market-driven voluntary green financing instruments like ESG products, private sustainability markets for green goods, services and commodities, voluntary carbon offset markets to support corporate targets like net zero or nature positive goals. A key objective is to build synergies between these two green finance sources.

4.2 Integration of climate factors into finance system

G20 members have embarked on the journey to incorporated climate factors into financing frameworks, strategies and mechanisms

Based on the Addis Ababa Action Agenda⁶⁷, integrated national finance frameworks (INFFs) are envisaged to “align the full range of financing sources -domestic and international sources of public and private finance - and the policies that govern them for sustainable development.” Successful evaluation has been completed, e.g., for Indonesia and Mexico. The Sustainable Banking and Finance Network¹⁷ tracks progress of frameworks to promote sustainable finance of many developing countries (including relevant G20 members, such as China, India, Indonesia, Mexico).

The UK’s 2019 Green Finance Strategy⁶⁸ similarly sets out how to harness the strength of the UK’s world leading financial sector to catalyze green investment and accelerate delivery of net zero. The Net Zero Strategy⁶⁹ outlines measures to transition to a green and sustainable future, including the goal to leverage up to £90 billion of private investment by 2030.

The Government of Indonesia works on the Climate Change Fiscal Framework to implement several activities such as green budgeting, a Private Sector Climate Expenditure, and Institutional Review. Indonesia has developed a more advanced green finance framework than most its peers, being evaluated at the second highest stage in the SBFN 2022 evaluation⁷⁰: “its national framework extends beyond the banking sector and promotes ESG integration across the financial sector ecosystem. In addition to ongoing activities to raise awareness and build capacity, implementation tools and initiatives are in place”. Indonesia has also used public finance to develop green capital markets (e.g., issuance of third green sovereign sukuk worth US\$750 million in 2020, and the state-owned Bank Mandiri issued its first US\$300 million bond in 2021).

The EU's efforts are pooled in the EU's Strategy for Financing the Transition to a Sustainable Economy ⁴¹ that includes the 2021-2027 Multiannual Financial Framework (MFF) and Next-Generation-EU (NGEU). Through this, the EU aims to mobilize private finance through up to EUR 605 billion on public finance for projects addressing the climate crisis and EUR 100 billion in projects supporting biodiversity. Of the EUR 750 billion allocated for NextGeneration-EU, 30% will be raised through issuance of NGEU green bonds, which will further develop green capital markets in the EU. Furthermore, through its Just Transition Mechanism, the EU aims to "ensure that the transition towards a climate-neutral economy happens in a fair way, leaving no one behind. It provides targeted support to help mobilize around €55 billion over the period 2021-2027 in the most affected regions, to alleviate the socio-economic impact of the transition".

Ideally climate factors can be further organized in comprehensive and reinforcing green financial frameworks based on the relevant governance system, laws and regulations, sources of finance and relevant financial instruments.

4.3 Technologies for climate and green finance

To advance climate finance, a key bottleneck is informational asymmetry and transaction cost of data disclosure of environmental and climate risk. G20 members can take advantage of emerging technologies through the integration of big data, sensing technologies, enhanced (artificial) intelligence technologies, mobile platforms, blockchain technologies. These "digital finance" technologies make large amounts of data available more quickly at lower costs, increasing transparency and access to information related to sustainable investments. They also have the potential to promote greater inclusion and innovation, increase opportunities for citizen participation in the financial value chain and unlock new sustainable business models.

Many G20 members have established industry and government competence to utilize technologies to advance the provision and efficiency of financial services – not least through central bank digital currencies (CBDC) (e.g., Brazil, Japan, and others). Tech Sprint organized by the Bank for International Settlement (BIS) and G20 in 2021 focused on green and sustainable finance focused on three topics: (1) data collection, verification and sharing; (2) analysis and assessment of transition and physical climate-related risks, and (3) better connecting projects and investors.

Overall, digitalization or technologies have specific advantages for climate and sustainable finance to improve informed decision-making for regulators, investors and consumers based on improved data availability, transparency, comparability, as well as better data analyses, e.g., for climate scenario analyses, understanding of interdependencies (e.g., of nature-climate nexus risks):

- Collection of non-financial environmental data through smart technologies, sensing and autonomous vehicles (e.g., drones), e.g., for climate-related emissions at the source, pollution at the source, land-use change;

- Improvement of transparency and consistency through provision of data and information via openly accessible platforms, including through mobile platforms;
- Improvement of comparability of data through utilizing algorithms to interpret data through artificial intelligence, e.g., in the highly fragmented ESG data space or for multiple frameworks for environmental disclosure and risk management frameworks;
- Improvements in intelligence through better scenario analyses and stress testing, as well as risk analyses of interdependencies (e.g., nature) through higher data availability and improved computing power.

Furthermore, technologies can help mobilizing finance for green projects through reduction of transaction cost and information cost for investors. For example, the BIS Innovation Hub together with Hong Kong Monetary Authority (HKMA) established the Project Genesis in 2021 that allows any investor to invest any amount into safe government green bonds via an app. Over the bond's lifetime, the investor can see accrued interest, track in real time how reduction in CO₂ emissions linked to the investment are made. Further, the investor can sell the bonds in a transparent market.

5. Actions to be taken: Stop counterproductive, mobilize green public and private finance through smart, coherent, and tailored policy tools

Based on the identified developments of climate and green finance in G20 members, the identified gaps and the need for improvements, specific actions that G20 leaders in regulatory bodies responsible for climate change and biodiversity loss can consider have been identified.

Climate finance actions considered by G20 members are based on five dimensions:

- 1: With limited resources and time available, G20 members focus efforts on shifting finance away from those economic activities with the highest negative impact.
- 2: Public finance through fiscal spending, tax policy, state-owned-enterprises (SOEs) and state-owned financial institutions leads the race to the top in collaboration with the private sector finance.
- 3: Climate finance is fully integrated with biodiversity aspects to maximize effects of the green and sustainable transition for mitigation and adaptation/resilience.
- 4: G20 encourages jurisdictions to develop their own green finance approaches based on the 6 principles noted by the SWFG
 - a. SWFG Principle 1: Ensure material positive contributions to sustainability goals and focus on outcomes;
 - b. SWFG Principle 2: Avoid negative contribution to other sustainability goals (e.g., through do no significant harm to any sustainability goal requirements);
 - c. SWFG Principle 3: Be dynamic in adjustments reflecting changes in policies, technologies, and state of the transition;
 - d. SWFG Principle 4: Reflect good governance and transparency;
 - e. SWFG Principle 5: Be science-based for environmental goals and science- or evidence-based for other sustainability issues; and
 - f. SWFG Principle 6: Address transition considerations.
- 5: Climate finance enables a just transition for countries in different development stages, for different sectors and ensure a better life for future generations rooted in the SDGs

Specific actions that G20 members can consider can be distinguished in (1) harmonized standards for public and private finance, (2) private sector mobilization, and (3) just and development finance.

5.1.1 Improving standardization to shift from unsustainable to green

Improving interoperability of various green and sustainable finance standards for private and public finance to reduce transaction cost, to ensure positive impact, to reduce greenwashing, to build trust and to shift from dirty to green finance can be developed.

While development of green taxonomies with a focus on mitigation has been increasingly successful and efforts to improve interoperability of green taxonomies are ongoing,

definitions of counterproductive and hard-to-abate economic activities through a “traffic light classification system” are paramount. This has the potential to increase economic costs for environmentally harmful activities and shift money to non-harmful and green activities. The classification system of those economic activities should focus on e.g., fossil fuel energies, transport-related infrastructure and services, agriculture and food systems, and resource extraction.

To reduce greenwashing, environmental regulators can support in providing and enforcing legal standards on **environmental thresholds and performance indicators** (i.e., technical screening criteria). These thresholds should describe what are maximum emissions and nature-negative outputs allowable (e.g., what are emission thresholds or biodiversity loss thresholds for specific activities) and provide performance indicators (e.g., what is considered a “positive biodiversity contribution” in different ecosystems and sectors). These thresholds are relevant for the inclusion/exclusion of economic activities in green finance taxonomies, as well as reporting.

Similarly, as a basis for evaluating environmental performance, **standards development for measuring, verifying, and reporting (MRV) comparable and standardized data on environmental performance** that includes vulnerable groups can be accelerated. This should utilize digital technologies available that should provide better access to all stakeholders including regulators, market participants and consumers. Technologies should advance climate and environment data management, to allow financial markets/entities to capture risk and opportunities of climate friendly investment/business/finance. The data quality should be ensured and enforced through standards supported or issued by competent environmental regulators. The competent environmental regulator can also provide regularly updated baseline environmental data on a granular level as well as performance summaries in relation to climate, biodiversity, pollution, and adaptation.

The foundation for global markets and relevant instruments to accelerate carbon-positive and nature-negative investments provides broader benefits if it is improved. This includes a consensus for global and cross-border carbon pricing and carbon leakage avoidance, where the parts of the proceeds can be utilized to support climate mitigation/adaptation/just transition in least developed countries including capacity building and technical assistance. Furthermore, tools for further natural rights trading can be implemented to increase the use of ecosystem-based solutions as carbon offsets within Paris Agreement Article 6 consensus reached at Glasgow⁴² and to build resilience.

Data that is made publicly and easily available has a greater potential to improve transparency and trust in green finance e.g., through a shared data repository, to evaluate relevant incentives and disincentives for aligning flows with sustainable development and climate targets and to facilitate smart climate financing decision making for example, for restructuring debts in developing countries, better standardize labelling of activities (e.g., green, and red taxonomy).

5.1.2 Private sector mobilization

These “traffic light system” standards can be applied for **public finance that includes, e.g., fiscal spending, subsidies, tax policy, state-owned enterprises (SOEs) and state-owned financial institutions**. Public financial and project engagement in non-SDG aligned or projects doing harm to an SDG can be ended by 2025 while state-owned financial institutions phase-out and divest from harmful projects by 2040. Exceptions can be provided to invest in harmful projects if they accelerate green development goals, such as when investing in a fund for early retiring coal-fired power plants.

Availability of green public finance can be increased through issuance of sovereign or SOE green financial instruments (e.g., green bonds, green sukuk).

With more green public finance, through sovereign or SOE green financial instruments (e.g., green bonds, green sukuk) green private sector spillovers and a mobilization of green private sector finance and businesses can be envisaged. By supporting governments, SOEs and SOFIs to utilize green financial instruments (e.g., green bonds), **local green capital market development** with immediate benefits for private sector development can be achieved.

The global infrastructure development facilities (e.g., Global Infrastructure Facility (GIF), Global Environment Facility (GEF)) and other applicable finance instruments (e.g., non-sovereign guarantees, blended finance, PPP) can be used for more efficient crowding in of commercial development finance and private finance in high-risk assets if accelerated, e.g., through capacity building for application and implementation of these financing mechanisms.

As private sector finance requires clear policy directions to understand regulatory risk (rather than uncertain future announcements), clear, ambitious green regulatory and policy targets paired with public finance measures will mobilize private sector finance to support phase-out of dirty assets and deployment of climate-friendly investments.

5.1.3 Just and development finance

Ensure a globally just transition through responsibilities to ensure a just transition and reduce COVID-19 related impacts particularly in developing countries. This should include the fulfillment and ideally increase of the US\$100 billion climate finance from developed to developing countries.

Furthermore, G20 members can work together to **reduce debt-burdens of highly indebted countries** that include the evaluation of multilateral and bilateral debt-for-nature and/or debt-for-climate swaps to increase both development finance and fiscal space in highly indebted countries.

The development cooperation can also support **financial and technical capacity** particularly for energy transition (e.g., grid, energy storage) and adaptation finance possibly through multilateral agencies that would reduce risks of strategic national competition in development support.

To further finance the green transition in G20 members and beyond, **the use of global infrastructure development facilities (e.g., GIF, MCDF) and other applicable finance instruments that provide for more efficient crowding in of commercial development finance can be accelerated.** Also, the local (green) capital market development can be further supported.

6. Appendix

6.1 Appendix 1: Overview of relevant taxonomies

EU taxonomy for sustainable activities	The EU taxonomy is a classification system, establishing a list of environmentally sustainable economic activities. The EU taxonomy would provide companies, investors, and policymakers with appropriate definitions for which economic activities can be considered environmentally sustainable.
China Green Bond Endorsed Projects Catalogue	The 2021 Edition Catalogue divides green projects into six major areas: Energy-saving and Environmental Protection Industry, Clean Production Industry, Clean Energy Industry, Eco-environment Industry, Green Upgrading of Infrastructure, and Green Services.
China “Traffic Light System” for Overseas investments	In 2020, China’s Belt and Road Initiative International Green Development Coalition (BRIGC) backed by multiple ministries issued the Green Development Guidance for BRI projects with a “Traffic Light System”. Projects are classified in “green” (environmentally beneficial without any significant harm to biodiversity, pollution and/or climate), “yellow” (environmentally neutral), and “red” (significant potential harm to any environmental dimension of pollution, biodiversity, or climate).
Indonesia’s Green Taxonomy ³⁸	In January 2022, Indonesia’s Financial Services Authority (OJK) completed the first edition of Indonesia’s green taxonomy. The Green Taxonomy classifies sustainable financing and investment activities into three categories, namely: green (do no significant harm, apply minimum safeguard, provide positive impact to the environment, and align with the environmental objective of the taxonomy, yellow (do no significant harm), and red (harmful activities).
The “EU-China Common Ground Taxonomy – Climate Change Mitigation (CGT)”.	CGT put forward commonalities from the EU and China’s taxonomies and provide generic methodologies for benchmarking taxonomies. As emphasized by the working group, the CGT has no legal implications and does not intend to be formally or legally endorsed by any jurisdictions. It is rather a source of inspirations and provides analytical toolkits for other jurisdictions when developing their own taxonomies.

ASEAN Taxonomy	<p>The new taxonomy follows previous ASEAN sustainable finance initiatives, such as the ASEAN Green, Social and Sustainability Bond Standards, and the ASEAN Sustainable Banking Principles. The ASEAN Taxonomy is a sustainable finance taxonomy with an initial focus on environmental objectives. It consists of two parts. The base is a Foundation Framework (FF) resting on four environmental objectives and two essential criteria to guide AMS in classifying economic activities in 3 tiers (green-amber-red).</p>
Singapore “Traffic Light System” 73 (not a G20 country, but with significance for financial markets in ASEAN and beyond)	<p>The Green Finance Industry Taskforce (GFIT), convened by the Monetary Authority of Singapore (MAS), issued a proposed taxonomy for Singapore-based financial institutions to identify activities that can be considered green or transitioning towards green. A “traffic-light” system was developed, which sets out how activities can be classified as green, yellow (transition), or red according to their level of alignment with environmental objectives.</p>
Japan Transition Finance Taxonomy	<p>The Basic Guidelines on Climate Transition Finance (Guidelines) is one measure supporting this development strategy through strengthening the position of climate transition finance in Japan, especially in hard-to-abate sectors. In addition to its main objective, the Guidelines aims to introduce more funding contributing to achieving the 2050 carbon-neutral goals of Japan and align with the Paris Agreement.</p>
Russian Green Finance Taxonomy	<p>The Russian Green Finance taxonomy covers both green and transition activities. It is compatible with recognized international taxonomies and reflects criteria for sustainable projects. Green taxonomy section covers activities in such areas as waste management, energy sector (including the whole spectrum of low-carbon energy solutions: solar, wind, geothermal power, biofuels, hydropower, nuclear and hydrogen), circular economy projects, CCUS, energy efficiency in buildings, industrial processes (steel, aluminum, cement, etc.), transportation fuels, vehicles and infrastructure, green mobility, land use and agriculture. Transitional taxonomy introduces criteria that encourage GHG emissions reduction in hard-to-abate sectors, namely, fossil fuel and natural resources exploitation and use</p>

6.2 Appendix 2: Overview of Sustainable financial instruments

Category	Name	Aim/Scope	Status and scale	Examples in G20
Climate finance policies and regulations as a basis for climate finance instruments	Green monetary policy	Central banks and other banking authorities are increasingly using their tools to provide the right price signals and incentives to align finance flows with climate goals ⁷⁴ .	G20 central banks generally failing ⁷⁵	European Central Bank ⁷⁵ etc.
	Green financial and real-economy policies	<ul style="list-style-type: none"> - Stress testing to improve financial institutions resilience - Mandated disclosure of climate risks - Legal requirements for real economy (e.g. the energy, transport, agriculture, or water sectors) 	Very few G20 members implemented these instruments	People's Bank of China ⁷⁶ for stress testing; NDC priority sectors;
	Climate-related financial disclosures	Strategies, voluntary disclosures, standards or frameworks, roadmaps, guidance documents, etc. (nonbinding)	Very few G20 members implemented these instruments	TCFD
	Carbon pricing scheme (e.g., carbon tax, carbon market)	Put a price on carbon emissions so that the costs of climate impacts and the opportunities for low-carbon energy options are better reflected.	<ul style="list-style-type: none"> - Almost half of all CO₂ emissions ⁷⁷ from energy use in G20 economies are priced as of 2021 - Carbon prices have increased across G20 economies 	Korea, Canada, Germany, China etc.

Category	Name	Aim/Scope	Status and scale	Examples in G20
	Energy savings insurance (ESI)	Address investment barriers to energy efficiency upgrades at small and medium enterprises (SMEs).	<ul style="list-style-type: none"> - Secondary replication in Europe led by GCF and IDB - Finance mobilized reached USD 250 million in 2018 ⁷⁸ 	Mexico, Brazil, Italy, India, Turkey
Risk management	Long-Term Foreign Exchange Risk Management instrument	Address currency and interest rate risk for renewable energy finance and climate investment in developing economies.	<ul style="list-style-type: none"> - Implemented by TCX (established by a group of multilateral development banks in 2015) - 30mn EUR ⁷⁸ investment from BMU IN 2015 - 30mn EUR from BMU in 2018 - 31mn EUR from UK DFID in 2019 	Germany, UK
Financing mechanisms and instruments	Green concessional financing (e.g., loans)	Provide early-stage project development, construction financing, and refinancing to wind, solar, and run-of-river hydro projects in low income, lower-middle-income, and upper-middle income countries	<ul style="list-style-type: none"> - Usually provided by MDBs and DFIs used for climate mitigation purposes - Almost all MDBs and DFIs have a climate portfolio with some concessional loan 	G20

Category	Name	Aim/Scope	Status and scale	Examples in G20
Financing mechanisms and instruments	National climate funds	Collect, blend, and manage all incoming revenues streams (both international and national) related to climate change into centralized and nationally owned fund to allocate resources to green projects	<ul style="list-style-type: none"> - US\$1.4 billion Amazon Fund (Brazil) with contributors from Germany, Norway, Malaysia - Green Climate Fund South Africa 	For an overview see the BU national climate fund tracker
	International climate funds	Often funded through international governments and/or development finance institutions, these funds pool money to provide low-cost, long-term financing to lower the risk and cost of climate financing applying different financing instruments (e.g., grant, concessional debt, guarantees, equity instruments, blended finance)	<ul style="list-style-type: none"> - US\$10.3 billion Climate Investment Funds (CIF) established in 2008 - US\$10.3 billion, Green Climate Fund (GCF) 	
	Green non-concessional loans	Provide green credit for aligned projects through commercial financial institutions at market rates (e.g., while the financial institution might be able to provide lower financing rates due to re-financing options)	<ul style="list-style-type: none"> - China's green credit market reached about US\$2.6 trillion in 2021 	China
	Green/transition bonds	Support specific climate-related or environmental projects (or projects transitioning from brown to green) on concessional terms	<ul style="list-style-type: none"> - One of the earliest and largest type of climate finance instruments; - volumes included in the Climate Bonds Green Bond Database in 1H 2021 period reached USD227.8bn 	EU, China, USA, etc.

Category	Name	Aim/Scope	Status and scale	Examples in G20
Financing mechanisms and instruments	Insurance instruments (e.g., insurance-linked securities, contingent credit, and loans)	Cover risks from weather-related disasters in a combination of risk prevention and risk transfer mechanism	<ul style="list-style-type: none"> - Swiss Re, The Nature Conservancy and regional governments in Mexico in “un-derwriting nature” initiative to protect the Mesoamerican coral reef ⁷⁹ 	Mexico
	Multilateral/bilateral/national grants	Grants can be offered by policy and private institutions to accelerate investments, e.g., through blended finance, that allows to crowd in private capital even in non-revenue or negative yield projects, including capacity building or technical plans	<ul style="list-style-type: none"> - Multilateral development banks (ADB, World Bank) provide grants for capacity building - KfW provides grants for energy efficient renovation of private houses - Large foundations (e.g., Gates Foundation, CIFF) provide grants for capacity building on climate change 	G20

Category	Name	Aim/Scope	Status and scale	Examples in G20
<p style="text-align: center;">Financing mechanisms and instruments</p>	<p>Financing facilities</p>	<p>Lending facility intended to increase climate-related investments by addressing market constraints and using blended finance to crowd-in private investments, for example in infrastructure, but also provides capacity building and knowledge sharing</p>	<ul style="list-style-type: none"> - Green Climate Facility by IDB) - Climate Finance Facility South Africa by DBSA - Global Environmental Facility established in 1992 - Global Infrastructure Facility (GIF) established by G20 with total investments of US\$76 billion - MCDF established in 2021 by China and others 	
	<p>Guarantees</p>	<p>Guarantees help mitigate risks from investments to lower the threshold for private investors to invest; guarantees can cover the entire investment or parts thereof;</p>	<ul style="list-style-type: none"> - Performance or credit guarantees to cover the risk of a contracted power off-taker in renewable energies; - IDB provides guarantees for the geothermal development in Chile and Mexico ⁸⁰ 	

Category	Name	Aim/Scope	Status and scale	Examples in G20
Financing mechanisms and instruments	Climate finance auctions	An alternative to traditional public climate finance, used to set a price floor for emission reductions which give auction winners the option of selling emission reductions to a public funder at a fixed price or to the market.	<ul style="list-style-type: none"> - Relatively new instrument but with a proven track record⁸¹. 	World Bank's Pilot Auction Facility for Methane and Climate Change Mitigation (PAF); UK Contracts for Difference (CfD) programme
	Coal exit financing mechanisms	Develop tools and incentives to retire coal-fired power plants ahead of schedule	<ul style="list-style-type: none"> - Energy Transition Mechanism (ETM) by ADB launched in 2021 - Accelerating Coal Transition (ACT) US\$2.5 billion fund launched by CIF in Nov 2021 - Reverse auctions in Germany 	
	Sustainability Linked loans	Incentivize borrowers (not restricted to projects) to improve their overall sustainability performance	<ul style="list-style-type: none"> - exponential increase in size and activity in recent years - \$40 billion⁸² of announced sustainability linked loan globally in the first six weeks into 2022 	Especially US
	Debt-for-climate/nature swaps	debt swap in which the debtor nation refinances and makes payments in local currency to finance climate/nature protection projects	Relatively small at hundreds of million-level per transaction	Paris Club members

6.3 Appendix 3: Selected reporting standards

Category	Name	Apply to	Content	Status
Government	EU Sustainable Finance Disclosure Regulation (SFDR)	All financial market participants ("FMPs") and financial advisors ("Fas") in the EU, FMPs with EU shareholders, and those marketing in the EU	It imposes comprehensive sustainability disclosure requirements covering a broad range of ESG metrics at both entity- and product-level.	Applicable in March 2021; Level 2, which starts in 2023, will require companies to justify their activities
	Recommendations to public joint stock companies on the disclosure on non-financial activities	Public joint stock companies in Russia	It encourages public companies to disclose information about how they consider ESG factors and how they implement these factors into their business model and development strategy.	Launched in July 2021, no recent update
	Administration Measures of Law-based Disclosure of Environmental Information by Enterprises	Certain high-polluting enterprises in China	It requires in-scope enterprises to disclose environment and pollution related information in annual reports.	Applicable in Feb 2022
	1. the Companies (Strategic Report) (Climate-related Financial Disclosure) Regulations 2022 2. the Limited Liability Partnerships (Climate-related Financial Disclosure) Regulations 2022	All UK registered companies and Limited Liability Partnerships (LLPs) with over 500 employees having annual revenue of more than £500 million.	These revised regulations require organizations to disclose climate-related financial information and ensure they consider the risks and opportunities they face because of climate change.	Regulations passed in January of 2022 with an effective date of 6 April, 2022

Category	Name	Apply to	Content	Status
	The US Securities and Exchange Commission (SEC) Interpretive Guidance Regarding Disclosure Related to Climate Change	US public companies	It provides guidance to public companies regarding the Commission's existing disclosure requirements as they apply to climate change matters.	First published in 2010; SEC has proposed rules to enhance and standardize climate-Related disclosures in 2022
	Disclosure Guidelines for the Financial Sector	Financial sector in China	It puts forward requirements on details to be disclosed by Chinese financial institutions on environmental information, and provides guidance for different financial sub-sectors such as commercial banks, asset management, insurance.	Launched by People's Bank of China in Aug 2021
Market	NASDAQ ESG Reporting Guide 2.0	All Nasdaq markets	It is a voluntary initiative and aims to help both private and public companies navigate the evolving standards on ESG data disclosure.	Published in 2019 as an updated version of the 2017 guide, incorporating new developments (such as TCFD, SDGs, GRI Standards, EU NFR Directive)
	New York Stock Exchange ESG Guidance and Best Practices	NYSE listed companies	It highlighting key elements of good quality reporting and provides guidance on voluntary sustainability reporting.	Provides resources for companies to report in line with frameworks like GRI, SASB, TCFD

Category	Name	Apply to	Content	Status
	Euronext ESG Reporting Guide: Target 1.5°C	Euronext issuers and private companies	It provides guidance for companies to identify and prioritize ESG opportunities and risks; report efficiently; navigate, comply with and stay ahead of regulations and differentiate themselves in terms of their ESG approach.	New edition announced in May 2022
	Johannesburg Stock Exchange (JSE) 1. Sustainability Disclosure Guidance 2. Climate Change Disclosure Guidance	Serve as a guidance tool that may be used by JSE issuers on a voluntary basis	It is aligned with global expectations and best practice, and specifically tailored to the South African business context, serving as an umbrella for topic-related guidance as needed.	Draft open for public comment from 9 December 2021 – 28 February 2022
	Singapore Exchange (SGX) sustainability reporting guide (not a G20 country, but with significance for financial markets in ASEAN and beyond)	SGX listed companies	SGX-ST requires each issuer to publish an annual sustainability report, describing the primary components on a 'comply or explain' basis, and in relation to the primary component in Listing Rules.	Effect from 1 January 2022, issuers are required to describe their sustainability practices on a "comply or explain" basis with reference to climate-related disclosures consistent with the TCFD recommendations.

Category	Name	Apply to	Content	Status
	Shanghai Stock Exchange & Shenzhen Stock Exchange Guidelines	Listed companies	These guidelines encourage listed companies to disclose information related to social responsibility and environmental impact, among others.	Launched in Jan 2022 by both two exchanges
Sector-led	Task Force on Climate-related Financial Disclosure (TCFD)	All organizations, especially organizations with public debt or equity	A voluntary set of guidelines aimed at assessing a company's exposure to climate change risk. It provides both general and sector-specific guidance to assist organizations with implementing the TCFD recommendations.	As of Sep 2021, 12 governments and dozens of central banks, supervisors, and regulators have formally expressed support for the TCFD recommendations, and more than 2,600 organizations have now endorsed them, an increase of over 70% since last year.

Category	Name	Apply to	Content	Status
	Taskforce on Nature-related Financial Disclosures (TNFD)	The TNFD framework is intended for use globally by corporates and financial institutions of all sizes.	A risk management and disclosure framework for organizations to report and act on evolving nature-related risks, which aims to support a shift in global financial flows away from nature-negative outcomes and toward nature-positive outcomes.	In March 2022, TNFD released the first beta version of the framework for a 18-month market consultation. A further three iterations of the beta versions are planned – June 2022 (v0.2), October 2022 (v0.3) and February 2023 (v0.4) – before the release of the final version v1.0 of the framework in Q3 2023.
	Carbon Disclosure Project (CDP)	Global companies or cities	The CDP (formerly the Carbon Disclosure Project) is an international non-profit organization that aims to make environmental reporting and risk management a business norm, driving disclosure, insight, and action towards a sustainable economy.	Since 2002 over 8,400 companies have publicly disclosed environmental information through CDP.
	The Sustainability Accounting Standards Board (SASB)	Global reporting companies and investors	SASB Standards guide the disclosure of financially material sustainability information by companies to their investors. Available for 77 industries, the Standards identify the subset of ESG issues most relevant to financial performance in each industry.	The number of unique SASB Reporters since 2020 is 1858, with the number of 2022 YTD being 736. The total number of member organizations in SASB Alliance reached 281, representing 28 countries.

Category	Name	Apply to	Content	Status
	Global Reporting Initiative (GRI)	Global companies	GRI is the independent, international organization that provides GRI standards for sustainability reporting. The GRI Standards include three series of Standards to be used together: Universal Standards, Sector Standards, and Topic Standards	Around three-quarters (73%) of the world's largest 250 companies and two-thirds (67%) of the N100 (5,200 companies comprising the largest 100 firms in 52 countries) now use GRI.
	IRIS+	Impact investors in particular	IRIS+ is managed by the Global Impact Investing Network (GIIN) and is the generally accepted system for measuring, managing, and optimizing impact.	Over 27,000 users have registered to use IRIS+ materials.

6.4 Appendix 4: Selected sustainable finance initiatives and standard setters

Lead Organization/Name	Content	Type of organization
Coalition of Finance Ministers for Climate Action	The Coalition will help countries mobilize and align the finance needed to implement their national climate action plans; establish best practices such as climate budgeting and strategies for green investment and procurement; and factor climate risks and vulnerabilities into members' economic planning.	Government
Development Assistance Committee, OECD (OECD DAC)	DAC Principles for Evaluation of Development Assistance. The OECD DAC measures and monitors bilateral development finance targeting climate change objectives using two Rio markers: climate change mitigation and climate change adaptation.	Government/multilateral
Finance to Accelerate the Sustainable Transition-Infrastructure initiative (FAST INFRA SI)	The FAST-Infra initiative launched the Sustainable Infrastructure (SI) Label – a consistent, globally applicable labelling system designed to identify and evaluate sustainable infrastructure assets. The label aims to facilitate due diligence processes and structuring of investments for sustainable infrastructure assets, thereby reducing transaction costs.	Association
International Sustainability Standards Board (ISSB)	Established in November 2021 by the International Finance Reporting Standards Foundation (IFRS), the ISSB aims to deliver a comprehensive global baseline of sustainability-related disclosure standards that provide investors and other capital market participants with information about companies' sustainability-related risks and opportunities to help them make informed decisions.	Association
Network of Central Banks and Supervisors for Greening the Financial System (NGFS)	The Network's purpose is to help strengthening the global response required to meet the goals of the Paris agreement and to enhance the role of the financial system to manage risks and to mobilize capital for green and low-carbon investments in the broader context of environmentally sustainable development. To this end, the Network defines and promotes best practices to be implemented within and outside of the Membership of the NGFS and conducts or commissions analytical work on green finance.	Government/regulator

Principles of Responsible Investment (PRI)	<p>The PRI is the world's leading proponent of responsible investment. It works:</p> <ul style="list-style-type: none"> - to understand the investment implications of environmental, social and governance (ESG) factors; - to support its international network of investor signatories in incorporating these factors into their investment and ownership decisions. 	Association/multi-lateral
Sustainable Banking Network (SBN)	<p>The Climate Action toolbox is a simple self-assessment tool to help reduce the carbon footprint of any business. It focuses on five key areas – transport (moving people and goods), office operations, site operations and equipment, and the design and making of products.</p>	Regulator
The Glasgow Financial Alliance for Net Zero (GFANZ)	<p>The Glasgow Financial Alliance for Net Zero (GFANZ) was launched in April 2021 by Mark Carney, UN Special Envoy for Climate Action and Finance and UK Prime Minister Johnson's Finance Adviser for COP26, and the COP26 Private Finance Hub in partnership with the UNFCCC Climate Action Champions, the Race to Zero campaign and the COP26 Presidency. Bringing together existing and new net-zero finance initiatives in one sector-wide coalition, GFANZ provides a forum for leading financial institutions to accelerate the transition to a net-zero global economy. Our members currently include over 450 financial firms across 45 countries responsible for assets of over \$130 trillion.</p>	Association
United Nations Environment Programme Finance Initiative (UNEP FI)	<p>A partnership between UNEP and the global financial sector to mobilize private sector finance for sustainable development. UNEP FI works with more than 450 banks, insurers, and investors and over 100 supporting institutions – to help create a financial sector that serves people and planet while delivering positive impacts. We aim to inspire, inform, and enable financial institutions to improve people's quality of life without compromising that of future generations. By leveraging the UN's role, UNEP FI accelerates sustainable finance.</p> <p>The frameworks UNEP FI has established or co-created include:</p> <ul style="list-style-type: none"> ● Principles for Responsible Banking (PRB) ● Principles for Sustainable Insurance (PSI) ● Principles for Responsible Investment (PRI) 	Association/multi-lateral

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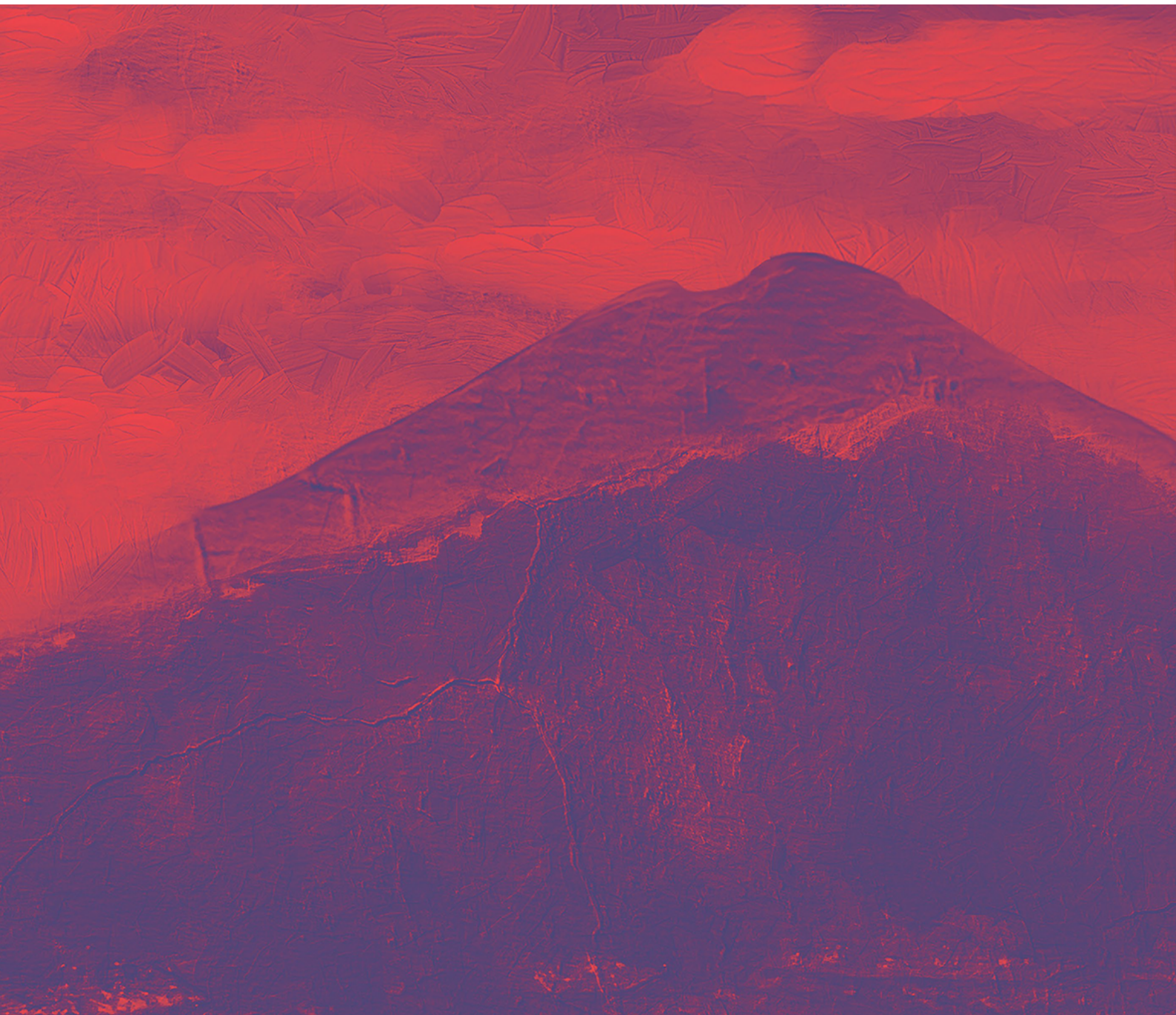
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CLIMATE SUSTAINABILITY WORKING GROUP (CSWG) G20 2022

TOWARDS LOW GHG EMISSION AND CLIMATE RESILIENCE FUTURE THROUGH UTILIZING ECONOMIC VALUE OF CARBON

Final Report



September 2022



STUDY 3.2

TOWARDS LOW GHG EMISSION AND CLIMATE RESILIENCE FUTURE THROUGH UTILIZING ECONOMIC VALUE OF CARBON

Indonesia, September 2022

Recover Together, Recover Stronger

Authors :



Contributors :



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Authors

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Executive Summary and Recommendations

Ever-high concentrations of greenhouse gas emissions will cause wide-ranging damages to our economies and societies, from reduced agricultural productivity and rising sea levels to adverse impacts on infrastructure and livelihoods from increased extreme weather events. These effects are already visible today, and without action, will only worsen in the coming decades. Failure to account for these current and future damages means that decisions made today are not necessarily aligned with those required for the low-carbon transition and to build a climate resilient future.

Through utilizing the economic value of carbon, the actions of decision-makers in the public and private sectors can become consistent with national targets, as well as the temperature goals of the Paris Agreement. Governments can use it to provide systemic, economy-wide signals to incentivize changes in behavioral and investment patterns away from carbon-intensive practices and towards low-carbon alternatives.

The role of G20 members – representing over 85% of the world’s GDP, around two thirds of its population and responsible for around 75% of global GHG emissions – will be decisive. Many are already pursuing measures to utilize the economic value of carbon, or plan to do so soon. The ways in which they value carbon vary. One of the clearest is through placing a direct price on emissions. This approach has expanded significantly in recent years, with 11 of the G20 members having already implemented national-level carbon pricing instruments, with more members in the process of, or considering, doing so. A variety of subnational level systems are also in operation in G20 members.

Direct carbon pricing is not the only way of utilizing the economic value of carbon. Other policies – ranging from internal and shadow carbon pricing, through to fuel taxes and climate regulations – can, in different ways, use a value of carbon to influence consumption and investment decisions. These measures are numerous and varied within G20 members.

This study has been developed for the G20 Climate Sustainability Working Group (CSWG) to inform and make recommendations on enhancing the economic valuation of carbon within members. It focuses primarily on the experiences and lessons learned from 20 years of implementing direct carbon pricing instruments (CPIs) in a range of different member contexts. The focus on direct instruments is motivated by their theoretical appeal to deliver emission reductions cost effectively; their adoption among G20 members and beyond; as well as their efficacy in reducing emissions in practice. Broader approaches to carbon valuation are addressed where relevant, to give a fuller picture of the diversity of approaches currently pursued.

The study benefited from oral and written comments from G20 members in the preparation phase, as well as responses to a survey on their experiences with implementing carbon pricing.

The recommendations of this study fall under two categories, as follows:

Implementing measures to utilize the economic value of carbon

- Expand the coverage of the measures that utilize the economic value of carbon. As a first step, members must increase the share of emissions covered by measures that impose some form of carbon value in order to ensure more decision-makers are incentivized to reduce GHGs.
- Develop an approach that is appropriate to the member's objectives and circumstances. Introducing measures to utilize the economic value of carbon requires tailoring design features to the domestic context. It is often possible to work with rather than push against local constraints when designing successful measures.
- Start simply and build over time – both in ambition and complexity. Initially targeting sectors with few large emitters and pre-existing high-quality emissions data can help build experience with various instruments. Once the foundations are laid – and businesses as well as citizens become familiar with the idea of carbon costs and find low-carbon alternatives – the approaches can evolve, and ambition can be raised.
- Build facility-level and public sector MRV capacity, especially in developing country members, as a no-regrets measure. Even if these efforts do not lead to direct mandatory carbon pricing, they will improve the accuracy of emissions reporting in national inventories, facilitate countries' access to results-based finance and voluntary carbon markets, as well as participation in Article 6 mechanisms.
- Increase efforts to reduce and remove inefficient fossil fuel subsidies and aim to remove all fossil fuel subsidies in the long run. Such subsidies can act as a negative carbon price and undermine the effectiveness of approaches to create an economic value of carbon.
- Use revenues collected to support and engage the most vulnerable income groups and regions and communicate specific co-benefits of emissions reduction for them as key components of building public acceptance and enabling a just transition.
- Assess the performance of carbon pricing instruments regularly and reform them, when necessary, through an inclusive and transparent process. Socio-economic impact evaluations are a key tool to assess the effect of measures utilizing the economic value of carbon and to develop further measures to limit any adverse consequences.

Enhancing collaboration among G20 members

- Establish a more structured forum for sharing experiences to enable all G20 members, especially those at earlier stages of design and implementation, to learn from the wealth of experience of G20 members in the different approaches towards placing an economic value on carbon.

- Commence discussions on a collaborative framework to address carbon leakage during the low-carbon transition. G20 members should start discussions now on how to address the risk of carbon leakage in a cooperative manner at the international level, given the different national circumstances. The framework should aim to minimize the risks of carbon leakage while maximizing the benefits from international trade.
- Extend support beyond G20 members. Drawing on their extensive experience with CPIs as well as with carbon markets under the Kyoto Protocol, members should actively engage with and build technical capacity in developing countries outside the G20. This will facilitate a cost-effective low-carbon transition utilizing the economic value of carbon more broadly and enable these countries to participate equitably in Article 6 mechanisms.

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1. Introduction

Climate change has been labelled the “greatest market failure the world has ever seen”. Its costs are not fully borne by those who emit greenhouse gas emissions (GHGs) and, as a result, there is a strong incentive to over-emit. Making the economic value of carbon explicit is central to correcting this market failure. It enables the costs of GHGs to be factored into decision-making today, increases the attractiveness of using and investing in low-carbon processes and technologies, and thus helps to ensure that current activities are consistent with those needed for the transition to a low-carbon and resilient society.

The role of G20 members – representing over 85% of the world’s GDP, around two thirds of its population and responsible for around 75% of global GHG emissions – will be decisive in this transition. All G20 members have submitted updated nationally determined contributions (NDC) to the United Nations Framework Convention on Climate Change (UNFCCC), most of which include an increased target for emissions reductions as compared with their previous NDC.¹ G20 members will meet their short- and long-term goals through a wide range of measures and for many, utilizing the economic value of carbon will play an important part.

Although approaches vary in their specifics and calculations in practice, the broadest notion of the economic value of carbon relates to the damages associated with additional GHGs in the atmosphere – and therefore the value or benefit of avoiding them. One way of considering it is as ‘the net present value of future worldwide damages (often up to 100 years in the future or longer) avoided by removing or preventing an additional ton of CO₂ emissions at a certain point in time.’ This monetary figure can then be used as ‘benchmark or reference value to assess the impacts and effectiveness of low-carbon policies and actions within the public and private sectors’ (UNFCCC Secretariat 2016).

The economic value of carbon can be utilized in different ways. One of the most effective is through pricing GHG emissions directly, as one of the tools in a broader climate policy mix. Direct carbon pricing provides a financial incentive to reduce emissions by encouraging changes in production, consumption, and investment decisions. The High-Level Commission on Carbon Prices concluded that ‘an explicit carbon-price level consistent with achieving the Paris temperature target is at least USD 40–80/tCO₂ by 2020 and USD 50–100/tCO₂ by 2030, provided a supportive policy environment is in place’ (CPLC 2017). Pricing carbon could also bring significant fiscal benefits for governments. An IMF/OECD report for G20 finance ministers concluded that ‘a USD 50 per ton of CO₂ carbon price in 2030 would generate revenue increases of around 1% of GDP for many G20 members and substantially more than that in a few cases.’ (IMF & OECD 2021). Recent years have seen progress, with an increasing portion of emissions covered by an operational carbon pricing instrument (CPI), estimated at around 23% of global GHG emissions in 2022 (World Bank 2022). With some exceptions, price levels remain outside of the range identified by the High-Level Commission, although have been on an upward trend in recent years.

¹ Türkiye submitted its first NDC to the UNFCCC in October 2021.

Box 1: Different ways of utilizing the economic value of carbon

The economic value of carbon can be utilized in various ways. The first is to inform the design of **carbon pricing instruments (CPIs)**. These apply a **direct price** on GHG emissions caused by an activity. There are two primary ways of realizing this price. **Emissions trading systems (ETSs)** place a limit on the total amount of GHGs, with regulated entities required to obtain and surrender an allowance for each ton of GHG they emit. ETSs can also function as a relative system, where entities earn allowances or credits if they outperform a given emissions performance standard. In both types of systems allowances can then be traded between participants, with the carbon (i.e. allowance) price determined by the market. Alternatively, the price of carbon is set directly by the government in the case of a **carbon tax** and is often levied based on the carbon content of fuels. **Crediting mechanisms**, which generate emissions reductions or 'offset' credits, can also establish a price on carbon, but to do so require a source of demand for the credits.

A carbon price can be realized **indirectly** through instruments or policies that affect the price of products or activities associated with GHGs – and therefore from which a carbon price can be implied. These policies are often implemented for reasons other than incentivizing emissions reductions. A common example in G20 countries are **fuel taxes**, which while primarily in place to raise revenues, also establish an implicit price of carbon.

Many actors utilize an economic value for carbon to inform decision-making processes, regardless of whether there is a direct carbon price in operation. Carbon valuation can be applied as part a cost-benefit analysis of **regulations and policies** to support better policy design and lay the groundwork for CPIs in the future. This could include determining appropriate levels for renewable energy generation support measures such as feed-in-tariffs. The public and private sectors can also use a value for carbon when **appraising projects and investments**. This helps align their actions with future climate policies and the economic opportunities associated with GHG reductions, as well as raising investor confidence that climate risks have been considered in their decisions. An increasing number of businesses use such **shadow carbon pricing** to support long-term strategic planning (UNFCCC Secretariat 2016).

Aside from direct carbon pricing the economic value of carbon can be and is utilized in other ways, as outlined in Box 1. Irrespective of the method pursued, tools to utilize the value of carbon form only one part of a broader policy mix. A well-balanced policy portfolio should also include complementary measures such as incentives for low-carbon technology R&D and deployment, investments in low-carbon public infrastructure such as smart grids and low-emissions transport infrastructure, as well as technology and performance standards and phase-out policies where required. The appropriate role and means of valuing carbon – as well its place within the broader policy framework – will naturally vary between members, reflecting the diversity of national circumstances of G20 members and their respective commitments under the Paris Agreement.

This report takes stock of the lessons learned from nearly 20 years of valuing carbon, primarily, but not exclusively, in the context of the developed G20 members. The focus lies foremost on direct carbon pricing. CPIs provide the clearest and most transparent way of correcting the market failure in a non-discriminatory manner. The geographical expansion of CPIs – particularly in the last half-decade – enables a comparison of their implementation in a wide variety of different member contexts. The lessons learned are drawn in the first instance from national-level instruments; sub-national systems, of which there are many in G20 members, are addressed where they provide relevant examples. Alternative ways of utilizing the economic value of carbon are also discussed where appropriate, to give a fuller picture of the diversity of approaches currently pursued within the G20.

2. Key principles and lessons learnt from implementation of carbon pricing instruments in G20 members

2.1 Status of carbon pricing instruments in G20 members

While implementing a carbon price is an effective way of utilizing the economic value of carbon to encourage emissions reductions, they are not necessarily the same thing. The economic value of carbon captures the cost of additional GHGs. This can then be used to inform the design of CPIs: for example, establishing a price level consistent with a government's climate goals by setting a carbon tax rate equal to the economic value of carbon. In practice, CPIs have not worked like this. Prices tend to be more influenced by political acceptability, economic circumstances, market dynamics and by the cost of available abatement technologies. Nevertheless, carbon pricing is still a useful way of internalizing some – if not always all – of the costs reflected in the economic value of carbon. Sections 2.1.1 – 2.1.3 provide an overview of the carbon pricing instruments currently in force in G20 members at both national and subnational levels, with further details included in the relevant member factsheets in the Appendix.

2.1.1 Carbon pricing experience in G20 members

G20 members are using carbon pricing instruments as part of their climate policy portfolio. A majority of G20 members have either a carbon tax or an ETS at the national or subnational levels.² Seven members have carbon taxes implemented at the national level and three at the subnational level. Seven members have emission trading systems implemented at the national level and five at the subnational level. Figure 1 and Figure 2 provide key facts and an overview of the carbon taxes and ETSs that have been implemented in G20 members at the national level, with Table 1 providing a more detailed overview of instruments implemented at the national level and supplementary information of instruments implemented at the subnational level.

² In the case of the EU, the EU ETS is considered a 'national' instrument, with non-G20 EU member state CPIs considered to be 'subnational'. The separate CPIs of Germany and France are here counted as 'national'.

Carbon pricing instruments in G20 members



Most G20 members are implementing either a carbon tax or an emissions trading system.



USD 16 billion raised from national carbon tax revenues in 2021.



USD 52 billion from auction revenues from national ETSs in 2021.



National carbon pricing instruments cover ca. 38% of the aggregate emissions of G20 members

Figure 1: Key facts regarding carbon pricing instruments

Source: Author's calculations based on World Bank Carbon Pricing Dashboard and ICAP ETS Map.

Several G20 members implement both a carbon tax and ETS on a national or subnational level. This is evidence that different instruments can be implemented simultaneously to complement each other. For example, the EU has an ETS which covers all the EU members, and Norway, Iceland, and Liechtenstein. Meanwhile, several EU members such as **France** also implement carbon tax, while **Germany** implements a complementary ETS.

Other G20 members are planning or exploring the implementation of carbon taxes or ETSs. **Indonesia** is planning to implement a carbon tax and ETS in 2022 and **Russia** intends to launch a pilot ETS in the island of Sakhalin soon. In **India**, in 2021 the government published a blueprint for a national carbon market, which is initially voluntary but is intended to transition to a mandatory ETS. In July 2022, the federal government has moved to launch a national carbon market by proposing to amend the Energy conservation Act of 2001.

At the state level, government of Gujarat recently signed a memorandum of understanding with external partners for the implementation of an ETS. Moreover, other G20 members, such as **Türkiye** and **Brazil**, are considering the role that a carbon pricing instrument could have in their climate policy portfolios.

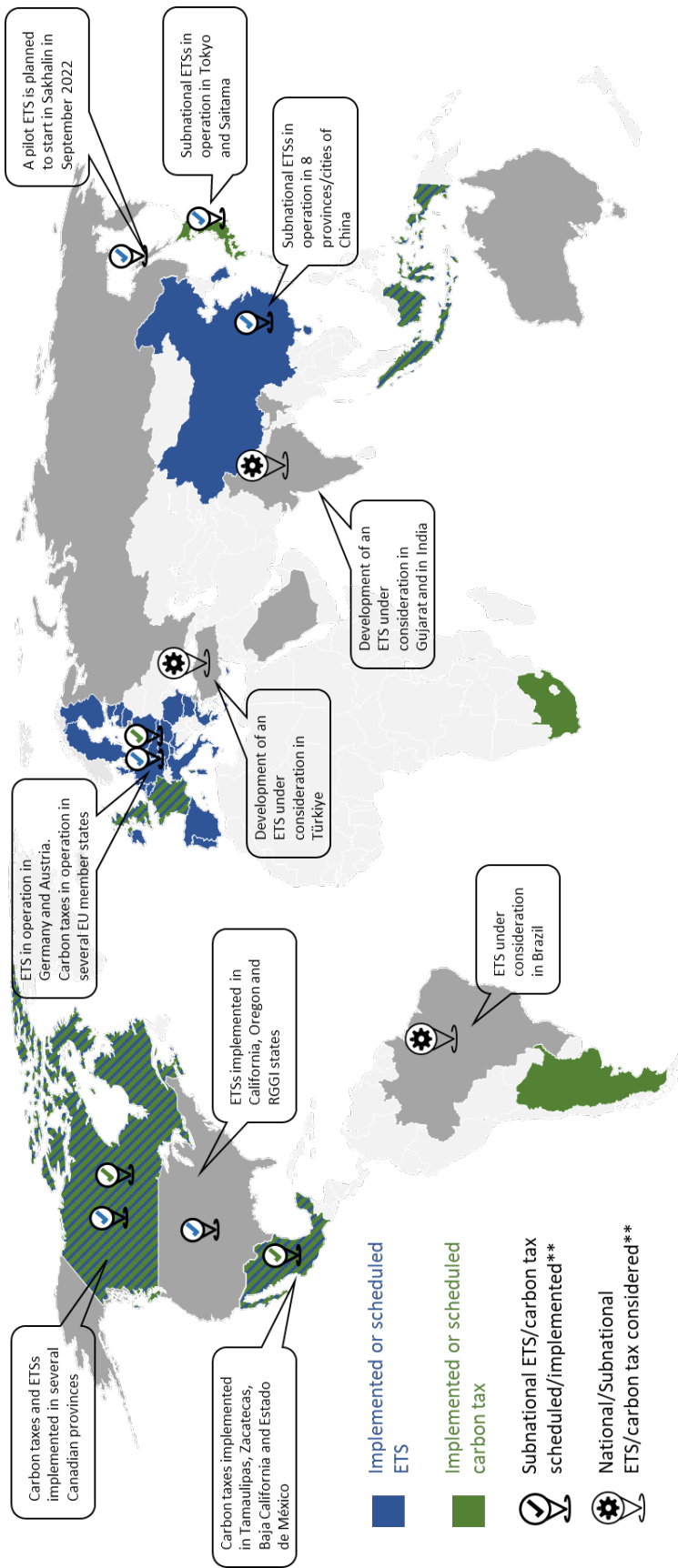


Figure 2: Overview of national* carbon tax and ETS in G20 members

* In the case of EU, national refers to EU level instruments and subnational refers to member state level instruments.

** For a full list of subnational jurisdictions with a carbon pricing policy implemented or planned for implementation, consult the factsheets in Section 5.

Source: Authors' own work based on World Bank Carbon Pricing Dashboard and ICAP ETS Map.

Table 1: Overview of national and subnational CPIs in force in G20 members

	Country	Instrument (start year)	Sector coverage	Revenues in 2021	Coverage of national emissions	Subnational CPIs (revenues in million USD 2021)
National ETSs		China National ETS (2021)		n/a	33%	ETS Pilots: Beijing (n/a), Chongqing (39.7), Fujian (n/a), Guangdong (n/a), Hubei (13.3), Shanghai (3.4), Shenzhen (n/a), Tianjin (11.7)
		Republic of South Korea National ETS (2015)		USD 257.7 million	73%	n/a
		European Union National** ETS (2005)		USD 37000 million	41%	ETS: Austria (n/a), Germany (8500) Carbon taxes: Denmark (468), Estonia (2), Finland (1547), France (8400), Ireland (542), Latvia (7), The Netherlands (n/a), Poland (1), Portugal (331), Slovenia (145), Spain (77), Sweden (2267)
		Germany National ETS (2021)		USD 8500 million	40%	n/a
National ETS and carbon taxes		Mexico National ETS (2020) National carbon tax (2014)		n/a USD 314 million	40% 44%	Carbon taxes: Baja California (1), Estado de México (n/a), Tamaulipas (2), Zacatecas (0.5)
		United Kingdom National ETS (2021) National carbon tax (2013)		USD 5900 million USD 690 million	28% 21%	n/a
		Canada National ETS (2019) National carbon tax (2019)		USD 264 million USD 4798 million	7% 22%	ETS: Québec (902), Nova Scotia (35.7), Newfoundland and Labrador (n/a), New Brunswick (n/a), Alberta (294), Saskatchewan (n/a), Ontario (n/a), Carbon taxes: British Columbia (2293), Northwest Territories (25.9), Newfoundland and Labrador (78.5), New Brunswick (98.9), Prince Edward Island (24.5)
National carbon taxes		Argentina National Carbon tax (2018)		USD 272 million	20%	n/a
		Japan National Carbon tax (2012)		USD 1800 million	75%	ETS: Tokyo, Saitama
		South Africa National Carbon tax (2019)		USD 94 million	80%	n/a
		France National Carbon tax (2014)		USD 8400 million	35%	n/a
Sub-national only ETS		United States Only sub-national ETS	n/a	n/a	n/a	ETS: RGGI (926), California (44 258), Massachusetts (44), Oregon (n/a)

Legend  Industry  Power  Buildings  Waste  Domestic aviation  Transport  Fuels

** See footnote 1 for the special case of the EU.

Source: Authors' own work based on World Bank Carbon Pricing Dashboard and ICAP ETS Map.

2.1.2 National ETSs and their features in G20 members

Seven G20 members implement national ETS.³ The first ETSs in G20 members are around two decades old, with the UK ETS starting its implementation as a voluntary system originally in 2002 and the EU ETS starting its first phase in 2005. The most recent systems were launched in 2021 (China, Germany, UK) and have significantly increased the coverage of carbon pricing instrument not only among G20 members, but worldwide. Summary information on the national ETSs implemented by G20 members is presented in Table 1.

Scope and coverage of ETSs in G20 members varies among systems. Sectoral coverage depends on the role of an ETS within the policy mix. Major emitting sectors such as power and industry are commonly covered.⁴ The scope of GHG gases that systems cover also varies; while all ETS cover CO₂ – which is relatively easy to monitor – some systems also cover other GHGs.

ETSs in G20 members in which allowances are auctioned have generated substantial revenues for governments. Collectively, auctioning of allowances in G20 members generated over USD 52 billion in 2021. Revenues raised varied from close to USD 260 million in Republic of Korea (where at least 10% of allowances must be auctioned) to USD 37,000 million in the EU (where 57% of allowances are auctioned). In 2021, carbon prices hit record highs in the markets of some G20 members such as EU, the UK and California (in the US) (ICAP 2022).

2.1.3 National carbon taxes and their features in G20 members

Seven G20 members across all five regions implement national level carbon tax.⁵ Although carbon taxes have been implemented in some European countries since the 1990s, the use of carbon taxes in G20 members is a more recent development, with the oldest instrument starting in **Japan** in 2012. A carbon tax on emissions from the power sector has been legislated for in Indonesia in 2022 and is scheduled to come into force soon.

Most of these taxes cover the power sector, and some of them, such as the **French** and Japanese taxes, have used existing tax structures for their collection. In **Japan, France** and **South Africa**, existing carbon taxes also cover transport sector emissions. Carbon taxes in G20 members typically apply to CO₂ emissions from the combustion of all fossil fuels but there are exemptions, for instance for natural gas in **Mexico** which is considered a transition fuel from oil and coal to renewables.

G20 members raised over USD 16 billion in 2021 from carbon tax revenues. Revenues raised varied from USD 94 million in **South Africa**, to USD 8,400 million in **France**. Three G20

3 Members implementing a national ETS: Canada; China; EU; German; Mexico; Republic of Korea; and UK.

4 Coverage of industrial sectors differ across systems but could include refineries, steel works, and production of iron, aluminum, metals, fertilizers, cement, lime, glass, ceramics, pulp, paper, cardboard, acids and bulk organic chemicals among others.

5 Members implementing a national carbon tax include: Argentina; Canada; France; Japan; Mexico; Republic of Korea; and UK.

members raised over USD 1 billion in 2021: **Japan, France** and **Canada** (Table 1). Revenues from carbon taxes are used for several purposes. In **Canada** they are redistributed to the subnational jurisdictions in which they were raised, and the governments of the provinces and territories can use them as they see fit. In **France**, they help finance the energy transition. In **Argentina**, they fund social security, transport, housing, and other programs.

2.1.4 Subnational carbon taxes and ETSs in G20 members

Subnational carbon pricing instruments are being implemented in six G20 members. The oldest of these instruments is the ETS program that spans 11 north-eastern US states (“RGGI”) which came into force in 2009. The most recent is the Austrian national ETS, which started operation in 2022.

Subnational carbon pricing instruments can complement, reinforce or provide valuable lessons learned for national instruments. In some cases, such as in China, the regional ETSs served as pilots, provided lessons for the national ETS, and now are in operation alongside with the national ETS to complement it. In others, such as the **German** and Austrian national ETSs, they serve to cover emissions not covered by the **EU** ETS. Subnational carbon pricing instruments can additionally serve as a local mechanism to control GHG emissions, therefore reinforcing climate policy measures that national governments put in place, such as the subnational carbon taxes in **Mexico**, or the California cap-and-trade program and RGGI in the **US**. In **China**, years of experience with regional pilots covering nearly 3,000 installations in more than 20 industries provided value lessons learned for the national ETS in 2021.

2.2 Utilizing the economic value of carbon: lessons learned from designing and implementing CPIs in the G20

In the past 20 years both ETSs and carbon taxes have been successfully implemented in varied circumstances and at different levels. Having started out in developed countries, progress in recent years shows CPIs can also be an appropriate tool for developing country members. An important enabler for this progression has been the adaptability of CPIs to suit local circumstances, with design features of the same instruments varying between members. Progress has also been made at the sub-national level (e.g. **Canada, US**) and experience shows that this may be a more appropriate in some member contexts.

2.2.1 Choosing an approach

Carbon taxes have been easier to implement from a technical perspective and may be more attractive to developing country members – but low public acceptability remains a major challenge. Most G20 members with carbon taxes levy it ‘upstream’, i.e. at the point of distribution, import or production of the fuel. This significantly simplifies administration, as the carbon tax can utilize existing tax processes (e.g. for collecting fuel excise duties) and fiscal infrastructure, minimizing the administrative burden for both public authorities and liable entities. Levying it downstream i.e. at the point of emissions (e.g. **South Africa, UK**) is more complex and requires a robust emissions monitoring, reporting and verification

(MRV) system. Carbon taxes can also effectively be introduced as part of a program of tax reform: **Argentina's** carbon tax was introduced as part of a wider package, which simplified the overall approach to taxing liquid fuels (Republic of Argentina 2018).

ETSs are significantly more complex to implement and require supporting infrastructure to function properly. ETSs give certainty over emissions reductions and should in theory support cost-effective abatement. In practice, experience has shown that they are significantly more complex to establish and administer than carbon taxes and therefore rely on greater capacities in both public and private sectors. They also require supporting infrastructure to function: a registry to track holdings and transactions of allowances, as well as an exchange on which to trade them; and robust MRV and enforcement systems are critical for the integrity of an ETS. ETSs are therefore often developed in a stepwise manner: for example, in **Mexico** a mandatory MRV system pre-dated the start of the pilot ETS, and the registry entered into operation after the ETS had formally begun. In **China** systematic training was provided for local authorities, other relevant institutions and for companies on topics including data collection and submission, allowance allocation methods and administrative operation of the ETS.

Crediting mechanisms will continue to be an important means of mobilizing finance to support NDC implementation and deliver adaptation and sustainable development co-benefits. Developing country G20 members have been major beneficiaries of crediting mechanisms. Out of the top ten countries with the highest number of registered Clean Development Mechanism (CDM) projects, six are G20 members (**China, India, Brazil, Mexico, Indonesia, Republic of Korea**). The UNFCCC estimates that the CDM has mobilized more than USD 300 billion of investment, much of which has involved G20 members (UNFCCC 2018). G20 members could continue to benefit under Article 6 of the Paris Agreement. Independent modelling of the potential benefits of Article 6 suggests that **Brazil, India, Indonesia, and Russia** could be among the largest suppliers of credits, implying significant financial inflows (Edmonds J.A. et al. 2021). Crediting mechanisms need a reliable source of demand to be effective. The demand could come from international buyers (e.g. Article 6 mechanisms and CORSIA) or generated domestically by implementing a crediting mechanism alongside an ETS/carbon tax. Examples include **China, Mexico, and South Africa** where domestically generated offsets can be used to meet a portion of CPI obligations. In **Australia**, the government competitively procures offset credits generated through the national crediting mechanism.

Other ways to utilize the economic value of carbon can function alongside – or even in the absence of – CPIs. G20 members pursue different routes to value carbon – directly or indirectly – regardless of whether there is a CPI in place. As shown in Figure 3 the indirect price applied through fossil fuel taxes is higher, often significantly, than the direct price in nearly all G20 members. Incentives to deploy carbon capture and sequestration (CCS) technologies to reduce emissions, or to remove CO₂ from the atmosphere, also place an economic value on carbon. The US provides tax credits, known as the Section 45Q credit, for geologically sequestering or other qualified use of CO₂ (Jones and Sherlock 2021; Beck and

Lee 2020). REDD+ provides similar incentives for the land use sector to reduce emissions and increase removals of CO₂ from the land use sector and has active projects in several G20 members. During its G20 presidency, **Saudi Arabia** advanced the notion of a carbon circular economy, which can be supported by utilizing the economic value of carbon (Al Shehri et al. 2022). **India's** Perform Achieve Trade (PAT) scheme, a tradeable performance standard, primarily targets energy efficiency and places an implicit price on carbon and could evolve into a national carbon market under the current plans (Bureau of Energy Efficiency 2021). The country also has a renewable energy certificate (REC) market which supports the generation of carbon-free power and indirectly contributes to emissions reductions from the power sector.

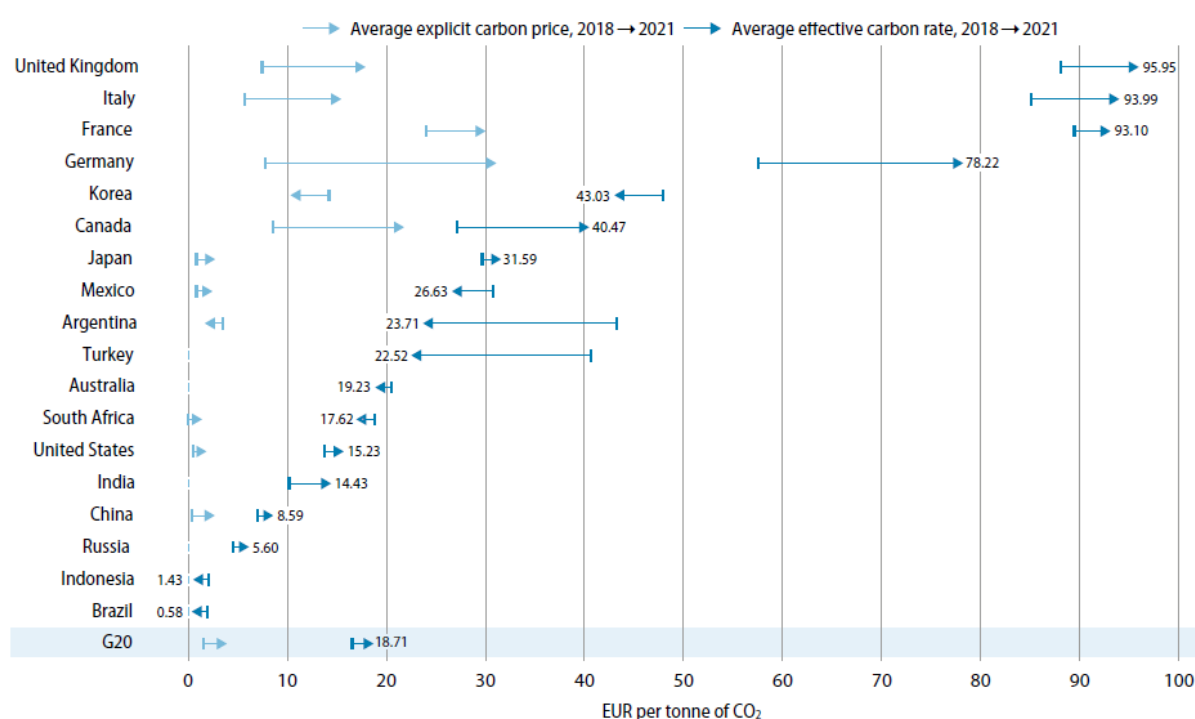


Figure 3: Average carbon prices (€) in G20 members, 2018-2021⁶

Source: OECD (2021), *Carbon Pricing in Times of COVID-19: what has changed in G20 economies?*

Internal carbon pricing is expanding, but largely in response to current and expected future government action. As of 2020, more than 2000 companies with a combined market capitalization of over USD 27 trillion disclosed their current or planned use of an internal carbon price, up 80% in five years. This is mostly implemented through a shadow carbon price – with a median value of USD 25/tCO₂ – to drive low-carbon investment, energy efficiency improvements and behavioral change. Expectation of near-term carbon pricing

⁶ Excludes Saudi Arabia. Explicit carbon prices reflect ETS auction price and carbon tax rates. Effective carbon prices are the total of explicit prices and indirect prices levied through fuel taxes. Prices are averaged across all energy-related CO₂ emissions, including those not covered by a CPI.

regulation makes a company more than five times more likely to use an internal carbon price; where there is no such expectation, only 14% of companies reported using or planning to use an internal carbon price. This suggests that there may be limited to scope for internal carbon pricing as a means of utilizing the economic value of carbon on a widescale without accompanying government action (CDP 2021).

2.2.2 Choosing the scope

Energy-related CO₂ emissions are the biggest source in the G20 and are the primary target of CPIs. Energy-related CO₂ emissions make up around 80% of all GHG emissions from G20 members and lie at the heart of the transition (OECD 2021). Covering energy-related emissions under an ETS or carbon tax is both common practice and relatively simple. All national-level G20 ETSs cover energy-related emissions from electricity generation and industry.⁷ Carbon taxes, which are mostly levied upstream on fuels, also target energy-related emissions by design. CPIs can be particularly effective for reducing emissions from electricity generation, where they drive fuel switching and, increasingly, a shift to renewable generation. The clearest example is the **UK**, where the carbon price played an important role alongside other policies in reducing the use of coal, which fell from 40% of generation in 2012 to 1.8% in 2020.⁸ Other energy-related emissions – for instance from road transport, which is a significant and growing source in G20 members – have so far proven less responsive to carbon pricing, as consumers have fewer available alternatives. Reducing emissions in these and other sectors requires complementary policies some of which are listed in Figure 4.

Expanding explicit carbon pricing beyond energy-related emissions poses challenges. Pricing emissions other than energy and from industrial processes – which are covered in the ETSs of **EU, Republic of Korea** and **UK** – will be challenging. The agriculture, land use, land use change and forestry (LULUCF), and waste sectors are often characterized by lots of small emitters and are sources for which robust MRV is harder to ensure. At present the waste sector is only covered in one ETS (**Republic of Korea**). For some G20 members this could materially impact the attractiveness and effectiveness of carbon pricing. In **Brazil** emissions from agriculture, LULUCF and waste represented more than more than 60% of national GHG emissions in 2016.⁹ In this instance, crediting mechanisms or other ways of valuing carbon – such as payments for ecosystem services or behavioral incentives, for example, to reduce meat consumption – may be more appropriate. Figure 4 assesses the relative effectiveness of carbon pricing in different sectors and appropriate companion policies, some of which can also give an economic value to carbon.

7 Currently, China National ETS only covers the power sector but is expected to expand to industrial sectors.

8 See for a press release from the UK government: <https://www.gov.uk/government/news/end-to-coal-power-brought-forward-to-october-2024>

9 <https://unfccc.int/sites/default/files/resource/BUR4.Brazil.pdf>



Figure 4: Relative effectiveness of carbon pricing in driving emissions reductions in different sectors and relevant companion policies

Source: adapted from ICAP (2020b), *Emissions Trading Worldwide: Status Report 2020*; Burke et al. (2019), *How to price carbon to reach net-zero emissions in the UK*

2.2.3 Setting the ETS cap or carbon tax rate

Good ETS design – including setting the cap – starts with good data. An ETS cap is the total amount of allowances issued by government over a particular period. It can be determined ex-ante by setting an upper limit on allowable emissions (e.g. **EU** and **Korean** ETSs) or ex post based on benchmarks and levels of production (e.g. **China** National ETS and **Indonesia** pilot ETS). The cap is the crucial component in determining the ambition of the system and the carbon price it delivers. Calculating the cap requires accurately measured and truthfully reported data. Decision making based on poor data can lead to a cap higher than actual emissions – as happened in the first phase of the **EU** ETS – eliminating the incentive for companies to abate. A mandatory prior MRV system and an initial pilot ETS phase – both of which were pursued in **Mexico** – are ways of addressing this. The robustness of cap setting, as well as the stringency of the cap, can develop over time in line with improved data.

Recent innovations in ETS design mean that they can now offer greater price stability. A common criticism of ETSs over the past decade has been that persistently low prices, caused by a surplus of allowances, have provided a weak incentive to reduce emissions. Recent reforms (e.g. **EU**, **UK**) have made systems more responsive, for instance by removing allowances from the market in the case of a surplus and introducing more allowances in the event of price spikes. These new mechanisms – to support prices when they drop too low and to respond flexibly when they rise too high – allow for greater influence over the carbon price, ensuring it remains at a politically acceptable level consistent with the member’s targets.

Appropriate and politically acceptable carbon tax rates vary between members, although specific design features can help their introduction. Whether the tax targets a certain level of revenue or aims to achieve a certain amount of emission reductions will impact the rate at which it is set. Like all taxes, they are subject to political constraints: in both **Argentina** and **Mexico** the legislated tax rates were lower than those originally proposed by the government. Designing carbon taxes to be impact-neutral – at least in the initial stages – can ease their introduction and political acceptability. In **South Africa**, the tax was designed so as not to have an impact on energy prices in the first phase (2019-22).

A carbon tax price trajectory offers longer-term certainty but can be difficult to follow in practice. A price trajectory – setting out in advance by how much the tax will increase over a given period – provides businesses with longer-term certainty and can help support investment. Many G20 members (e.g. **Canada, South Africa**) have taken this path; however trajectories are not always easy to follow. The **UK** carbon tax, intended to reach GBP 30/tCO₂ by 2020, has been frozen at GBP 18/tCO₂ since 2014.¹⁰ The **French** carbon tax, which was due to reach EUR 86.2/CO₂, was abandoned following protests in 2018 and is currently frozen at EUR 44.6/tCO₂. Concerns over energy prices, the impact on households and effects on industrial competitiveness can prove compelling reasons to not to increase a carbon tax as originally planned.

2.2.4 Approach to leakage protection

Leakage has been a big ex-ante concern, although empirical evidence establishing its existence ex-post is quite weak. The risk of carbon leakage – i.e. of emissions being displaced from countries with a stringent climate policies to those without – has been a major concern. It has largely been addressed by limiting the compliance costs of energy intensive and trade-exposed companies, through tax exemptions, compensation, and distributing emissions allowances for free. These measures aim to level the playing field for industrial sectors competing in international markets and increase political acceptability. They may have also reduced the incentive to reduce emissions (Zetterberg 2014; Venmans 2016). Empirical evidence for actual carbon leakage is quite weak (Dechezleprêtre and Sato 2017). Ex-ante approaches, simulating potential carbon leakage effects, tend to find some carbon leakage effects in relevant sectors, while ex-post studies, analyzing existing policies, usually find limited to no evidence (ICAP 2020a). The lack of clear findings may be explained by the effectiveness of current carbon leakage protection instruments or the fact that prices have been relatively low until recently. Experience highlights the importance of moving away from carbon tax exemptions or free allocation amounts in an ETS based on historical emissions towards output-based rebates and allocations as quickly as possible. The long-term goal remains eliminating exemptions and free allocations (Quirion 2022).

¹⁰ The UK carbon tax is levied on fossil fuel electricity generation, in addition to the price imposed by the UK ETS. <https://researchbriefings.files.parliament.uk/documents/SN05927/SN05927.pdf>

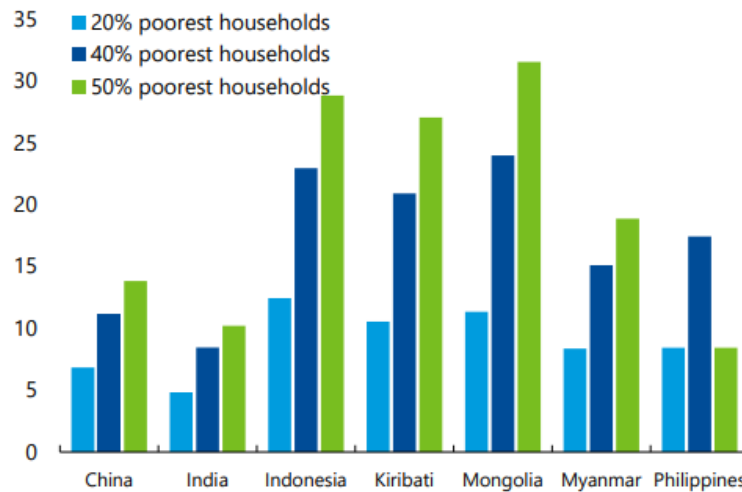
New approaches to address carbon leakage will be needed in the years ahead. The industrial sector is responsible for around 30% of global GHGs, with 60-80% coming from the production of trade-exposed basic materials (e.g. aluminium, cement, iron and steel) (Ahman et al. 2017). The low-carbon transition will require the economic value of carbon to be considered in these production processes. As a result, in the coming decades carbon leakage and competitiveness will become ever-greater political issues. Finding a balance between these two will require new approaches. One – a border carbon adjustment – is being developed for implementation by the **EU**, but other options, such as climate clubs,¹¹ product standards, consumption charges and the role of innovation support for breakthrough technologies may also be explored.

2.2.5 Revenue use

Revenue use for income redistribution can be a powerful and effective approach to protect vulnerable households, reduce inequality, and build support for carbon pricing.

In the context of a socially just transition, reducing or eliminating the regressive impact of carbon pricing on the poorest households is a common concern among members, particularly in developing countries, where failing to do so may push citizens into poverty. In practice, revenue redistribution through simple cash transfers can prove a powerful and effective tool to address these concerns. In **Canada**, eight out of ten households in provinces covered by the federal carbon pricing backstop system receive more money back than they pay in additional fuel charges (Ammar 2019). Such approaches could also apply in developing country G20 members. Findings from the IMF, summarized in Figure 5, suggest that, with a carbon tax of USD 50/tCO₂, the poorest 40% of households could be protected through cash transfers equal to about 11%, 8% and 23% of revenue raised in **China, India and Indonesia**, respectively (Alonso and Kilpatrick 2022). In the case of **Brazil**, with a tax of USD 30/tCO₂ offsetting the impact on the poorest 40% of households through a universal rebate (i.e. to all households) would require 34% of revenues, and less if the support could be better targeted at the most vulnerable (Vogt-Schilb et al. 2019).

¹¹ In its original conception, Nordhaus (2015) defines a climate club as a collection of countries which would like to reduce their GHG emissions by setting mutually recognized and ambitious targets, and which exempt each other from climate-related trade tariffs that non-members of the club would be subject to.



Source: IMF staff calculations based on household surveys.

Note: Compensation is assumed to take place through a targeted cash grant to the poorest 20%, 40%, and 50% using proxy-means testing (that is, using easily verifiable characteristics).

Figure 5: Percentage of revenue from USD 50 carbon tax needed to compensate the poorest households on average in selected Asian countries

Source: Alonso and Kilpatrick (2022) *The Distributional Impact of a Carbon Tax in Asia and the Pacific*

Revenues can also be used to help consumers respond to price increases and drive the innovation needed for the low-carbon transition. Revenues can support measures to help consumers improve their energy efficiency and limit the impact of any increase in energy prices caused by carbon pricing. In **France**, proceeds from the EU ETS help fund a program of subsidized energy efficiency improvements for poorer households. Compensation can also be provided to industrial entities to reduce any negative competitiveness impacts resulting from higher electricity prices.¹² Revenues can provide crucial support for early-stage and innovative technologies to reach market readiness. The **EU** ETS's Innovation Fund will provide around EUR 38 billion from 2020 to 2030 to support innovative projects in areas including carbon-neutral iron and steel production using green hydrogen and developing end-to-end carbon capture and storage value chains.¹³ In **China**, the allowances in the national ETS are freely allocated at the time of writing but some of the pilot ETSs (e.g. Guangdong, Hubei) do raise revenues. An important lesson learned is that transparent and targeted revenue use that help impacted citizens and industries switch to low-carbon alternatives and reduce the impact of higher energy prices can be a powerful tool to ensure the durability of the carbon pricing instruments.

12 For additional details see, https://ec.europa.eu/clima/eu-action/eu-emissions-trading-system-eu-ets/free-allocation/carbon-leakage_en#financial-compensation-for-indirect-emissions for the EU & <https://www.gov.uk/government/publications/uk-emissions-trading-scheme-and-carbon-price-support-apply-for-compensation/compensation-for-the-indirect-costs-of-the-uk-ets-and-the-cps-mechanism-guidance-for-applicants> for the UK.

13 For additional details see: https://ec.europa.eu/clima/eu-action/funding-climate-action/innovation-fund_en

2.2.6 Stakeholder Engagement and Communications

Different types of engagement are appropriate for different types of stakeholders at different phases of the policy process. Figure 6 illustrates the diversity of objectives, actors and considerations for stakeholder engagement and communications in the context of an ETS, but a similar assessment applies for carbon taxes. Stakeholder engagement helps to build understanding and expertise among all parties, enhances credibility and trust by providing useful information to those involved, and encourages acceptance and active participation (PMR and ICAP 2021). Engagement of external stakeholders – e.g. companies and industry groups, trade unions, civil society groups – is a vital part of the policy design and implementation process and is common in G20 members. It can take many forms: hearings with selected stakeholders that have implemented (e.g. **EU ETS** and **Korea ETS**), workshops and bilateral meetings (e.g. **South Africa**), public meetings (e.g. **Tokyo ETS**), regular meetings with consolidated working groups (e.g. **Mexico**) (PMR & CPLC 2018). Although most countries organize external stakeholder consultations in the design or review phases of the CPI, these consultations can also take place on an ongoing basis (e.g. **Germany's** Working Group for Emissions Trading (AGE) regular meetings).



Figure 6: Objectives and actors for effective stakeholder engagement

Source: Reproduced from: PMR and ICAP (2021) *Emissions Trading in Practice: a Handbook on Design and Implementation*

Planning on how to communicate effectively should start early and revolve around messages that connect to the audience's core values. Communicating the benefits of carbon pricing in a way that speaks to different audiences is an essential part of developing public acceptability and policy longevity. The use of revenues is often key. Spending revenues on areas of public concern – and communicating this clearly – can be more persuasive than economic arguments about the instruments' efficiency (PMR & CPLC 2018). The message should resonate with the audience. In **Canada** the federal government has used effective framings tailored to the local context, emphasizing a moral and fairness narrative based around “our responsibility to do the right thing”, as well as clearly explaining revenue use. The **French** yellow vest ('Gilets jaunes') protest movement in response to the announcement of an acceleration of the planned carbon tax increase shows how public pressure can form against carbon pricing. While good communications is not the only tool to address this – substantive policy responses, such as revenue use and social protections must be in place – it is a key part building and retaining public acceptability (Conway et al. 2019).

3. Utilizing the economic value of carbon: approaches in the G20 to carbon pricing assessment

3.1 Assessing the socio-economic impact of carbon pricing in G20

Ex-ante modelling exercises have been an important tool for policy makers to understand the socio-economic impacts of planned or existing CPIs, but they need to be adapted to local needs. G20 members have used modelling extensively to understand the socio-economic impacts that planned policies will have on the economy and society. Key questions that modelling exercises have sought to answer refer to impacts on GHG emission reductions and imports and exports in **Indonesia** (Deloitte Tohmatsu Financial Advisory); possible price trajectories and projected revenues for the government in **France** (Callonnec, Gaël, et al. 2009); income distribution in **South Africa** (Ward et al. 2016); and impact on net present social value from the introduction of **UK** ETS (BEIS 2020). An important lesson is that no single modelling approach can adequately assess the diverse set of socio-economic impacts and that complementary approaches will be necessary for a robust ex-ante assessment.

Options to mitigate potential negative impacts can already be identified at the impact assessment stage. Socio-economic impact assessments will typically look to understand possible negative impacts, such as on household incomes or on industrial sectors. Solutions to potential problems can be identified and tested concurrently. When analyzing the implementation of the ETS in **Mexico**, a study on the potential for carbon leakage from the introduction of an ETS assessed and recommended different design measures that could mitigate the competitiveness concerns (Vivid Economics 2018). In **France**, before the introduction of the carbon tax, the final recommendations of a study included the incorporation of a compensation system that would target the most affected economic sectors and categories of households (Comité pour la Fiscalité Écologique 2013).

Multiple stakeholders contribute to understanding the impacts of carbon pricing. Typically, governments either undertake or commission analyses on the socioeconomic impacts of CPIs. For developing country members, international development organizations have played a key role in supporting such studies. In **Argentina, Mexico, South Africa** and **Indonesia**, organizations such as the World Bank and the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) have supported the development of modelling studies and other research to understand the impact of carbon pricing on society and the economy. Other projects supported by the World Bank, among others, include the Finance Ministers' "Coalition for Climate Action", an initiative of 72 ministers working on measures leading to effective carbon pricing reflecting the diverse interests of both the global north and south. The coalition includes 11 ministers from G20 members (e.g. **Canada, France, Indonesia, Republic of Korea**). Engaging directly with affected stakeholders is an important complementary way of understanding the impacts. For example, **Türkiye**, with support from the World Bank, held extensive consultations with a diverse set of stakeholders to consider different carbon pricing options and their implications in developing its approach to utilizing

an economic value of carbon.¹⁴

3.2 Assessing how carbon pricing can support NDC implementation

CPIs are an increasingly important part of members' climate policy portfolios to achieve their NDCs and other long-term climate goals. G20 members such as **China** and the **EU** have made clear how their ETSS are a core policy tool to achieve their climate goals. Following the announcement of their updated NDCs and net-zero commitments, both the **EU** and **UK** are in the process of reforming their systems to ensure they are consistent with their emissions reduction targets. Socio-economic impacts assessments are a key tool to assess how CPIs will support NDC implementation, through estimating not only GHG impacts but important co-benefits such as improved air quality. Other G20 members – for example **Indonesia** and **Brazil** – have highlighted the role Article 6 could play in their NDC achievement, particularly in the land use sector.

NDCs and broader climate commitments have helped build the case for CPIs. The adoption of NDCs and domestic climate targets have helped policymakers make the case for implementing CPIs. In **South Africa**, an assessment in 2007 of future emissions scenarios and mitigation options – including a carbon tax – informed the country's announcement at COP15 in 2009 of a voluntary commitment to reduce GHGs 34% and 42% below business-as-usual emissions in 2020 and 2025 respectively. Building on this commitment, the government launched a public consultation on a carbon tax in 2010, with the tax forming an integral part of the 2011 National Climate Change Response Policy (National Treasury of South Africa 2010; van Heerden et al. 2016; Department of Environmental Affairs 2011). In **Mexico**, in the early stages of planning for the implementation of an ETS, government officials used the sectoral climate commitments that the country had declared in its NDC to respond to the initial reluctance of private sector representatives (PMR and ICAP 2021).

3.3 Aligning multiple domestic carbon pricing instruments

CPIs can effectively be combined to achieve different policy objectives. G20 members have implemented CPIs in different combinations to achieve their goals. The **UK's** carbon tax was introduced in 2013 on fossil fuel inputs in the electricity generation sector as an effective 'top up' to the **EU** ETS price, which was considered too low. The tax has remained in place even with the subsequent rise in **EU** and now **UK** ETS allowance prices. A recent study found this has contributed to the faster decarbonization of the UK power sector (Leroutier 2022). Different instruments can also tackle different emissions. In **Germany** and **France** respectively, an ETS and a carbon tax have been introduced on many of the emissions not already covered by the **EU** ETS, to expand the coverage of carbon pricing in their economies. Under its "fit-for-55" package the **EU** itself is considering the adoption of a new emissions trading system for buildings and road transport. When launched, Indonesia's hybrid approach - which combines emissions trading and carbon taxation – will provide important lessons for other developing countries in the G20 and more broadly.

¹⁴ See PMR Türkiye website for additional details: <https://pmrturkiye.csb.gov.tr/>.

Crediting mechanisms can be combined with ETS/carbon taxes to provide flexibility and extend emissions coverage. Allowing offset credits from domestic projects to be used for compliance under an ETS/carbon tax can give regulated entities greater flexibility and allow for mitigation to be achieved at lower cost. The Mexican and South African carbon taxes both allow a portion of the compliance obligation to be met through offset credits, as does China's national ETS. This approach effectively extends the coverage of carbon pricing, incentivizing activities (e.g. reforestation, low-carbon farming) that may not be suitable for direct inclusion in a CPI. A tax-and-offset model is a way of introducing some of the flexibility in mitigation offered by an ETS without the administrative complexity.

It is important to understand the interactions between CPIs and other measures to value carbon, particularly when they imply substantially different values for different emissions. It can help preclude unintended consequences and improve cost effectiveness. For example, Mexico undertook an assessment of the economic impacts of different carbon pricing mixes on variables like carbon price levels over time, projected revenues and administrative costs to industries (Mehling and Dimantchev 2017).

3.4 Aligning carbon pricing with other fiscal, energy and climate policies

The role of carbon pricing within a broader policy mix should be defined early on. CPIs always exist within a broader, often complex, landscape of other related policies. These policies can be complementary (e.g. energy efficiency awareness campaigns), overlapping (e.g. renewable subsidies), or counterproductive (e.g. fossil fuel subsidies) to the objectives of carbon pricing. Policy mapping is therefore an important first step, for example in **Türkiye**, where a roadmap for ETS implementation assessed the interactions with existing policies and strategies (PMR 2019). With the policies mapped, the role and contribution of carbon pricing can be determined. The **US** state of California has designed its climate policy portfolio so that each policy, such as the Renewable Portfolio Standard and the Low Carbon Fuel Standards, will generate a significant contribution to emission reductions in different sectors of the economy. In this policy mix, the cap-and-trade (or ETS) program acts as a backstop measure to guarantee overall targets are met (CARB 2017).

Carbon pricing is adaptable and can be designed to operate within a variety of existing policy mixes. Ideal market conditions for optimum carbon pricing do not reflect conditions on the ground. G20 members have varied local contexts, with different policy mixes and priorities, some of which may complicate the introduction of CPIs. In general CPIs have proven adaptable to these different circumstances. One of the clearest examples is their operation in regulated electricity markets (e.g. China, Republic of Korea). Unlike in the textbook models of carbon pricing where costs are passed through and influence the behaviour of end users, generation costs cannot be passed on freely to the consumer in most real-world settings. Despite this, **China** and **Republic of Korea** adapted their ETS design to ensure that end users – by having to also surrender allowances – continued to face a carbon price and hence an incentive to mitigate.

Ensuring the coherence of measures utilizing the economic value of carbon and other climate and energy policies is crucial for maximizing emissions reductions while limiting the socio-economic impacts. When introducing or reforming measures which operationalize the economic value of carbon to affect the decisions of key actors, a detailed and careful assessment of the broader policy landscape is critical. Crucially, any reform of the instruments in the climate and energy policy portfolio, must be based on a transparent review process and developed considering the views of key stakeholders so as not to be a source of uncertainty. For example, in the **EU** the reforms under consideration as a part of the “fit-for-55” legislative package is accompanied by ex-post evaluations of past policy efforts, stakeholder consultations and impact assessments, which are all publicly available.¹⁵ In exercises like this, aiming for a consistent, or at least comparable, economic value of carbon across the economy can act as a focal point, enhance cost effectiveness and coordinate the public and private efforts which necessarily span decision-makers with extremely diverse interests.

3.5 Assessment on the impact of existing carbon markets/pricing

Higher carbon prices are needed to meet the objectives of the Paris Agreement. The High-Level Commission on Carbon Prices concluded that a Paris-compatible carbon price was in the range of ‘at least at least USD 40–80/tCO₂ by 2020 and USD 50–100/tCO₂ by 2030, provided a supportive policy environment is in place’ (CPLC 2017). Within the G20 direct carbon prices range from range from less than USD 1/tCO₂ to almost USD 100/tCO₂. Direct carbon prices averaged EUR 3.62 per tCO₂ across 2018 to 2021 when averaged across all energy-related CO₂ emissions, including those not covered by a CPI; including indirect pricing through fossil fuel raises the figure to EUR 18.71 per tCO₂ (OECD 2021).¹⁶ According to an IMF/OECD report for the G20 finance ministers, ‘the carbon price increases that are estimated to be needed for G20 members to achieve their NDC commitments through pricing alone vary from less than USD 25 per ton of CO₂ in 2030 in five countries, to between USD 25 and USD 75 per ton of CO₂ in four countries, and over USD 75 per ton of CO₂ in ten other cases’ (IMF & OECD 2021).

Assessments find that CPIs work and have reduced emissions – but there is more potential to unlock. There have been relatively few ex-post assessments of how CPIs have impacted GHG emissions. Most existing studies focus on Europe. While the results vary for different countries, generally low carbon prices have led to modest emissions reductions: one literature review found that ‘the aggregate reductions from carbon pricing on emissions are limited—generally between 0% and 2% per year’ (Green 2021); while another assessment across five sectors in 39 OECD countries concluded there was decreased growth in carbon emissions by 1% to 2.5% on average (Rafaty et al. 2022). The assessments also show that higher prices can unlock more emissions reductions. In the **UK** between 2013 to 2016 the tax was found to have lowered emissions by 6.2% at an average cost of EUR 18/tCO₂ (Abrell et al. 2022). In **France** the carbon tax reduced manufacturing CO₂ emissions in 2018 by 5% compared to a no-tax scenario (Dussaux 2020).

¹⁵ See European Commission webpage on the European Green Deal for additional details at https://ec.europa.eu/clima/eu-action/european-green-deal/delivering-european-green-deal_en#documents.

¹⁶ Calculation excludes Saudi Arabia.

4. Recommendations on leveraging the economic value of carbon for NDC implementation and low-carbon transition

The understanding of climate change as a negative externality has been recognized for decades. However, the failure to account for the value of carbon – and to internalize its costs – has led to an overproduction of GHGs, a situation which continues to this today. In the years and decades ahead, if the world is to succeed in transitioning to a low-carbon economy, the economic value of carbon must be a central component of decision-making and policy frameworks.

G20 members have made progress in this area. The ways of utilizing carbon's economic value are varied and look set to play an important role in reaching members' NDC targets. Both when broadly defined, or when considering only the CPIs on which this report focuses, it is clear there is no one-size-fits-all approach. Carbon must be valued in a way that is consistent with the local economic, social and political context. In many G20 members this is with a national-level CPI; in others, action is happening at sub-national level. In all members there is a great diversity of policies which give incentives to reduce or remove emissions and therefore place an economic value on carbon, however indirectly.

G20 members must now go further. Carbon prices – even when considering both direct and indirect pricing – cover fewer than half of GHGs in the G20 and, with some exceptions, are at price levels largely outside the range identified as being consistent with the Paris Agreement temperature goals. The wider ways G20 members value carbon – e.g. through regulations, subsidies, regulations, tax incentives – often imply different types and levels of implicit prices for different decision-makers. As such they do not provide the broad, economy-wide incentive a CPI can offer. Carbon valuation in its various forms must therefore become more consistent and systematic.

Giving an economic value to carbon alone is not sufficient. GHGs are not the only relevant market failure. Other critical failures include: a lack of information; imperfect risk and capital markets; undervaluation of research and development; support for necessary networks and systems (e.g. electric vehicle charging infrastructure, upgrading electricity grids); valuing mitigation co-benefits (e.g. air and water quality) (Stern and Stiglitz 2022). Separate policies are needed to address these and other market failures.¹⁷ They should nevertheless work in tandem with measures that give an economic value to carbon, without which resources will continue to be allocated to emissions-intensive activities and policies inconsistent with the Paris Agreement temperature goals within countries and internationally.

The following recommendations for G20 members are grouped into two categories: actions related to the implementation of economic carbon valuation measures; and priority areas for coordination at the G20 level.

¹⁷ See also Figure 4 for an overview of complementary policies.

4.1 Recommendations on implementation of measures to utilize the economic value of carbon

- **Expand the coverage of the measures that utilize the economic value of carbon.** As a first step, members must increase the share of emissions covered by measures that impose some form of carbon value in order to ensure more decision-makers are incentivized to reduce GHGs. CPIs provide an economically efficient way of applying a single price signal across many entities. National-level CPIs may not be appropriate for all members and not for all sectors. Some members already implement sub-national CPIs; in these instances, the priority is to expand the reach and consistency of the various instruments chosen, with carbon valuations in line with those needed for NDC achievement.
- **Develop an approach that is appropriate to the member's objectives and circumstances.** Introducing measures to utilize the economic value of carbon requires tailoring design features to the domestic context. It is often possible to work with rather than push against local constraints when designing successful measures utilizing the economic value of carbon. This means that the measure must be carefully selected in inclusive consultations with stakeholders, its scope of application is appropriate for the national context, and its level of ambition does not compromise its durability.
- **Start simply and build over time – both in ambition and complexity.** Initially targeting sectors with few large emitters and pre-existing high-quality emissions data can help build experience with various instruments. Once the foundations are laid – and businesses as well as citizens become familiar with the idea of carbon costs and low-carbon alternatives to status quo emerge – the approaches can evolve over time, and ambition can be raised in due course.
- **Build facility-level and public sector MRV capacity, especially in developing countries members, as a no-regrets measure.** Even if these efforts do not lead to direct mandatory carbon pricing, they will improve the accuracy of emissions reporting in national inventories, facilitate results-based finance activities and participation in Article 6 mechanisms. They also underpin the environmental integrity of emissions reduction projects which generate credits for voluntary and international compliance markets such as CORSIA.
- **Increase efforts to reduce and remove inefficient fossil fuels subsidies and aim to remove all fossil fuel subsidies in the long run.** These subsidies can act as a negative carbon price and undermine the effectiveness of approaches to create an economic value of carbon. The G20 agreed in 2009 to phase out inefficient fossil fuel subsidies, a goal reaffirmed more broadly in COP26; however, the IMF estimates global subsidies (explicit and implicit) amounted to USD 5.9 trillion in 2020 and are forecast to rise further (IMF 2022).

- **Use revenues collected to support and engage the most vulnerable income groups and regions, and communicate specific co-benefits of emissions reduction for them.** These are key components of building public support and enabling a just transition. Carbon pricing can be a powerful way not only to reduce emissions but also inequality and comes with many co-benefits. Many members have existing social schemes for identifying and targeting support at the most vulnerable. Revenue redistribution can utilize these existing structures to ensure those who need it most are supported.
- **Assess the performance of carbon pricing instruments regularly and reform them, when necessary, through an inclusive and transparent process.** Socio-economic impact evaluations are a key tool to understand the effect of measures utilizing the economic value of carbon and to develop measures to limit any adverse consequences. Reviews should be inclusive and transparent so that all stakeholders feel their voices are heard and appreciate that the recommendations emerging from them represent compromises. Open and transparent review and reform processes ensure that any changes to the instruments do not create undue uncertainty.

4.2 Recommendations on enhanced collaboration among G20 members

- **Establish a more structured forum for sharing experiences** to enable all G20 members, especially those at earlier stages of design and implementation, to learn from the wealth of experience of G20 members in the different approaches towards valuing carbon.
- **Commence discussions on a collaborative framework to address carbon leakage during the low-carbon transition.** As the world decarbonizes, carbon leakage and competitiveness will become ever-greater political issues. G20 members should start discussions now on how to address the risk of carbon leakage without compromising the benefits of international trade. Designing an inclusive framework in a cooperative manner and ensuring that it reflects the different national circumstances and commitments of members is essential. This could draw on ideas such as the climate club, recently agreed among the G7.
- **Extend support beyond G20 members.** For many developing countries outside the G20, Article 6 of the Paris Agreement will play a central role in giving an economic value to carbon. Many are also interested in exploring domestic CPIs to decarbonize. Drawing on their extensive experience with CPIs as well as with international carbon markets under the Kyoto Protocol, G20 members should actively engage with and build technical capacity in non-members to ensure a cost-effective low-carbon transition more broadly and enable them to participate equitably in Article 6 mechanisms

5. Appendix

5.1 G20 member country factsheet

Note for readers

The following factsheets provide information on carbon pricing instruments currently operational in G20 members. Unless otherwise stated, all information is drawn from the World Bank's Carbon Pricing Dashboard.¹⁸ In members in which there is currently no explicit CPI in operation a description of selected policies relevant to the economic value of carbon is provided. These are based on direct inputs from G20 members and the authors' own research and are not intended to be comprehensive. The categories for members with explicit CPIs are as follows:

- **Carbon pricing instruments:** either an ETS or a carbon tax
- **Scope and coverage:** which sectors are covered and what % of national emissions
- **Recent price level:** the nominal prices on 1 April 2022. For carbon taxes, it corresponds to the carbon tax rate. When the carbon tax rate varies by fuel type, the range is presented. For ETSs, it corresponds to the price of an allowance. For the Canadian OBPS, it corresponds to the excess emissions charge payment rate
- **Revenue raised:** revenues raised in 2021 either through levying a carbon tax or auctioning ETS allowances
- **Use of revenues:** where relevant, if tax/ETS auctioning revenues are used for specific purposes
- **Offset use:** whether offset credits can be used to meet some or all of an entity's compliance obligation
- **Competitiveness/exemptions:** How the risk of carbon leakage is addressed, alongside any other exemptions
- **Notes:** any other relevant information

¹⁸ https://carbonpricingdashboard.worldbank.org/map_data

Argentina	
Carbon pricing instrument 1. Argentina carbon tax (2018)	
Scope and coverage 1. All sectors are covered (with partial exemptions), covering 20% of national emissions	
Recent price level 1. USD 0.003 – USD 5 tCO ₂ e	Revenue raised (2021) 1. USD 272 million
Use of revenues 1. There is no earmarking of carbon tax revenues	
Offset use 1. No	
Competitiveness/exemptions 1. Exemptions include international aviation and international shipping, fuels export, the biofuel content of liquid fuels, and fossil fuels as inputs in chemical processes	

Australia
<p>An ETS – the Carbon Pricing Mechanism (CPM) – operated between 2012 and 2014. It covered around 60% of Australia’s emissions, including those from electricity generation, stationary energy, landfills, wastewater, industrial processes, and fugitive emissions. Allowances could be bought at the fixed price of AUD 23 and 24.15/tCO₂e in the first and second years respectively. There was free allocation of allowances to trade exposed sectors.¹⁹ The CPM was repealed in 2014. In the same year the Emissions Reduction Fund (ERF) was introduced. The ERF purchases Australian Carbon Credit Units (ACCUs), which represent emissions avoided or stored in Australia from a variety of different project types. Project operators can bid for an options contract, which gives them the right, but not the obligation, to sell their credits to the government.²⁰ AUD 2.7 billion has so far been committed to 528 projects with an expected total reduction of 217 MtCO₂e²¹. The ERF also includes a safeguard mechanism. This establishes a baseline emissions level for covered entities, which are facilities with annual emissions of more than 100,000 tCO₂e. Around 50% of national emissions are covered. Entities must ensure net emissions do not exceed their baseline, with any excess covered by surrendering ACCUs. The safeguard mechanism started operation in July 2016.²²</p>

19 <https://www.cleanenergyregulator.gov.au/Infohub/CPM/About-the-mechanism>

20 <https://www.cleanenergyregulator.gov.au/ERF/About-the-Emissions-Reduction-Fund/How-does-it-work>

21 <https://www.cleanenergyregulator.gov.au/ERF/auctions-results/april-2022>

22 <https://www.cleanenergyregulator.gov.au/ERF/About-the-Emissions-Reduction-Fund/the-safeguard-mechanism>

Brazil

Brazil has been a major participant in international carbon markets under the Kyoto Protocol, hosting 344 registered Clean Development Mechanism projects, behind only China and India. The expected emissions reductions from these projects are around 50 MtCO₂e per year.²³ Brazil also participates in the UNFCCC's Warsaw Framework for REDD+, which provides results-based finance for countries that reduce emissions from deforestation and forest degradation. In 2019 Brazil received USD 96 million from the Green Climate Fund for avoiding around 19 MtCO₂e between 2014 and 2015.²⁴ The proceeds were used in part to establish the Floresta+ Programme. Established in 2020, Floresta+ seeks to provide monetary and non-monetary incentives to preserve and enhance native vegetation.²⁵ Floresta+ is one among many such Payment for Environmental Services programs in Brazil, which provide voluntary financing for defined environmental services.²⁶ The possibility of establishing an ETS is also currently being discussed under two different processes, under Law 14,120/2021 and Bill 528/2021. The possibility of implementing an ETS in the power sector is under consideration. Since 2013, a group of leading companies has been participating in a voluntary ETS simulation to gain experience and develop proposals for an ETS in Brazil.²⁷

Canada²⁸

Carbon pricing instruments

1. Canada federal fuel charge (2019)
2. Canada federal output-based pricing system (OBPS) (2019)

Scope and coverage

1. The fuel charge applies to 21 types of fuel, covering 22% of national emissions
2. The OBPS applies to industrial facilities that emit 50 KtCO₂e per year or more in emissions-intensive and trade-exposed sectors. Similar facilities that emit 10Kt CO₂e per year or more may participate voluntarily. The system covers 7% of national emissions

Recent price level

1. USD 40/tCO₂e
2. USD 40/tCO₂e

Revenue raised (2021)

1. USD 4,798 million
2. USD 264 million

23 <https://cdm.unfccc.int/sunsetcms/Statistics/Public/CDMinsights/index.html#reg>

24 <https://www.greenclimate.fund/project/fp100>

25 <https://www.in.gov.br/en/web/dou/-/portaria-n-288-de-2-de-julho-de-2020-264916875%20>

26 <https://documents1.worldbank.org/curated/en/554361468020374079/pdf/862700NWP0ENGL00Box385172B00PUBLIC0.pdf>

27 https://icapcarbonaction.com/system/files/document/220408_icap_report_rz_web.pdf

28 <https://www.canada.ca/en/environment-climate-change/services/climate-change/pricing-pollution-how-it-will-work/putting-price-on-carbon-pollution.html>

<p>Use of revenues</p> <ol style="list-style-type: none"> 1. In provinces and territories that requested the application of the fuel charge, all direct proceeds are returned. Where the fuel charge is applied as a backstop, around 90% of revenues support families directly through Climate Action Incentives payments 2. Provinces and territories that voluntarily adopt the OBPS can choose to receive revenues directly. Where the OBPS is applied as a backstop, revenue is returned to the provinces and territories through funding provided by two programs aimed at industrial decarbonization and clean electricity
<p>Offset use</p> <ol style="list-style-type: none"> 1. No 2. Credits from the GHG Offset Credit System can be used for compliance in the OBPS
<p>Competitiveness/exemptions</p> <ol style="list-style-type: none"> 1. Exemptions apply for some uses in agriculture and transport, as well for farmers and off-grid communities. Industrial facilities are covered by the OBPS. 2. The OBPS establishes intensity-based benchmarks. Its design therefore responds to the carbon leakage risk for emissions-intensive trade-exposed industries.
<p>Notes</p> <p>The two components of the Canadian federal pricing system – the fuel charge and OBPS – serve as minimum national standards. Provinces and territories can choose to implement their own explicit CPIs or apply the federal system. For those that do not apply any carbon pricing – or whose policies do not meet the benchmark – the federal system will apply in full or in part as a ‘backstop’. ETSs are currently operating in Nova Scotia and Quebec, with carbon taxes in place in British Columbia and Northwest Territories. New Brunswick and Newfoundland and Labrador operate a provincial OBPS with a provincial fuel charge and carbon tax respectively. The federal system partly applies alongside provincial measures in Alberta, Ontario, Prince Edward Island and Saskatchewan. The federal system applies as a backstop in Manitoba, Nunavut, and Yukon.</p>

China	
<p>Carbon pricing instruments</p> <ol style="list-style-type: none"> 1. China national ETS (2021) 	
<p>Scope and coverage</p> <ol style="list-style-type: none"> 1. The ETS applies to CO₂ emissions from the power sector, including combined heat and power and captive power plants from other sectors. It covers 33% of national emissions. 	
<p>Recent price level</p> <ol style="list-style-type: none"> 1. USD 9/tCO₂e 	<p>Revenue raised</p> <ol style="list-style-type: none"> 1. N/A
<p>Use of revenues</p> <ol style="list-style-type: none"> 1. Although there has been no revenue raised to date, draft regulations from 2021 propose a gradual introduction of auctioning and a new national ETS fund. 	
<p>Offset use</p> <ol style="list-style-type: none"> 1. Up to 5% of emissions through China Certified Emissions Reductions (CCERSs), generated from projects not covered by the national ETS. 	
<p>Competitiveness/exemptions</p> <ol style="list-style-type: none"> 1. All allowances are freely allocated. Compliance obligations are currently limited to a portion of emissions above the benchmark value. 	

Notes

Eight ETSs currently operate at provincial or city level: Beijing, Guangdong, Shanghai, Shenzhen, Tianjin (started in 2013); Chongqing, Hubei (2014); and Fujian (2016). These systems will gradually be integrated into the national ETS. Aside from explicit carbon pricing through ETSs, China provides other economic incentives to pursue low-carbon practices. These include: taxes on coal, crude oil, natural gas and other fossil energy; a renewable energy tariff surcharge subsidy; new more efficient vehicles exempted from vehicle purchase taxes.

France

Carbon pricing instruments
1. France carbon tax (2014)

Scope and coverage

1. The carbon tax applies to CO₂ emissions from mainly the industry, buildings, and transport sectors. It covers 35% of national emissions.

Recent price level

1. USD 49/tCO₂e

Revenue raised (2021)

1. USD 8,400 million

Use of revenues

1. In 2016 EUR 3 billion (out of EUR 3.8 billion) contributed to financing tax credits for competitiveness and employment. In 2017, EUR 1.7 billion was directed towards financial support for renewable energy.²⁹

Offset use

1. No

Competitiveness/exemptions

1. Partial exemptions for certain industrial processes, power production, shipping, aviation, public transport, freight transport and agriculture. Fishing vessels are fully exempt, as are operators already covered by the EU ETS.

Notes

Aside from the carbon tax, France implements a range of measures to support emissions reductions. These include: energy taxation in line with the European Directive on Energy taxation as part of the EU ETS; subsidies for retrofitting buildings and for clean transportation; an energy certificate scheme for energy providers that induce energy savings for customers. France has also established the Low Carbon Label ("label bas carbone") framework to certify emissions reductions/absorptions for carbon projects. Domestic flights must offset their emissions.

Germany

Carbon pricing instruments

1. Germany national ETS (2021)

Scope and coverage

1. CO₂ emissions from buildings and road transport, covering 40% of national emissions.

²⁹ <https://www.ecologie.gouv.fr/fiscalite-carbone>

Recent price level 1. USD 33/tCO ₂ e	Revenue raised (2021) 1. USD 7.94 billion
Use of revenues 1. Revenues accrue to the Energy and Climate Fund, which funds activities to support the low-carbon transition. In the 2021 financial year, EUR 4.7 billion raised through the German ETS was used to lower the renewable energy surcharge, thus reducing consumers' electricity bills.	
Offset use 1. No	
Competitiveness/exemptions 1. Activities deemed to be at risk of carbon leakage in the EU ETS are also eligible to receive compensation based on sectoral fuel benchmarks and fixed compensation levels under the German ETS. Additional sectors/sub-sectors may qualify upon request if they meet thresholds for emissions and trade intensity.	
<p>Notes</p> <p>As part of the “Fit for 55” package, the EU Commission has proposed a new ETS for the buildings and road transport sectors. Should this be agreed Germany will then work on a transition from the national ETS towards the new EU-wide ETS. Aside from the national ETS, Contracts for Difference are considered a potentially useful option to support emissions reduction in certain industries by paying the difference between older, emissions-intensive and newer, low-carbon production methods.</p>	

India

India has been a major participant in international carbon markets under the Kyoto Protocol, hosting 1,685 registered Clean Development Mechanism projects, second only to China. The expected emissions reductions from these projects are around 120 MtCO₂e per year and come primarily from renewable energy activities.³⁰ India also operates several market-based measures to enhance energy efficiency and promote renewable energy generation, both of which implicitly place a price on carbon. The Perform, Achieve and Trade (PAT) is a market-based mechanism to reduce energy intensity in selected industries. It covers around 50% of primary energy consumption in 13 sectors. Entities that outperform their specific energy consumption standard are issued 'ESCerts', which can be traded and used by underperforming facilities.³¹ India also operates a market for renewable energy certificates (REC). State-level electricity regulators must determine local renewable purchase obligations, which can then be met by obligated entities through purchasing RECs. RECs are one part of a wider policy package to support renewable generation, which also includes generation subsidies and feed-in-tariffs.³² In a 2021 discussion paper, the Bureau of Energy Efficiency set out a roadmap for developing a national carbon market. The first stage would see measures to strengthen demand within the PAT and REC markets. This would be followed by efforts to increase supply of offsets in a voluntary carbon market. This could then transition into an intensity-based cap-and-trade system.

30 <https://cdm.unfccc.int/sunsetcms/Statistics/Public/CDMinsights/index.html#reg>

31 <https://beeindia.gov.in/sites/default/files/NCM%20Final.pdf>

32 <https://www.adb.org/sites/default/files/publication/794046/adbi-wp-1313.pdf>

Indonesia

In 2021, the government issued Presidential Regulation No. 98, which among other things establishes carbon economic instruments as one of the tools to achieve Indonesia's NDC target. There are three mechanisms foreseen: carbon trading (cap-and-trade); carbon tax; and a system of results-based payments. Other mechanisms may subsequently be included. Around the same time, legislation on wider tax reforms was passed, which established a legal basis for the introduction of a carbon tax. This tax was intended to apply initially to coal-fired power plants at a rate of approximately USD 2/tCO₂e, covering 26% of national emissions. It was planned to enter operation in April 2022 but was delayed in response to rising price of energy commodities. The tax will work in tandem with an ETS, which will also cover the power sector, as a hybrid "cap-trade-and-tax" system. Facilities that exceed their emissions cap under the ETS will have the option to compensate for their surplus emissions through surrendering allowances and/or offsets, or paying the carbon tax. The rate of the tax will be linked to the price of the domestic carbon market. The ETS will build on the experience gained through a voluntary trial conducted between March and August 2021. This involved 80 coal-fired power plants, comprising over 75% of power sector CO₂ emissions.

Italy

Italy implements direct carbon pricing through its participation in the EU ETS (see EU factsheet). It covers around 1,300 installations in Italy, representing 33% of GHG emissions. Aside from the EU ETS, an implicit carbon price is realised through the taxation of fuels, which applies to diesel, gasoline, fuel oil, LPG, natural gas and coal and coke. In total around 85% of CO₂ emissions from energy use were priced – explicitly or implicitly – in 2021.

Japan ³³	
Carbon pricing instruments 1. Japan carbon tax (2012)	
Scope and coverage 1. The carbon tax applies to CO ₂ emissions from the combustion of fossil fuels, covering 75% of national emissions.	
Recent price level 1. USD 2/tCO ₂ e	Revenue raised (2021) 1. USD 1.8 billion
Use of revenues 1. Revenue is used to support renewable energy projects and to enhance energy-savings measures.	
Offset use 1. No	
Competitiveness/exemptions 1. Certain uses of fossil fuels in the industry, transport, agriculture, and forestry sectors are exempt and eligible for refunds.	
<p>Notes</p> <p>In 2022 the government launched a call for endorsements for a new Green Transformation (GX) League. Anticipated to start operation in 2023, it would see participating companies establish their own emission reductions targets in line with national goals. Emissions can then be traded and used, alongside carbon offsets, to meet the reduction targets. While participation is voluntary, 440 companies accounting for more than 40% of Japanese emissions have endorsed the plan. It constitutes one of five pillars to mobilize the estimated JPY 150 trillion needed over the next ten years to finance the green transformation in Japan.³⁴ At the subnational level, two linked ETSs currently operate in Saitama and Tokyo. In 2013 Japan established the Joint Crediting Mechanism, which is a bilateral offset crediting mechanism to incentivize low-carbon technologies in 17 partner countries. The program can provide emissions reductions to help Japan and partner countries to meet their NDC targets through using Article 6 of the Paris Agreement.</p>	

33 <https://www.env.go.jp/policy/tax/about.html>

34 https://www.japan.go.jp/kizuna/2022/06/clean_energy_strategy.html

Republic of Korea	
Carbon pricing instruments 1. Korea ETS (2015)	
Scope and coverage 1. The ETS includes emissions from the industry, power, buildings, domestic aviation, waste and public sectors, covering 73% of national emissions.	
Recent price level 1. USD 19/tCO ₂ e	Revenue raised (2021) 1. USD 243 million
Use of revenues 1. The revenue from auctions is reinvested to support small- and mid-sized companies. ³⁵	
Offset use 1. Operators can meet up to 5% of compliance obligations through eligible offsets.	
Competitiveness/exemptions 1. Certain emission-intensive and/or trade-intensive sectors are eligible to receive free allowances up to 100% of the benchmark or historical emission level. Certain small emitters are exempt from the ETS.	

Mexico	
Carbon pricing instruments 1. Mexico carbon tax (2014) 2. Mexico pilot ETS (2020)	
Scope and coverage 1. The carbon tax covers CO ₂ emissions from all sectors, and all fossil fuels except natural gas, covering 44% of national emissions. 2. The ETS covers CO ₂ emissions from the power and industry sectors, covering 40% of national emissions.	
Recent price level 1. USD 0.42 – USD 4/tCO ₂ e 2. USD 0/tCO ₂ e	Revenue raised (2021) 1. USD 314 million 2. N/A
Use of revenues 1. Revenues are not earmarked and flow back into the general budget 2. There have been no revenues raised to date.	
Offset use 1. Credits from CDM projects developed in Mexico or Green Certified Emission Reductions that are traded in the European Energy Exchange. 2. Covered entities may utilize offsets or early action credits to meet up to 10% of compliance obligations.	
Competitiveness/exemptions 1. Natural gas is exempted from taxation and the tax is capped at 3% of the fuel sales price. 2. All allowances are currently allocated for free.	

³⁵ <https://ieta.org/resources/Resources/CarbonMarketBusinessBrief/CarbonMarketBusinessBriefsKorea2020.pdf>

Notes

In addition to the national carbon tax and ETS, four subnational carbon taxes operate in Zacatecas, Baja California, Tamaulipas and Estado de México, introduced in 2017, 2020, 2021 and 2022 respectively.

Russia

A regional pilot ETS has been planned to launch in the Sakhalin region in September 2022, with the aim of ensuring that the region achieves net zero emissions by the end of 2025. This pilot is considered as a test to identify GHG regulation measures that could later be applied to other Russian regions. At the initial stage carbon caps will be applied to entities with emissions above 50,000 tCO₂e per year. The system will later cover smaller emitters. Entities will be able to use both ETS allowances and offsets to meet their obligations. In July 2021, the Federal Law “On Limiting GHG Emissions” was adopted, establishing the obligation of large emitters to account for and submit reports on GHG emissions, as well as the procedure for supporting activities for the implementation of climate projects. The approximate indirect carbon price in Russia is currently around 10 USD per tCO₂e, taking into account existing fuel taxation.

Saudi Arabia

During its G20 Presidency in 2020, Saudi Arabia launched the concept of the circular carbon economy (CCE) as a framework for reducing emissions in line with the Paris Agreement. Building on the three Rs of the circular economy – reduce, reuse, and recycle – CCE includes a fourth step of ‘remove’ and considers each of the Rs as of equal importance. For the CCE to become reality, enabling policies will be required. These could include public-private research and development funding, financial subsidies to de-risk investment in unproven technologies, tax incentives, direct capital investment subsidies and results-based financing. In particular, appropriate business models must be developed to support the deployment of carbon utilization or storage technologies.³⁶ Through incentivising the more efficient use of energy and carbon, these and other policies could provide an economic value to carbon.

³⁶ <https://www.cceguide.org/wp-content/uploads/2020/08/00-CCE-Guide-Overview.pdf>

South Africa	
Carbon pricing instruments 1. South Africa carbon tax (2019)	
Scope and coverage 1. The carbon tax applies to all fossil fuels combusted by large businesses in the industry, power, and transport sectors. It covers 80% of national emissions.	
Recent price level 1. USD 10/tCO ₂ e	Revenue raised (2021) 1. USD 94 million
Use of revenues 1. There is no strict earmarking of revenues, but three priority areas for revenue use been identified: reducing/not increasing other taxes; tax incentives for e.g. energy efficiency; “soft earmarking” for free energy and public transport. ³⁷	
Offset use 1. Up to 10% of entities’ GHG emissions from eligible projects located in South Africa.	
Competitiveness/exemptions 1. Tax exemptions of 60-95% may apply. This depends on the sector, as well as the level of trade exposure, fugitive emissions, emissions performance, offset use, and participation in the carbon budget program.	

Turkey
In 2020 Turkey published a draft legal and institutional framework to establish a pilot ETS. This would build on the existing MRV system, which has been in operation since 2015 and covers around 900 large emitters in the power and industrial sectors. With support from the World Bank’s Partnership for Market Readiness, Turkey has identified an emissions cap and developed a national allocation plan, developed Turk-SIM (an ETS simulation with gamification features), developed a transaction registry for the pilot ETS, and assessed Article 6 and options for Turkey. The date for the introduction of the pilot ETS has not yet been confirmed.

³⁷ <http://www.treasury.gov.za/public%20comments/CarbonTaxBill2019/Final%20Response%20Document%20-%202018%20Draft%20Carbon%20Tax%20Bill.pdf>

United Kingdom	
Carbon pricing instruments 1. UK carbon price support (CPS) (i.e., carbon tax) (2013) 2. UK ETS (2021)	
Scope and coverage 1. The tax applies to CO ₂ emissions from the power sector, covering 21% of national emissions. 2. The ETS applies to energy-intensive industries, the power sector, and aviation in the UK and the European Economic Area. It covers 28% of national emissions.	
Recent price level 1. USD 24/tCO ₂ e 2. USD 99/tCO ₂ e	Revenue raised (2021) 1. USD 690 million 2. USD 5.7 billion
Use of revenues 1. Revenues are not earmarked and flow back into the general budget 2. As above	
Offset use 1. No 2. No	
Competitiveness/exemptions 1. Certain types of power generation are exempt, as is all power production in Northern Ireland which is instead covered by the EU ETS. 2. Some allowances are freely allocated to emissions intensive, trade exposed sectors. The government also provides compensation for eligible entities for higher electricity costs caused by the UK ETS and CPS.	
<p>Notes</p> <p>The CPS was originally introduced to provide a stronger carbon price signal than that provided by the then EU ETS allowance price, which at the time was deemed to be insufficient. Together the two comprised a 'carbon price floor' (CPF). The CPS rate was to be confirmed three years in advance at a level which would "top up" the projected EU ETS price to reach the CPF target. Following the UK's departure from the EU and the establishment of the UK ETS the CPS continues to apply, although the rate has not been increased since 2016. The CPS rate has contributed to a significant shift in the economics of, and investment incentives for, renewable energy sources compared to coal for domestic power generation (coal-based generation fell from around 40% of electricity in 2012 to 5% in 2018).</p>	

United States

Though there is no carbon pricing instrument at the national level, federal policies to reduce emissions give an economic value to carbon. An example is Section 45Q tax credit for geologically sequestering or other qualified use of CO₂. Several explicit state-level CPIs are also in force. A cap-and-trade system has been in operation in **California** since 2012, covering power, industry, transport, and buildings, which amount to around 74% of the state's GHG emissions. The ETS has been linked to that of the Canadian province of Québec's since 2014. The **Regional Greenhouse Gas Initiative (RGGI)**, established in 2009, is an ETS covering 11 New England and Mid-Atlantic states with the aim of reducing GHG emissions from the power sector. Within the RGGI, Massachusetts has operated an ETS since 2018, also covering the power sector. The ETS in Oregon has since 2022 covered suppliers of liquid fuels and propane and natural gas utilities. Free compliance instruments are annually distributed to fuel suppliers according to the declining cap. The state of **Washington** plans to operate an economy-wide, cap-and-trade program from 2023.

European Union ³⁸	
Carbon pricing instruments 1. EU ETS (2005)	
Scope and coverage 1. Power, industry, and intra-EEA aviation, covering 39% of emissions.	
Recent price level 1. USD 87/tCO ₂ e	Revenue raised (2021) 1. USD 34 billion
Use of revenues 1. Revenues from auctioned allowances accrue to member states' national budgets, at least 50% of which should be used for climate- and energy-related purposes. Auction revenue also directly supports two dedicated funds: the Innovation Fund (supporting innovative and breakthrough technologies in industry) and the Modernisation Fund (supporting investments in ten lower-income member states)	
Offset use 1. No	
Competitiveness/exemptions 1. Sectors deemed at risk of carbon leakage received free allocation up to 100% of the relevant benchmark. Small emitters are exempted from participation	
<p>Notes</p> <p>In 2021 the European Commission proposed its "Fit-for-55" package, to deliver on the EU's enhanced commitment to reduce emissions by 55% by 2030 and achieve carbon neutrality by 2050. As part of this a series of amendments were proposed to the EU ETS. These include increasing the rate at which the cap is reduced, including emissions from maritime transport, transitioning from free allocation of allowances to a new carbon border adjustment mechanism, and increasing funding available from ETS revenues to the Modernisation Fund and the Innovation Fund. It also proposed establishing a new emissions trading system for buildings and road transport, to be complemented by a new Social Climate Fund to support the transition in a socially just way</p>	

³⁸ The following EU member states have carbon pricing instruments in place: Denmark carbon tax, Estonia carbon tax, Finland carbon tax, France carbon tax, Ireland carbon tax, Latvia carbon tax, the Netherlands carbon tax, Poland carbon tax, Portugal carbon tax, Slovenia carbon tax, Spain carbon tax, Sweden carbon tax, Germany national ETS, Austria national ETS. As Germany and France are G20 countries in their own right, the German national ETS and the French carbon tax are presented in their own factsheets.

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G20

INDONESIA
2022



G20 DIGITAL ECONOMY MINISTERS' MEETING 2022





Jakarta, 21 September 2022

Reference No. : B-199/DEWG/KI.01.07/09/2022
Subject : Digital Economy Minister's Letter to the Chair's Summary
To : Digital Economy Ministers of G20 DEWG Countries and Invitees

Your Excellency,

On behalf of the Indonesian G20 Presidency, I wish to commend your support and contribution during the 2022 Digital Economy Ministers' Meeting (DEMM) in Bali. I am confident the DEMM has advanced our progress in the digital economy.

Having considered the situation where no consensus was reached for the DEMM to issue a Ministerial Declaration, I decided to issue the DEMM Chair's Summary, which was read at the closing of the DEMM. Bearing in mind the spirit of consensus of the G20 members, I invited views from all members on the Chair's Summary, as I reiterated during the DEMM.

Whereas, during the DEMM, I recognized that:

1. *"Several members have condemned Russia's war against Ukraine and its disruptive impacts towards global digital economic ecosystem. While some others have stated the discrepancy between the topic of geopolitical tension to the mandate of the DEWG."*
2. the Digital Economy Ministers have broadly reached a consensus on all the substantive issues tabled by DEWG.

The above points shall constitute as part of the Chair's Summary read in the DEMM, which is hereby attached. It shall be taken as an acknowledgment of the views shared by some of the G20 members and shall not be construed otherwise.

I thank you for your significant participation in the DEMM, and avail myself of this opportunity to renew to you the assurances of my highest consideration.

Best regards,

A blue ink handwritten signature, appearing to read "Johnny G. Plate", with a long horizontal stroke extending to the right.

Johnny G. Plate
Chair



**G20 DIGITAL ECONOMY
MINISTERS' MEETING 2022
CHAIR'S SUMMARY**

G20 DIGITAL ECONOMY MINISTERS' MEETING 2022 CHAIR'S SUMMARY

The Bali Package

1. We, the G20 Digital Economy Ministers, met in Bali, Indonesia on 1 September 2022 to deepen our discussions on digital connectivity and post-COVID-19 recovery, digital skills and digital literacy, data free flow with trust and cross-border data flows, and other issues associated with digital transformation. These discussions are in line with the overarching theme of the Indonesian G20 Presidency, "Recover Together, Recover Stronger", and its priority issues on inclusive global health architecture, digital-based transformation, and sustainable energy transition.

PART I

2. Ministers have stated their continued support to the G20 DEWG 2022 and its following actions to the deliverables. While consensus has been reached in all substantive deliverables, varying views have been stated with regards to the geopolitical tensions, as follows:
3. Some members denounce any attempt to completely or partially disrupt digital connectivity infrastructure, and the digital ecosystem, as well as peaceful international trade and commerce. These include the war in Ukraine that undermines the integrity of the digital economy. Meanwhile, mindful of the DEWG Terms of Reference in 2021, some others underscored that the DEWG is not mandated to discuss geopolitical issues, and acknowledge that digital economy integrity is indispensable for promoting the socio-economic development of countries, in particular of countries in special need, which are those suffering from natural disasters and ongoing conflicts, including Ukraine. There was also a view denouncing any attempt to disrupt economic relations developed through the operation of connectivity infrastructure and the digital ecosystem. Many members call for all to refrain from employing any endeavor that interferes with our collective efforts to promote connectivity and bridge digital divides, increase digital skills, and enable data free flow with trust and cross-border data flows.

PART II

4. On all three priority issues of the DEWG, namely Connectivity and Post-COVID-19 Recovery, Digital Skills and Digital Literacy, and Data Free Flow with Trust and Cross-Border Data Flows, we, the Digital Economy Ministers, have reached an agreement in the following paragraphs:

Introduction

5. Continuing the productive work and elevation of the Digital Economy Task Force to the Digital Economy Working Group (DEWG) discussed in the Saudi G20 Presidency and adopted during the Italy G20 Presidency, we emphasize the need to foster international cooperation for a more inclusive, empowering, sustainable, resilient, and innovation-driven digital transformation which will help to achieve post-COVID-19 recovery and contribute to the achievement of the Sustainable Development Goals (SDGs).

6. We recognize and seek to build upon the achievements of the previous G20 presidencies and those in other multilateral fora relevant to the work of the DEWG and its priorities in the Indonesian G20 Presidency. We affirm that international cooperation and collaboration within and beyond the G20 DEWG will help to leverage the full benefits of the digital transformation currently underway and reap the benefit of data free flow with trust and cross-border data flows. Mindful that not all countries and people are equally equipped to maximize and harness the benefits of digital transformation, we recognize the need to enhance digital connectivity and access to digital literacy and skills. Such efforts are essential to ensure that digital transformation facilitates the promotion of inclusive economic growth and creates opportunities for people in vulnerable situations to meaningfully participate in the digital economy.
7. We acknowledge the cross-cutting nature of digital transformation, its impacts on different sectors, and the potential utilization of digital solutions for the G20 members. We welcome the discussion on the adoption of digital technologies in various sectors such as health, energy, agriculture, culture, education, employment, finance, industry, trade, tourism, and other associated priorities at the other Indonesian G20 Presidency Working Groups and Engagement Groups.
8. Building on the momentum from the Digital Economy Ministers' Meeting in Bali, the Bali Package serves as an essential milestone to pave the way toward global recovery through cooperation among the G20 members in Achieving a Resilient Recovery: Working Together for a More Inclusive, Empowering, and Sustainable Digital Transformation.

Realizing a Stronger Post-COVID-19 Recovery through Digital Connectivity

9. We acknowledge that the COVID-19 pandemic has accelerated the transformation of the digital ecosystem and digital economy. However, we recognize that continued challenges, especially on the issue of digital divides, inhibit all members of society from enjoying the benefits of the digital economy.
10. In line with the past G20 Digital Ministers' Declarations, we acknowledge the role of digital connectivity as an essential enabler of digital inclusion and digital transformation and recognize the need to protect digital infrastructure. We recognize the Indonesian G20 Presidency's efforts to frame the developing interplay of people-to-people and digital connectivity as 'people-centered digital connectivity'. The Presidency proposes it as an extension of human-centered digital connectivity concept, which highlights the role of digital connectivity in supporting people's resilience within the COVID-19 pandemic as presented in the Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity (Annex 1). The discussion highlights the importance of resilient high-quality connectivity based on access availability and affordability, infrastructure readiness, as well as responsible and meaningful use of digital technologies to support the provision of proactive, human-centric, inclusive, safe and secure, easy-to-use, and accessible digital public services for all. All of these are pertinent to enhancing access for all stakeholders, achieving meaningful connectivity, realizing the SDGs, and supporting post-COVID-19 recovery.
11. Despite the many benefits, increasing economic interdependence and integration also brings increased risks including regarding privacy and digital security. Such a situation requires the maintenance of well-functioning economies through in particular, safeguarding critical infrastructure, addressing the misuse of technology, and protecting 'users of digital services' from malicious activities. We recognize the importance of a safe and secure online environment to

enhance confidence and trust in the digital economy, including extending safety for all, especially for underrepresented groups and people in vulnerable situations. Cognizant of such background and building on the work done in the past G20 presidencies, the Indonesian G20 Presidency has compiled the Collection of Existing Practices on Digital Security as a Key Enabler to Support Business Continuity. We will also continue to advance our discussions on how to promote online safety, especially for Micro, Small, and Medium Enterprises (MSMEs).

12. Noting the challenges of the digital ecosystem, we are aware of the various innovations and solutions to enable an inclusive, empowering, and sustainable digital transformation. To increase the usability and optimize the implementation of digital innovation solutions, the Indonesian G20 Presidency recognizes the need to encourage cooperation between innovation players such as start-ups, venture capitals, corporations, and governments to support the development of innovation and improvement of processes in different phases of production chains as well as in various digital economy areas, especially in technology, healthcare, sustainable and renewable energy, education and digital literacy, financial inclusion, and supply chain. The Indonesian G20 Presidency is organizing the G20 Digital Innovation Network to facilitate such efforts.
13. We reaffirm the importance of governments providing digital services that are proactive, human-centric, inclusive, user-driven, safe and secure, easy-to-use, and accessible to all. Furthermore, we share the need to foster collaboration, promote the exchange of views, and share use cases to advance the digital transformation and innovation for public services to facilitate growth and recovery. Cognizant of such views, we appreciate the organization of the Digital Transformation Expo, an initiative of the Indonesian G20 Presidency to showcase and share the G20's digital transformation achievements.
14. With innovation being a driving force to global digital economy development, it is of the shared benefit for the international community to jointly promote research, development, innovation, and application of digital technologies, deliver inclusive and concrete outcomes, and create an enabling ecosystem with extensive and multistakeholder participation in particular for developing countries and MSMEs. Recognizing contributions from G20 members, international organizations, and other stakeholders in delivering actionable outcomes, we encourage discussions on how to promote further innovation in the digital economy.
15. To extend the benefit of the discussion on the digital connectivity and post-COVID-19 recovery within the DEWG and beyond the economies of G20, we welcome the Smart Village and Smart Island Initiative administered by the ITU as an initiative that may foster the advancement of an inclusive, empowering, and sustainable digital economy in various countries, such as middle-income countries, least developed countries, landlocked developing countries, and small islands developing states. We support the effort to digitally transform populations in rural and remote communities, particularly the most vulnerable.

Nurturing an Inclusive Digital Transformation through Digital Skills and Digital Literacy

16. We note that digital skills and digital literacy are essential to foster an inclusive digital transformation. We firmly believe that international collaboration to further develop digital skills and digital literacy should be encouraged to ensure and harness the positive impacts of digital transformation on sustainable, human-centered, and inclusive development.

17. We reiterate the need to empower people in vulnerable situations by strengthening cooperation in bridging digital divides and digital inclusion as well as improving digital skills and digital literacy, through enhancing digital accessibility for people in vulnerable situations and underrepresented groups, which are essential to ensuring that no one is left behind, especially those in developing countries. We welcome the Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situation in the Digital Economy (Annex 2), showcasing experiences and practical information from different G20 members aiming to inspire and guide strategies and public policies toward a more inclusive and empowering digital economy for people in vulnerable situations and underrepresented groups, among others.
18. We welcome G20 members efforts to advance the meaningful participation of MSMEs in the digital economy including those in rural and remote areas. We recognize past G20 efforts to enhance MSMEs' meaningful participation in the digital economy at the sub-national, national, and international levels.
19. We acknowledge the role of the existing initiatives to measure digital skills and digital literacy. Nonetheless, with the rapid pace of digital transformation, efforts to improve digital literacy and digital skills remain in need, especially for people in developing countries and regions. Therefore, we welcome the introduction made by the Indonesian G20 Presidency of the G20 Toolkit for Measuring Digital Skills and Digital Literacy (Toolkit). The Toolkit was discussed in the Workshop for G20 Toolkit for Measuring Digital Skills and Digital Literacy, where we highlighted the importance of making use of the Toolkit as an adaptable instrument to different country's contexts as well as a complement to existing initiatives, especially with respect to measuring and benchmarking skills gaps to inform policy responses, for the purpose of enhancing digital skills and literacy.
20. Furthermore, we note the increasing demands of global markets, especially emerging markets, for a workforce adept at utilizing emerging technologies, such as artificial intelligence, big data analytics, distributed ledger technologies, cloud computing, internet of things, and quantum computing among others. Such demands can be addressed with valuable programs, policies, and initiatives to improve digital skills and digital literacy, including at the national level, supported by the governments, industry, and other stakeholders. Such efforts should also be supported by robust, accessible, and secure digital infrastructures to facilitate the development of digital skills and digital literacy. The effort to emphasize the importance of promoting digital literacy and skills was also exemplified in the past G20 presidencies, such as in the G20 Digital Economy Development and Cooperation Initiative during the China G20 Presidency in 2016, the #eSkills4Girls initiative started under the Germany G20 Presidency 2017 with the aim to tackle gender digital divide in particular in low income and developing countries, and the G20 Rome Leaders' Declaration during the Italy G20 Presidency in 2021. Reflecting on such achievements, we are also mindful of the need for training, reskilling, and upskilling to grow the talent pool in meeting the current and future demands.
21. As such, to achieve such goals, we welcome the Compendium of Practices and Policies on Advanced Digital Skills and Digital Literacy, which outlines, in particular, initiatives and lessons learned from G20 members in harnessing the use of emerging technologies to advance digital skills and digital literacy.

Facilitating Discussion to Foster Data Free Flow with Trust and Cross-Border Data Flows in Advancing Digital Transformation

22. Recognizing the work carried out under the previous G20 presidencies, we affirm the importance of enabling data free flow with trust and cross-border data flows to advance a more inclusive, empowering, and sustainable digital transformation. We recognize the role of data and data flows as a key driver for economic growth and development, particularly for developing countries. We reaffirm the previous G20 discussions that highlighted the importance of trust for cross-border data flows, including consumer, business, and government trust. We acknowledge the importance of addressing key issues, such as privacy protection, personal data protection, intellectual property protection, and security, in accordance with the relevant applicable international and domestic legal frameworks, and taking into account legitimate public policy objectives. It is essential to exchange insights and experiences to further common understanding and to work towards identifying commonalities, complementarities, and elements of convergence between existing regulatory approaches and instruments enabling data to flow with trust, in order to foster future interoperability.
23. Building on these prior discussions, we have exchanged information and improved our understanding on identifying commonalities, complementarities, and elements of convergence between existing regulatory and policy approaches and instruments, including the existing regional and multilateral arrangements that enable data free flow with trust and cross-border data flows. We have discussed the Stocktaking Existing Data Governance Approaches to Identify Common Values for Data Free Flow with Trust and Cross-Border Data Flows in the G20 and the Workshop of Multistakeholder Dialogue on Identifying Measures to Facilitate the Different Levels of Understanding of Data Governance. Both activities also highlighted regulatory approaches and instruments such as model contractual clauses as well as multi-stakeholder discussions to further enable data free flow with trust and promote cross-border data flows.
24. We note the discussion initiated by the Indonesian G20 Presidency on lawfulness, fairness, and transparency in the context of its proposed 'principles' for data free flow with trust and cross-border data flows, as well as discussions on existing principles related to data flows established by regional and multilateral institutions, and the practical approach to operationalize data free flow with trust and promote cross-border data flows. We seek to intensify our discussion on the practical aspect of data free flow with trust and cross-border data flows through deepening our understanding of the commonalities in different regulatory approaches and instruments used to enable data to flow with trust, as described in the previous paragraph.
25. We recognize the importance of continuing the discussion on the use and development of interoperable digital identity frameworks in alignment with the human-centric approach in facilitating digital identity solutions that respect human rights, including the right to be free from arbitrary or unlawful interference with privacy. We seek to foster the discussion of digital identity. We note the Report on Identifying Key Enablers on Digital Identity (Annex 3) as a reference for enabling digital identity systems to harness the benefits of the digital economy. Digital identity solutions may also help support progress towards the achievement of digital inclusion and the SDGs.

Way Forward

26. We express our commitment to enabling an inclusive, empowering, and sustainable digital transformation to achieve a resilient recovery and prosperous digital economy. We take note of the need to discuss policies to create an enabling, inclusive, open, and fair digital economy that fosters the application of new technologies and allows businesses and entrepreneurs to thrive.
27. We are grateful to those who contributed to the G20 Digital Economy Minister's Meeting in 2022, which brought together all G20 members, G20 2022 guest countries, namely Cambodia, Fiji, Rwanda, Senegal, Singapore, Suriname, the Netherlands, and United Arab Emirates, and G20 permanent guest, Spain.
28. We would also like to thank ITU, OECD, UNCTAD, and UNESCAP as global knowledge partners in G20 DEWG 2022, as well as representatives of businesses and civil society organizations who contributed to the discussion.
29. The Indonesian G20 Presidency appreciates the effort put forward by all G20 members and other stakeholders, in particular Australia for its proposal on online safety and China for its proposals on digital innovation and cooperation, and on digital literacy and digital skills.
30. We welcome the India's G20 Presidency in 2023 for the G20 to continue the progress achieved at the present G20 Digital Economy Ministers' Meeting.
31. As the next Presidency, and acknowledging the fact that Digital Economy has now become a key enabler for socio-economic growth post COVID-19, India looks forward to continue the achievements of previous presidencies and current Indonesian G20 Presidency on various key issues of Digital Economy. India considers Digital Inclusion as the way forward for such progress, for which it will try to evolve consensus-based frameworks on some of important issues impacting Digital Economy. The key focus areas identified for Digital Inclusion by India include Cyber Security in Digital Economy, Digital Skilling, and Public Digital Platforms to achieve Sustainable Development Goals.



ANNEX 1

Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity

INTRODUCTION¹

In our contemporary world, digital connectivity constitutes a foundational infrastructure that has created value for individuals and organizations. Policies have prioritised digital connectivity as a key driver for economic and social advancement in support of the current global agenda for growth and development as articulated in the Sustainable Development Goals (SDGs). Great progress has been made to increase the number of connected people around the world including in low and middle-income countries (LMICs). Yet in 2021, the International Telecommunications Union (ITU) estimated that only 63% of the world population or 4.9 billion people were online. Many hundreds of millions more, particularly those who live in low population density or belong to vulnerable groups, have struggled with access that is too slow, too costly, and too unreliable to make a difference to their lives. The COVID-19 pandemic has resulted in a further sharp contraction of economic activity all over the world. While advanced economies have seen a gradual economic recovery, albeit below pre-crisis levels, the aftershocks of the pandemic continue to weigh on growth in most G20 emerging economies and threaten to adversely affect attainment towards inclusive growth and development (IMF, 2020).

The pandemic has dramatically and irrevocably reinforced the vital importance of digital connectivity across the world. The aim of this stocktake is to demonstrate the complex interplay between digital connectivity and the social context within which the technology is embedded for expanding connectivity, recovering from the COVID-19 pandemic, and working toward the 2030 Sustainable Development Agenda is developed.

EXISTING APPROACHES FOR EXTENDING DIGITAL CONNECTIVITY IMPLEMENTATION

The enhancement and improvement of digital infrastructure through better mobile and broadband connectivity has been a priority of many nations in achieving significant economic and social benefits. Therefore, this report was formulated with the aim to compile and analyse existing policies, institutional arrangements, and implementation arrangements to understand how the development and expansion of digital networks and infrastructure could boost the economic recovery as well as drive the achievement of SDGs. Its key take aways includes:

PROVISION OF SOUND POLICY AND REGULATORY FRAMEWORKS TO SUPPORT HIGH QUALITY CONNECTIVITY

An examination of digital connectivity policies in the G20 should start from an assessment of digital divides in the G20 area as provided by OECD (2021a). While levels of broadband subscriptions are higher among G20 countries than in the rest of the world, substantial differences exist both among countries and within them. Within countries, systemic access gaps between urban and rural areas, affecting especially the latter, call for broadband access policies to explicitly address such differences.

¹ This annex of the Bali Package is part of ITU's deliverable "Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity" under Priority Issue 1: Connectivity and Post-COVID-19 Recovery.

In light of extant digital divides, it is imperative to boost the deployment of high-quality and cost-efficient digital connectivity for economic recovery and development by implementing sound policy and regulatory framework considering country differences and priorities (OECD, 2021b). Data from the OECD Broadband Portal reveals that the pandemic has spurred the uptake of high-speed broadband subscriptions, with users upgrading their connections to improve upload and download speeds to work and study from home.

Against this context, G20 members have taken actions to build policies that address digital connectivity divides. While such policies translate differently across countries, regions, and rural/urban areas, extant reports reveal two main clusters of policy and regulation (OECD, 2021a): Overarching policies and regulatory measures to expand connectivity and tailored policies and regulations to close connectivity divides in rural and remote areas. In the majority of G20 countries, the private sector is the largest source of investment in telecommunication infrastructure, particularly in the advanced economies. However, in some cases, governments are investing alongside private actors through public-private partnerships to share the risks of creating, developing, and operating infrastructure in areas where there is no clear business case, such as in remote rural areas. The role of the public sector is also crucial in creating an enabling environment for private investment and innovation in digital connectivity while also encouraging alternative models to fill financing gaps through means such as community-led networks that can support local programmes for digital skills and training (OECD, 2021a).

PROVISION OF POLICY AND REGULATORY FRAMEWORKS ON DIGITAL CONNECTIVITY TO SUPPORT THE ACHIEVEMENT OF SDGS

Aside from its transmission value, digital connectivity needs to be matched with coordination among government, industry, and civil society organisations to work toward the Sustainable Development Goals (SDGs) as articulated in the 2030 Agenda for Sustainable Development (herein after referred as 2030 Agenda) (Shenglin et al., 2017). Overall, most countries around the world have demonstrated policy intent to achieve the SDGs although there are variations in the strategies employed.

In this section, we focus on the key policies and institutional mechanisms that have been enacted to translate SDGs policy intent into outcome (UNDESA 2020; 2021). Our comparative analysis across the five representative G20 countries provides insights into how policies aimed at SDGs attainment have been instrumentalised both in terms of online and offline good practices and challenges enacted prior to COVID-19 and during the pandemic.

The key areas of focus in our country-specific analysis are as follows:

- 1. High-level legal and regulatory frameworks for implementing the SDGs** involving the creation of a new structure or using existing mechanisms with the overall purpose of integrating the goals into policies and actions.
- 2. The role of sub-national and local governments in SDGs implementation**, including responding to the UN's localisation strategy for implementing the 2030 Agenda and bringing contextual knowledge, experience, data, and practices to strengthen SDGs coordination at the national level.
- 3. Development of SDGs monitoring, evaluation, and reporting mechanisms** that go beyond measuring targets and achievements to understand how policy intent and instrumentation link to the outcome. The Voluntary National Review (VNR) process introduced in 2016 has been designed to create a dialogue to identify good practices and challenges towards this end.

4. **Establishing mechanisms for the inclusion of a range of non-governmental stakeholders** in SDGs implementation, monitoring and evaluation through presentation of the VNR to the UN High Level Political Forum on Sustainable Development with multi-stakeholder participation.
5. **Combining policies and institutional arrangements for SDGs implementation** with e-government at the national and subnational level. Since early 2020, the global pandemic has reinvigorated the role of e-government with open government data portals established to promote transparency and accountability in the provision of basic services. In addition to the institutional, policy, and implementation aspects of SDGs, it is also examined in the document where digital connectivity has impacted several sectors, such as:
 - **The education system** shows the urgency of digital connectivity for the rural and low-income groups, to prevent digital divide. The COVID-19 pandemic also proves that digital connectivity is indispensable to guarantee equal education opportunities for students.
 - **The health care system** discusses the booming digital health industry after the COVID-19 pandemic. This not only provides an efficient way to address contagious diseases (such as global pandemic), but also offers timely help to vulnerable and remote groups.
 - **The agriculture sector** explores the fast development of technologies that connect smallholder farmers and the policy instruments that facilitate such connectivity.

THE KEY TAKE AWAYS

This report aims to enhance the UN's current definition of human-centered connectivity² by drawing on the emergent concept of institutional resilience as it relates to the role of digital connectivity in supporting the 2030 Agenda. Furthermore, it adds another layer to the discourse on digital connectivity which contextualizes the current global situation.

In working towards this goal, the institutional resilience lens provides a pathway for expanding the current understanding of digital connectivity and its role in the post-COVID-19 era. The key takeaways comprise:

- **Overarching policies and regulatory measures to expand connectivity.** These are, as suggested in OECD (2021a), policies and measures aimed at expanding digital connectivity through the promotion of competition and investment and reduction of network deployment costs.
- **Tailoring policies and regulation to close connectivity divides in rural and remote areas.** On top of overarching policies, tailored policy measures can be a method to address communities in vulnerable situation resulting in persisting connectivity divides, both in the public domain and non-profit sector.
- **Building capacity to address future shocks.** Phenomena such as the COVID-19 pandemic and other public health crises have highlighted the importance of building capacity and addressing the disruptions caused to all sectors of society.

² Human-centered connectivity defined as affordable access by individuals to connectivity and devices, digital literacy and skills, and to applications that provide basic human services (UN, 2021b).

- **Integrating online mode of functioning in the national planning effort.** Despite the quick adaptations made in society to work to adapt to an online mode of functioning and accompanying policies enacted towards this end, there remain huge challenges in terms of their integration with the national planning effort.



ANNEX 2

Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situations in the Digital Economy

INTRODUCTION³

The rapid acceleration of digital technologies, in response to the COVID-19 pandemic, has increased the risk of exacerbating the digital divide. Bearing the brunt of this widening digital divide are underrepresented groups, women, children, people in rural communities, elder generations, and persons with disabilities. We also recognize the impact of the digital divide on micro, small and medium enterprises (MSMEs). For the purpose of this document, such people will be referred to as 'vulnerable groups' as they are prone to various socioeconomic challenges. Such vulnerable groups experience different barriers and enablers for accessing the digital economy, hence it is important for policymakers to acknowledge the intersection between these groups of people and their diverse experiences.

Indonesia, as the G20 Presidency in 2022, has commissioned the development of this Compendium to support building inclusive digital economies. Drawing upon existing policies developed and implemented by the G20 member States, the Compendium provides references to frameworks that support the formulation of digital economy policies which can enable more inclusive outcomes.

Key policy areas for analysis include digital infrastructure and connectivity, digital platforms and digital trade, digital financial services, digital entrepreneurship, digital skills and human capacity, and digital ID.

STRATEGIES AND INITIATIVES SUPPORTING THE PARTICIPATION OF VULNERABLE GROUPS IN THE DIGITAL ECONOMY

- **Women**

Digital skills and human capacity: Strategies associated with enhancing the digital inclusion of women are universally broad in their reach. Some G20 members are working to build a digital system that embraces, develops, and attracts women's expertise and skills in support of the digital transformation process, and increase the sustainability of quality work opportunities for women.

Digital entrepreneurship and trade: Much attention has been focused on developing women's digital entrepreneurship and trade. Some G20 members work with e-commerce firms to support women entrepreneurs to grow their e-commerce business, and/or introduce dedicated programs for woman entrepreneurs.

³ This annex of the Bali Package is part of UNESCAP's deliverable "Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situation in the Digital Economy" under Priority Issue 2: Priority Issue 2 – Digital Skills and Digital Literacy. This annex was prepared through the collaborative efforts of ESCAP and the Griffith Asia Institute, Griffith University, Australia.

- **Children**

Digital infrastructure and connectivity: An important precursor to providing opportunities to develop digital skills is the provision of devices and connectivity. Many G20 members are expanding digital infrastructure to support children's education through extending telecommunications networks into underserved areas, schools and low-income families.

Digital skills and human capacity: Some G20 members have launched smart education initiatives which integrate resource service platforms, such as the national smart education platform for primary and secondary schools. These initiatives have played a significant role in promoting application and resource sharing.

- **Rural communities**

Digital infrastructure and connectivity: For countries with remote and hard-to-access locations, a multidimensional approach to infrastructure connectivity is likely to reach more households and boost digital inclusion. Common themes among G20 members are related to digital infrastructure investment and the expansion of fibre-optic and satellite networks to improve rural connectivity. Some G20 members have a multi-pronged approach to upgrade digital infrastructure, incentivize smart agriculture innovation, and improve digital governance capabilities in rural areas.

Digital skills and human capacity: Opportunities to engage rural communities in acquiring digital skills are simultaneously enabled with improved digital infrastructure. Some G20 members have opened digital learning centres to teach rural communities how to use digital devices and develop their skills.

Digital entrepreneurship and trade: A key economic opportunity of digital expansion, within rural communities is to improve agricultural productivity and entrepreneurship. Some G20 members provide education and training related to agriculture and fisheries and smart farm systems in areas of demand.

- **Elder generations**

Digital skills and human capacity: Some G20 members have dedicated programs for elder generations. These countries partner with young volunteers, NGOs, and non-profit organizations in digital facilitation and education services. Some G20 members provide physical access points for elder generations including libraries, schools, and community centres, while other G20 members work with a network of community organizations who deliver one-on-one, small group, and online learning support for elder generations.

- **Persons with disabilities**

Digital skills and human capacity: Some G20 member States have been working to expand educational opportunities for persons with disabilities for some time. A number of G20 members use welfare centres to provide information literacy to this vulnerable cohort. Where individuals are not mobile, they provide customized instruction in the residence. Some G20 members work with local service providers, such as librarians and operators of employment/senior/social assistance organizations who have been instrumental in rolling out digital skills learning centres across the country.

Digital platforms and digital trade: Another approach to improve digital inclusion for this vulnerable cohort is to consider accessibility issues within e-government platforms. Some G20 members provide architectural guidelines for IT systems that consider the usability and accessibility aspects which fit the needs and abilities of persons with disabilities.

Digital ID: Some G20 members have implemented digital IDs for persons with disabilities. Digital ID systems enable the exercise of rights and access to benefits (medicine, equipment, treatment, free public transport, school aid, family allowances, etc.), for persons with disabilities.

- **Micro, small, and medium enterprises (MSMEs)**

Digital skills and human capacity: Some G20 members support MSMEs to both train their workforce and adopt new technologies by providing skills-training activities (e.g., big data and data analytics, artificial intelligence, human-machine interface, Internet of Things, digital integration of business processes, or cybersecurity). Some G20 members assist MSMEs to increase their use of digital services with various kinds of funding, such as a voucher, conditional grant, or microgrant, to help cover the costs related to adopting digital technologies.

Digital entrepreneurship and trade: Focusing on start-up and venture capital investments are a key feature of policies that support MSMEs in the digital economy. Some G20 members provide MSMEs with education, mentoring, networking, and further advice for scaling up their digital needs at each development phase.

INSIGHTS FOR ENABLING VULNERABLE GROUPS TO BENEFIT FROM THE DIGITAL ECONOMY

The experiences of G20 members provide important lessons for formulating, reforming, and implementing policies that enable vulnerable groups to benefit from and participate in the development of the digital economy. Key insights are summarized below:

Design and implement “targeted” policies

1. Acknowledge the diversity and intersectional needs of each vulnerable cohort.
2. Take into account national conditions, identify vulnerable groups accordingly, and develop measures for an inclusive society, while following developments in the international arena.

3. Consider the costs, tools, and training needed by the targeted groups need to participate in the program in order to guarantee its full access. Policies and initiatives must reflect the challenges of the digital divide caused by lack of access to technology and affordability of digital devices and gaps in digital skills. These challenges can be addressed by providing additional support in the form of data plans or devices, so that members of underrepresented groups are able to take full advantage of the initiatives.
4. Anticipate obstacles that may arise in the implementation process to ensure the success of policies.
5. Pilot projects should be implemented before scaling up the initiative.
6. Identify experiences (from both the public and private sectors and civil society) that can be considered as best practices.

Increase consultations

7. Adopt the “nothing about us without us” model to co-create policies with vulnerable groups targeted by the initiative, so as to take in account their specific needs.
8. Undertake multi-sectoral consultations is crucial in developing appropriate policies and goals throughout the entire digital ecosystem. This involves creating engagement strategies and advisory groups.
9. Design and implement public policies for the digital inclusion of vulnerable groups with more societal participation, based on public consultations and other mechanisms of participation.

Take a whole-of-government approach

10. Promote a whole-of-government approach in designing, implementing, and evaluating policies. Collaboration with all levels of government and locally placed agencies reduces the risk of fragmentation and redundancy.

Build partnerships

11. Encourage public-private partnership to leverage from specific expertise and perspectives of multiple actors.
12. Involve various stakeholders, such as the government, private sector, academics, and practitioners, so that the policies and programs that target vulnerable groups can resonate and get more support in their implementation.
13. Integrate all available resources, incorporating local availability (e.g., schools, libraries, associations, digital facilitation points, etc.) as well as the opportunities offered by radio, television, and the web.

Monitor and reform policies

14. Consider the skills that people need in everyday life, as the demands are changing rapidly. Monitor and submit digital inclusion policies for vulnerable groups for constant improvement.

Raise awareness through communication and promotion

15. Promote, at both national and local levels, the benefits of digital literacy as it is essential when targeting vulnerable groups. Any messaging must communicate the benefits of a digital literacy initiative. For example, that the learner will be able to undertake their weekly grocery shopping through the online skills they learn.
16. Raise awareness about the opportunities available to vulnerable groups which will benefit their socioeconomic status by conducting events.

Focus on sustainability

17. Promote initiatives that stimulate social and digital inclusion based on sustainable models and that do not depend exclusively on governments.
18. Build a digital system that embraces, develops, and attracts women's expertise and skills in support of the digital transformation process and increase the sustainability of quality work opportunities for women.

Address the challenges posed by development of the digital economy

19. Address the unique challenges, including economic, community, and individual risks, in order to fully harness the benefits of the digital economy. The key to addressing these risks is greater transparency and accountability and the empowerment of users through education, awareness, digital literacy, and digital skills (i.e., upskilling).



ANNEX 3

Report on Identifying Key Enablers on Digital Identity

INTRODUCTION⁴

Ensuring that individuals and businesses can prove who they are is central to a well-functioning society and economy, unlocking easier access to a range of essential services. In the 21st century, many of these interactions take place in a digital context and it is vital that they can do so in a trusted and secure way.

Too often, Digital Identity is reduced to a question of technology and software engineering. After all, for those that can access it, there is a world of services at their fingertips. However, for those that cannot, there is the potential to be excluded from even basic services.

Digital identification can allow easier access to services from government and other providers. These range from declaring taxes, to claiming government benefits, to accessing basic banking services, or verifying remotely the qualifications of job applicants. Digital identification underpins accountability for every sensitive transaction in the digital world involving a natural or legal person. Reliable and robust digital identity can thus offer greater security, efficiency, and productivity across sectors, as well as simplifying the lives and well-being of citizens and businesses.

Given the critical role of digital identity in today's society, governments can play an important role. This is the case not matter how diverse digital identity solutions may be across countries or whether they are providing access to a public or private sector service. It includes providing the very foundations for a public identity infrastructure (to prove legal identity of citizens and businesses) and coordinating and/or delivering digital identity solutions domestically and engaging in international conversations to support cross-border recognition of digital identity management. However, it also means ensuring that the design and implementation of digital identification systems take account of broader economic and societal objectives, mitigating any possible harms to individuals, while facilitating their active participation in societal and economic activities.

At the same time, governments have an opportunity to see digital identity as an enabler for even higher ambitions. There is a window of opportunity to use the design of digital identity as a means to re-imagine interactions to allow for more inclusive, seamless, and joined-up experiences that solve whole problems for users from end-to-end and which are available through a range of channels.

Building on the previous G20 Collection of Digital Identity Practices, the work of other international fora, and in support of the Indonesian G20 Presidency in 2022, this Annex sets out relevant suggestions for governments to develop a solid basis for establishing a sound Digital Identity within their own jurisdictions and across borders. The scope of the Annex is limited to digital identification of natural and legal persons (i.e., natural persons representing a legal person), thus excluding the identification of things (such as goods). It refers to digital identification and the provision and sharing of digital attributes and credentials to access public and private sector services.

⁴ This Annex of the Bali Package was prepared with the support of the OECD under Priority Issue 3: Data Free Flow with Trust and Cross-Border Data Flows.

This Annex is expected to support governments to benefit from the full potential of digital identity in fostering digital economies and governments at the G20 level, while acknowledging that the development of standards and regulations in this area is being discussed more widely.

KEY ENABLERS FOR DIGITAL IDENTITY AS A SERVICE

Realising the potential offered by digital identity for the transformation of societies and economies is not a short-term and simple task. There are many elements that contribute to its success and so it is important that governments have a clear understanding and appreciation of the breadth of the key “enablers” required. This Annex focuses on four foundational enablers:

1. Effective design of digital Identity

Effective design of digital identity is critical to its success, bearing in mind that “digital” should never be the default as face-to-face interactions should always remain an option to ensure access for people with specific needs. Whether just starting, or building on existing solutions, work on digital identity should begin with the needs of the users, focusing in particular on those who may face barriers to engaging with digital services such as lack of financing, skills, or connectivity. For example, the enrolment process should be made as easy for users as possible, according to their needs, and according to the context of the specific services requiring identification. However, an important design concern is balancing the needs and experience of users with the need for security and privacy protections, including protections of misuse from any malicious actors. If designed poorly, digital identity solutions and systems may cause security harms. Identity theft and fraud are for instance a global problem impacting the lives of millions every year. Therefore, one of the most important decisions for service providers is understanding and defining the appropriate level of identity assurance required to access a given service, while empowering users with consent over their personal data. Finally, even if portability is not a priority at first, international standards that shape a global understanding of identity proofing and authentication can support any future changes or adaptations.

In summary, securing effective design highlights for prioritising the following:

- Being inclusive and understanding the needs of users.
- Facilitating enrolment and access through multiple channels.
- Empowering users with consent over their personal data.
- Developing systems and solutions that are trusted and secure.
- Developing mechanisms for liability in the event of damages to natural or legal persons.
- Improving technical interoperability.
- Utilizing relevant international standards.

2. Collaboration and coordination across the digital identity ecosystem

Identity is relevant for all those who rely on secure identification to provide or access critical services. Trusted and portable digital identity is critical for the digital economy and government to fully function. Collaboration and coordination between all relevant actors, including those providing digital identity solutions, attributes, and credentials, is essential. For fully justifiable reasons, countries may have taken

different approaches in the provision of Digital Identity. Yet, in all cases an important consideration remains the need for collaborating across the public and private sectors to ensure a sustainable approach that empowers citizens and businesses with access to digital identity wherever and whenever they want to use it. This is particularly important for services that have regulated requirements for verifying the identity of the user. Government can play an essential role in these conversations.

Making this work efficiently implies:

- Understanding the actors involved, and collaborating across sectors.
- Developing mechanisms for oversight and enforcement.
- Engaging in bilateral and multilateral co-operation.

3. Sustainable investments in digital identity

From a government perspective, the development of a business case for digital identity is how to justify why it matters, taking into consideration the specific situation and identity management system at play. The benefits of digital identity are both short and long-term and depend on the usability, performance, and adoption of digital identity solutions and schemes. Aside from the benefits, there are notable costs associated with digital identity systems which can be separated into initial investments and running costs. These include ongoing funding for domestic digital identity programmes and individual solutions, which is connected to the overall national approach to governing digital identity, including roles and responsibilities for delivery, for either public or private sector actors. To justify investments, assess impact, and make necessary improvements to digital identity policies and regulations, countries should monitor and evaluate digital identity performance, including but not limited to security, adoption (by end-users and service providers), and user satisfaction. To ensure sustainability, it is critical that governments focus on:

- Understanding the benefits, costs and risks associated with digital identity for society at large.
- Securing sustainable funding.
- Monitoring compliance and evaluating performance.

4. Implementation: A fit for purpose regulatory framework for digital identity





A comprehensive regulatory framework –with regulations, laws, and other instruments– that is fit-for-purpose is essential for securing wide access to digital identification for individuals and businesses, and to answer the multiple needs of services and service providers across sectors and borders. Developing a regulatory framework that is effective in addressing these multiple needs, yet flexible enough and future proof, for example could benefit from regulatory experimentation and agile regulatory governance.





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G20 Chair's Summary
Education Ministers' Meeting
Bali, 1 September 2022

The G20 Education Ministers met in Bali on 1 September 2022 under the Indonesian G20 Presidency. The meeting was attended by G20 members, invited countries and international organisations in a hybrid manner and was chaired by the Indonesian Minister of Education, Culture, Research and Technology.

During the meeting, Ministers discussed the G20 education agenda under Indonesia's Presidency namely a) universal quality education; b) digital technology in education; c) solidarity and partnership in education; and d) future of work. The Ministers also welcomed the Report and Compendium on education strategies in 26 countries, detailing more than 150 education programs and best practices.

Part I

1. We are meeting under the challenge of the fulfilment of the right to quality education and its continuity for all at all times, particularly at times of crises, pandemics, natural disasters, political conflicts all around the world. Many members condemn Russia's war in Ukraine which has impacted access to learning and education. While others view that the Education Working Group (EdWG) is not the proper forum to discuss geopolitical issues.
2. We are gravely concerned by all actions worldwide that weaken our ambitions of providing universal quality education. We reiterate the importance of providing children and young people quality education in any circumstance, including in emergencies, as well as in crisis and conflict contexts.

Part II

There is broad agreement on the following issues:

3. We reaffirm our commitment to achieve a more resilient, equitable, inclusive, peaceful and sustainable future through education.
4. We reaffirm the principle that education is a human right and a foundation for peace, tolerance, and common welfare of humankind in line with the United Nations 2030 Agenda for Sustainable Development and as highlighted in the previous G20 Education Ministers' Declarations (2018, 2020 and 2021).
5. We reiterate the importance of making progress towards SDG4 to ensure access to inclusive and equitable quality education to promote lifelong learning

opportunities for all, and to overcome learning poverty from COVID-19 and other crises.

6. We emphasise the need to embrace the use of digital technologies and in-person education to promote effective, inclusive, meaningful and equitable teaching and learning and to mitigate the risks of further deepening education inequalities. We recognize that while it is important to embrace and make use of technological advancement, high quality teaching and face-to-face teacher-student interaction remain paramount to the future of education.
7. We reaffirm the fundamental role of solidarity and partnership in strengthening the education systems to recover together and recover stronger from the impact of COVID-19 and other crises on learners, particularly on those from the most disadvantaged and vulnerable groups including learners with disabilities, girls and young people as underlined in the G20 Education Ministers' Statement on COVID-19, as well as the G20 Education Ministers' Declarations 2020 and 2021.
8. We are committed to promoting lifelong learning and the acquisition of relevant knowledge, skills and attitudes by all learners to enable them to thrive in life and work, and contribute to more equitable, inclusive and sustainable societies.

Universal Quality Education

9. We reaffirm the importance of Education for Sustainable Development (ESD) and our commitment to SDG4 to ensure inclusive, equitable and quality education and to promote lifelong learning opportunities for all. We will continue to combat learning poverty and education inequalities exacerbated by COVID-19 and other crises. We highlight the importance of equitable access to quality early childhood education and development and the acquisition of foundational skills and competencies, particularly literacy and numeracy and safeguarding learners' physical and emotional well-being.
10. We are committed to supporting all learners, particularly those in vulnerable situations who face disproportionate challenges and risks of falling further behind including from gender, disability, ethnicity, socio-economic inequalities and learning-related barriers and any form of discrimination.
11. We are committed to supporting the provision of continuous professional development and quality training, including the use of digital technology, for and together with teachers, school leaders, and other educational professionals considering their essential roles in learning recovery and achieving universal quality education.

12. We emphasise the need to keep investing in education at the appropriate level and to make the most effective use of these investments to strengthen our education systems.

Digital Technology in Education

13. We emphasise the need to harness the potential of digital technologies in addressing the issues of educational access, quality and equity, and in providing learning experiences that are more interactive, personalised and engaging.
14. We recognise the potential of digital technologies to ensure universal access to education and accelerate learning recovery by increasing connectivity and providing more accessible and affordable resources and tools while also improving the digital literacy skills of learners, teachers, school leaders and other educational professionals.
15. We emphasise the need to ensure learners' data privacy, protection and security, prevent discrimination, gender-based harassment, cyberbullying, counter misinformation and disinformation and improve inclusivity and ethical practices in the use of digital technology in education.
16. We recognise the challenges of the digital divide which impede the optimal benefits of digital technologies in education. We are committed to collectively seeking adaptive solutions in the short-, medium- and long-term, while engaging relevant stakeholders to narrow the digital divide.

Solidarity and Partnership in Education

17. We recognise the need to act in solidarity to rebuild more resilient and effective education systems, with the empowerment of relevant actors within and beyond G20 to remove barriers to education, improve teaching and learning environments, and support transitions within and across all stages of education.
18. We encourage working in partnership in the spirit of *gotong royong*¹ to strengthen our shared commitments and to promote investments for inclusive education and training at all levels, including with multilateral and international institutions.

¹ *Gotong royong* is an Indonesian term that describes joint activities to achieve an expected result. It derives from the words *gotong* (work) and *royong* (together). It refers to a type of togetherness in society that manifests itself in the form of cooperation to complete a task, for personal and community interests. *Gotong royong* is the mechanism by which a community has enthusiasm for and an established practice in overcoming difficulties and solving problems together. It represents a collective spirit among neighbours that strengthens economic and social resilience, and traditionally applies in the event of a disaster, or when working on crops or building public facilities, such as roads, bridges, irrigation canals and even schools. As such, *gotong royong* is not only a spontaneous activity; it has also been institutionalised in various aspects of the management of public life.

Future of Work

19. We reaffirm our commitment to promoting quality, integrated, adaptive, flexible and dynamic teaching and learning at all levels in our education and training systems in order to support the acquisition of the full range of skills, including critical, creative, and innovative thinking, technical, social and emotional skills and the provision of well-being that are vital to prepare learners for work and meaningful participation and contribution to society, and to promote lifelong learning.
20. We emphasise the importance of cultivating relevant skills in tertiary or higher education, and technical and vocational education and training through learning and training programmes that are developed and implemented in collaboration with industries, partners and other stakeholders such as: project-based learning, internships, apprenticeships, and entrepreneurship, which better equip the students prior to entering the working world. The acquisition of skills needs to enable our learners to take on the necessary digital, economic, social and ecological transformation of our societies.
21. We support a revised G20 Skills Strategy being developed jointly by the Employment and Education Working Groups, which highlights the importance of developing adequate skills and lifelong learning as a guide for countries to move forward in their journey to achieve universal quality education and promote lifelong learning, in order to benefit individuals, enterprises, economies and societies. We look forward to future cooperation between the Employment and Education Working Groups to support and monitor the implementation of the G20 Skills Strategy.

Way Forward

22. We are committed to reimagining and rebuilding more resilient, effective, equitable, inclusive and adaptive education systems that are better prepared for ongoing and future crises and to support countries in the urgent design and implementation of recovery-oriented policies to tackle learning loss brought about by the pandemic and other crises to work towards the achievement of balanced and harmonious oriented well-being and universal quality education by 2030.
23. We reaffirm our commitment to promoting knowledge-sharing to address the diverse challenges in education and to working together across the areas of universal quality education, digital technology in education, solidarity and partnership, and future of work in the spirit of *gotong royong*.



24. We reaffirm our commitment with the United Nations to transform education by integrating approaches, learning resources, and methods in education policies and practices and to open greater opportunities for international cooperation, solidarity and partnership. We underline the importance of bringing the voice of the G20 to the 2022 Transforming Education Summit that serves as our concerted efforts to help shape a more peaceful, inclusive, gender equal, and sustainable future for humanity and the planet.

Ministers thanked Indonesia's leadership in the G20 as well as an excellent organisation of the Education Working Group 2022. We look forward to supporting the next presidency of India and Brazil in 2023 and 2024 respectively and to continue the commitment to achieve the G20 Education Agenda under the spirit of partnership and collaboration to lead global recovery and beyond.

G20 CHAIR'S SUMMARY

ENERGY TRANSITIONS MINISTERS MEETING 2022

We, the G20 Ministers responsible for energy, met virtually and in person in Bali, on 2 September 2022, to focus on concrete and practical actions for accelerating clean, sustainable, just, affordable, and inclusive energy transitions as we are recovering together and recovering stronger.

Part I

1. We meet during a global energy crisis, distinguished by high energy prices and market volatility, disruptions to energy supply chains, and record inflation in the aftermath of the COVID-19 pandemic, as well as rising geopolitical tensions with widespread effects on people, planet, prosperity, and peace.
2. We are gravely concerned, in this regard, by the increased and ongoing conflicts in many parts of the world, including the war in Ukraine which has adverse impacts on the global efforts to accelerate energy transitions and secure energy access. Many members expressed condemnation to Russia in this regard, while others view that the Energy Transitions Working Group is not the proper forum to discuss geopolitical issues. Many affirm that energy should never be used as tools of political coercion, at the same time, others stress the need to refrain from unilateral restrictions. The current situation has underlined the urgency to rapidly transform energy systems to be more secure, reliable, and resilient. Members have also called for peace, cessation of hostilities and an immediate end to war.

Part II

The Ministers agreed on the following points:

3. We are committed to be the key part of solutions to achieve market stability and affordability, strengthen energy security, enhance energy sustainability and accelerate energy transitions. We will realize a future-proof and secure energy systems capable to withstand shocks and uncertainty, by strengthening supply chains including critical minerals and materials; enhancing resilience; and promoting inclusive investments to meet growing energy demand, in line with our sustainable development and climate goals. We recognize that advancing energy security reinforces our agenda to accelerate and ensure just, inclusive, affordable, and viable energy transitions.

Strengthening Efforts to Achieve Global Goals

4. Recalling the 2030 Agenda for Sustainable Development, the UNFCCC, the Paris Agreement, and decisions taken by COP26 and CMA 3, including the Glasgow Climate

Pact, we will continue our work in ensuring access to affordable, reliable, sustainable, and modern energy for all by 2030. Taking action across mitigation, adaptation and finance, we reaffirm our commitment to the full and effective implementation of the UNFCCC and of the Paris Agreement reflecting the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances. As agreed in Rome, we acknowledge the key relevance to achieve global net zero GHG emissions or carbon neutrality by or around mid-century and take note of different approaches and the time frames announced by various countries in this regard.

5. Taking note of the 6th Assessment Report of the Intergovernmental Panel on Climate Change, we highlight the nexus between energy and climate and emphasize our responsibility to accelerate climate change mitigation actions by reducing emissions in the energy sector through clean, sustainable, just, affordable, and inclusive energy transitions, thus contributing to holding the global average temperature to well below 2°C and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

Bali Compact

6. We endorse the Bali Compact, our G20 framework that sets out 9 (nine) voluntary principles for energy transitions, that leaves no one behind, and aims to advance the G20 works on the energy sector building upon the previous G20 presidencies' outcome.

Priority Area I – Securing Energy Accessibility

7. We reaffirm our commitments to achieve the goals of 2030 Agenda for Sustainable Development, notably with respect to SDG7, and strive to close the gaps in energy access as well as to eradicate energy poverty. We will improve access to affordable, reliable, sustainable, and modern energy, recognizing that ensuring such access is a basic human need, including for, among others, the most vulnerable populations and displaced people. We acknowledge the range of pathways to improve energy access, including by but not limited to providing solutions in clean cooking and electricity with a modern energy minimum requirement as well as developing regional interconnectivity. We emphasize the importance of achieving universal access by exploring a range of possible options in ensuring energy supply especially by continuing support to Africa. This year, we deep-dived into addressing challenges on energy access faced by archipelagic island states, remote and isolated communities which are found in all corners of the world, particularly in the Pacific.

Priority Area II – Smart and Clean Technologies Scaling-Up

8. Scaling up technology solutions and promoting different approaches are critical for accelerating clean energy innovation and just energy transitions. We highlight the vital role of strengthening cooperative action on technology development, technology and knowledge transfer under mutually agreed terms, to achieve our sustainable development goals and climate goals. We welcome technological partnerships such as Clean Energy Ministerial, Mission Innovation, G20 Energy Efficiency Leading Programme, and the Energy Efficiency Hub. We commit to promote and invest in clean, safe, sustainable technologies and approaches which may include energy efficiency measures and different types of renewables, other zero and low emission technologies, including

abatement technologies as well as removal technologies, taking into account national circumstances and in accordance with the availability of resources. We acknowledge the role of public and private finance and technology cooperation to boost the innovation ecosystem of next-generation clean technologies and accelerate their commercialization. We will enhance the resilience of clean energy technologies in developing countries and commit to mitigating the related risks including digital security concerns.

Priority Area III - Advancing Energy Financing

9. We will boost clean energy investment and financial flows, particularly for developing countries in accelerating energy transitions. In this regard, we support energy sector actions for unlocking and improving inclusive investments, including in upstream, through strengthening project pipelines, enhancing policy and regulatory frameworks including de-risking mechanisms, preparing high-quality bankable projects, and streamlining approvals. We note the importance of local manufacturing, technology and skill transfer under mutually agreed terms and for maximizing benefits for local populations. We urge further dialogue and action among institutional investors, Multilateral Development Banks, other financing institutions, industries, and policymakers to enhance collaboration, to identify innovative financing options, to promote compatible approaches to green and transitions financing, as well as to provide policy, institutional, and regulatory support.

Partnerships for Clean, Sustainable, Just, Affordable, and Inclusive Energy Transitions

10. To achieve clean, sustainable, just, affordable, and inclusive energy transitions, we emphasize the need to continue strengthening collaborations for innovative partnerships and to ensure both financing and access to the necessary technologies. Such partnerships would also benefit and empower Indigenous People and local communities, women, youth, children, migrants, and persons with disabilities. We welcome the exploration of new partnership initiatives to support countries' goals in accelerating energy transitions, including those between developed and developing countries.

Closing

11. We note that during this critical decade of actions, the G20 Indonesia's Presidency put forward Bali Energy Transitions Roadmap as a suggested way to provide continuity in our global agenda. This Presidency roadmap sets out voluntary multiyear actions to get on track to achieve the Sustainable Development Goals (SDGs) and lays pathways towards net zero emissions or carbon neutrality according to national circumstances.
12. We thank the Partner IOs for their contributions to the Indonesia's G20 Energy Transitions Working Group. We thank Indonesia's Presidency for stewarding our agenda. We will submit our Outcome Documents to the G20 Leaders' Summit to be held in Bali on 15-16 November 2022. We welcome progress and further initiatives during India's G20 Presidency in 2023.

G20 Presidency's Documents

- Decade of Actions: Bali Energy Transitions Roadmap
- Stocktake on Access, Technology, and Finance
- Summary of G20 2022 ETWG Side Events



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2 SEPTEMBER 2022



BALI COMPACT

BALI COMPACT

Acknowledging our leadership role, we, G20 members, representing the world's largest group of energy consumers and producers, are strengthening international cooperation and energy architecture to accelerate energy transitions during this critical decade of action. The G20 intends to work on a voluntary basis towards enhanced ambitions towards clean, sustainable, just, affordable, and inclusive energy transitions that leave no one behind and promote social and economic development, while ensuring energy security, stability, accessibility, affordability, and sustainability as well as eradicating energy poverty.

Our agenda to accelerate energy transitions will underpin a stronger, more inclusive global economic recovery and growth. We will increase our efforts to achieve SDG7 to ensure affordable, reliable, sustainable, and modern energy access for all and enable different groups of society to benefit from energy transitions, including women, youth, children, Indigenous People and local communities, migrants, and persons with disabilities.

Accelerating energy transitions should include a wide range of options towards low emissions development to achieve net zero GHG emissions or carbon neutrality, in line with the UNFCCC and the Paris Agreement. The Bali Compact lays out a set of inclusive voluntary principles for G20 members and beyond to ensure smooth and effective transitions in accordance with national circumstances and priorities:

- **Strengthening confidence and clarity in national planning, implementation and review** by using whole-of-government approaches to maximize the social, economic, and environmental advantages.
- **Enhancing energy security, markets stability and affordability**, by promoting open, transparent, and competitive international markets, strengthening and diversifying supply and value chains, affirming that energy should not be used as a means of political coercion and refraining from unilateral restrictions, increasing accessibility to technologies and related materials, while enhancing inclusive investments in sustainable energy.
- **Securing resilient, sustainable and reliable energy supply, infrastructure, and systems** to be able to meet energy demand, ensure energy security and economic prosperity, as well as respond to climate change, geopolitical situations, digital security concerns, and other emerging risks.
- **Boosting energy efficiency measures** to realize their potential as a first fuel to drive cost-effectiveness across sectors.
- **Diversifying energy systems and mixes as well as lowering emissions from all energy sources**, including by scaling up and integrating renewables, clean energy and

fuels, deploying new technologies including abatement and removal technologies for those countries which include them in the national low emission development strategies, electrifying and digitalizing demand sectors and recognizing the need to accelerate efforts towards phasing down unabated coal power generation.

- **Catalyzing sustainable inclusive investments at scale for moving towards low or net zero emissions energy systems**, phasing out inefficient fossil fuel subsidies that encourage wasteful consumption and using our policy options to create enabling environments for investments, including through partnerships to support developing countries and emerging markets.
- **Collaborating on mobilizing all sources of finance to help achieve the goals of the 2030 Agenda for Sustainable Development and the Paris Agreement** to accelerate clean, sustainable, just, affordable, and inclusive energy transitions, by deploying innovative inclusive financing options, enabling capital market flows, and enhancing multilateral development banks (MDBs) support.
- **Scaling up innovative, affordable, smart, low and net zero emissions technologies** by advancing partnerships and technology cooperation, promoting local development, and removing barriers to their rapid deployment.
- **Building and strengthening innovation ecosystems to boost research, development, demonstration, dissemination, and deployment** by enhancing public-private collaboration, improving commercial viability, and ensuring accessibility and affordability of next-generation technologies.



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DECADE OF ACTIONS:

Bali Energy Transitions Roadmap



G20 ENERGY TRANSITIONS MINISTERS' MEETING
BALI, 2 SEPTEMBER 2022

Decade of Actions: Bali Energy Transitions Roadmap

2022

1. INTRODUCTION

Under the Indonesia G20 Presidency 2022, the G20 has elevated the global clean energy transitions to a G20 Leader level priority.

Building on the three priorities of the G20 Energy Transitions Working Group (ETWG), the Indonesia G20 Presidency has developed a framework for accelerating clean, sustainable, just, affordable, and inclusive energy transitions. This Bali Energy Transitions Roadmap through 2030 (“the Bali Roadmap”) aims to provide a suggested way in the discussions and work of the G20 ETWG, climate, finance and related G20 tracks on clean energy transitions actions that will, naturally, reflect national circumstances, needs and priorities of G20 members in their low emission development pathways towards net zero emissions or carbon neutrality by or around mid-century as part of their announced 2030 pledges at the COP26 Glasgow Summit..

The Bali Roadmap builds on three components: a) the Bali Compact with principles for accelerating clean energy transitions; b) three key priorities of actions over the short to medium-term (through 2030); and c) a Presidency Troika action plan with milestones (see section 3).

The first important component of the Bali Roadmap, the **Bali Compact** offers an inclusive framework for G20 members and beyond to accelerate clean energy transitions that leave no one behind. Designed as a whole-of-government approach, it seeks to address social, environmental, and economic impacts and support just and inclusive energy transitions. The guiding principles of the Bali Compact include implementation and reviewing frameworks for improved decision-making; enhancing energy security and market stability and affordability; securing resilient and reliable energy supply infrastructure and system; boosting energy efficiency; diversifying energy systems and mixes; catalysing sustainable and inclusive investments at scale; collaborating on mobilizing all sources of finance; scaling up innovative affordable, smart, low and zero emission technologies; and building and strengthening innovation ecosystems to boost research, development, demonstration, dissemination, and deployment.

As the second important component of the Bali Roadmap, the Indonesia Presidency put forward three core priorities for the G20 ETWG to consider in accelerating energy transitions: 1) securing energy accessibility, 2) scaling up smart and clean energy technologies; and 3) advancing clean energy financing. Actions along these core priorities of the G20 Presidency form the basis to work towards **broad G20 action plan for accelerating clean energy transitions, and might be considered as a work programme of the G20 Presidency Troika** in the G20 ETWG and related G20 working groups (climate, finance, infrastructure, development and trade tracks of the G20) with priorities and collaborative actions to promote the achievement of these priorities in the G20 through 2030.

Third, an annual Bali Energy Transitions stocktake is encouraged to follow up on the priorities and actions set out in the Bali Roadmap. This stocktake would be based on member self-review and reporting along the priorities and actions of the Bali Roadmap and a progress report by involved international organisations and initiatives. This will provide an opportunity to review progress in all focus areas and actions with a view to adjust and add new priorities and additional actions through 2030.

2. THE CORE PRIORITIES OF THE BALI ROADMAP

The Bali Roadmap intends to focus on a set of core priorities, milestones as well as voluntary and desired collaborative actions that will, naturally, reflect national circumstances, needs and priorities. (see Annex).

- Priority #1: Securing energy accessibility
- Priority #2: Scaling up smart and clean energy technologies
- Priority #3: Advancing clean energy financing

2.1. Priority #1: Securing energy accessibility

With slightly more than seven years left to achieve the 2030 Agenda for Sustainable Development, at the current rate for improving energy accessibility, there will still be an estimated 600 million people without access to electricity and 1.2 billion without access to clean cooking by 2030. In addition, the current energy crisis has highlighted the importance of re-focusing on populations at risk of energy poverty in all economies where affordable energy services have become inaccessible to many households, even in wealthy economies. The G20's focus on the following actions will move the energy accessibility forward for vulnerable populations that need to be addressed to achieve SDG7.

Action #1: Focus on a modern energy minimum requirement and the concept of affordable, reliable, modern, and sustainable energy services. The energy sector has an important bearing on the development of other sectors. Thus, in order to reap these gains, the G20 recognizes the importance of looking beyond basic energy access. Adopting a modern energy minimum in developing countries will help shift our collective efforts beyond basic energy access and to a volume that will be useful for household, community, and local economic needs.

Action #2: Maximise integrated approaches for joint clean cooking and electrification, notably in Sub-Saharan Africa and Asia through public funding/finance programmes and clean cooking technology deployments. Currently access to electricity has advanced faster than access to clean cooking fuels and technologies. By focusing attention through collaborative action on this population cohort, considerable progress can be made in reducing the universal challenge of access to clean cooking in developing countries.

Action #3: G20 action plan for Small Island Developing States (SIDS) and isolated communities. There has been continued dependence of the , archipelagic island states, remote and isolated communities on fuel imports (oil and diesel). The technology exists for these contexts and economies to transition to renewable energy sources which will contribute to the energy security of SIDS. The Indonesian G20 Presidency has the opportunity to focus securing clean energy access and accelerating energy transitions on these island economies and isolated communities which are found in all corners of the world, particularly in the Pacific. Renewable energy-based decentralised energy solutions could help facilitate regional cooperation to bridge the energy access gap globally.

Action #4: Address emerging energy poverty when energy becomes unaffordable and inaccessible to vulnerable households. The public policy challenge to eradicate energy poverty goes beyond ensuring basic access to electricity and clean cooking. Increasingly, household energy services for lighting, cooking, heating, cooling, and communication connectivity can become unaffordable and inaccessible to vulnerable households in every country. The G20 reaffirms its voluntary, non-binding definition of energy poverty that is inclusive of developed and developing country challenges as agreed under the Italian G20 Presidency. Furthermore, the G20 Energy Ministers in Karuizawa reaffirm their recognition

that natural gas plays a key role in many G20 countries, and its potential to expand significantly over the coming decades, supporting transitions towards lower emissions energy systems. G20 encourages efforts to address energy poverty challenges for vulnerable households through developing integrated policy solutions in line with national circumstances.

2.2 Priority #2: Clean energy technologies

Achieving progress in the global deployment of new and emerging clean energy technologies¹ by 2030 to accelerate clean energy transitions requires a programme of clean energy technology engagement by the G20. Such an engagement should identify best practices of national clean energy transitions frameworks; notably on just and inclusive transitions, support effective engagement of national, regional, and global clean energy technology partnerships in the G20, scale up global public and private funding through policy guidelines, including streamlining approvals and permitting and promote the resilience and sustainability of global clean energy supply chains.

Action #1: Strengthen whole-of-government approaches to national clean energy transitions through the exchange of best practices in the G20 on planning, implementation and tracking frameworks for energy policy decision making to address the social, environmental, and economic impacts, across several G20 tracks. This includes principles and guidelines for just and inclusive clean energy transitions.

Action #2: Support effective G20 engagement with global clean energy technology partnerships – including at a sectoral level of energy efficiency, electricity, industry, transport, electrification and energy systems – leveraging existing national, regional and global initiatives, such as Clean Energy Ministerial (CEM), Mission Innovation, the Breakthrough Agenda, the IEA Committee on Energy Research and Technology (CERT) and the IEA Technology Collaboration Programmes (TCPs), RD20 and similar platforms.

Action #3: Scale up global public and private funding of the development, demonstration and deployment of clean energy technologies by leveraging G20 tracks, relevant global fora and processes to ensure deep and sustained sharing of learning experiences between countries. This includes highlighting progress in global clean energy deployment, the identification of priority infrastructure needs, and the exchange of best practices for streamlining approvals and permitting.

Action #4: Promote the resilience and sustainability of clean energy supply chains. G20 can help foster an open, transparent and non-discriminatory trading environment for low emission energy products and equipment to facilitate the rapid deployment of clean energy technologies. G20 to support the formulation of global standards and frameworks for ESG. To enable a faster clean energy transition across sectors and regions, the G20 can work on common definitions and certification of clean energy technologies and materials, identify and lift barriers to diverse, responsible, sustainable and resilient supply chains for critical mineral production, processing, and recycling needed for clean energy technologies.

2.3 Priority #3: Clean energy finance and investments.

Achieving a Paris-aligned clean energy and climate resilient transitions will require trillions of investments from all sources of finance – public, private, domestic and international – to be mobilised. We urge developed countries to provide enhanced support, including through financial resources to assist developing countries, in continuation of their existing obligations

¹ With the involvement of finance and investment partners, G20 members and international organisations, the Indonesia Presidency organised a series of G20 side events on a broad range of technologies, including low emission hydrogen, ammonia, nuclear energy, biofuels, CCUS, direct air capture and energy efficiency.

under the UNFCCC, which can help to leverage the trillions required in clean energy investment. We ask relevant international organizations to continue-regularly tracking and reporting on the resources mobilized.

Lessons learned in developing national project pipelines that can attract financing at the scale needed to support clean energy transitions should be shared across countries. Private sector partners, both project developers and commercial finance providers should be involved in the design and implementation of solutions. These solutions will facilitate faster energy transitions by scaling up deployment of a wide range of clean energy technologies. Public sources of finance should focus on de-risking to crowd in higher multiples of commercial finance; including, for example through leveraging blended finance instruments for clean energy technologies.

Action #1: Strengthen clean energy finance and investment analysis across all sources of public and private finance to meet energy access and transition goals and **identify avenues for potential disbursement** that would bring down the costs of technology adoption. The immediate focus should be on both rapid upscaling of emerging technologies and large-scale roll-out of critical technologies.

Action #2: Develop sustainable and inclusive financing solutions at scale through collaboration among international organizations and relevant partners, and facilitate energy investment forums in showcasing investment opportunities that will enhance engagement with the private sector. Innovation is also needed to enhance collaboration on clean energy deployment in a way that accounts for different national circumstances.

Action #3: Highlight progress of clean energy transitions finance. G20 to encourage relevant international organisations and financial institutions to regularly monitor, track and report on progress on private and public clean energy finance flows in developing countries. G20 members to increase dialogue on investment opportunities in scaling up critical energy transition technologies, supportive policy measures, including discussions on public spending and related flows.

Action # 4: Develop closer links between the G20 Energy Transition Working Group and the G20 Sustainable Finance Working Group and to share outcomes that can benefit the scaling up of the clean energy transition. Support G20 Sustainable Finance Roadmap Action # 18, promote the development of sustainable finance alignment approaches and enhance collaboration and coordination on clean energy definitions, technical thresholds and pathways that support a just energy transition considering different national circumstances.

3. Priorities and actions of the Bali Roadmap

Priority	Milestones for 2030	Key actions and G20 deliverables	Organisations, initiatives and G20 Groups conducting relevant work ²
Priority Focus #1: Energy Accessibility			
Universal access to energy	SGD7.1.1. (Access to electricity)	Action #1: Introduce a modern energy minimum for electricity access approaches and the concept of affordable and accessible modern energy services	G20 energy track, MDBs, IEA, IRENA, SEforALL, UN, Rockefeller Foundation, GEAPP, Energy for Growth Hub.
	SGD7.1.2 (access to clean cooking fuels and technologies)	Action #2: Maximise integrated approaches for joint clean cooking and electrification , notably in Sub-Saharan Africa and Asia in public funding/finance programmes	G20 energy track, IRENA, Modern Energy Cooking Services (MECS), OPEC Fund, Clean Cooking Alliance, SEforALL.
	Regional focus	Action #3: G20 action plan for Small Island Developing States (SIDS) and isolated communities.	G20 energy track, Pacific Community (SPC), UN ESCAP, IRENA, Commonwealth Secretariat, International Solar Alliance, Sydney Energy Forum (SEF)
	All G20 economies	Action #4: Address emerging energy poverty when energy costs become unaffordable and inaccessible to vulnerable households.	G20 energy track, EU Energy Poverty Observatory, UN Bodies

² The list is non-exhaustive and includes references to related work streams of G20 tracks and work of relevant international organisations and initiatives in the area.

Priority Focus #2: Clean Energy Technologies

	Whole-of-government national clean energy transitions	<p>Action #1: Strengthen whole-of-government national clean energy transitions with exchange of best practices on frameworks for the planning, implementation and tracking of energy policy decision making to address the social, environmental, and economic impacts</p>	G20 energy, climate, finance and development tracks
		<p>G20 to adopt key principles and guidelines for just and inclusive energy transitions with a view to identify priority actions for the G20 on the following priority areas:</p> <ol style="list-style-type: none"> 1. Employment and jobs, social and economic development and engaging the people in the transitions 2. Gender equality and behavioural aspects and quality of life 3. Eliminating energy poverty and integrating younger generations in decision making. 	G20 energy, finance and development tracks, Global Commission on People-Centred Clean Energy Transitions, CEM Equality in Energy Transitions Initiative, CEM Empowering People Initiative.
	Energy technology partnerships for enhanced international cooperation	<p>Action #2: Support effective G20 engagement with global clean energy technology partnerships by strengthening and prioritising international collaboration, complementing domestic action of G20 members and partners. This includes co-hosting the G20 Energy Ministerial with CEM/MI.</p>	G20, IRENA, IEA CERT and TCPs, CEM/MI, Breakthroughs Agenda, RD20 platform
	Sectoral partnerships	<p>Increase energy efficiency of the global economy</p> <p>G20 to identify priority measures to scale up actions by sector, notably through strengthened energy</p>	G20, IEA, SEforALL, CEM/MI, Mission Efficiency

		efficiency standards and electrification, and enhanced financing frameworks	
		<p>Decarbonising the power sector</p> <p>G20 to review policies and financing frameworks necessary to deliver clean energy investment in the power sector, including for advancing the decarbonisation of generation, the expansion and modernisation of grids and the adoption of technologies to mitigate power sector emissions.</p>	G20, The Breakthrough Agenda and its partners, such as IEA, IRENA, Green Grids Initiative among others
		<p>Decarbonising the industry sector</p> <p>G20 to develop a toolbox with options for lowering GHG emissions for industry sector decarbonisation</p> <p>G20 to identify financing options and models for decarbonising heavy industries</p> <p>G20 to develop industry-specific recommendations (steel, cement, metals, among first priorities).</p>	G20 climate, finance and ETWG tracks, CEM Industrial Deep Decarbonisation Initiative (IDDI), OECD, The Breakthrough Agenda
		<p>Decarbonising the transport sector</p> <p>G20 to develop a policy toolbox with policy options for transport sector decarbonisation including road, aviation, maritime sectors and mobility.</p>	G20, IMO, IATA, ICAO, OECD, IEA, CEM, The Breakthrough Agenda
		<p>Electrifying demand</p> <p>G20 to develop a policy toolbox for the deployment of energy system/sector integration technologies</p>	G20, IRENA, IEA, ISGAN CEM.

		with priorities on digitalisation, smart grid technologies, energy storage among others	
	Scale up global funding of clean energy technologies	<p>Action #3: Scale up global public and private funding of the development, demonstration and deployment of clean energy technologies</p> <p>G20 to track and highlight progress in global clean energy deployment, the identification of priority infrastructure needs and support the exchange of best practices for streamlining approvals and permitting</p>	G20 energy, finance and infrastructure tracks.
	Resilient and sustainable global clean energy supply chains	<p>Action #4: Promote the resilience and sustainability of clean energy supply chains</p> <p>G20 to support the formulation of global standards and frameworks for ESG, common definitions and certification of clean energy technologies and materials and actions to support diverse, responsible, sustainable and resilient supply chains for critical mineral production, processing, and recycling.</p>	G20 energy track, Sydney Energy Forum (SEF), The Breakthrough Agenda
Priority Focus #3: Clean Energy Finance and Investment			
Clean energy finance and investment	Catalyze sustainable investment at scale and mobilize all sources of public and private finance	<p>Action #1: (i) Strengthen clean energy finance and investment analysis across all sources of public and private finance to meet energy transitions goals; and (ii) identify avenues for potential disbursement that would bring down the costs of technology adoption.</p>	G20 energy and finance tracks, OECD, IEA, CEM, IRENA, ERIA
		<p>Action #2: Develop sustainable and inclusive financing solutions at scale through collaboration among international organisations and relevant</p>	G20 energy, finance and development tracks, OECD, IRENA, GFANZ, MDBs

		partners, facilitate energy investment forums in showcasing investment opportunities, and providing platforms for enhanced engagement with private sector initiatives.	
	Measuring energy transitions finance	<p>Action #3: Monitor and track energy transitions finance</p> <p>G20 to encourage regular monitoring, tracking and reporting on public and private energy finance flows to developing countries.</p>	G20 energy, climate, finance and development tracks, OECD, IRENA
	Linkage with sustainable finance roadmap	<p>Action # 4: Develop closer links between the Energy Transitions Working Group and the Sustainable Finance Working Group to share outcomes for scaling up clean energy transitions efforts.</p> <p>Support G20 Sustainable Finance Roadmap Action #18 on promoting the development of sustainable finance alignment approaches and enhancing collaboration and coordination on clean energy definitions, technical thresholds, and pathways that support a just energy transition considering different national circumstances.</p>	G20 energy and finance tracks, OECD, IEA, UN



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**STOCKTAKE ON ACCESS, TECHNOLOGY,
AND FINANCE**

*Accelerating Energy Transitions Towards
Net Zero Emissions or Carbon Neutrality*



G20 ENERGY TRANSITIONS MINISTERS' MEETING
BALI, 2 SEPTEMBER 2022

Stocktake on Access, Technology, and Finance

*Accelerating Energy Transitions Towards Net Zero
Emissions or Carbon Neutrality*

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Introduction

At their Rome Summit in 2021, G20 Leaders reaffirmed their commitment to the Paris Agreement goal of holding the global average temperature increase well below 2°C and pursuing efforts to limit it to 1.5°C above pre-industrial levels. G20 countries committed to net zero emissions or carbon neutrality by mid-century as part of their announced 2030 pledges at the COP26 Glasgow Summit. To implement these goals, G20 Leaders called for accelerating actions across mitigation, adaptation and finance in this decade.

Towards 2030, G20 countries will develop national pathways that align the mid-century long-term ambition with short- and medium-term goals. On the road to net zero emissions or carbon neutrality by or around mid-century, the energy sector will have to play a critical role, as it accounts for almost 80% of global GHG emissions. Similarly, the G20 has to play its role as a leading international cooperation forum for aligning efforts on finance, technology and sustainable development for all.

The Indonesia G20 Presidency has made the acceleration of clean energy transitions to net zero emissions or carbon neutrality as a leader-level priority and confirmed three pillars of action - boosting energy accessibility, scaling up clean energy technology deployment and clean energy financing and investment. Through these three pillars the G20 should promote sustainable and clean energy transitions.

This commitment by the G20 towards accelerating clean energy transitions has never been as relevant as today. Energy security and clean energy transitions are integral parts of a sustainable future and the Bali Compact highlights the critical principle of resilient energy supply and market stability.

In 2022, the G20 has to address collectively the economic, social and energy security implications from the triple global crisis: the global humanitarian crisis, economic slowdown and accompanying supply chain disruptions stemming from the COVID-19 pandemic, and the global climate and energy crisis, which directly affects global oil, gas, electricity and coal markets and brings about rising cost of living and a risk of growing inequality of energy access. Concerns around energy security and market stability have not been this urgent since the oil crisis of the 1970s. In response, energy systems have to become more resilient, more energy secure, and reliant on stable supply, prioritizing renewable resources wherever possible. This will affect every corner of the world. For example, increasing the resilience of small island developing states and archipelagic regions means creating opportunity for renewable energy, thus decreasing the dependence on fossil fuels.

The objectives of the Agenda for Sustainable Development (SDGs) and the Paris Agreement, adopted by all G20 countries, are increasingly converging and becoming mutually supportive. In terms of SDG7, this has evolved into a recognition that the global clean energy transitions will need to address energy access as well as energy efficiency targets, in addition to scaling up renewable energy, and adapt to regional and national needs.

For developing economies, this is being articulated in terms of a just, inclusive and equitable energy transitions that recognizes the access deficit, economic development needs, and local supply chain needs. The inclusion of women, youth and the empowerment of local communities is a vital factor for making energy transitions a success for everyone. The Global Commission for People-Centered Clean Energy Transitions believes that all clean energy transitions should be truly people-centered and inclusive, and that this is essential to the success of energy system transformation at the pace and scale required to deliver global ambition for climate change mitigation (IEA, 2021a).

Clean energy technology deployment is a key enabler for implementing global climate goals and for accelerating clean energy transitions by 2030 towards net zero emissions or carbon neutrality by mid-century. Under their Nationally Determined Contributions (NDCs), developing economies aim to raise climate ambitions, conditional upon access to finance and technology. While each country's circumstances and priorities may vary, clean energy technologies will be a fundamental driver of progress towards 2030 and 2050 targets. Post-pandemic economic recovery plans in many economies focused heavily on renewables and energy efficiency but also industrial transformation and technology innovation, making the outlook stronger but global fiscal stability may limit the scope of such recovery spending.

Getting the world on track to meet net zero emissions or carbon neutrality by mid-century requires more than three-fold increase in clean energy investments reaching USD 4.6 trillion by 2030, according to the IEA Net Zero by 2050 A Roadmap for the Global Energy Sector report. A coordinated G20 approach across finance, infrastructure, energy and climate tracks to coordinate action over investment in clean energy transitions would also help leverage positive spill-overs, making the transitions easier for all.

Financing an accelerated clean energy transitions is one of the core priorities of the Bali Compact and Roadmap. Importantly, at COP26, countries reaffirmed their pledge of providing USD 100 billion annually from developed to developing countries. A new collective quantified goal (NCQG) on climate finance is to be agreed by 2024, starting from a floor of USD 100 billion per year. This funding will be critical for enabling access to clean energy and its technology deployment.

Radically transforming the energy system will require a substantial scaling-up of investment between now and 2030. In the energy sector, depending on the ownership structure, investment will be privately or publicly financed. On average, about 30% of additional investment globally is expected to come from public sources, with additional public investment needs to reach net zero emissions or carbon neutrality estimated at a cumulative 2% of GDP (with a range between 0.5 and 4.5 percent) for the decade between 2021 to 2030. The remaining 70% of the additional investment would come from private sources. Mobilizing private finance will require putting in place adequate financing, institutional, and regulatory frameworks with appropriate fiscal policies. A range of innovative financing instruments and vehicles are also needed to mobilise private capital from domestic and international sources and the role of new partnership models to help meet the G20's finance priority.

The G20 remains strongly committed to implementing and accelerating clean energy transitions to address these multiple crises. G20 countries will work jointly and individually towards meaningful and effective actions contained in the commitment under the Bali Energy Transitions Roadmap towards net zero or carbon neutrality, proposed by the G20 Presidency of Indonesia. If carried out consistently over the next years, G20 countries have the potential to be a driving force to reduce the gap collectively between existing emission reduction plans and what is required to reduce emissions towards 1.5°C. Energy transitions will be vital to make significant progress to deliver near term climate mitigation action.

This G20 leader-level ambition and the three key priorities will need to be consistently implemented across several Presidencies in the Energy Transitions Working Group and link to the relevant discussions and work programmes in the G20 finance and climate tracks.

The annual stocktake of progress, prepared jointly by the SEforAll, IEA and OECD will allow the G20 as a whole to track progress on energy accessibility, clean energy technology, and scaling-up clean energy finance and investment, with a view to identify emerging priorities and key opportunities for international collaboration in the G20. This stocktake provides an overview of recent trends in the clean energy sector with regard to access, technology and finance, highlighting the latest data and indicators to track progress and opportunities for enhanced international collaboration for the G20 to build new partnerships. The stocktake can facilitate an annual progress update under each Presidency, while capturing the priorities highlighted by future Presidencies.

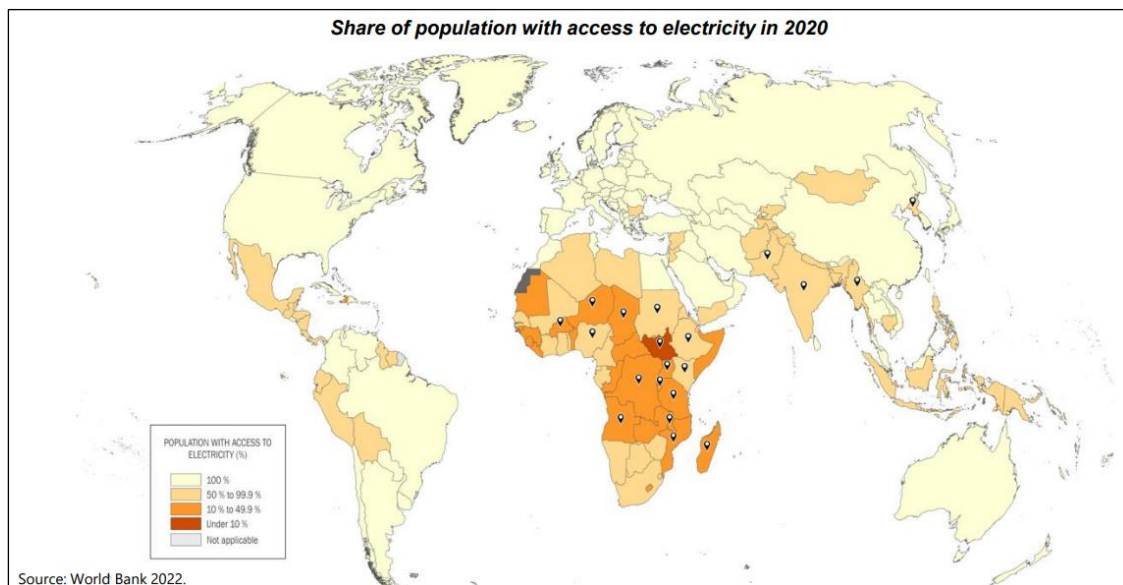
I. Stocktake of Priority #1: Energy Accessibility

I.1 Context

At today's rate of progress, the world will not achieve the SDG 7 goal by 2030. The most prominent gap remains in Sub-Saharan Africa where access rates to electricity continue to be below 50% in many countries (see Figure 1). The largest unserved populations can be found in Sub-Saharan Africa in Nigeria (92 million people), the Democratic Republic of Congo (72 million), and Ethiopia (56 million).

Recent progress on SDG7 indicator 7.1.1 (access to electricity) has been mixed, as is the outlook between now and 2030. The global electricity access rate rose markedly between 2010 and 2020, from 83% to 91%. During this period, the number of unserved people fell from 1.2 billion in 2010 to 733 million in 2020 (IEA et al, 2022a). Meeting the 2030 target requires increasing the number of new connections to 100 million a year. At current rates of progress, the world will reach only 92% electrification by 2030. In addition, the development dividend of increased access to electricity--the ultimate goal of SDGs, will only take off well beyond basic access (Energy for Growth Hub, 2021).

Figure 1. Share of population with access to electricity in 2020



In terms of SDG7 indicator 7.1.2 (access to clean cooking fuels and technologies), the number of people gaining access to clean cooking around the world increased significantly between 2010 and 2020. In addition, more than 67 countries have already included household energy or clean cooking related goals in their Nationally Determined Contributions (NDCs) in the lead-up to COP26 (Clean Cooking Alliance, 2021).

However, as in previous years, population growth outpaced these improvements, particularly in Sub-Saharan Africa. As a result, the total number of people lacking access to clean cooking

has stagnated for decades. In 2000–10, this number was close to 3 billion people. It dropped to 2.4 billion people (2.1–2.7) in 2020.¹ In contrast to improvements in other parts of the world, the access deficit in Sub-Saharan Africa has nearly doubled since 1990 and rose by more than 50% since 2000, reaching a total of 923 million (898–946) people in 2020.

Because the elimination of the clean cooking deficit is inherently complex due to multiple factors, a multisectoral, coordinated effort is needed to achieve the target of universal access to clean cooking by 2030. Without an increased effort, it is estimated that 2.1 billion people will still lack access to clean cooking in 2030. The prioritization of this challenge during the Saudi Arabia G20 Presidency highlighted the criticality of this energy deficit.

I.2. Trends in universal access to energy

Five key trends will influence the progress of this G20 priority on energy accessibility:

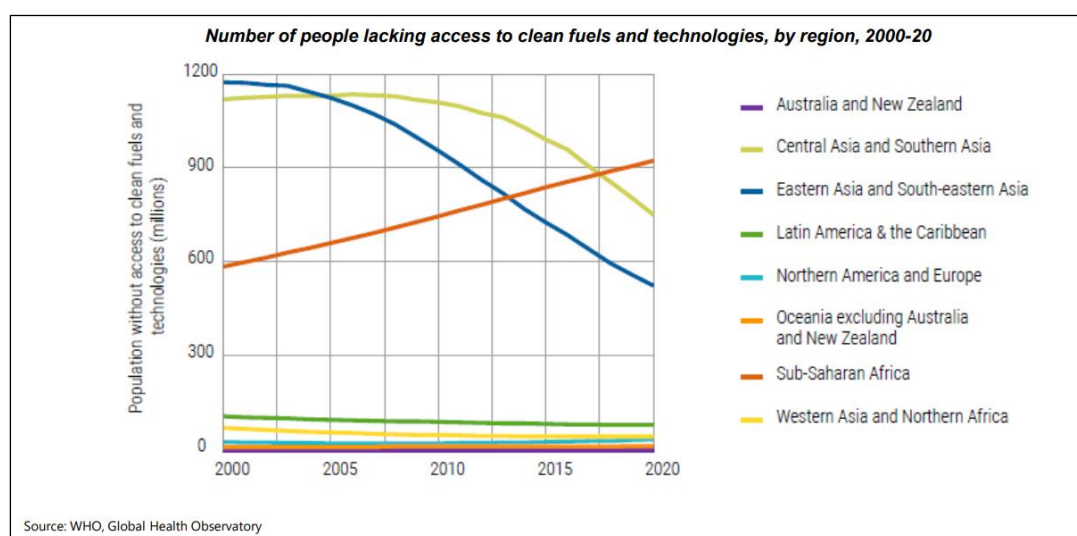
- 1) *Africa's energy access challenge.* While other regions have made progress in both electrification and clean cooking, Africa represents 77% of the global electrification deficit with a majority of the 20 countries with the highest access deficit coming from Africa. Closing the access gap by 2030 will depend on the progress made in Africa.
- 2) *A missed opportunity amongst small island countries.* Small island states are highly reliant on imported fossil fuels, especially oil to service their electricity and transport systems. A transition to almost 100% renewable electricity before 2030 is technically and economically feasible, opening further opportunities for low-cost electric clean cooking and the electrification of the transport sector, but is dependent on finance.
- 3) *Low prioritization of clean cooking.* Despite best intentions, clean cooking still lacks the political prioritization that is needed to address this multi-faceted and multi-sector challenge. While several regions are moving in the right direction, the trend in Africa needs to be reversed (see Figure 2).
- 4) *Financing flows for energy access.* Financing for energy access is not flowing to the countries that need it the most (see Figure 8). Overall financing flows from all sources are at a three-year low (see Priority #3 of this stocktake).
- 5) *Energy affordability and energy poverty*². In addition to the pace of electrification slowing in recent years, the pandemic's impact on household incomes made basic energy

¹ Parenthetical figures appear reflect 95% uncertainty intervals, as defined in the methodology section at the end of the access to clean cooking chapter in IEA et al (2022).

² Italy G20 Presidency Documents (2021) provides a G20 definition of energy poverty: "Energy poverty occurs when households or territorial units cannot fulfill all of their domestic energy needs (lighting, cooking, heating, cooling, information-communication) as a result of lack of access to energy services, an inability to afford them, or their poor quality or unreliability in order to, at minimum, safeguard their health and provide for opportunities to enhance their well-being. Energy poverty affects, to a greater or lesser extent, every country (both developing and mature economies) and requires addressing constantly changing risks while targeting support to populations most vulnerable

services unaffordable for around 90 million people in Asia and Africa who had previously enjoyed access. Affordability of energy services in other parts of the world have presented similar challenges making the G20 focus on energy poverty under last year's Italian G20 Presidency incredibly timely. The challenge of energy poverty (both in terms of access and affordability) will continue to be an important trend that many countries will need to confront. This is further underlined by the SDG's target 7.1 which explicitly focuses on *modern energy services*.

Figure 2. Number of people lacking access to clean fuels and technologies by region, 2000-20



I.3. Emerging priorities

Half-way through the SDGs, there are several key issues that have emerged for SDG7. These emerging issues should be considered in the Bali Energy Transitions Roadmap that will shape political priorities over the next several years. These emerging issues include:

- **Adopting a ‘modern energy minimum’.** For energy access to unlock the sustainable development opportunities that were intended, the global community needs to look beyond basic access. A modern energy minimum of 1,000 kWh per capita per year is a minimum standard that all development efforts should target. This will require new metrics, monitoring protocols, and improved technologies to ensure that communities and nations are maximizing their developmental benefit of energy access.
- **Prioritizing ‘mutual support’ between electrification and clean cooking.** There are an estimated 1.7 billion people who currently have access to electricity, but not to clean

to these risks. For developing economies energy poverty should also take into consideration energy services needed by public services and productive uses.”

cooking. Technologies and appliances that can adapt to local preferences and store energy to overcome blackouts now exist. Addressing this population cohort as new initiatives get underway would help to make major progress in the clean cooking access deficit.

- **Transitioning archipelagic and small island states to near 100% renewable energy for electricity.** The technologies exist and need to be matched with opportunities for public and private investment in order to build greater resilience and energy security.

I.4. Enhancing international collaboration and partnerships

In line with the emerging priorities, there are several key international collaborations and partnerships that can be considered. The **Global Energy Alliance for People and Planet (GEAPP)** was recently launched at COP26 to address the energy access and energy transitions challenge in developing countries. While led by philanthropies, GEAPP aims to leverage USD 10 billion of public and private investment in countries that demonstrate ambitious visions for addressing their energy access and energy transitions challenges. Similarly, this year's COP27 in Africa represents another good opportunity for G20 to demonstrate its support to **Egypt's COP27 Presidency** and intention on focusing on Africa's just and equitable energy transitions challenge. Finally, the **Archipelagic and Island States Forum (AIS Forum)** provides an important platform for reaching out to 47 countries that manage similar challenges in terms of energy security and transition to renewables. The AIS Forum, together with the energy work program of the Pacific Community (SPC), can provide needed leadership to ensure that island economies are not left behind in terms of a more inclusive energy transitions.

II. Stocktake of Priority #2: Technology

II.1. Context

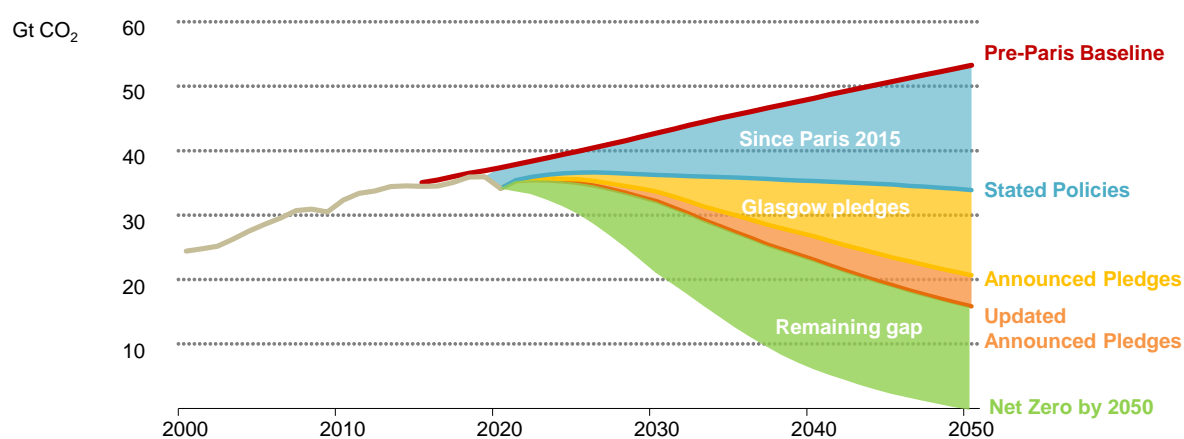
The next decade will be critical. The technologies needed to achieve the necessary emissions reduction by 2030 already exist, and the policies that can drive their deployment have already been proven. Increased support for these technologies can help ensure that climate ambitions are met.

The world is off track, but recent energy technology project pipelines are growing and deployment has gathered pace on some technologies, getting the world closer to recent pledges at COP26, if implemented, the world would see a temperature increase of 1.80C.

In this decade, it is critical the G20 makes sure that the clean energy technologies that underpin this ambition are on track. However, reflecting the announced ambitions and pledges

to the COP26 in Glasgow, as shown in the IEA's Announced Pledges Scenario (APS), there is a huge remaining gap still towards a 1.50C trajectory and additional action can be identified for advanced and developing economies.

Figure 3. Energy technology deployment can close the gap by 2030 on the road to 2050



Source: IEA (2021b), [COP26 climate pledges could help limit global warming to 1.8 °C, but implementing them will be the key – Analysis - IEA](#)

The IEA's Net Zero Emissions (NZE) by 2050 Scenario (IEA, 2021c) is a pathway for the global energy sector to achieve net zero CO₂ emissions by 2050, while also achieving universal energy access by 2030 and major improvements in air quality. With around 400 milestones across all sectors, the NZE roadmap gives a sense of pace and scale needed for technology deployment. These include:

- **Energy efficiency:** Annual energy intensity decreases by over 4% through 2030, with further annual decreases of almost 3% up through 2050. This translates into a necessary 50% increase in energy efficiency (GDP/energy use) of the global economy by 2030.
- **Buildings:** By 2030, all new buildings are zero-carbon ready, paving the way for more than 85% of buildings to be zero-carbon ready by 2050.
- **Electricity:** Over 1000 GW of wind and solar is added each year by 2030. Net zero emissions are achieved in advanced economies by 2035 and globally by 2040. By 2050, nearly 70% of global electricity generation comes from solar PV and wind.
- **Hydrogen:** Low-emissions hydrogen production accelerates to 150 Mt in 2030, with a big increase in electrolyser capacity to 850 GW by 2030. This scales to 435 Mt of low-emissions production and 3,000 GW of electrolyser capacity by 2045.
- **Carbon capture, utilisation and storage (CCUS):** Around 1.7 billion tonnes (Gt) of CO₂ are captured per year by 2030, scaling to around 7.6 Gt CO₂ annually by 2050.

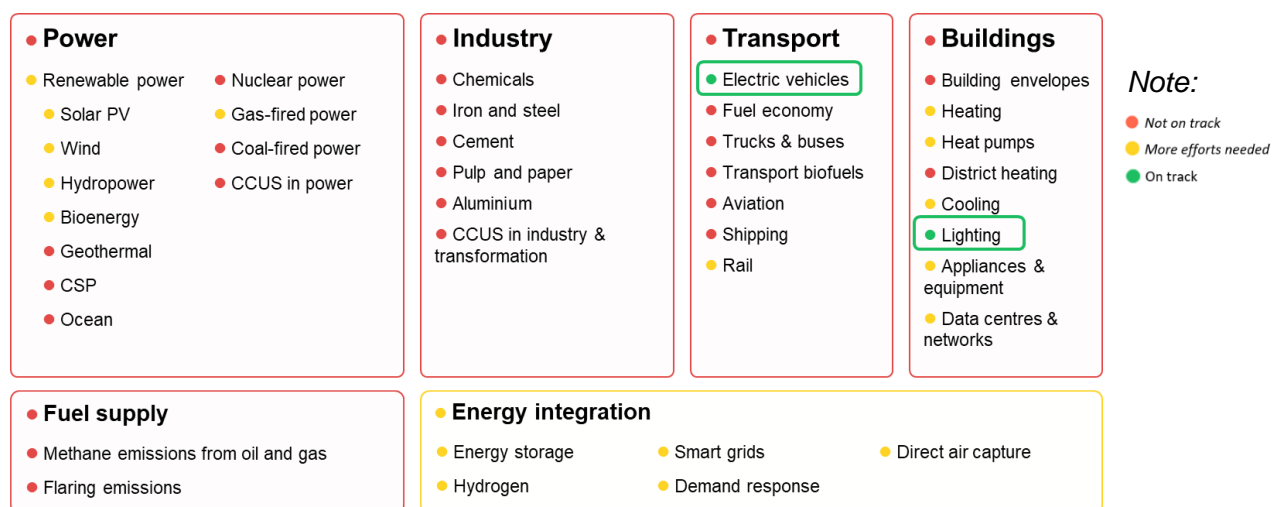
- **Investment in clean energy technology:** By 2030, public resources for clean energy RDD need to triple by 2030 with at least USD 90 billion required by 2026 for a portfolio of clean energy demonstration projects and a tripling of clean power investment by 2025.

II.2. Global trends in energy technology deployment

Progress by sector and technology

By technology, out of 46 technologies only two technologies were on track in 2021, that was electric vehicles and lighting, as the IEA Tracking Clean Energy Progress in 2021 illustrated.

Figure 4. Tracking Clean Energy Progress (2021)



Source: IEA (2021d), *Tracking Clean Energy Progress*, [Tracking Clean Energy Progress – Topics - IEA](#)

Decarbonising the power sector is a fundamental step to reduce emissions, especially in an increasingly electrified world. However, key power generation technologies are not on track (such as nuclear, geothermal, CCUS in power, concentrating solar power and ocean energy).

Energy integration technologies will become increasingly important, especially as shares of variable renewables rise. More efforts are needed to scale technologies like hydrogen, energy storage and direct air capture, as well as investments in smart grids and demand response.

All three energy end-use sectors – industry, buildings and transport – are not on track. In industry, much stronger progress is needed on material and energy efficiency, the uptake of renewable fuels, and development and deployment of low-carbon processes. Unprecedented efficiency improvements are required in buildings, addressing growing demand from cooling, heating and powered devices. The transport sector will need to undergo a major transformation, including vastly improving efficiency and shifts from oil to electricity and other low-emissions fuels. A rapid step-change in industry action is needed.

Latest trends for critical carriers for accelerating clean energy transitions

- **Low emissions power:**
 - In 2021, 245 GW of wind and solar PV were added globally, complemented by another 50 GW of other renewables and 5.6 GW of nuclear capacity.
 - Total low-emissions capacity additions were 6% higher than in 2020 and 73% higher than 2015.
- **Energy intensity:**
 - In 2021, the energy intensity of the global economy improved by 1.9%, up from 0.5% in 2020.
 - This is similar to the annual average over the last decade 2010 to 2020 (2%).
- **Clean transport electrification and fuels:**
 - Electric vehicle sales accounted for 9% of the global car market in 2021.
 - This is four times higher than their market share in 2019.
- **Low emissions fuels:**
 - Global investment in liquid biofuels more than doubled in 2021, reaching just over USD 8 billion. Two-thirds of this growth was in biodiesel, spurred by rising investment in renewable diesel, although ethanol investment also nearly doubled.
 - Just under 270 MW of electrolyser capacity that can produce hydrogen from water came online in 2021, more than in any previous year. Around 70 MW of electrolyser capacity came online in 2020.
 - Over 150 CCUS projects were announced in 2021, compared to around 30 in 2020.

II.3. Emerging priorities

Achieving critical technology and sector breakthroughs to 2030 offers a number of key emerging priorities for clean energy transitions. At COP26 in Glasgow, five breakthrough sectors were identified, **power, road transport, hydrogen, agriculture and steel.**

For the **power sector**, there is no shortage of technology options but **G20 needs to accelerate** investment in energy efficiency, a wide portfolio of renewables, as well as hydrogen and other low carbon fuels, such as ammonia.

In the **road sector**, the rate of energy efficiency, electrification and the penetration of low-emissions fuels need to accelerate dramatically. The shift in behaviour, the switch of the vehicle fleet and the deployment of technology and service infrastructure will determine the speed of decarbonisation.

For industry, up to 2030, G20 countries need to demonstrate low-emissions technologies, notably in heavy industry and other hard to abate sectors, notably in steel.

In partnership with IRENA and the UN High Level Action Champions, the IEA leads the **State of Sectoral Transitions report** which will provide every year an annual report to track progress by sector against a 1.5 °C trajectory (IEA, 2022b upcoming). The first report will be presented in September 2022. This will help G20 countries to track and identify common milestones, the state of international collaboration between countries, companies and civil society. The report provides recommendations for key focus areas over the next 1-2 years.

Promoting energy efficiency

Energy efficiency takes the core priority in early action, as demonstrated in the IEA net zero roadmap by 2050. Efficiency measures could help the global economy be one third more efficient by 2030. And that despite the fact the global economy grows by 40% by 2030, driven by higher populations and income levels, but uses 7% less primary energy. Around 80% of the additional energy efficiency gains over the next decade result in overall net cost savings to consumers, helping to lower energy bills and to cushion the effects of price volatility.

In the current geopolitical context, behavioural aspects and voluntary action are very important. Implementing programmes for energy efficiency in low-intensity industries offer great value for efficiency processes and result in greater competitiveness of industries, notably SMEs.

Boosting a broad clean energy technology portfolio

In the period beyond 2030, diverse low-emissions technologies that currently are at the demonstration or prototype stage need to be developed and deployed, in particular dispatchable generation technologies that can add capacity and flexibility to power systems. Examples include various forms of storage and demand-side response technologies, which are projected to provide the bulk of electricity flexibility options by 2050.

Carbon Capture, Utilisation and Storage (CCUS) and advanced nuclear technologies such as small modular reactors are also important options for the clean energy transitions. All effective technologies must be mobilised to achieve climate goals in a cost optimal and secure way. This requires that governments strategically direct and quickly increase spending on research and development. Developing, demonstrating and deploying clean energy technologies will boost the availability of innovative technologies as a hedge against technological uncertainty.

Accelerating emissions reductions in hard-to-abate sectors

Near zero emissions by 2050 requires decarbonising all energy producing and consuming sectors, including industry. In industry, the decarbonisation pathway will be most challenging. Two sectors that can enable global breakthroughs, are steel and cement.

China and India are the largest producers of steel & cement and the G20 can play a major role in tackling industry emissions. For deep emission reductions in industry, we need a massive technology shift, towards near zero emission technologies, primarily CCUS and hydrogen.

A massive push is needed to scale CCUS and hydrogen to levels required in the NZE. One critical area is the planning and building out of supporting infrastructure, such as CO₂ transport and storage, hydrogen transportation infrastructure, and electricity production and distribution.

A toolbox for advancing steel sector decarbonisation includes industry transitions planning, carbon pricing, market creation mechanisms, international finance, level-playing field mechanisms. We hope the toolbox will be useful to government around the world, as they look to accelerate progress on the industry transitions (IEA, 2022c).

II.4. Enhancing international collaboration and partnerships

Since the creation of the energy working group of the G20 in 2015, the group has increasingly advanced discussions on the role of technology as part of energy transitions. In 2019, Japan placed a strong focus on hydrogen in the G20 and Saudi Arabia on hard-to-abate sectors, CCUS, hydrogen as well as recycling. G20 Presidencies have created synergies with global energy technology partnerships, notably the initiatives by the Clean Energy Ministerial and Mission Innovation, supported by the IEA technology collaboration partnerships and advancing the Glasgow Breakthrough Agenda. Building on the Breakthroughs Agenda, the CEM and MI platforms can enable G20 partnerships that help advance and close technology gaps as identified in this stocktake.

Initiated by the UK and shared by 42 world leaders, **the Breakthrough Agenda** is an unprecedented global clean technology plan to help keep 1.5°C within reach of all parties. The main key is the successful implementation of technology transfer from developed countries to developing countries.

G20 countries can build on the Breakthrough Agenda with a view to work on five key areas in the coming years:

1. **Coordination** – establishing a clear ‘centre of gravity’ for each major emitting sector, making use of existing initiatives / structures where possible.
2. **Assistance** – strengthening the technical and finance offer by bringing together donor and recipient countries, philanthropies and delivery partners in globally coordinated fora for the delivery of scaled-up assistance programmes in each major emitting sector.
3. **Trade** – agreeing net-zero aligned trade arrangements that can enable a faster transitions across sectors and regions. This could include, high-level dialogues in each sector (where relevant) to develop a common approach to reaching a level-playing field.
4. **Demonstration** – increase spending on technology demonstration projects to at least \$90bn by 2026. Early deployment projects should be supported by matchmaking forums in all regions, and by commitments and process to ensure deep and sustained sharing of learning from these countries between countries.
5. **Infrastructure** – accelerate the build-out of key international infrastructure to enable the transitions across multiple sectors, through strengthened collaboration. This includes agreeing top priority projects that can support near-term growth in renewable and low carbon hydrogen, clean power and CO2 transport and storage, for example.

Clean Energy Ministerial (CEM) is an international collaboration platform that brings together a powerful community of the world’s largest and leading countries, companies, and experts to form action coalitions that accelerate clean energy transitions. With almost all G20 members also members of the CEM, it serves as a valuable forum in which to take practical actions to implement the political leadership of the G20. The CEM’s flexible work programme currently consists of more than twenty active workstreams, which span across all sectors of the clean energy economy.

Many G20 countries co-lead or participate in CEM workstreams, which range across a wide spectrum of clean energy topics, ranging from power systems to energy efficiency, transportation to industry, clean fuels to CCUS, and various other enabling topics.

On clean fuels for instance, CEM has initiatives on bioenergy (the Biofutures Platform Initiatives) and hydrogen (the CEM Hydrogen Initiative (H2I)). Led by several G20 governments, with participation of many others, the CEM H2I not produces analytical work for long term H2 scenarios, but offers to be a platform facilitating partnerships with other fora undertaking work in this area such as the Hydrogen Council, International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE), IEA’s Advanced Fuel Cells and Hydrogen Technology Collaboration Programmes, Mission Innovation, World Economic Forum, etc. As these initiatives are delivering action on the ground, the Global Ports Hydrogen Coalition, a part of the Hydrogen initiative (H2I) dedicated to support the scale-up of clean hydrogen in the

global economy, brings together over 60 ports from around the world to engage in supporting H2 deployment.

The Super-Efficient Equipment and Appliance Deployment (SEAD), again another long-standing CEM initiative, is the key international platform for exchange for practitioners of energy efficiency for products. The initiative is led by the UK, EU, India and Sweden and coordinated by the IEA. It currently has 21 members with a strong economic and geographical diversity. In addition to being a CEM initiative, SEAD is associated with the Energy Efficiency Hub, hosted by the IEA. The Energy Efficiency Hub encourages and fosters exchange and collaboration on key energy efficiency policies across its members from the IEA and G20 countries.

Likewise, CEM's initiatives on Carbon Capture Utilisation and Storage (CCUS), Electric Vehicles (EVI), Industrial Deep-Decarbonisation (IDDI), Smart Grids (ISGAN) and power systems transformation (21CPP) have all been very popular fora for collaboration among many G20 members.

Building upon the three percent club, **Mission Efficiency** was launched at the Sustainable Energy for All Forum in Kigali, Rwanda in 2022. Mission Efficiency is a collective of commitments and actions from a coalition of governments, organizations and initiatives coming together to accelerate the energy transitions towards energy efficient economies worldwide. The end-use sectors covered by Mission Efficiency collectively represent nearly all of global electricity consumption. The efforts being undertaken by Mission Efficiency, a coalition of partners who aim to elevate, support and invest in energy efficiency globally through public and private financiers, provides a promising framework for making needed progress on energy efficiency.

Mission Innovation (MI) promotes investment in research, development and demonstration to make clean energy affordable, attractive and accessible for all. A global initiative of 22 countries and the European Commission (on behalf of the European Union), among them many G20 countries MI promotes public-private innovation alliances – Missions – to bring down costs and boost scale of clean energy solutions. Major missions include: Green Powered Future, Zero Emission Shipping, Clean Hydrogen, Carbon Dioxide Removal, Urban Transitions, Net Zero Industries, Integrated Biorefineries.

III. Stocktake of Priority #3: Finance and Investment

III.1. Context

Getting the world on track to meet net zero emissions or carbon neutrality by mid-century requires a more than three-fold increase in clean energy investments reaching USD 4.6 trillion by 2030. All regions will need to see a massive scale up in investments with the largest

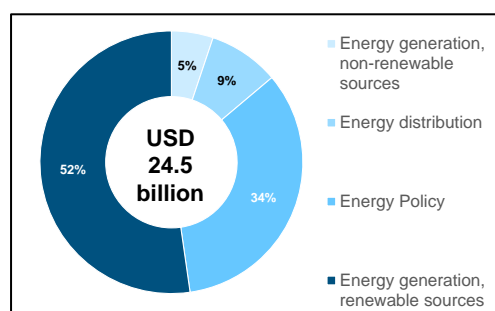
increases needed in emerging and developing countries where a 4-fold increase from current levels, reaching more than USD 1 trillion by the end of 2020s. Investment in the power sector alone needs to grow at a rate of more than 25% annually, compared to a 3% average growth rate seen over the past few years (IEA, 2022d) - a significant challenge given fiscal constraints in these countries. At the same time, this challenge represents an opportunity for foreign investors to expand their green portfolios into these fast-developing economies, while increasing domestic participation of citizens and local businesses to contribute and reap benefits from a just energy transitions.

III.2. Clean energy finance and investment trends

Achieving the 100 billion climate finance goal requires continued efforts to scale up public finance that mobilises private capital

In 2020, climate finance provided and mobilised by developed countries for developing countries totalled USD 83.3 billion, a 4% increase from the previous year, but more than USD 16 billion short of the 100 billion annual pledge (OECD, 2022a). In 2016-2019, over one-third of total climate finance provided and mobilised targeted the energy sector (Figure 5). During the same period more than half of the total climate finance provided and mobilized in the energy sector was targeted for renewable power. 32% (USD 7.6 billion) of all energy sector finance was mobilized from the private sector, mainly for renewables. Between 2016 and 2020, lower middle- and upper middle- income countries accounted for more than three quarters of the total energy financing where Africa and Asia collectively represented 68% of this total (OECD, 2022a). Achieving the USD 100 billion goal requires continued efforts to scale up public finance and improve its effectiveness in mobilizing private capital, particularly in least developed countries.

Figure 5. Breakdown of the climate finance to the energy sector, 2016-2019 annual average

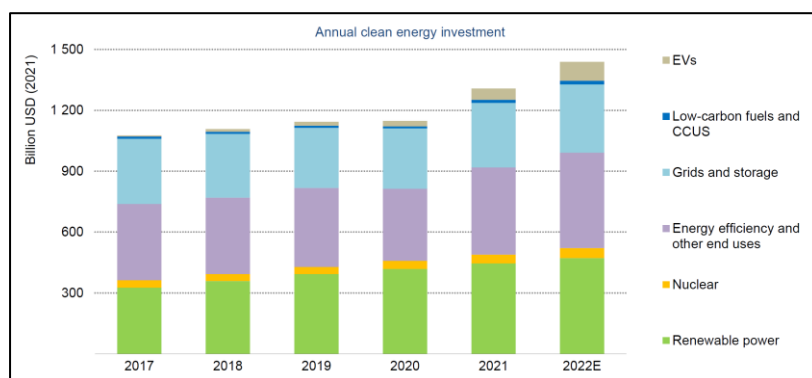


Source: OECD (2021)

Clean energy investments are estimated to reach USD 1.4 trillion by the end of 2022

World energy investments are set to rise over 8% in 2022 to reach a total of USD 1.4 trillion, well above pre-COVID levels. Within this total, annual clean energy investments are estimated to rise for a second year in a row, however at a level below that needed to put the world on a net-zero path by mid-century. China with the highest level worldwide, together with the European Union and the United States are estimated to represent 60% of global clean energy investments in 2022. Renewable power, grids and energy storage investments represent the lion's share with more than half of all clean energy investments globally (Figure 6). Energy efficiency investments follow renewables, thanks to government incentives and the surge in energy prices. Besides the need for rapid scale up in clean energy investments, there will be a need for a massive shift away from fossil fuels to achieve the Paris Agreement goals (IEA, 2022d).

Figure 6. Annual global investments in clean energy technologies, 2017-2022

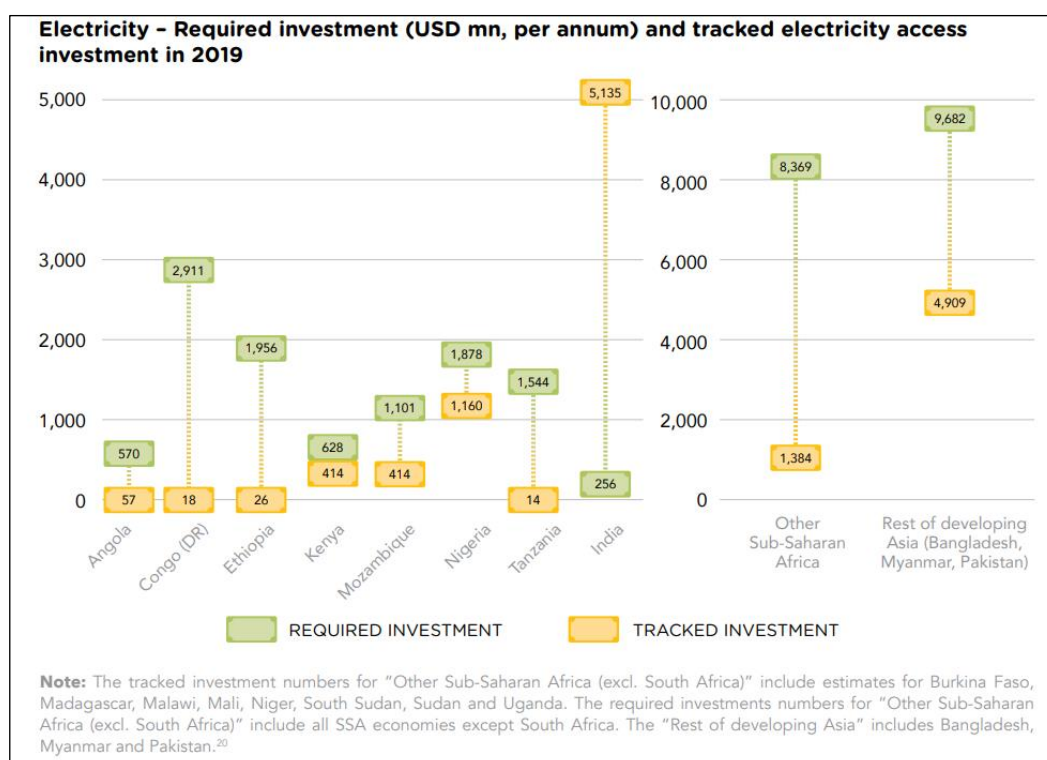


Source: IEA (2022d)

Efforts towards increasing electricity access and accelerating a low-carbon energy transitions should be strategically paired with clean cooking investments to leverage finance and policies

To achieve the universal access target and maintain development aligned with the net-zero pathway, USD 42 billion in clean energy investments for electrification and clean cooking solutions are needed (IEA, 2021c). Tracked investments of USD 13.6 billion in 2019 are about 41% of what is required, indicating a significant gap that needs to be closed (SEforAll, 2021).ⁱ

Figure 7. Required investment and tracked electricity access investment (2019)



Source: SEforALL (2021)

Financing flows for access to electricity and clean cooking continue well below what is needed. The latest data on financing flows (from all sources: public, private, international, domestic) for access to electricity indicates a three-year low of USD 31.9 billion (2019) to the 20 countries that represent 80% of the electrification access deficit. Even more critical, the financing flows from all sources for clean cooking only reached USD 133.5 million for the 20 countries that represent approximately 80% of the access deficit (SEforALL and CPPI, 2021).

Meaningful progress on phasing down fossil fuel subsidies would help to level the playing field in favour of clean energy

Total fossil fuel subsidies to consumers and producers across G20 economies rose to USD 190 billion in 2021 from USD 147 billion in 2020 as energy prices rose with the rebound of the global economy. Support for producers reached levels not previously seen in OECD tracking efforts, at USD 64 billion in 2021 – up almost by 50% year-on-year, and 17% above 2019 levels (OECD, 2022b). Those producer subsidies have partly offset low energy prices during the COVID-19 slump, as well as losses from domestic consumer price controls as global energy prices surged in early 2021.

A total of USD 246 billion equivalent response measures were put in place for households and firms across 42 countries between October 2021 and December 2022. This included USD 169

billion direct support for fossil fuels consumption (OECD, 2022c). There is an ongoing challenge faced by governments in targeting support measures to households and businesses most in need, and in maintaining consistent incentives to reduce fossil-based energy and encourage the transitions to carbon neutrality.

In 2021, global public spending on energy research and development (R&D) rose to USD 38 billion, nearly 90% of which was allocated to low-carbon energy R&D

The 5% increase in public spending in 2021 was slightly lower than the 7% annual average between 2017 and 2020 (IEA, 2022d). Spending on hydrogen and fuel cells have been systematically increasing since 2015 as the only two technologies showing constant growth. Corporate energy R&D spending by listed companiesⁱⁱ returned to growth in 2021, with a major increase in China and renewables compensating for tightened budgets elsewhere and among fossil fuel companies. At the same time energy-intensive industry sectors spent more on R&D whereas aviation sector declined.

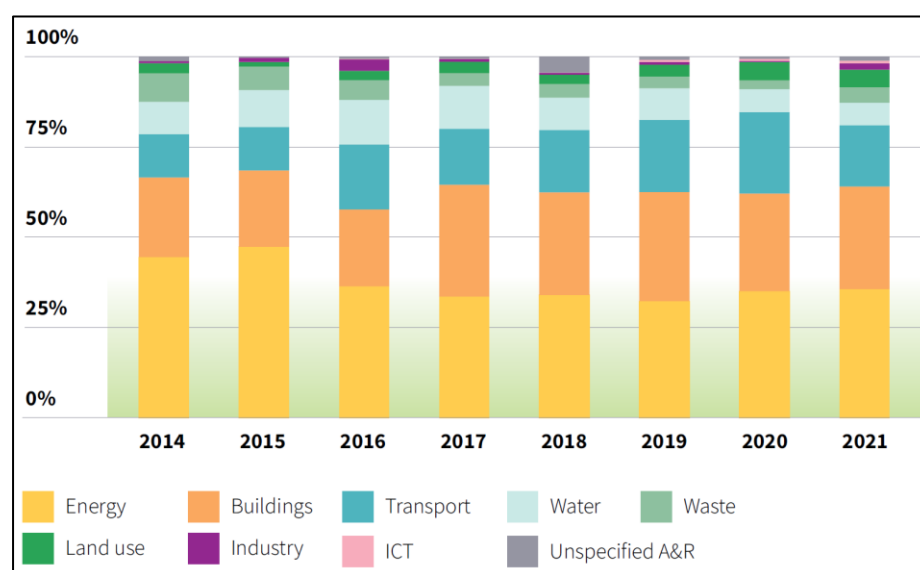
Renewables are attracting investments from institutional investors, while a few still remain highly exposed to fossil fuel assets

Renewable energy has an important share of assets under management by large pension funds and collectively with transmission accounts for about one third of the infrastructure equity holdings according to the latest survey of large pension funds undertaken by the OECD (OECD, 2021a). A large range is observed depending on fund size, the country's energy transitions progress and the economy's dependence on fossil fuels.ⁱⁱⁱ With respect to the funds' total investments, green investments represented on average 8% of the total, with a range from <1% to as high as 58%. Green equity investments accounted for nearly three-quarters of all green investments and highlights the potential for green debt, including green, social and sustainability bonds, to play a larger financing role in the future.

Green, social and sustainability bond market represents a growing source of finance

Green, social and sustainability as well as the sustainability-linked and transition bond market surpassed the USD 1 trillion mark in 2021 with about half of this total represented by green bonds. Energy, buildings, and transport were the three largest sectors where proceeds were used, collectively contributing 81% to the 2021 total (Figure 8).

Figure 8. Breakdown of the use of green proceeds by sector, 2014-2021



Source: CBI (2022)

III.3. Emerging priorities

Blended finance for clean energy

Overcoming the clean energy finance gap in emerging and developing economies will require more targeted efforts to mobilise both domestic and international sources of private capital using innovative financing solutions. Blended finance, the use of development finance and philanthropic funds to crowd in commercial finance, can be an effective way to catalyse private capital, but is not a panacea and needs to form part of a wider package of support measures and reforms. A robust understanding of the market failures, barriers and risks to clean energy investments at the national level is a prerequisite to designing effective financing solutions. The OECD’s forthcoming blended finance guidelines for the clean energy sector provide a detailed overview of blended finance solutions for different clean energy sub-sectors that can be used to de-risk projects or provide additional support needed to mobilise private capital, with a summary of the main solutions provided in the table below. This will complement the G20 Blended Finance Principles underdevelopment.

Table 1. G20 Blended Finance guidelines and principles

Blended finance solutions	Description
Aggregation and securitisation	Pooling of smaller projects to rateable and investable financial products
Grants	For early-stage investment, project preparation and structuring

Revenue guarantee	To help establish viability in new markets or less mature technologies
Energy savings insurance	To increase market confidence in energy efficiency project performance
Partial risk guarantee or 1st loss facility	As a credit enhancement to improve investor confidence, lower financing costs and address supply chain risks
Equity capital fund for EE	Address collateral requirements and capital constraints of ESCOs
On-lending schemes and revolving funds	Build awareness and capacity of domestic financial institutions on viability for energy efficiency and newer clean energy solutions to the market
Tenor extensions	Increase access to long term debt to better match project life times
Political risk insurance	Protection against breach of contract or other changes in political or policy context affecting projects
Performance insurance	Improve investor confidence in project viability and projected returns
Current risk hedging or forex guarantees	Forex risks created by lending in hard currency or importation of equipment in foreign currency
Viability gap fund	To increase project returns for first projects to meet return expectations

Source: OECD (2022 forthcoming)

Financing the energy transitions will require a comprehensive, system wide approach

Collaboration and coordination with the wider financial ecosystem will be an important driver to unlocking finance at scale. Efforts to green financial systems led by the G20 Finance track and outlined in the G20 Sustainable Finance Roadmap and the forthcoming Sustainable Finance Report should be considered and where appropriate integrated into the Bali Compact and Bali Energy Transitions Roadmap. In addition, enhanced engagement with related Working Groups such as Climate Sustainability, Development and Infrastructure would strengthen financing efforts for a just transitions.

The private sector can take on a crucial role in the energy development process to accelerate the transitions, by investing in necessary infrastructure, research and development, as well as in innovative solutions that foster the adoption of energy efficiency, renewable energy and other low carbon energy solutions. However, challenging risk-return profiles that impede access to finance can pose significant obstacles and early engagement with the private sector

can enable the development of innovative financing solutions that address perceived and real risks that can help to lower financing costs and improve project returns. It can also help to create the right domestic enabling frameworks that private investors require as a precondition to invest. G20 clean energy investor dialogues can provide a platform to facilitate closer engagement with the private sector.

III.4. Enhancing international collaboration and partnerships

Enhancing international collaboration will be critical to support countries in meeting the global net zero or carbon neutrality goal. Achieving the finance priority of the G20 energy transitions will require new partnership models to be developed that encompass not only countries, but the private sector as well.

The Just Energy Transition Partnership (JETP) for South Africa, announced at COP 26 and the USD 8.5 billion financial commitments made by countries to support the transitions is a model that is being replicated in other countries. At the same time, financial sector led initiatives such as the [Glasgow Financial Alliance for Net Zero \(GFANZ\)](#), together with philanthropic organisations, are collaborating with governments to create country platforms that can support the creation of bankable project pipelines at scale. These different partnerships and platforms will need to work closely together to create the necessary conditions to accelerate investments and unlock finance for energy transitions.

ⁱ This includes country specific data from Angola, Congo (DR), Ethiopia, Kenya, Mozambique, Nigeria, Tanzania and India as well as aggregate data for all sub-Saharan Africa countries except for South Africa and aggregate data from developing Asia based on Bangladesh, Myanmar and Pakistan.

ⁱⁱ This includes reported R&D expenditure by companies active in sectors that are dependent on energy technologies, including energy efficiency technologies where possible.

ⁱⁱⁱ This survey is the eighth since the data collection exercise was first established in 2011. Its scope covers 100 public and private pension funds from 40 countries that responded to the survey, which in total managed USD 10.3 trillion in assets in 2020.

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G20
INDONESIA
2022

ENERGY
TRANSITIONS
MINISTER'S
MEETING

2 SEPTEMBER 2022



**SUMMARY OF G20 2022 ENERGY
TRANSITIONS WORKING GROUP (ETWG)
SIDE EVENTS**

SUMMARY OF G20 2022 ENERGY TRANSITIONS WORKING GROUP (ETWG) SIDE EVENTS

1. Ensuring People-Centred Transitions for All

6 April - International Energy Agency (IEA)

The event demonstrated the need for jobs, skills and training to be at the heart of energy transitions, one of the three pillars of Indonesia G20 Presidency. While transitioning to clean energy is associated with a number of job losses in traditional fossil fuel energy sectors, workshop participants underlined these should not undermine the even greater number of new economic opportunities the transition offers. Therefore, clean energy transition policies need to be truly people-centred, fair and inclusive. Speakers highlighted the need for governments, employees, and employers to come together to discuss transition issues. Speakers underscored the value of international best practice exchange and co-operation on just transitions across the G20, as set out in the G20 Bali Clean Energy Transitions Roadmap.

2. Making CCS/CCUS Affordable: Enabling CCUS Deployment in G20 and Beyond

13 April - Economic Research Institute of ASEAN and East Asia (ERIA)

The developing world will need to rely on CCUS to decarbonize emission as many countries still rely on fossil fuel during the energy transition. Reducing costs of CCUS in the developing world is key to this transition. This workshop co-organized by ERIA proposes several ways to make CCUS affordable. First, meeting 2030 CCUS deployment targets by combining research and innovation with governmental support as well as public-private sectors should lead to CCUS commercialization. Second, regional collaboration is imperative for achieving economies of scale to reduce costs of CCUS. Third, identifying low-cost CCUS opportunities is important, while leveraging the experience, expertise, and resources of the oil and gas sector. Fourth, the development of value chain networks and hubs of CCUS could help accelerate deployment of CCUS. Finally, capacity building and knowledge sharing on CCUS are so critical to understand the elements of the suite of CCUS technologies and required policies.

3. Maintaining Energy Security during Transitions

20 April - IEA

Invited speakers highlighted the critical importance of energy security to our societies in the light of the coronavirus pandemic, geopolitical turbulences and the deepening global energy crisis. In response, governments should strengthen the resilience of energy systems through greater energy efficiency, diversified energy sources, and resilient and sustainable energy supply chains. G20 economies drive the global economic recovery through clean energy finance and investment. To avoid any lock-in from new investment, it is important to evaluate the repurposing of existing fossil fuel infrastructure to the

production, use and transport of a range of low-emission fuels before such infrastructure is decommissioned. Government speakers called for enhanced international collaboration on clean energy transitions, notably on hydrogen and critical minerals, to make future energy security more robust.

4. Achieving Global Energy Access Goals in the Decade of Actions

27 April - Sustainable Energy for All (SEforAll)

The G20 Secretariat of the ETWG and SEforALL organized a virtual side event, “Achieving Global Energy Access Goals in the Decade of Action”. This virtual side event brought together experts to discuss the global challenges and regional barriers to universal energy access around electrification and clean cooking to provide G20 members and partners with more detailed understanding of how universal energy access goals can be met. Highlights of the dialogue included an in-depth analysis of the modern energy minimum, proposed by the Energy for Growth Hub, the state of finance flows to energy access, the opportunity to address both electrification and modern clean cooking technologies, and the importance of last-mile strategies such as those being undertaken in Indonesia. As a result, this virtual side event has positioned key ideas that have been incorporated into the discussions of the G20 Bali Clean Energy Transitions Roadmap.

5. Escalating Gas Role in Energy Transitions

11 May - ERIA

The energy transition, the current geopolitical crisis, and the developing economies’ struggle to procure access to clean energy, show the crucial role of natural gas. Nevertheless, the geopolitical tensions have increased the gas price in global markets and have triggered its volatility. The workshop, co-organized by ERIA, recommends three groups of actions to escalate the role of natural gas. First, the G20 countries need to acknowledge the crucial role of natural gas in the energy transition, in fulfilling universal energy needs, ensuring energy security, and facilitating the penetration of VRE and advanced technologies. Second, G20 countries should hold events to stimulate the use of the different cooperation financing schemes for developing and emerging economies and engage in international initiatives in relation to the promotion of CCUS. Third, G20 countries should implement capacity building programs for the developing regions by promoting the creation of more integrated and transparent gas markets.

6. Assuring Energy Access and Transitions in Archipelagic States

18 May - United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP)

Recognizing the energy transition as a potential opportunity for the eradication of energy poverty, the assurance of a just and equitable transition will be a key focus of efforts over the coming decade in order to mitigate the potential negative socio-economic impacts. The G20 Indonesia Presidency recognizes the particular challenges in delivering universal energy access in archipelagic circumstances, especially in the case of small island developing states. This event sought to provide participants with insights into the opportunities and challenges arising in those situations.

Speakers and participants recognized that the current trajectory would result in a failure to deliver universal access, but that the challenges are far from insurmountable. Participants highlighted potential improvements in technology, finance (both private finance and investment from multilateral development banks), and the need for

strengthening international collaboration – including among the G20 members – to support energy access globally.

ESCAP and the G20 Indonesia Presidency closed by noting their plans to amplify the recommendations, practices, and experiences discussed during this event by highlighting the issue of archipelagic energy access and proposing tangible actions to the ETWG and at Ministerial-level discussions of the G20.

7. Boosting Geothermal Power

25 May - International Geothermal Association (IGA)

Co-Organized by IGA, the webinar discussed about the key factors to boost geothermal development. The important points, among others: At the global level, there is potentially 1 TW worth of geothermal energy which can be developed in many applications. By using cascade-use scheme (combination of electricity generation and direct-use applications), geothermal developers can generate more revenue and contribute more in energy transition. For the financing facilities could be supported from development banks, public investment fund, green fund, and commercial banks. However, a certain risk sharing mechanism is needed to lower the business risk and increase the economic feasibilities. The mechanism can be in the form of cost-sharing mechanism, geothermal resource risk insurance mechanism, and early-stage fiscal incentives. And in order to boost geothermal development in Indonesia, several enabling environments must be created which include regulation frameworks, technologies capabilities, business certainties, and partnership opportunities.

8. Highlighting Nuclear Potentials in Energy Transitions

10 June - International Atomic Energy Agency (IAEA)

IAEA and the government of Indonesia organized a technical webinar on the topic of “Nuclear Potentials in Energy Transitions - Onward to The G20 Summit 2022.” Nuclear power can support energy transition to zero emission, not only for the power sector, but beyond the electricity sector, which can generate jobs and spur economic growth. Nuclear technology options, focusing in particular on small modular reactors, can be attractive options for developing countries, while still paying attention to the safe, secure and sustainable operational plans. IAEA can support member states for the development of a sustainable national infrastructure required for safe, secure and the peaceful nuclear power program, and also facilitate an intern regional project to build the capacities of member state in the area of Small Modular Reactors (SMR) and to exam how it can be utilized to support climate change medication.

9. Expanding Solar, Wind, and Ocean Energy Solutions

8 June - International Renewable Energy Agency (IRENA)

On 8 June, IRENA and the government of Indonesia organized a technical webinar on the topic of “Expanding solar, wind and ocean energy”. Solar, wind and ocean energies are key technologies that will be needed to accelerate the energy transition, with innovative emerging technology solutions such as floating solar PV and floating wind turbines. Affordability and financing are key considerations in upscaling renewable technologies. Government commitment to international climate targets must be translated into stable and predictable policies and international cooperation must be strengthened with shared interest followed by more investment and projects in emerging economies, in order to further advance the development of these key technologies.

10. Accelerating Green Hydrogen Technologies and Energy Storage for The Energy Transition

15 June – IRENA

On 15 June, IRENA and the government of Indonesia organised a technical webinar on the topic of “Accelerating Green Hydrogen Technologies and Energy Storage for The Energy Transition.” Green hydrogen and energy storage are becoming the critical enablers of innovative technologies that are prone to address the multifaceted issues of the decarbonisation of the energy sector. Green hydrogen and storage contribution spans from enhancing power system flexibility to decarbonising energy-intensive processes in industry and transport. Therefore, stronger international cooperation in hydrogen and energy storage and multi-level partnership in the global and regional sphere is required to ensure accessibility, affordability, and security of those technologies.

11. Biofuels for Green Economy

16 June - Clean Energy Ministerial (CEM)

Co-Organized by CEM, a virtual webinar on the topic of “Biofuel for Green Economy” aims to disseminate the most recent biofuel development and discuss the biofuel issues and challenges toward net zero emissions. Biofuel industry is the second largest renewable energy sector in terms of employment, only behind solar energy in the world and significantly contribute to the achievement of Agenda 2030 SDGs as well as carbon neutrality. Biofuels still hold the enabling keys towards green and sustainable economy, in particular significant contribution of biofuels stretches in the massive industrial value chains, from the upstream sector in agricultural sectors, into the downstream sector for its use in the energy sectors. A roadmap of action involving all stakeholders is required for the development and sustainability of sustainable biofuel governance so that biofuels can be properly understood and regulated.

12. Energy Efficiency: Scaling Up Strategies

29 June - United Nations Industrial Development Organization (UNIDO)

This webinar provided an overview of the key barriers and constraints to energy efficiency (EE) from a technical, financial, institutional, and policy perspective. It highlighted global challenges (growing demand, energy security, infrastructure bottlenecks and shortfalls, economic growth and competitiveness) and pointed out the barriers that must be addressed to increase energy efficiency and unlock financing. New and innovative technologies will play a key role in industrial decarbonization. It suggested to establish a clear legal umbrella for ESCOs and developing a local ecosystem with local players who can bridge the needs of financiers, building owners, and technology solution providers. Successful policies and incentive schemes prove to raise ambition on energy efficiency and unlock investments. Governments need to work together on creating an enabling environment for EE investments, leading intensive stakeholders’ dialogue with industries, and facilitate strong partnerships between energy efficiency project promoters and financial institutions.

13. Joint Webinar on Energy and Climate Financing

13 July – Organisation for Economic Co-operation and Development (OECD)

This webinar co-organized with the MEMR and MoEF and co-led by the OECD. The event began with a keynote from MEMR highlighting the investment requirements for Indonesia’s clean energy transition. OECD provided an overview of the latest status on climate financing, highlighting the need for urgent action to accelerate investments in

climate adaptation and mitigation. IEA provided an overview of the newest energy investment trends. Some of the key messages discussed were: Country ownership and leadership in the investment plan are essential; Strong regulations are crucial to unlocking private capital; MDBs need to leverage limited public funding to attract private sector participation by focusing on de-risking investment; Blended finance would be an essential instrument to improve the bankability of projects; and new partnership models will be needed to enhance collaboration across stakeholders.

G20 Chair's Summary on Multilateralism for Sustainable Development Goals

G20 Development Ministerial Meeting
Belitung, 8 September 2022



We, the G20 Development Ministers, gathered in Belitung, Indonesia on 8 September 2022 to renew our commitment to reinvigorate a more inclusive multilateralism, including through reform of the multilateral system, for implementing the 2030 Agenda and achieving its Sustainable Development Goals (SDGs) by building on the works, consensus, and achievements made under the Indonesian G20 Presidency and previous presidencies.

Part I

1. Members agreed that global economic recovery has slowed and is facing major setbacks as a result of the climate, biodiversity and pollution crisis, the COVID-19 pandemic, and other crises in many parts of the world. Many expressed condemnation on Russia's war against Ukraine. Others viewed that the Development Working Group (DWG) is not the proper forum to discuss geopolitical issues. Members called for peace, cessation of hostilities, dialogue and respect of the UN Charter and international law.
2. Members noted that these have further exacerbated efforts to advance the 2030 Agenda for Sustainable Development by producing serious consequences across the world, including disrupting global supply chains, increased energy and food insecurity and malnutrition, as well as other humanitarian and economic challenges. Members recognized that these have disproportionately affected countries most vulnerable to global disruptions, particularly developing countries. Members therefore reaffirmed their commitment to strengthen multilateralism to achieve the SDGs, by building on the works, consensus, and achievements made under the Indonesian G20 Presidency and previous presidencies.

Part II

There is agreement on the following points:

3. In line with the G20 theme for 2022 of "Recover Together, Recover Stronger", we welcome the three priorities of the Indonesian G20 Presidency of strengthening global health architecture, enabling an inclusive digital transformation, and accelerating sustainable energy transitions. The work undertaken by the G20 DWG and its deliverables contributes to the aforementioned priorities in addressing development challenges and accelerating the implementation of the 2030 Agenda and achievement of the SDGs with a pledge to leave no one behind.
4. We express our unwavering commitment to the 2030 Agenda for Sustainable Development and achievement of its SDGs, which remains as a blueprint for a sustainable future for all. We committed to put sustainable development at the center of the international cooperation agenda and leave no one behind. The world currently has less than a decade to ensure a timely realization of the 2030 Agenda. However, the international community is collectively off track in the delivery of SDGs due to multiple crises and challenges as well as lack of access to adequate and affordable finance and technology. Furthermore, the adverse public health and socio-economic impacts of the COVID-19 pandemic, including increased pressure on health systems, deepening education crisis, global value chains disruption as well as risk debt distress, and further exacerbated by delivery challenges, misinformation and inequitable access to COVID-19 and other vaccines, medical, and non-medical countermeasures, further derailed progress towards achieving the SDGs. The alarming situation is also amplified by the multiple crises comprising of worsening food and energy insecurity, climate crisis, gender inequality, and tightening financing conditions.

5. We also take note of the United Nations Global Crisis Response Group brief on the multiple crises that severely threatened SDGs achievements, including disruption in food and energy supplies and increased cost of living. We are deeply concerned by the current global food security crisis. Recognizing the need for a swift, efficient and strong multilateral answer showing our solidarity to the affected countries and populations in the short and long-term, we are committed to support operational responses.¹ As G20, we must work together to make global agriculture and food systems more sustainable and resilient. Hence, building on from the Matera Declaration on Food Security, Nutrition, and Food Systems, we reaffirm our commitment to mobilize and maintain voluntary contributions to achieve global food security and nutrition in all regions, which demands an urgent and coordinated response in supporting innovative policies and responsible investment in sustainable agriculture, promoting local food systems, territorial development and sustainable and resilient food systems. Moreover, current global energy demands and volatility in the energy markets underline the need for partnership based on trust and long-term goals, in order to achieve affordable, reliable, sustainable and modern energy for all. We stress the importance of focusing on concrete and practical actions for accelerating clean, sustainable, just, affordable, and inclusive energy transitions that leave no one behind as we are recovering together and recovering stronger.
6. Noting the urgency to implement the 2030 Agenda for Sustainable Development in a timely manner and addressing the multiple alarming crises that directly impact SDGs achievement, we reaffirm our commitment to accelerate the delivery progress of the SDGs by mobilizing resources, including technology and affordable financing.² We strongly emphasize the imperative to realize collective and concrete actions of G20 under the Indonesian Presidency on the achievements of SDGs, as enshrined in the 2022 G20 Bali Update. In doing so, we will also work collaboratively across the G20 Finance Track and Sherpa Track on mainstreaming the SDGs and further aligning the G20 work with the 2030 Agenda and strengthening coordination and policy coherence.
7. Taking into account the abovementioned development challenges in fulfilment of the mandate to narrow the development gap, we put forward concrete actions to support Developing Countries in fostering inclusive, resilient, gender-responsive, and socially, economically, and environmentally sustainable recovery efforts. We therefore welcome the work done by the Development Working Group on the G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including Least-Developed Countries (LDCs) and Small Island Developing States (SIDS). The roadmap aims to help accelerating recovery in Developing Countries, including LDCs and SIDS. The roadmap includes three key focus areas, which are micro, small, and medium enterprises (MSMEs), adaptive social protection, and green economy, including blue economy through low GHG emissions/low carbon and climate resilient development.
8. In the same spirit, we also stress the role of innovative financing mechanisms, including blended finance, to unlock new sources of finance to close the SDG financing gap, taking note of the importance of transparency and mutual accountability. We recognize the contribution of Total Official Support for Sustainable Development (TOSSD) as one of the voluntary statistical frameworks to measure progress in achieving the 2030 Agenda. In view of the rising levels of debt globally, we acknowledge the ongoing work in the G20 Finance Track to address debt distress. Building on past achievements and premises of the 2020 Saudi Presidency and 2021 Italian Presidency, we welcome the work done by the Development Working Group on the G20 Principles to Scale Up Blended Finance in Developing Countries, including Least Developed Countries and Small Island Developing States. The G20 Principles set out a set of voluntary principles that reflect our common strategic direction and aspiration for scaling up blended finance implementation.
9. We also believe that the lack of a universal and equitable access to quality, safe, effective and affordable health products, including vaccination, is not only a global health issue, but

¹ Such as the work undertaken by the FAO, the IFAD, the WFP and other relevant organizations' initiatives.

² While emphasizing the importance of G20 Principles for Quality Infrastructure Investment.

also a development one. A more equitable manufacturing, access, and delivery of safe and effective COVID-19 vaccines, complemented with financing for vaccine absorption and delivery, and surge capacity of resources to deploy these vaccines, is prerequisite for a recovery that is universal, sustainable and resilient. Such recovery is the prerequisite to bring the SDGs achievements back on track. In this regard, we acknowledge the Ministerial Declaration on the response to the COVID-19 Pandemic and Preparedness for Future Pandemics and of the Ministerial Decision of the TRIPS Agreement recently agreed at the World Trade Organization 12th Ministerial Conference. G20 has contributed on strengthening global health and tackling development challenges, including through the G20 Support to COVID-19 Response and Recovery in Developing Countries endorsed under the Saudi Presidency in 2020, but more needs to be done. To put these recovery efforts forward and achieve universal health coverage (UHC), we reaffirm our support for the strategies for global vaccinations led by WHO, and continue to advance efforts to ensure equitable and universal access to vaccination and other countermeasures, including therapeutics, diagnostics, and anti-virus while taking into account local needs and national vaccination plans. Furthermore, we commit to strengthening health systems and stepping up efforts under the One Health approach, as previously fostered under Matera Declaration, and investing in health system performance will be crucial for crisis response and prevention. We aim to work in partnership for equitable access to health systems globally.

10. We recognize that global health is a global development challenge. Its provision is aimed to accelerate progress towards the SDGs that support low-income and developing countries. In this context, recalling the G20 Rome Leaders Declaration, we reaffirm our commitment to fight the COVID-19 pandemic, including through extensive COVID-19 immunization that is a global public good. We also reaffirm our commitment to global solidarity, equity, and multilateral cooperation; to effective governance; to put people at the center of preparedness. Furthermore, we are committed to strengthening global health governance and supporting ongoing discussions and works at WHO to develop an instrument on pandemic prevention, preparedness, and response (PPR), including the identification of financing mechanisms to promote sustainable financing for pandemic PPR, as well as the establishment of Financial Intermediary Fund for pandemic PPR hosted by the World Bank. Also, we acknowledge the establishment of the G20 Joint Finance-Health Task Force for pandemic PPR with the central coordination role of the WHO in the designing phase. Recognizing that WHO plays a leading role in international health, PPR should be pursued to strengthen and ensure the capabilities of the global, regional and national health systems which are more inclusive, resilient and better prepared to prevent and contain future disease outbreaks in a timely manner in order to keep them from turning into global pandemics, thus preventing another significant setback to achieve the SDGs.
11. These essential initiatives could only proceed with stronger multilateral cooperation. However, our world is currently threatened by division amidst the multiple crises and mutually reinforcing global challenges. This challenging reality indicates a high time to bring the call for a reinvigorated multilateralism, as multilateralism is not an option but a necessity for realizing the 2030 Agenda for a more equitable, more resilient, and more sustainable world. We recall our commitments in the UN 75th Anniversary Declaration that contains a call to reinvigorate multilateralism and support multilateral cooperation in ensuring timely delivery for the achievement of the SDGs. We remain guided by the purposes and principles of the UN Charter that is the cornerstone of international law, cooperation, and global solidarity.
12. We, the G20 Development Ministers, convened in Belitung to declare our commitment to reinvigorate multilateralism for SDGs and affirm that the Vision Statement embodies such efforts and commitments for the timely realization of the 2030 Agenda. In doing so, we should promote the achievement of the SDGs in all work in partnership with the G20 workstreams and work in partnership with partner countries, international organizations, multilateral development banks, and relevant stakeholders to push the agenda forward.

Closing

The Ministers welcome the work done by the Development Working Group on the following documents: “G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including Least Developed Countries and Small Island Developing States” and “G20 Principles to Scale Up Blended Finance in Developing Countries, including Least Developed Countries and Small Island Developing States”, as attached.

We thank participating international organizations for their contributions during Indonesia’s Presidency of the G20 DWG. We thank Indonesia’s Presidency for stewarding our agenda. We will submit our outcome documents to the G20 Leaders’ Summit to be held in Bali on 15-16 November 2022. We welcome progress and further initiatives during India’s G20 Presidency in 2023.



G20 INDONESIA
2022

ATTACHMENT

**G20 Roadmap
for Stronger Recovery and Resilience**

in Developing Countries, including Least Developed Countries
and Small Island Developing States



INTRODUCTION

As the world is coping with multiple crises, the G20 remains and continues to reinforce its role as the premier forum for international economic cooperation that can take decisive action for global recovery, resilience and sustainable development. Developing countries, including Least Developed Countries and Small Island Developing States, are struggling to recover from the COVID-19 pandemic and adjust to the ongoing infections and impact of the virus, grappling with record inflation, rising interest rates and debt burdens, the need for reliable, affordable and sustainable energy, global supply chains disruption, geopolitical tensions, environmental degradation, climate change, biodiversity loss, exacerbating gaps in gender equality, increasing global food insecurity and the global education crisis that can dramatically affect their populations and upend efforts and investments to advance the full implementation of the 2030 Agenda for Sustainable Development.

The Development Working Group (DWG) is a coordinating body and policy resource for G20 actions towards developing countries and cross-cutting issues of sustainable development and steers the implementation of the Roadmap collective actions. The DWG can harness complementarities and enhance coordination across all G20 workstreams to strengthen policy coherence on the G20 work and maximize impact. In line with the Seoul Development Consensus (2010), narrowing the development gap and reducing poverty are integral to our broader objective of achieving strong, sustainable, inclusive and balanced growth, and ensuring a more robust, sustainable and resilient global economy respective to each countries' economic development and prosperity among and within countries.

The G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including LDCs and SIDS (the Roadmap) is a multi-year program of actions aiming at accelerating the recovery of developing economies, and in order to implement the 2030 Agenda and to achieve the Sustainable Development Goals (SDGs) which includes alleviating poverty and ending hunger, malnutrition, increasing human capital development and increasing resilience to disaster risks and future shocks. Guided by the High-Level Principles of the G20 Action Plan on the 2030 Agenda; the Principles of the G20 Support to COVID-19 Response and Recovery in Developing Countries endorsed under the 2020 Saudi Arabian Presidency, the Roadmap is designed to respect every person and to leave no one behind, including people living in vulnerable situations. The collective actions of the Roadmap promote global solidarity; support the recovery with sustainable, resilient and inclusive solutions according to national circumstances and capabilities; build on partnership, including on finance and technology on mutually-agreed terms and international cooperation with diverse-stakeholders; and are implemented on a voluntary basis.

Our support to strengthen recovery and resilience of developing countries, including LDCs and SIDS, builds on the longstanding political leadership by the G20 in cooperating with developing countries and promoting sustainable development paths. In the face of multiple global crises, we sustain our joint efforts and uphold continuity and consistency in our collective actions and emphasize that we are committed to promoting the implementation of existing initiatives, including the G20 Principles for Quality Infrastructure Investment and Matera Declaration on Food Security, Nutrition and Food System. We are committed to both addressing urgent and pressing issues to alleviate poverty and development setbacks and accelerate efforts towards achieving sustainable development in an integrated and coherent and inclusive manner. Collective actions and outcomes of the Roadmap are delivered and developed with the support of relevant international organizations, Multilateral Development Banks (MDBs), and other development partners, the private sector, and other stakeholders to ensure an effective implementation





and avoid duplication of efforts. They are reviewed periodically and are integral to the DWG accountability process.

Whilst the international community is collectively off-track to achieve the SDGs by 2030, the Roadmap aims to contribute to achieving the goals and objectives of all relevant international instruments, including the 2030 Agenda for Sustainable Development; the Addis Ababa Action Agenda; the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, Sendai Framework for Disaster Risk Reduction 2015-2030; the G20 Principles for Quality Infrastructure Investment; the Convention on Biological Diversity; UN Convention to Combat Desertification and the Doha Programme of Action for Least Developed Countries. Collective actions of the Roadmap are country driven and take into account national circumstances, economic development strategies and capabilities. Their implementation requires engagement of all stakeholders. We aim to promote partnerships with developing countries, international organizations, MDBs, non-state actors and G20 engagement groups, including through North-South, South-South and triangular cooperation, to better achieve an inclusive, resilient, and socially, economically, environmentally sustainable recovery and resilience. The Roadmap is a living document aiming at addressing pressing and emerging issues, that will be reviewed periodically and enriched by new priorities. The Roadmap also addresses themes that cut across the key focus areas, such as gender equality and empowerment of all women, girls and youth, and inclusion of children and support to people living in vulnerable situations, including persons with disabilities.

The Roadmap sets out three key focus areas, for our voluntary collective actions adopted because of their recognized positive impacts and multiplier effect to meet the specific needs and to accelerate recovery in developing countries, including LDCs and SIDS. The key focus areas showcase evidence-based policies, and consist in concrete collective actions that we put forward together and implemented on a voluntary basis to support developing countries, including LDCs and SIDS, and to take the SDGs agenda forward. Key focus areas highlight some of the most important aspects of sustainable and inclusive growth, and a sustainable recovery; enhancing productivity and competitiveness, resilience, and access to finance, and integrating global value chains of the **Micro-, Small, and Medium-sized Enterprises (Key Focus Area I)**, ensuring resilience against future shocks and challenges through **Adaptive Social Protection (Key Focus Area II)**, and fostering a more sustainable growth by promoting **Green Economy, including Blue Economy through Low GHG emissions/Low Carbon and Climate Resilient Development (Key Focus Area III)**. These key focus areas showcase the vulnerability of our existing systems, expose the impact of crises across the world, and lay out major challenges and opportunities in responding to shocks and bring forward ambitious and realistic collective concrete actions.

KEY FOCUS AREA I Micro-, Small, and Medium-sized Enterprises (MSMEs)

Micro-, Small, and Medium-sized Enterprises (MSMEs), both formal and informal, make up over 90% of all firms around the globe. They are the backbone of most economies, particularly in developing countries, including LDCs and SIDS, and play the main role in achieving the SDGs. The international community has recognized the central contribution of MSMEs for their wide-reaching impacts on economic growth, job creation, local productive capacities development, persons with disabilities, gender equality and the empowerment of women and girls, food and nutrition security and water availability, promotion and enhancement of health and education, inclusive and sustainable industrialization, and potentially advancing just and inclusive transitions towards green and more sustainable economies. MSMEs also play a key role in reducing poverty and inequality, including driving progress on women, persons with disabilities, and young entrepreneurs' economic empowerment. Yet, besides their huge contributions,





MSMEs, particularly informal MSMEs, have been disproportionately impacted by multiple crises over the years including the COVID-19 pandemic, the impact of climate change, and the energy and food crises which have resulted in financial instability, increased costs of living, liquidity constraints, employment losses, including in the agriculture sector and business closures. The situation is dire for all MSMEs, notably those led by women and youth.

Therefore, based on their vital contributions, the role of MSMEs has long been a major discussion topic in many global forums, including the G20. Since its inception, the G20 has had a long history of discussing and supporting MSMEs, both under the Finance and Sherpa Track and as well as G20 engagement groups. Through this Roadmap, the G20 DWG proposes a set of voluntary collective synergistic and gender-responsive actions to further enhance the productivity, competitiveness, resilience, and access to finance and global value chain of MSMEs in developing countries, including LDCs and SIDS, as a key pathway to sustaining progress towards the SDGs. G20 DWG will refer to the G20 Policy Guidelines on Boosting MSMEs International Competitiveness and will seek to both complement and ensure complementarities with other workstreams related to MSMEs, including the Environment Deputies Meeting-Climate Sustainability Working Group, Sustainable Finance Working Group, the Employment Working Group, Trade and Investment Working Group, Digital Economy Working Group, Global Partnership for Financial Inclusion, and through G20 engagement groups.

OPPORTUNITIES

Strengthening the MSMEs that have strong development impacts will accelerate the efforts in achieving the SDGs. While governments across the world have deployed a range of measures to help MSMEs cope with the adverse consequences of the COVID-19 crisis, it is paramount for policy action to shift gears away from short-term support towards more comprehensive and structural interventions to enhance MSMEs' competitiveness, productivity, reduces moral hazards, and achieve long-term recovery and resilience to shocks and crises.

The G20 DWG recommends and aims to promote and support a forward-looking integrated policy agenda for MSMEs in developing countries, including LDCs and SIDS. The G20 can also leverage its extensive experience in setting up innovative public-private partnership frameworks to support MSMEs to enhance their competitiveness and resilience in developing countries, including LDCs and SIDS. Such an agenda calls for further collective efforts by the G20 and partners, including relevant international organizations, multilateral development banks (MDBs), and the private sector to altogether support productivity and competitiveness of the MSMEs such as by improving access to finance that is affordable, catalyze private investment, promote better and more resilient integration of MSMEs into global and regional value chains and sustainable supply chains, encourage innovation, digital skills and professional training, enhanced capacities for disaster risk reduction and management including integration into local emergency management systems and the adoption of sustainable business practices and green technologies, including by digital transformation and connectivity, as well as through the development or strengthening of policy frameworks and enabling sector frameworks, with specific attention given to MSMEs led by women, youth, and persons with disabilities, that encourage gradual transitions to formality.

The above agenda also acknowledges various types of MSMEs, and the need for evidence-based policy interventions and solutions that are adapted to the specific needs, constraints and potential. It specifically acknowledges the need to address the most vulnerable segments of the MSME sector, particularly enterprises in the informal sector owned by women and youth. It supports the development of good governance including transparent and equitable access and benefits, regulatory environments, policies,





and quality standards of products and services for all types of MSMEs so that no one is left behind. It especially acknowledges the need to empower women and young entrepreneurs.

CHALLENGES

While MSMEs' contribution to the national economic output is critical, the challenges surrounding MSMEs remain daunting, especially in times of crises. MSMEs, notably the micro and small enterprises and their workers are the most vulnerable when facing any shocks and risks, including disaster risks, environmental degradations, climate-related events, and global value chain disruptions, with severe consequences for food and energy security. Adversely impacted by the COVID-19 pandemic, MSMEs' resilience to shocks and their ability to recover is closely linked to their productivity and competitiveness. The pandemic has exacerbated MSMEs conditions by several factors, including limited participation of MSMEs in national, regional, and global value chains; low skills and productivity growth; limited capacities to adopt new business models; lack of sustainable connectivity and respective quality infrastructure; lack of financial inclusion; low digital adoption and digital skills; lack of opportunities to reskilling and upskilling, especially in the changing world of work, and management for enhanced decision-making and business practices, in particular for women, youth, and persons with disabilities that led to the business closure; high cost of preventive risk management and business continuity planning account for such exposure to risks and shocks.

Further, the informality and lack of incentives to formalize are also prominent features of MSMEs ecosystems in developing countries, including LDCs and SIDS makes them more susceptible to economic shocks, liquidity shortages, and global value chain disruptions and contractions in aggregate demand. Because of their informal status, and the limited availability of statistics, many might not have access to bank accounts and other services such as social benefits and social protection. Informal enterprises are less likely to benefit from stimulus packages aiming at supporting (primarily formal) MSMEs and mitigating the socio-economic impact measures. Many of the informal MSMEs are led by women and youth making it imperative to be proactive in including them in post-COVID recovery efforts. The overall lack of comprehensive data on MSMEs in developing countries compounds this challenge, making it more difficult for governments and financial institutions to deliver targeted support and services tailored to their needs.

COLLECTIVE ACTIONS

Action 1: Promoting the adoption of comprehensive national frameworks and strengthening existing regulatory frameworks to improve coordination between all stakeholders in designing MSMEs sustainable development policies

Alongside the creation of enabling business environments, transparency, and easy rules-based regulatory frameworks that are indispensable for MSMEs' growth and sustainable development, coordinated action is also needed to develop policies. These policies may address harnessing MSME data collection for innovation; financial inclusion, including digital financial literacy; promoting innovative partnerships and multi-stakeholder cooperation; including exploring the possible use of emerging digital technologies; business and market development; project preparation; adopting technology and encouraging innovation and professional training; risk prevention and reduction management, including risks-related to climate change; skills development; sustainable business practices; as well as in the empowerment of people living in vulnerable situations MSMEs sector, especially persons with disabilities, women and youth entrepreneurs, and the informal enterprises. We also note that there are ongoing discussions in several international fora about digital public goods and their contribution towards sustainable development. We





look forward to discussing the issue in various G20 working groups, including the Development Working Group in the future.

These requires enhanced coordination mechanisms between all government bodies in charge of MSME development and private stakeholders and civil society in MSME ecosystems to reach a common understanding of MSME needs and strengthen linkages between sectoral interventions to avoid duplication of efforts and to address MSME needs in an effective and consistent manner, with a view to advance sustainable development in all of its three pillars.

The G20, with the support of relevant international and regional organizations and stakeholders, will promote the strengthening and use more extensively existing platforms or initiatives for knowledge sharing, exchange of good practices, and peer learning initiatives amongst countries with well-developed MSME strategic frameworks or development coordination systems through international cooperation, including North-South, South-South and Triangular Cooperation.

Action 2: Encouraging countries to invest in reliable and comprehensive data on MSMEs and evaluating outcomes of MSMEs policies and programs

We acknowledge the need for reliable, comprehensive, disaggregated national and sub-national data on MSMEs. This includes disaggregated data targets and reporting that can help policymakers develop evidence-based and gender-responsive policy interventions that are tailored to the differentiated needs of all types of MSMEs, including formal and informal MSMEs, without overburdening them with reporting requirements. Looking forward, the comprehensive data can be used as a tool to monitor and evaluate the outcomes of MSMEs policies and programs implementation. The G20 acknowledges the important aspects of transparency, reliability, and comparability in data collection on a voluntary basis.

The G20 could work with relevant national authorities and relevant organizations in establishing comprehensive and integrated frameworks and methodologies to monitor and evaluate the impact of MSMEs policies and programs on all types of MSMEs by further knowledge-sharing and cross-country peer learning on national good practices. The G20, with the support of relevant international and regional organizations, aims to help address persisting and emerging gaps in collecting MSMEs data that is transparent, reliable, and comparable on a voluntary basis and support the establishment and development of comprehensive and digital data architecture in consultation with national authorities and representative MSMEs organizations in developing countries. These actions aim to reduce information and access asymmetries, strengthen capacities for disaggregated data collection by location, sector, value chains, size, age, gender, formal/informal status, etc., and establish effective and multi-stakeholder institutional frameworks for sharing such data in accordance with the relevant applicable legal frameworks in national circumstances.

Action 3: Supporting MSMEs' digital transformation to strengthen their capacities in applying sustainable business practices

Increasing productivity and improving sustainability across the whole spectrum of MSMEs requires a comprehensive ecosystem approach and coordinated interventions at the national, sector, and enterprise levels. There is evidence of the potential of digital transformation to increase MSMEs' productivity, competitiveness, and resilience, accelerate the transition of many MSMEs to formality and further contribute to sustainable and inclusive economies. Improving the digital capabilities of MSMEs in developing countries requires holistic efforts to create enabling and sustainable business environments and address the digital divide, including the gender digital divide. Digital transformation can also help facilitate the integration of SDG-aligned and sustainable practices in MSMEs' business models to improve





their positive outcomes, diversify their business opportunities, and strengthen their access to capital through innovative financial mechanisms and instruments, including sustainable finance.

The G20 in collaboration with relevant international organizations, local authorities, and stakeholders could invest in existing or develop capacity development initiatives to support MSMEs' digital transformation, and programs aiming at enhancing the awareness of MSMEs and building their capacities to identify, manage and report on their sustainability-related risks, impacts, and contributions to the SDGs. Such digital transformation powered by enhanced connectivity would help MSMEs integrate with global value chains and the global marketplace.

Action 4: Promoting policy research dialogue and North-South, South-South and Triangular Cooperation on MSMEs transitions from informal to formal economy.

The call for greater formality is central to SDG-8. The COVID-19 crisis triggered a new sense of urgency to the formalization agenda, driven by the need to reduce the vulnerabilities of informal workers and businesses, notably for women, youth, and persons with disabilities owned informal MSMEs, to increase tax revenues amidst the growing debt burdens, as well as the recognition that greater formality can help foster decent work and more sustainable recovery pathways. Protecting and empowering informal MSMEs is paramount to ensure an inclusive and sustainable recovery, and a gradual transition to formality is required to better understand the constraints facing different groups of informal enterprises (be it in terms of growth status, sectors, gender, age, etc.) as well as the broader ecosystem in which they operate, including governance and market conditions, business culture as well as relationships with the formal sector. Generally, much remains to be learned about MSMEs' incentives and disincentives to formalize and the effectiveness of different formalization strategies in different country contexts.

The G20, in partnership with developing countries, international organizations, MDBs, and relevant stakeholders aims to promote policy research and dialogue platforms through North-South, South-South, and Triangular Cooperation initiatives for peer-learning, knowledge sharing, exchange of national best practices, and capacity-building programs on challenges relating to MSMEs informality and formalization pathways, including on the role of digitalization, and with specific challenges faced by women, youth, and persons with disabilities led and owned enterprises. Existing initiatives and platforms of the UN system and other organizations working on informality issues could be leveraged for this purpose.

Action 5: Promoting solutions for MSMEs financial inclusion and de-risking finance

In line with the G20 Financial Inclusion Action Plan, the G20 aims to ensure full and equal access to financial services and products for MSMEs both in urban and rural areas, especially for MSMEs led by women and youth. We are committed to improving MSMEs access to capital, financial and investment capacity, and improving financial and digital literacy by reducing their over-reliance on the traditional lending channels and diversifying their access to finance mechanisms and different systems of payment and transactions in the global value chains.

We welcome and support existing international and regional organizations MDBs, such as support to the local banking system, including microfinance institutions, as well as their mechanisms for recovery and the 2030 Agenda. We are also committed to strengthening our partnership with Africa on this front, building on the G20 Compact with Africa. Furthermore, we support the promotion of women-led enterprises through the Women Entrepreneur Finance Initiative (We-Fi), launched by the G20 in 2017, which is essential for sustainable strong recovery and resilience.





Financing options, both public and private, and its mechanisms tailored to the diverse sector and scale of MSMEs will contribute to financial inclusion and de-risk lending, especially when coupled with technical assistance. Guarantee schemes, impact investing microfinance, Islamic finance where appropriate, and sustainability-related financial instruments, alternative risk models, and other promising blended finance initiatives provide evidence that public or donor funding can unlock much larger amounts of private finance towards alleviating MSME financial constraints. Additionally, digital financial services have the potential for expanding access to finance for MSMEs. They can lessen possible financial fragility and stimulate job creation, investment, innovation, and inclusive economic growth globally.

KEY FOCUS AREA II: ADAPTIVE SOCIAL PROTECTION

Social protection systems that support the resilience of individuals and households at risk of life cycle and covariate shocks are still rare across developing countries including LDCs and SIDS, with the poorest societies falling further behind. The lack of comprehensive, adequate, gender-responsive, and substantial social protection benefits and coverage have become evident at the outset of the COVID-19 pandemic and become even more salient in the race against climate-related, including slow-onset, extreme weather events, biodiversity loss and environmental and natural hazard risks, which tend to disproportionately affect developing countries including LDCs and SIDS, and people living in vulnerable situations. The pandemic has also demonstrated the key role of social protection in mitigating economic impacts from shocks.

In a context where social protection systems remain largely fragmented, exclusionary, unsustainable and not suited for the risks of the future in those countries, Adaptive Social Protection (ASP) approaches emphasize building community resilience toward such shocks, especially those living in identified high-risk areas. The ASP builds upon the integration of social protection (including shock-responsive social protection), disaster risk reduction (DRR), and climate change adaptation (CCA), and builds upon existing capacities. ASP leverages social protection instruments in preparing against, coping with, and adapting to different shocks such as disaster risks and the adverse effects of climate change. The implementation of ASP is consistent with and integral to the pursuit of extending substantial benefits and coverage of social protection for all in need as SDG 1.3 target as well as the Global Partnership for Universal Social Protection 2030 (USP 2030). It also contributes to the implementation of the UN Secretary General initiative for a Global Accelerator on Jobs and Social Protection for Just Transitions which aims to create 400 million decent jobs including in the green, digital, and care economies and to extend social protection coverage to the 4 billion people currently excluded.

The longstanding G20 commitments to strengthening social protection systems and building households' resilience draw on the Seoul Development Consensus for Shared Growth (2010), the G20 Leaders' declaration during the Saudi Arabia presidency (2020) that calls for Adaptive Social Protection for all, including those in the informal economy and multiple DWG initiatives to support social protection programs in developing countries and create knowledge-sharing platforms such as the social protection knowledge-sharing gateway and the Social Protection Inter-Agency Cooperation Board (SPIAC-B). In addition, the agenda on ASP implementation emphasizes the ongoing international agenda that extends social protection to beneficiaries under the risks of covariate shocks and strengthens communities' resilience through social protection programs.





OPPORTUNITIES

Social protection systems and programs have been used to address the impact of shocks during emergencies. The modification of social protection systems, where they are in place, to respond to shocks during local, national and global crises shows the potential for social protection systems to accommodate the implementation of ASP. A greater adaptive potential can be achieved by combining social protection instruments with disaster risk reduction and climate change adaptation instruments, including nature-based solutions and ecosystem-based approaches. The operation of social protection, climate change adaptation and disaster risk reduction share similar values to increase community resilience toward shocks through development programs. Additionally, ASP is a potential hub for policy dialogues with the engagement of social partners from government, business, labor organizations, relevant NGOs and civil society organizations, international organizations, and other stakeholders focused on the development of social protection and humanitarian aid, where appropriate and accordance with national laws and regulations to enable the humanitarian relief system to better address community vulnerabilities before, during, and after crises. ASP could benefit from asset-based approach¹ to provide resilience and support economic growth.

Defining ASP programs could also address the need to close protection gaps and work towards universal social protection in all dimensions: full population coverage, including women and girls, children and persons with disabilities; adequacy of benefits and services; comprehensiveness of risks covered adequate and sustainable financing; transparency and accountability in the governance; reliability and timeliness in delivery; ensuring the adoption of a gender-responsive approach; ensuring disability aspects are included to promote rights, avoid stigma and ensure that no one is left behind throughout the life cycle.

Strengthening delivery capacities, such as well-functioning inclusive social-economic registries, payment technologies, early warning systems, risk assessment tools and effective institutional arrangement are necessary for building ASP. A successful ASP also requires the addition of new and bold strategies focused on supporting households' resilience that does not necessarily imply substantial additional financing but mainly requires program design, sector coordination and synergy, as evidence shows. In addition, child-sensitive and gender-responsive targeting and programming, and inclusive programming for persons with disabilities, older persons and people living in vulnerable situations are at the heart of ASP program design and offer opportunities to address inequality. More potential financing options for ASP have also emerged, such as sovereign risk pools, market-based risk transfer instruments, and global climate funds.

CHALLENGES

Developing countries' social protection systems and policies share the common challenges of mobilizing resources; reaching those living in poverty and near poverty; providing access to informal economy workers, and promoting the transition from informal to formal economy guaranteeing adequate levels of benefits to support subsistence levels; and providing adaptive, sustainable and universal social protection based on a combination of social insurance and assistance. Such challenges are even more severe in LDCs.

The COVID-19 pandemic has highlighted both the vulnerability of those who were left out and those who did not benefit from any social protection system and the limits of the capacity to deliver —as a large share of the people living in informality was out of the scope of existing social protection systems and

¹ Asset-based approach for social protection is an approach that emphasizes reliance on privately invested savings where households are encouraged to save, invest and privately insure to safeguard against crisis.





programs. Coping with multiple crises, including climate change, biodiversity loss, food insecurity and resource insecurity, and external shocks and risks, many developing countries, including LDCs and SIDS, remain highly vulnerable and subject to development setbacks without social protection schemes that are able to strengthen their resilience and accelerate their recovery and longer-term adaptation.

A successful ASP depends on reinforced individuals and households' resilience, including female-headed households —while avoiding the dilemma between investing in such resilience and other competing priorities— and on addressing the simultaneous challenges of expanding programs' coverage and adequacy of social protection to vulnerable households, limited fiscal capacity, and fostering transition of workers and enterprises from the informal economy to the formal economy, through domestic resource mobilization and international support, building delivery systems, and achieving sector coordination and effective governance for implementation. Many countries already face limited fiscal capacity as well as elevated levels of debt for extending social protection coverage and benefits, and it could hamper their capacities to allocate financial resources for ASP.

Additionally, the successful implementation of ASP depends on integrating approaches and resources from different sectors: disaster risk reduction, climate change adaptation and social protection across social assistance, social insurance and active labor market interventions. This requires institutional coordination and capacity building at national and sub-national levels to achieve collaboration and navigate through the different information systems and processes.

COLLECTIVE ACTIONS

Action 1: Appraising existing social protection system capabilities to support people's resilience to shocks

ASP builds on the need to strengthen existing social protection systems. The addition of new strategies focused on supporting individuals and households' resilience including women, girls, children, the elderly and persons with disabilities, that can take the form of changes to programs' design and sector coordination and more effective governance, which must be based on evidence, and does not necessarily imply high fiscal costs. Developing countries, including LDCs and SIDS first need to appraise the capability of their social protection systems and reevaluate their existing programs to take into account shocks, including climate change pressures associated with mitigation, adaptation, preparedness, response, and recovery. Such actions should occur in accordance with national circumstances, and the promotion of gender equality. These should be complemented by ensuring the development of strong and accessible climate resilient and adaptive health, water, sanitation and hygiene (WASH) and food systems, where synergies can be exploited to maximize impact.

We support the development of a policy research agenda conducted by relevant international organizations and stakeholders, aiming at expanding the availability of key indicators of informality and gathering contextual evidence and analysis of ASP and building off existing efforts to map households' vulnerability and resilience across developing countries. This policy research agenda provides the appraisal of the extent to which social protection systems and policy-relevant analysis on households' resilience which aims at measuring the contribution of existing and expanded programs of social protection to such resilience while offering evidence on driving factors and risks that jeopardize households' livelihoods and make them vulnerable and more prone to impoverishment. The agenda will develop natural-hazard and climate vulnerability measures with the potential to better inform the design of ASP in terms of its components and coverage.





Action 2: Investing in the establishment and expansion of social-economic registries, and associated risks data

The impact of the COVID-19 crisis illustrates the relevance of unified national ID systems and social-economic registries for benefits and service delivery —ideally with possibilities of cross-checking records while maintaining a high degree of personal data protection. Well-functioning registries combined with effective and secure payment mechanisms allow governments or aid providers to significantly scale-up cash transfers and expedite payments in a matter of weeks. Investments in data innovation and information systems with the integration of risk information tools can contribute to strengthening the resilience of the most vulnerable. Therefore, these could include simultaneously collecting climate and natural hazard data, promoting the use of social registry data for assessing vulnerability and integrating them into an integrated risk information system for risk identification, beneficiary determination, and program/benefit design.

We support efforts to improve risk-informed data and information systems to identify beneficiaries through knowledge-sharing arrangements that enable cross-country peer-learning on good practices of developing unified social-economic registries and disaster and climate risk information systems.

Action 3: Improving institutional arrangement and capacity to design and deliver ASP programs.

ASP should enhance coordination, effective governance, and synergies across all stakeholders to design effective and well-covering programs to enhance resilience and the ability to respond to shocks. The establishment of ASP requires shared understanding and mechanisms among disaster risk management, climate change adaptation, and development and humanitarian actors to tweak the design and delivery of social protection to better prepare for, cope with, and adapt to shocks. Assessment of capacities, existing arrangements and processes, and scope for the extension of coverage to new beneficiaries and improved benefit expansions for resilience building in existing social protection systems is a prerequisite to facilitate the design of preparedness, response and adaptation strategies for individuals, households and communities. Vertical and horizontal coordination across ministries and with non-governmental partners enable an effective deployment of ASP tools and programs before, during, and after emergencies.

We recognize that building institutional capacities and supporting specific local infrastructure will be key for countries to implement their own adaptive social protection schemes. We aim, in partnership with relevant stakeholders (1) to promote policy dialogue on this matter with the purpose of building and enhancing the use of digital technologies for deploying ASP benefits; (2) to improve governance, simplify and smoothen administrative processes in social protection systems, and improve governance; and (3) to design risk-informed programs, particularly with climate change adaptation and disaster risk reduction approaches that are also to address gender inequality, disability and age-based inequality, and people living in vulnerable situations; and (4) to align development priorities for increasing community resilience from different relevant sectors that can be realized through social protection instruments.

Action 4: Promoting the roles of disaster and climate change risk transfer instruments for financing social protection

Shocks are largely not unpredictable crises, and their magnitude can often be anticipated. Building on strategic foresight and planning, governments can design risk financing strategies in response to immediate and longer-term responses to disasters and climate-related risks. The recommended approach is to consider risk-layering instruments such as disaster risk financing and climate risk financing, including



micro-insurance, especially for slow-onset climate events (e.g., drought and sea-level rise), and through multilateral climate funds, asset-based insurance, and sovereign risk-pooling. Each instrument must be fit-for-purpose and tailored to the context, the potential magnitude and frequency of shocks, and disaster- and climate risks.

We support developing countries, in partnership with international organizations, MDBs and relevant stakeholders, in developing their risk financing strategies by exploiting the accumulated experiences in both budgetary and market-based instruments. North-South, South-South and Triangular cooperation initiatives will help share knowledge, foresight, and innovations in risk financing strategies that are context-specific and sustainable for developing countries, including LDCs and SIDS.

**KEY FOCUS AREA III:
GREEN ECONOMY, INCLUDING BLUE ECONOMY
THROUGH LOW GHG EMISSIONS/LOW CARBON AND CLIMATE-RESILIENT
DEVELOPMENT**

Environmental degradation, the adverse impacts of climate change, especially extreme weather events, biodiversity loss and pollution are expected to add more pressures on the global economy which has deteriorated since 2020 because of the COVID-19 pandemic. Unsustainable production and consumption worldwide gradually incapacitate the earth's ability to provide essential ecosystem services for all living organisms, putting food security and nutrition, as well as water availability at serious risk in the foreseeable future. The Sixth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) further shows that many adverse impacts of climate change will significantly hit people living in vulnerable situations. Furthermore, people in developing countries, including LDCs and SIDS are particularly at risk as their welfare is highly dependent on terrestrial and marine natural resources. This calls for meaningful and effective actions by all countries, with international cooperation, including on access to transparent climate finance and technical support as critical enablers, to pursue a sustainable recovery from the COVID-19 pandemic that stimulates economic growth while addressing climate change and holding the increase in the global average temperature increase in line with the Paris Agreement temperature goals.

We reaffirm our commitment, in the pursuit of the objective of the UNFCCC, to tackle climate change by strengthening the full and effective implementation of the Paris Agreement, on the basis of the best available scientific knowledge, reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances. We remain committed to the Paris Agreement goal to hold the global average temperature increase well below 2°C and to pursue efforts to limit it to 1.5°C above pre-industrial levels, also as a means to enable the achievement of the 2030 Agenda.

We recognize that the impacts of climate change at 1.5°C are much lower than at 2°C. Keeping 1.5°C within reach will require meaningful and effective actions and commitment by all countries, taking into account different approaches, through the development of clear national pathways that align long-term ambition with short- and medium-term goals, and with international cooperation and support, including finance and technology, sustainable and responsible consumption and production as critical enablers, in the context of sustainable development. These efforts should also address biodiversity loss and environmental degradation, including land degradation and ocean deterioration and pollution, in accordance with national circumstances, needs, and priorities.





A green economy and blue economy through low greenhouse gas (GHG) emissions/low carbon and climate-resilient development pursues human well-being and social justice by synergizing economic growth and improving environmental quality, in line with the 2030 Agenda for Sustainable Development, the UNFCCC, and the Paris Agreement and the Sendai Framework. It balances growth with environmental benefits through a more sustainable and efficient use of terrestrial and marine resources. A recovery that invests sustainably in the green and blue economy can contribute to achieve the SDGs, stimulate decent and green jobs creation, and enhance society's resilience to climate shocks. The realization of this recovery and shift towards sustainable production and consumption, including by increasing resource efficiency towards circular economy approaches, among other approaches², requires sustained investment and greater international cooperation. While all countries continue to take a more decisive effort on making a more sustainable economy, support enhances the effort of many developing countries, especially the most vulnerable, to implement such trajectories and realize just, sustainable and inclusive transitions, including energy and green transitions that advance the achievement of the SDGs.

This Roadmap aims to better connect the DWG agenda to other sustainability and climate agendas across the G20. This Roadmap also aims to complement broader efforts by the G20 working groups and their outcomes related to sustainability, including the Sustainable Finance Working Group, the Environment Deputies Meeting and Climate Sustainability Working Group, and the Energy Transitions Working Group.

OPPORTUNITIES

Transitioning to a green and blue economy offer significant opportunities, including a multiplier effect on human health, food security and nutrition, safe and clean water availability, the creation of new quality jobs opportunities, behavioral change, and development of skills and innovation, in sectors such as renewable energy, sustainable agriculture, forestry, sustainable mobility, sustainable tourism, inclusive and sustainable industrialization, sustainable fisheries and aquaculture as well as sustainable land and ocean management practices. A gradual adoption of sustainable consumption and production patterns including through circular economy approaches would also lead to technological innovation and long-term economic growth. Other important multiplier effects include biodiversity conservation, climate adaptation and mitigation, food security, safe and clean water availability and gender equality. Furthermore, the increasing trend of global green and sustainable finance, including innovative financing and investment also opens the window of opportunity for developing countries, including LDCs and SIDS to benefit from. Nonetheless, it is important to scale up sustainable finance to address the needs and priorities particularly in developing countries.

Many developing countries face rapid demographic growth and urbanization, thereby needing additional sources of energy with cities, quality infrastructure and industries that are yet to be built, have an opportunity to leapfrog systems design by also building on the experiences of their intermediary cities and rural areas that are engaging in climate actions. With the necessary resources and capacities, they can pursue inclusive and sustainable industrialization, including through just and inclusive energy transitions partnership, develop low GHG emissions/low carbon value chains and low waste value chains, scale-up and deploy low GHG emissions/low carbon technology, enhance smart and sustainable mobility, scale-up climate-resilient infrastructure, provide equitable access to goods and services, including affordable, reliable and sustainable energy; water, sanitation, and hygiene (WASH) services; and sustainable and management of ecosystems. This will allow governments to provide more affordable

² These include the approaches stated in the 2020 G20 Riyadh Leaders' Declaration.





services and sustainable and quality infrastructure, reducing costs for consumers, and addressing societal inequalities.

Well-designed just and inclusive transitions plans, based on integrated planning, coherent policy-making can help identify the cost-efficient pathways to delivering affordable, reliable and sustainable energy access, green, inclusive and sustainable industrialization, as well as sustainable infrastructure options. Transitions plans that take into account the transnational aspects of transitions measures can help to reduce the negative impact of such measures on development agenda. Getting broad buy-in from local actors for the low GHG emissions/low carbon transitions will also be key to achieve the changes needed and smooth the transitions. To that effect, adequate skills development and social protection measures for potential job losses and economic revitalization strategies for affected regions are necessary.

The G20, the broader international community, including developing countries should collaborate and seize these opportunities to address pre-existing vulnerabilities, including the disproportionate vulnerability and exposure to biodiversity loss and natural hazard, leading to greater climate-related and environmental risks, strengthen their competitiveness, and embark on a stronger, more resilient path that advances all three dimensions of sustainable development in a balanced and integrated manner.

CHALLENGES

In the aftermath of the COVID crisis and in the context of the global energy security, food security and nutrition crisis, developing countries, including LDCs and SIDS, have limited fiscal space to support the gradual transitions towards a green and blue economy in the context of sustainable development. They are also facing increased cost of capital, exacerbated by climate vulnerability as well as growing costs from deteriorated terrestrial and marine ecosystems, further reducing the resources available for much needed low GHG emissions/low carbon investments in green and blue economy schemes. While investments in climate action increase, there is a need to further mobilize public and private capital, including by crowding in more private investments which includes climate adaptation and mitigation as well as biodiversity conservation in developing countries, as the sustainable finance markets only represent a small fraction of financial markets and have been largely concentrated in advanced economies and a limited number of developing countries.

Many developing countries also face a significant technology gap, which could slow the transitions, including hard-to-abate sectors and climate adaptation, and even lock them into high-emission development pathways. Important economic sectors, such as sustainable agriculture, forestry, fisheries, aquaculture and tourism that are the backbone of many developing countries' economies are particularly exposed to climate change and environmental-degradation risks and lack of environmental and social sustainability practices. These impacts are translating into growing costs for developing countries' economies.

Addressing capacity gaps, including skill gaps, and raising awareness are also necessary to fully realize the opportunities of the just and inclusive transitions towards a green and blue economy. This includes building a shared understanding within society of the goals to be achieved, the steps to be undertaken and the resources to be deployed to realizing such a large-scale transformation. Strengthening leadership at various levels, institutional capacity, and human resources development can incentivize a more financially-viable pipeline of projects related to green and blue economy. In fact, low GHG emissions/low carbon and climate resilient development as the backbone of the green and blue economy in the context of sustainable development should be designed to reflect the specific socio-economic conditions that





different countries face, and be aligned with the Sustainable Development Goals, including by promoting poverty reduction, energy access, biodiversity conservation and sustainable use, pollution reduction, food security and nutrition, and gender equality.

COLLECTIVE ACTIONS

Action 1: Support developing countries, including LDCs and SIDS in mainstreaming low GHG emissions/low carbon and climate-resilient development strategies into their national development planning

Mainstreaming low GHG emissions/low carbon and climate-resilient development, or mainstreaming climate and biodiversity actions with development objectives, including planning for just energy transitions, is a process of structural transformation that requires the elaboration of a long-term vision and planning to enable an efficient and cost-effective shift to a green and blue economy in alignment with the UNFCCC and the Paris Agreement and the 2030 Agenda for Sustainable Development. Effective vision design and planning are context-specific, but in general benefit from broad consultation with and participation of concerned actors, multi-stakeholder dialogue and the implementation of a coherent strategy. The latter combines consistent policy direction and careful sequencing of complementary and mutually reinforcing measures. The respective long-term plan should also be flexible enough to support other emerging initiatives, including circular economy approaches, disaster risk-reduction, the use of nature-based solutions and ecosystem-based approaches and promoting the conservation and more sustainable use of biodiversity, while at the same time ensuring the steady progress in addressing poverty and hunger, and energy security.

Long-term integrated development planning, incorporating interconnected policies on climate, energy, food systems, water, environmental, macro-economic, fiscal, labor, skills, industrial, infrastructure, transport, and financial policies, as well as explore synergies with G20 Resource Efficiency Dialogue (RED) Roadmap, will be key to align short and mid-term policy choices with long-term objectives, increase policy coherence, and support implementation. Setting a long-term direction, underpinned by wide stakeholder buy-in, will also require articulating the multiple benefits of low GHG emissions/low carbon and climate-resilient development models. We support, in collaboration with international organizations and interested countries, ongoing and future efforts to strengthen developing countries, especially LDCs and SIDS capacities to mainstream low GHG emissions/low carbon development strategies into national development planning. Mainstreaming and alignment will entail coordinated and harmonized actions being taken horizontally across multiple departments and vertically across levels of governance (national, regional, local, with meaningful stakeholder engagement), all pulling in the same direction, as opposed to an array of isolated policy measures, often implemented in an inconsistent manner and leading to suboptimal or even contradictory outcomes. Regional or local governments, in accordance with national context, need to also play a more significant role in the planning process as they are well placed to engage with local groups, including communities, civil society, and private sector.

Action 2: Promoting just and inclusive transitions towards a low GHG emissions/low carbon and climate-resilient development path in line with the 2030 Agenda, the UNFCCC and the Paris Agreement

As developing countries, including LDCs and SIDS, continue to scale-up efforts towards transitioning to low GHG emissions/low carbon and climate resilient development pathways to achieve sustainable development, there is a need to ensure that the transitions will positively contribute to climate action, market stability, affordable and universal access to electricity, energy security, poverty reduction, food





security and nutrition, promote decent work opportunities, close the gaps of global inequality, biodiversity conservation, and leaves no one behind. For developing countries, including LDCs and SIDS, transitioning towards low GHG emissions/low carbon development and climate-resilient pathways is an opportunity to reset economies on a more inclusive, resilient and sustainable path, by sequencing and prioritizing measures that maximize social, environmental, and economic opportunities, minimize and carefully manage any challenges, while at the same time contribute to sustainable development. The implications of climate policies across countries will also need to be better understood and taken into consideration. There is a need for all countries to implement well-designed climate and biodiversity policies that accommodates local, social, and economic circumstances including energy transitions to increase the mutual benefits of climate action, decrease the adverse impacts of climate change, and address transitions risks and help all stakeholders address energy poverty, and improve energy affordability and sustainability, reduce inequalities and effectively eliminate poverty, and build community resilience through enhanced social protection and physical infrastructure, taking into account national priorities.

Supported by strong global partnership, the effort in transitioning toward low GHG emissions/low carbon and climate-resilient development pathways should demonstrate countries' respective and ambitious contributions to the global structural changes required to preserve life on our planet in line with economic development plans. By considering intergenerational environmental justice in the context of domestic transition efforts, just and inclusive transitions also provide the opportunity to reconcile human welfare with ecosystems, recognizing that the two are inextricably linked, especially in developing countries, as the welfare of the poor especially depend on their access to, and the quantity and quality of terrestrial and marine ecosystems – and other forms of biodiversity. Deploying nature-based solutions and ecosystem-based approaches is one of the potential tools to support efforts towards sustainable development.

Taking note of various concepts of just and inclusive transitions³, we welcome, in collaboration with regional and international organizations and developing countries, the promotion of just and inclusive transitions towards low GHG emissions/low carbon and climate-resilient development paths, such as by identifying policy areas and supports needed to achieve just and inclusive transitions in developing countries, including LDCs, SIDS, as well as countries and regions whose economic sectors are driven by fossil fuel.

Action 3: Enhance developing countries' capacities for promoting green economy and blue economy

A green and blue economy can be a relevant instrument for a more resilient recovery from COVID-19 and sustainable development. To fully seize the opportunities offered by green and blue economic models and approaches, taking into account the different realities and capacities and levels of development, developing countries, including LDCs and SIDS will need to build institutional and individual capacities, as well as implement integrated planning and sustainable development roadmaps. The needs and opportunities of capacity building for developing countries are even more relevant in pursuing blue economy could be further explored, especially in improving sustainability aspects of existing maritime economy sectors, such as fisheries, aquaculture, transportation, and tourism, as well as on fostering new,

³ References of the concepts of just and inclusive transitions may include, but not limited to: [i] ILO Guidelines for Just Transition towards Environmentally Sustainable Economy for All (2015), [ii] Solidarity and Just Transition Silesia Declaration (2018), [iii] MDB Just Transition High Level Principles for All.





sustainable ocean economy opportunities that can lead to greater diversification and resilience, such as offshore energy utilization.

Developing countries will need support to design low GHG emissions/low carbon and climate-resilient development strategies that reflect their specific socio-economic conditions, national strategies and capacities, and be aligned with poverty reduction, energy access, food security and nutrition, and more broadly with sustainable development objectives. In addition, to be competitive, developing countries, including LDCs and SIDS could leverage energy sources and benefit from access, transfer and deployment on mutually agreed terms and in line with WTO rules to cost-effective low GHG emissions/low carbon technologies at scale to promote the uptake of renewables and the implementation of energy efficiency measures and take actions to mitigate and adapt to the impacts of climate change, taking into account national circumstances, needs, and priorities. Lastly, strengthening leadership, institutional capacity, and human resources development will be required to undertake project preparation and planning in order to develop a financially viable pipeline of green and blue projects to attract sufficient financing to unlock opportunities. This should include strengthening the leadership and meaningful participation of all groups of society, including women and girls, youth, and persons with disabilities. Furthermore, this should also include the transformation of education systems to support the green and digital transitions.

We support, in collaboration with international organizations, developing countries, and other stakeholders such as the Multilateral Development Banks (MDBs), to scale up dedicated policy support on the design of low GHG emissions/low carbon and climate resilient development strategies and the collective identification of a financially viable pipeline of projects related to green and blue economy in developing countries, including LDCs and SIDS, through existing initiatives that promotes peer-learning, as well as dialogues on how development co-operation can better assist developing countries in seizing new investment opportunities from the green economy and blue economy and scale up resources. Such efforts will aim at facilitating channels and resources. Countries may also set up a collaboration hub to ensure policy coherence, inclusivity and ownership among stakeholders in mainstreaming low GHG emissions/low carbon and climate-resilient development.

Action 4: Identify workable approaches on financing the transitions towards the green economy and blue economy, as well as de-risking and attracting green investments, especially on low GHG emissions/low carbon technologies

Sustainable recovery, including through green and blue economy transitions, requires significant resource mobilization for economic diversification, quality infrastructure, and low GHG emissions/low carbon technologies. This is especially true in emerging and developing economies, where there is a need to “leap frog” actions and solutions in line with sustainable development ambitions and unique national circumstances for the coming decade and beyond. Collective action by governments, complemented by MDBs and the private sector can ensure the suitable flows of public and private capital for the transitions by identifying and pursuing workable approaches that achieve the necessary finance and investment in the green and blue economy. When designed effectively, these approaches can also help to increase economic activity, boost job creation, advance gender equality and increase social welfare while supporting biodiversity conservation and climate actions, for example through nature-based solutions and ecosystem-based approaches. A growing number of financial instruments already play an instrumental role in accelerating investments towards the green economy and blue economy in the context of sustainable development. Many countries are also developing guidance, sustainable financing frameworks, and principles to ensure investments are aligned with sustainable development objectives. These measures, paired with additional tools and actions that unlock finance and de-risk investments,



including the development of green and blue industry and technology clusters, can help mobilize the scale of resources needed to achieve the green and blue economy.

International co-operation can unlock the required finance at suitable scales and redouble investor opportunities in these solutions by sharing knowledge and research collaboration, policy, technology and other resources on mutually agreed terms and in line with WTO rules, including through North-South and South-South and Triangular Cooperation (SSTC). This includes integrating North-South and SSTC into country programs, support and initiatives in order to ensure experiences, innovation and proven sustainable financing approaches are scaled-up across countries to enhance investment in low GHG emissions/low carbon technologies. North-South and SSTC can also include regional dialogues and cross-border partnerships to tackle barriers to low GHG emissions/low carbon technology finance and investment, and help build enabling environments for the deployment of low GHG emissions/low carbon technologies, such as needs for the underlying data, information, standards and protocols that improve familiarity in those projects amongst financial actors and that increase investor confidence. In this context, the International Financial Institutions (IFIs), including Multilateral Development Banks (MDBs) play a crucial role in fostering SSTC and developing innovative financing options that could help developing countries, including LDCs and SIDS, address barriers to accessing capital markets and leverage private finance.

We support, in partnership with international organizations, the identification of good practices in public-private cooperation and coordination for mobilizing financial and non-financial means for all sources, as well as for aligning financial flows with development, climate and environmental objectives, including through: i) coordination between governments and corporations operating in their jurisdictions in developing sectoral pathways consistent with climate targets; ii) innovative financial mechanisms, including blue bonds and mechanisms for early retirement or repurposing of high-emitting assets, and associated de-risking; iii) coordinated action by public financial institutions to provide de-risking and strengthen domestic policy frameworks; and iv) incentive measures to promote transitions investments. We also support ongoing international cooperation and partnerships on the development, scale-up, and the deployment of low GHG emissions/low carbon technologies, including through North-South and SSTC, to promote institutional support to developing countries to get policy, regulation, and foster technology transfer on mutually agreed terms and in line with WTO rules that are context-specific and sustainable for developing countries, including LDCs and SIDS.



G20 INDONESIA
2022

ATTACHMENT

G20 Principles to Scale up Blended Finance

in Developing Countries, including Least Developed Countries
and Small Island Developing States



BACKGROUND

The 2030 Agenda for Sustainable Development – with the Sustainable Development Goals (SDGs) at its core – and the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement have redefined global ambitions: creating a better world for all and leaving no one behind are collective responsibilities where each country has primary responsibility. The 2030 Agenda highlights that public finance plays a vital role in providing essential services and public goods and in catalyzing other sources of financing, including from the private sector. The Addis Ababa Action Agenda (AAAA) provides the framework to finance these collective ambitions and underlines the need to mobilize finance from all sources (public, private, domestic, and international). It calls on a diverse array of actors – governments, private sector investors, micro, small, and medium enterprises, businesses, civil society, academia, philanthropy, foundations, and financial institutions – to mobilize and share knowledge, expertise, and technology on voluntary and mutually agreed terms and financial resources, in a more coordinated and affordable manner, and in the pursuit of economic growth that enhances well-being, gender equality, leaves no one behind, and preserves the environment. Facing the financing gap, the AAAA points out that many countries still fall short of their respective Official Development Assistance (ODA) commitments, and it reiterates that the fulfillment of all ODA commitments remains crucial. The multiple crises that are currently endangering safety, well-being, and prosperity across the world, including the impact of the COVID-19 pandemic, climate change, energy security, and biodiversity loss, are a setback to the achievement of the SDGs. These crises have amplified the need for effective and innovative means of financing to contribute to help fill the SDG financing gap and achieve the goals and objectives of the UNFCCC and the Paris Agreement.

Blended finance – the strategic use of development finance for the mobilization of additional finance towards sustainable development in developing countries¹ – has become an established pillar of the financing for sustainable development landscape which started with the adoption of AAAA in 2015. While not a silver bullet that will solve the myriad challenges associated with mobilizing investment for the SDGs, blended finance is one pillar of development finance that can effectively complement already established financing approaches. In order to deliver the resources needed, especially for the people living in vulnerable situations, blended finance with a gender perspective has the potential to increase the scale and impact of projects and programs that support women’s economic empowerment, and the active leadership and broad participation of women entrepreneurs and women-led organizations in developing economies.

The G20 Action Plan on the 2030 Agenda for Sustainable Development laid the first step for alignment of G20 work across all relevant workstreams with the 2030 Agenda and its SDGs. That process is still ongoing to tackle the alignment of all public and private finance with the SDGs. The key role of innovative financing mechanisms, including blended finance, to unlock new sources of finance to fill the SDG financing gap has been consistently recognized by the G20. At the Osaka Summit 2019, G20 Leaders recognized that *“international public and private finance for development as well as other innovative financing mechanisms, including blended finance, can play an important role in upscaling collective efforts.”*

Under the 2020 Saudi Presidency, the G20 acknowledged that enhancing innovative financing mechanisms, such as blended and impact finance, can help private resources contribute to sustainable development and encourage to share best practices through engagements with relevant regional and

¹ OECD (2018), *Making Blended Finance Work for the Sustainable Development Goals*, OECD Publishing, Paris, <https://doi.org/10.1787/9789264288768-en>.





international organizations, regional and multilateral development banks, as well as think tanks and academia.²

Under the 2021 Italian Presidency, the G20 reaffirmed that the endeavor to achieve sustainable resilience should be complemented with increased mobilization of all financing resources and the alignment and impact on the SDGs, which corresponds with the call that *“development actors should use their capabilities to enhance mobilization of the private sector, including by using risk sharing strategies, blended finance approaches and building a pipeline of suitable projects.”*³

Building on these past achievements and premises, we put forward the *G20 Principles to Scale Up Blended Finance in Developing Countries, including Least Developed Countries (LDCs), and Small Island Developing States (SIDS)* (hereinafter referred to as G20 Principles), which would be in continuation of the G20 FSD Framework endorsed in 2020 under the Saudi Presidency, and the work undertaken by the Italian presidency on the G20 Framework for Voluntary Support to INFFs, the G20 High-Level Principles on Sustainability-Related Financial Instruments, and the G20 Common Vision on SDG Alignment. The G20 Principles set out a set of voluntary principles that reflect our common strategic direction and aspiration for scaling up blended finance implementation in developing countries, including LDCs and SIDS.

THE G20 PRINCIPLES TO SCALE UP BLENDED FINANCE

The G20 aims to advance and provide value added to the established blended finance policy and practitioner frameworks that focus largely on donors or development finance providers (such as the OECD’s DAC Blended Finance Principles⁴, the development finance institutions (DFIs) Enhanced Blended Concessional Finance Principles for Private Sector Projects⁵, and the Tri Hita Karana Roadmap for Blended Finance), by putting more emphasis on addressing the implementation and capacity challenges that may impede blended finance flows from reaching scale in developing countries, and in particular in LDCs and SIDS. Despite this established policy landscape and a concerted effort to accelerate financing for the SDGs, only a small amount of private finance has been mobilized by official development finance interventions.⁶ This points to a significant gap between what is available and what is needed to scale blended finance in developing countries, including LDCs and SIDS. Departing from this concern, the G20 Principles are being produced at the most opportune time, informed by the insights gained through consultations with developing countries, the DFIs, as well as private sectors. In this regard, we welcome the “OECD Stocktake Report on Blended Finance” which provides an analytical basis for developing the G20 Principles.

² G20 Financing for Sustainable Development Framework, 2020.

³ Financing for Sustainable Development: G20 Framework for Voluntary Support to INFFs, G20 High-Level Principles on Sustainability-Related Financial Instruments and G20 Common Vision on SDG Alignment

⁴ OECD DAC Blended Finance Principles for Unlocking Commercial Finance for the Sustainable Development Goals, <https://www.oecd.org/dac/financing-sustainable-development/development-finance-topics/OECD-Blended-Finance-Principles.pdf>

⁵ DFI Working Group on Enhanced Blended Concessional Finance for Private Sector Projects, https://www.ifc.org/wps/wcm/connect/topics_ext_content/ifc_external_corporate_site/bf/bf-details/bf-dfi

⁶ Between 2013 and 2020, USD 306 billion were mobilised from the private sector by official development finance interventions. While mobilised private finance towards developing countries grew steadily in 2012-2018, it dropped by 4% in 2019 and amounted to USD 51 billion in 2020, its peak to date. (OECD, forthcoming).





In conjunction with the SDGs and the goals and objectives of the UNFCCC and the Paris Agreement, the G20 Principles provide a clear direction as to how blended finance can help to finance sustainable development impact, help build markets that attract commercial capital finance for national development strategies, to contribute to the achievement of SDGs, nature-based solutions and ecosystem-based approaches and ultimately eradicate poverty. In this light, blended finance can be aligned with country-led efforts including the Integrated National Financing Frameworks (INFFs) and SDG-aligned investment opportunity areas that support national sustainable development plans and strategies stipulated by the agenda. We, therefore, welcome the “UNDP 2022 INFF Sustainable Investment Stocktake”. The stocktake finds that many of the 86 countries developing INFFs are using the approach to prioritize private finance solutions and have identified more than 450 SDG-aligned investment opportunity areas which are both commercially attractive and catalytic for sustainable development. Blended finance has a crucial role to play, particularly in reaching last-mile populations, and will be leveraged in around one-third of these opportunity areas.

For blended finance to achieve its full potential, its deployment must increase substantially, bolstered by greater and more efficient provisions of concessional capital, combined with significantly more participation from private investors including philanthropies. While recognizing the importance of domestic resources, full implementation of respective ODA commitments and optimization of its impact, enhanced North-South, South-South, and Triangular Cooperation, and enabling private investment as stated in the AAAA are also key for achieving the SDGs. We recognize the importance of transparency and mutual accountability in national and international financing, which play key roles in mobilizing private finance. We take note of the potential of climate finance and nature-based solutions and ecosystem-based approaches. We also take note of the potential of other financing sources, such as Islamic finance among others as indispensable to broaden the impacts of finance.

We reaffirm our commitment, in the pursuit of the objective of the UNFCCC, to tackle climate change by strengthening the full and effective implementation of the Paris Agreement, on the basis of the best available scientific knowledge, reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances. We remain committed to the Paris Agreement goal to hold the global average temperature increase well below 2°C and to pursue efforts to limit it to 1.5°C above pre-industrial levels, also as a means to enable the achievement of the 2030 Agenda.

We recall and reaffirm the commitment made by developed countries, to the goal of mobilizing jointly USD 100 billion of climate finance per year by 2020 and annually through 2025 to address the needs of developing countries, in the context of meaningful mitigation actions and transparency on implementation and stress the importance of delivering that goal fully as soon as possible. We further reaffirm the Glasgow Climate Pact call for developed countries parties to at least double their collective provision of climate finance for adaptation to developing country parties from 2019 levels by 2025 in the context of achieving a balance between mitigation and adaptation, in the provision of scaled-up financial resources, recalling Article 9, paragraph 4, of the Paris Agreement. We also reaffirm our collective commitment to the Paris Agreement’s goal of making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development. Furthermore, developing countries, particularly countries with less capacities, including in Africa and other least-developed countries, face multiple challenges while accessing climate finance.⁷

⁷ As UNSG noted last year only a small fraction, a mere 3% of the total climate finance, reaches the African continent. In the last decade only 2% of the global investments into renewable energies have been given to Africa, <https://press.un.org/en/2021/sgsm20674.doc.htm>





The G20 Principles, which are non-binding in nature, enrich the existing principles in the following areas: (1) provide blended finance policy and practitioner frameworks to enable developing countries including LDCs and SIDS to effectively attract, deploy and scale blended finance; (2) provide additional insights and guidance to address implementation and capacity challenges, and bring blended finance to scale in developing countries including LDCs and SIDS. The G20 Principles could help governments to take an active role in scaling up blended finance transactions by building local capital markets, advancing local sustainable development priorities, and working closely together with private actors. For development cooperation providers, including multilateral development banks, the G20 Principles could catalyze support in developing countries, including LDCs and SIDS including in terms of financing, capacity building, and policy support. The G20 Indonesian Presidency focuses on the importance of gender equality and social inclusion (GESI) and youth as key crosscutting and catalytic areas to accelerate sustainable recovery and strengthen resilience against future shocks.

PRINCIPLE 1. Target blended finance to local contexts and harness blended finance to catalyze finance in the last mile. From the outset, blended finance operations should be designed to respond to local needs and realities, including catalyzing finance in the last mile, i.e. “the poorest of the poor but also the people, places and small enterprises that are under-served and excluded, where development needs are greatest, and where resources are most scarce”⁸. A critical element of this is ensuring effective and meaningful dialogue and engagement within the frame of national priorities on financing, as well as dedicated technical assistance to help partner countries tackle existing challenges and gaps including through the voluntary implementation of the Integrated National Financing Frameworks (INFFs) in countries that are developing them.

PRINCIPLE 1.A. Anchor blended finance structures and instruments to local development priorities, ensuring their alignment with local financing priorities. Blended finance should be anchored with national development priorities and can feature among the range of financing sources available to countries. Given the identified impact of climate change on social sectors, taking note of the importance of gender equality and social inclusion, and on infrastructure, as well as on key economic sectors such as agriculture, including its value chains and food security, local financing priorities for environmental degradation and adaptation and resilience should also be considered for blended finance structures and instruments. Specifically, for developing countries, including LDCs and SIDS, digital solutions should be promoted and used where possible to help broaden access to finance. INFFs, as country-led efforts to define national priorities and the financing strategy needed to deliver them, could help blended finance investments while strengthening national ownership and engagement.

PRINCIPLE 1.B. To simplify the implementation, governments should identify target sectors for blended finance in line with national priorities and needs and prioritize that blending solutions reach the last mile while considering project attributes and context. Target sectors for blended finance should be aligned with SDGs, government priorities, national development plans, and local needs, including Nationally Determined Contributions (NDCs) and national biodiversity strategies and action plans. Additionally, when considering the use of blended finance, a stringent assessment is needed to understand the feasibility of mobilizing additional finance. While blended finance can play a role in closing the development financing gap, it also can deliver returns for commercial finance providers. Blended finance transactions need to be linked to projects that can ultimately be financially sustainable. Where a project’s financial sustainability is not strong enough to attract commercial investments, in the long-term, other approaches in

⁸ UNDP and UNCDF (2016), *Getting to The Last Mile in Least Developed Countries*, UNDP and UNCDF, New York.





the government's toolbox to finance sustainable development priorities, including public finance, should be considered, and risks equitably shared.

PRINCIPLE 1.C. Enable and engage national and sub-national development and commercial banks to tailor blended finance to local contexts. National and sub-national development banks are increasingly taking on a dual function as public financiers of development projects and as mobilisers and facilitators of private finance for investment. With support from their multilateral and bilateral counterparts, national and sub-national development banks can best tailor blended finance to local contexts and employ blended finance to catalyze finance in the last mile given their proximity to local communities. National and sub-national development banks are embedded in local policy contexts and have an established role as pipeline developers, including for quality and sustainable infrastructure.

PRINCIPLE 2. Support domestic financial systems and market development. Creating an effective enabling environment requires policy and regulatory reform in accordance with local laws and regulations, including at the sector level, enhanced local ownership, and capacity building, with an emphasis on building local managerial capital, recognizing the importance of avoiding market failure and distortion. Blended finance can contribute to this by identifying where blockages, and entry-level barriers exist and support in addressing them. Building inclusive capital markets can support alternative sources of capital mobilization in developing countries, including LDCs and SIDS, and blended finance to mobilize local currency can play an important role in scaling these markets. Additionally, blended finance should focus on maximizing productivity and supporting market practices. Complemented with enhanced roles of Local Development Banks can orient their strategies, development objectives, and operations towards the alignment of all resources to the SDGs.

PRINCIPLE 2.A. Support sound local institutional, policy, and regulatory frameworks. To scale blended finance, governments, and Central Banks should promote sound policy and regulatory frameworks including on sustainable finance, responsible business conducts, and due diligence with support from development cooperation providers, to strengthen, implement, and adapt existing regulatory tools and frameworks as the basis for enabling an environment for investment as well as resilient, effective, efficient, and inclusive financial markets that effectively intermediate capital. Such investment frameworks and markets can, as a co-benefit, enable private sustainable investment at a system level to support gender equality and social inclusion and increase societies' resilience and preparedness to face the climate crisis, biodiversity loss, and other future shocks.

PRINCIPLE 2.B. Enable local actors to engage in blended finance transactions, including to mobilize themselves. Building local, inclusive markets is one of the major ambitions of blended finance, and requires building, strengthening, and leveraging local actors, especially in LDCs. Blended finance should be transitory in its nature, and not greater than necessary, crowding out other resources. Thus, development finance actors should contribute to catalyzing market development without distortion, then they aim to gradually reduce the concessionality, and subsequently the share of development finance needed, to unlock private investment. To get there, building, strengthening, and leveraging local actors such as local financial institutions, local fund managers, and other financial or capacity-building intermediaries by, for example, providing them with liquidity via credit lines, risk sharing capacity, or securitization structures, is important. Enabling local actors to engage in blended finance is in particular important with a view to promoting local currency investment.





PRINCIPLE 2.C. Develop local capacities and create the ecosystem to go beyond a transaction-based approach. Developing country governments, including those from LDCs and SIDS, need to work with development partners to develop capacities at system, institutional and individual levels to turn the concept of blended finance and its ambition into reality. In doing so, developing countries need to identify what their main capacity-building needs are in order to attract more private investment via blended finance, and align these flows with sustainable development priorities and SDGs. Furthermore, developing countries need to aim at creating an ecosystem for blended finance that facilitates optimization of resources mobilization, reduced concessionality, and promotes stand-alone private investments in the long run, e.g. through credible and suitable sustainable finance markets and frameworks. Technical assistance can play an important role in supporting the development of local institutional capacities. Combining blended finance instruments with technical assistance can therefore significantly increase their effectiveness.

PRINCIPLE 3. Aim for scale through systemic and transformational approaches. To address scale and unlock the catalytic potential of blending, developing country governments need to develop blended finance strategies and embed them in broader sustainable development and mobilization strategies. Portfolio approaches, increased ticket size (such as through aggregating projects), and de-risking facilities with support from multilateral development banks are important in mobilizing commercial capital to investments which support development at scale. To achieve such systemic and transformative change, effective collaboration among stakeholders across the public and private sectors, as well as domestic and international actors is a necessary condition, and governments should define the roles of different actors.

PRINCIPLE 3.A. Ensure that a pipeline of projects stands ready to attract blended finance. Developing countries, in collaboration with development partners and project preparation facilities, need to invest in project preparation at scale to build an SDG and NDC aligned pipeline of viable projects, as a necessary condition for creating pathways for private sector participation. In developing viable investment-ready project pipelines, developing countries need to build on investment plans that are based on the national policy contexts and aligned with SDGs to facilitate investment flows and enable investors and project developers to identify and source investment opportunities that match their needs from the available options.

PRINCIPLE 3.B. Facilitate portfolio and programmatic approaches to unlock private finance at scale. Adopting programmatic approaches will enable effective due diligence, bring down transaction costs, and complement portfolio approach ambitions. Both approaches can help reach high investment volumes and enable risk diversification for private investors, and thereby playing an increasingly important role in blended finance. Governments can take a key role in enabling and facilitating these portfolio and programmatic approaches: by aligning them with national sustainable development priorities and addressing countries' specific characteristics that lead to different risk, return and impact criteria enabling data-driven decisions for all stakeholders involved.

PRINCIPLE 3.C. Promote multi-stakeholder coordination while respecting all parties' mandates. In conducting effective multi-stakeholder coordination on blended finance, the government should commit and take into account the legal implications of private contracting processes and should take the lead in paving the way for the private sector to invest. Thereby improving the investment climate while empowering the domestic market (including through national development banks) to create a sustainable finance ecosystem and providing credible and coherent frameworks and standards. Multilateral Development Banks and DFIs can also play a role by working with the private sector to demonstrate the benefit of a positive social approach including the promotion of gender equality and social inclusion and an environmentally sound approach. Furthermore, it





is important to define the roles of different actors and to cross-coordinate across the different stakeholder groups at the country, actor, and sector-level, while respecting all parties' respective mandates and risk appetites.

PRINCIPLE 4. Improve impact management and measurement, and promote transparency and mutual accountability. The core of successful and responsible blended finance operations are impact management and measurement. Transparency and accountability are also key for investors to identify good investment opportunities, to embed sustainability in management decisions, to understand risk and return expectations, and to ensure the effectiveness and alignment of impact targets and results with local sustainable development priorities. Furthermore, transparency and mutual accountability in public financing could play key roles in mobilizing private finance. Transparency promotes a culture of learning and knowledge-sharing of best practices and can contribute to a strong track record and increase donor and investors' confidence in blended finance.

PRINCIPLE 4.A. Establish performance and result metrics from the outset. From the start, all stakeholders involved in blended finance operations could adopt common validated monitoring and evaluation, and risk-sharing framework, while specific reporting arrangements may be tailored to context. Establishing a common set of key performance indicators in the respective projects should be a priority to ensure a transparent, impactful, and comparable assessment of results.

PRINCIPLE 4.B. Dedicate appropriate resources for monitoring, reporting, and evaluation, to track financial flows, commercial performance, and development results. In spite of its importance, many developing countries do not have the appropriate resources to apply impact management and measurement. Thus, support can be mobilized to build the institutional capacity for developing countries at all levels, to strengthen and establish adequate systems for monitoring and evaluation of the development interventions. Monitoring, reporting and evaluation systems could track financial flows, commercial performance, and development results where appropriate, and assess them against predefined and mutually decided upon metrics to assess the effectiveness and efficiency of blended finance operations. In doing so, governments can supplement their monitoring, reporting, and evaluation system with digital solutions, producing a more accurate database to make informed decisions. Impacts to be achieved should be framed in terms of the SDGs, and set objectives should be coherent with local sustainable development priorities and grounded in local development needs.

PRINCIPLE 4.C. Promote public transparency and mutual accountability on blended finance implementation and results. Information on the implementation and results of blended finance activities should be made publicly available and easily accessible to relevant stakeholders while considering confidentiality and proprietary information. Besides accountability, external communication on blended finance performance is instrumental in mobilizing further commercial capital, by improving the availability of market information and the quality of risk assessment for the efficient pricing of investments. Importantly, this information is crucial to enable an understanding of success factors of blended finance and building an evidence base; ex-ante impact projections and targets should as far as possible be supported by strong and transparent impact monitoring, management, and measurement.





WAY FORWARD

The G20 is committed to contributing to scale blended finance in developing countries, including LDCs and SIDS by showing leadership in concrete implementation efforts. While development actors (public and private) should step up in blending, developing country actors equally should actively participate in blended finance – and need to harness the full potential of blended finance, including in delivering local sustainable development priorities and seeking to catalyze finance in the last mile. In order to drive implementation, forward we support the implementation of the G20 Principles on a voluntary basis through the following actions:

1. **Develop a Stocktake Report** that builds the basis for a shared understanding of the concept of and evidence on blended finance, provides information on successful cases of blended financing from G20 members and beyond, evaluates the efficiency of different models in delivering impact and leveraging private sector finance and distills opportunities to scale blended finance for local sustainable development priorities from a developing country perspective (e.g. policymakers and national development banks), including addressing the associated challenges.
2. **Develop implementation Guidance to turn the G20 Principles into an actionable how-to-tool in a multi-year approach.** A complementary guidance on the *G20 Principles to Scale Up Blended Finance in Developing Countries, including LDCs and SIDS*, could turn those into a practical tool (a know-how to guide) to achieve a bigger impact on sustainable and accountable development. Such Guidance could outline concrete actions to address the G20 Principles, including tools such as step-by-step processes, identifying the main actors of each step, and a viable governance structure and institutional arrangement in the implementation of projects, and to improve elements such as transparency, ownership and governance and a generic to-do list. The Guidance could serve developing countries and private and corporate actors to turn the G20 Principles into reality and initiate policy change that should be accompanied by notable progress in terms of blended finance flows going to LDCs, SIDS as well as their local and cross-sectional sustainable development priorities.
3. **Promote optimal operationalization and delivery of blended finance in developing countries, including LDCs and SIDS.** Engage in ongoing discussions with all actors in the financial sector of developing countries, including LDCs and SIDS on the implementation of the G20 Principles and the envisioned implementation guidance. Seeking the perspective of those countries, and the private sector will be essential to create ownership and prepare policy changes that would lead to the improvement of blended finance approaches. Exploring opportunities to establish innovative, ambitious, and effective partnerships, that are commensurate with the urgency and the scale of the challenge. This includes a commitment to assist in capacity building, share experiences and knowledge, promote the transfer of technology on voluntary and mutually agreed terms and digitalization and strengthen support to existing related initiatives, including through the North-South Cooperation and South-South and Triangular Cooperation. This includes the support of dedicated global institutions, including Multilateral Development Banks (MDBs) and the role played by philanthropies, to engage a wide set of actors and build a global community of support. We acknowledge the proposed initiative by the Government of Indonesia on the Global Blended Finance Alliance that could serve as a global community of support to accelerate investment in climate action and sustainable development. We take note of the Asia Pacific SDG Financing Facility (APFIN)—the country-led facility that pioneered INFFs; the UN Joint SDG fund and the INFF Facility, which brings together UNDP, UNDESA, and the OECD, with the





support of several G20 members and countries. It acts as one vehicle to take forward the G20 framework for voluntary support to INFFs, responding to country demand for technical support, facilitating exchange, and providing access to technical guidance on issues prioritized by voluntary countries through their INFFs, including on blended finance. Promote impact management and measurement while promoting accountability support by taking into account national contexts through existing mechanisms such as Total Official Support for Sustainable Development (TOSSD) which is one of the voluntary statistical frameworks to measure progress in achieving the 2030 Agenda. The effort to promote impact management and measurement and mutual accountability will include collaborations with respective countries and institutions.

4. **G20 member countries to support developing countries to implement blended finance and engage in dialogue and facilitate exchange with relevant stakeholder groups.** G20 members can align their cooperation and connect their domestic constituencies with country's demand for support in the development of blended finance instruments, capacity, enabling environment, and related reforms, in line with the G20 Framework for Voluntary Support to INFFs. DWG could engage in dialogue and facilitate exchange and peer-learning with other relevant groups of the G20, such as exchanging information and providing inputs to the Sustainable Finance Working Group, such as developing a policy toolbox highlighting ways to scale up sustainable finance markets, with a focus on improving accessibility and affordability. Engage international organizations, networks, and initiatives to use and align with the G20 Sustainable Finance Roadmap, particularly on Actions 5, 15, and 19. The DWG can do regular exchanges with other relevant working groups, and through G20 engagements groups, such as Business 20.
5. **Encourage International Finance Institutions (IFIs), including MDBs, and other relevant IOs, more broadly to mobilize private finance by assisting developing countries, including LDCs and SIDS** in developing blended financial instruments and mechanisms in catalyzing market development, engineering de-risking facilities, and improving their capacity to develop portfolio and programmatic approaches to unlock private finance at scale, screen public investment projects and assess their suitability of a blended finance mechanism and to develop investment-ready project pipelines. International development partners need to have the knowledge and understanding with respect to market structure, regulations, institutions, and the local political economy dynamics within developing countries, including LDCs and SIDS in order to ensure blended finance is targeted effectively. Furthermore, engage IFIs, MDBs, and relevant IOs in developing the *Guidance on the G20 Principles to Scale Up Blended Finance in Developing Countries, including LDCs and SIDS*. We call on relevant finance institutions to set adaptation finance targets and to scale up the participation of the private sector.





G20 INDONESIA
2022

2022 G20 BALI UPDATE

on the G20 Action Plan on the 2030 Agenda for Sustainable
Development and G20 Development Commitments



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EXECUTIVE SUMMARY

As part of the commitment to uphold its accountability and transparency, the Development Working Group (DWG) formulated its first accountability report in 2013 to track the progress and status of active G20 development commitments. Following the G20 Leaders commitment to align the work of G20 with the 2030 Agenda for Sustainable Development to ensure that no one is left behind in our efforts in eradicate poverty, achieve sustainable development and build an inclusive and sustainable future for all as enshrined in G20 Action Plan on the 2030 Agenda for Sustainable Development in 2016, the DWG accountability document was extended to also cover the G20 Presidency's contribution to global efforts to implement the 2030 Agenda for Sustainable Development and to accelerate the achievement of the Sustainable Development Goals (SDGs). Indonesian G20 Presidency remains committed to uphold the transparency and accountability by presenting '**2022 G20 Bali Update**'—that adheres to the G20 Modernized Accountability Framework.

The first section of 2022 G20 Bali Update aims to provide a progress report on Indonesian G20 Presidency's collective and concrete actions—through the deliverables of the Finance Track and Sherpa Track—which contribute to the overall achievement of SDGs. As COVID-19 pandemic has erased decades of gains in the development and created setbacks in the SDGs achievement, G20 under the Indonesian Presidency through its collective and concrete actions aims to support global recovery and accelerate the SDGs achievement—whilst also contribute to the implementation of the Addis Ababa Action Agenda (AAAA), the United Nations Framework Convention on Climate Change (UNFCCC), the Paris Agreement, and the Convention on Biological Diversity. This section is narrated to showcase the collective actions and commitments highlighting the importance of collaboration and cooperation; sector-specific actions that will foster stronger recovery and build resilience; financing for sustainable development; and G20 specific support to developing countries in terms of COVID-19 recovery and SDGs achievements.

The second section of 2022 G20 Bali Update monitors the progress of active G20 development commitments made since the establishment of the DWG, and determines the status of each commitment based on the assessment of its progress. Data for the progress of each commitment has been compiled from the report of past presidencies and relevant international organizations. Based on the assessments made in the making of the 2022 G20 Bali Update, **5** are assessed as being "completed", **31** are assessed as being "on track", and **0** commitments are assessed as "no progress".

The 2022 G20 Bali Update is not only intended to ensure accountability and transparency, but also to support future G20 presidencies in optimizing the G20's contribution to advance the achievement of the SDGs and the G20 development commitments. In the first section, a lessons learnt segment is put forth, which identifies the challenges and lessons learned in optimizing Indonesian G20 Presidency contributions to 2030 Agenda for Sustainable Development through its collective and concrete actions and ways forward for future presidencies to address those challenges. In the second section, the progress on the G20 development commitments is laid out, so that future presidencies can pick up the torch to continue





on realizing and reporting the work done to implement the G20 development commitments. Both the first and second sections of the 2022 G20 Bali Update are intended to support the formulation process of the next Comprehensive Accountability Reports, and help contribute to the efforts to achieve the Indonesian G20 Presidency's overall goal of Recover Together, Recover Stronger.

REFLECTION ON THE CURRENT GEOPOLITICAL TENSION

For the reflection of member's position on the current geopolitical tension, this document will refer to Part I of Chair's Summary of G20 Development Ministerial Meeting on Multilateralism for Sustainable Development Goals.





I. BALI UPDATE ON G20 ACTION PLAN ON THE 2030 AGENDA FOR SUSTAINABLE DEVELOPMENT

I.I Introduction: COVID-19 Pandemic and the Progress of the 2030 Agenda Implementation

Following the launch of the 2030 Agenda for Sustainable Development in 2015, G20 Leaders have been committed to aligning the work of G20 with the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) to ensure that no one is left behind in our efforts to eradicate poverty, achieve sustainable development and build an inclusive and sustainable future for all. This commitment is reflected in the adoption of the G20 Action Plan on the 2030 Agenda for Sustainable Development in 2016 which outlines the high-level principles of the implementation and G20 collective actions for achieving sustainable development. Thenceforth, each G20 Presidency has carried out the mission to mainstream the 2030 Agenda for Sustainable Development—while ensuring coherence with the G20 Action Plan—in the working groups' deliverables to contribute to advancing the SDGs achievement.

However, the COVID-19 pandemic has created severe impacts on health, economic, environmental and social aspects of society that hindered progress made in achieving sustainable development. It has erased decades of gains in the development¹ sector as well as intensified inequalities within and among countries by pushing more than 100 million people into poverty², making 28 million people unemployed³, threatening the livelihoods of 1.6 billion workers in the informal economy⁴, among other impacts. It also increased the volume of financing necessary to recover and regain momentum to put the achievement of the SDGs back on track, noting that the SDG financing gap was already a challenge before the pandemic happened. Regardless of some signs of recovery in the health, economic and social sector whilst also noting the importance of environmental aspect, the current progress is still far behind the expected pace to achieve the SDGs by 2030. The abovementioned challenges mean that accelerating the achievement of the SDGs is indispensable.

Despite the devastating setback to the process of achieving the SDGs, G20 under the Indonesian Presidency continued to embody its role as a premier forum for international economic cooperation⁵ and will further align its work with the 2030 Agenda for Sustainable Development in order to pave the way for global recovery that will correspondingly advance the SDGs achievement. The leadership of G20 as a

¹ UN Desa, "Sustainable Development Report Shows Devastating Impact of COVID, Ahead of Critical New Phase," United Nations, Africa Renewal, 2021, <https://www.un.org/africarenewal/news/sustainable-development-report-shows-devastating-impact-covid-ahead-%E2%80%98critical%E2%80%99-new-phase>.

² Ibid

³ Marie-Claire Soderger, et al., "COVID-19 and the Sustainable Development Goals: Reversing Progress Towards Decent Work For All," ILO, 2022, <https://ilostat.ilo.org/covid-19-and-the-sustainable-development-goals-reversing-progress-towards-decent-work-for-all/>

⁴ United Nations, "The Sustainable Development Goals Report 2021," (New York: UN, 2021), <https://unstats.un.org/sdgs/report/2021/The-Sustainable-Development-Goals-Report-2021.pdf>

⁵ G20, "Rome Leaders Declaration," 2021.





forum in coordinating the collective and concrete actions contributing to the implementation of the 2030 Agenda is needed more than ever. Against the background, G20 is putting forth sets of multi-sector policies to amplify the global recovery and bring SDGs back on track that can create positive impacts on G20 member countries and beyond, particularly developing countries, including Least Developed Countries (LDCs), and Small Island Developing States (SIDS).

In this regard, the Development Working Group (DWG)—as indicated in the G20 Action Plan—carried out the mandate of being the guardian and the coordinating body of the G20 Action Plan on the 2030 Agenda as well as policy resource for sustainable development across the G20. This mandate comes with the responsibility to conduct an annual progress report on each G20 Presidency’s collective and concrete actions—through the deliverables of the Finance Track and Sherpa Track—which contribute to the achievement of SDGs. Therefore, under the Indonesian G20 Presidency, DWG presents ‘**2022 G20 Bali Update**’, the accountability document with its first section dedicated to assembling the Indonesian G20 Presidency’s contribution to the SDGs achievement.

I.II 2022 Indonesian G20 Presidency Contribution to COVID-19 Recovery and 2030 Agenda for Sustainable Development

Understanding the challenges and need for collective and concrete actions, the Indonesian G20 Presidency set out the theme of ‘Recover Together, Recover Stronger’. It is reflective of the urgency for the world to accelerate the inclusive, sustainable, and just recovery from the impact of COVID-19 pandemic which can only be done with the spirit of collaboration and cooperation. The participation and joint effort of all stakeholders at the global, regional, national and sub-national level together with vertical and horizontal collaboration are essential. The G20 is committed to realize the coordinated recovery efforts—in line with the 2030 Agenda for Sustainable Development—that are sustainable, inclusive and leave no one behind.

In reaching and realizing the aforementioned desired objectives, each working group under the Indonesian G20 Presidency—both within the Sherpa Track and Finance Track—is converting the theme into sector-specific priority issues that are timely and strategic. Building upon consensus in the working group and some also at the Ministerial level, the outcome documents consisting of collective and concrete actions are delivered to guide the work of G20 members in creating positive impacts to support global recovery in a sustainable and inclusive manner. These outcomes are also forwarding the longstanding efforts and past achievements of G20 to ensure continuity.

Aside from being aligned to the theme, all G20 deliverables from working groups and ministerial meetings have one common denominator: that is, contributing to the implementation of the 2030 Agenda for Sustainable Development, particularly in accelerating the achievement of the SDGs. SDGs are mainstreamed and reflected implicitly and/or explicitly in the outcome document corroborating the G20 commitment to achieve a strong, sustainable, inclusive and balanced growth, and promoting a more robust and resilient global economy for all with the 2030 Agenda for Sustainable Development as the





blueprint. Consequently, the Indonesian G20 Presidency through its collective and concrete actions also aims to contribute to achieving the Addis Ababa Action Agenda (AAAA), the Paris Agreement, the United Nations Framework Convention on Climate Change (UNFCCC), and the Convention on Biological Diversity.

Therefore, the following sections are bestowed to highlight the Indonesian G20 Presidency contribution to the COVID-19 recovery and SDGs achievements categorized into 4 sub-sections concerning [I] the emphasis of collaboration, partnership, multilateralism and leaving no one behind; [II] the sector-specific actions; [III] financing for sustainable development; and [IV] G20 contributions in supporting the recovery and SDGs achievement in the developing countries, including LDCs, and SIDS.

I.II.I Recover Together, Recover Stronger: Reaffirming Global Partnership and Reinvigorating Multilateralism in Fostering Recovery and 2030 Agenda for Sustainable Development

The international community only has less than a decade to ensure timely delivery of the 2030 Agenda for Sustainable Development. However, the negative health, social, and economic impacts of the COVID-19 pandemic, exacerbated by inequitable access to COVID-19 medical and non-medical countermeasures, have hindered progress made towards achieving the SDGs, in some cases also reversing the progress achieved before the pandemic. The pandemic reflects the indispensable urgency of international cooperation to address global challenges, particularly in times of crisis as no one is safe until everyone is safe. With this view in mind, reaffirming global partnership, reinvigorating multilateralism and ensuring inclusivity are essential. Therefore, the Indonesian G20 Presidency is not missing the momentum to foreground the importance of collaboration and cooperation to ensure global recovery and bring SDGs implementation on track, particularly with regards to Goal 17 (Partnerships for the Goals) and Goal 10 (Reducing Inequality).

The DWG has expressed support for efforts to reinvigorate a more inclusive multilateralism and reform aimed at implementing the 2030 Agenda and achieving its Sustainable Development Goals (SDGs), and recalling the commitments in the UN 75th Anniversary Declaration that contain a call to reinvigorate multilateralism and support multilateral and international cooperation in ensuring timely delivery for the achievement of the SDGs. The DWG has also acknowledged the need of the post-pandemic recovery, particularly through equitable access to the safe and effective COVID-19 vaccines, as a prerequisite to bring SDGs achievement on its timely track; supporting ongoing discussion and works at WHO to develop an instrument on pandemic prevention, preparedness, and response (PPR). DWG is also committed to work in partnership with all G20 workstreams, partner countries, international organizations, multilateral development banks, and relevant stakeholders.

Harnessing global partnership, cooperation and collaborations are also accentuated and disseminated through other working groups' collective actions. Among many others, the





Education Working Group (EdWG) has produced the Report and Compendium on promoting universal quality education, harnessing digital technology for inclusive education, preparing for the future of work, and leveraging solidarity and partnerships in education to recover together and recover stronger that includes sharing the documentations to countries beyond G20 as a reference for program development or potential collaboration. The Health Working Group (HWG) underscored the need for continued advanced collaboration in strengthening global health architecture with enhanced global health system resilience, aligned health protocols for seamless cross border mobility, and interoperability focused our collective efforts on the expansion of Global and Regional Manufacturing and Research Hubs for pandemic Prevention, Preparedness, and Response (PPR). The Energy Transitions Working Group (ETWG) and the Bali Compact also reiterates the need of international cooperation in scaling-up smart and clean technologies. Environment Deputies Meeting and Climate Sustainability Working Group (EDM-CSWG) also encourages international partnerships among countries to finance land protection, conservation, sustainable management and restoration programs and projects. Starting from 2022, the Sustainable Finance Working Group (SFWG) has begun the annual monitoring exercise on work being done by the G20, international organizations, other international networks and initiatives, and the private sector stakeholders in implementing the G20 Sustainable Finance Roadmap. This exercise emphasize the need for global partnership and cooperation to advance sustainable finance agenda. The Digital Economy Working Group (DEWG) affirmed that international cooperation and collaboration within and beyond the DEWG will help to leverage the full benefits of the digital transformation currently underway.

Ensuring inclusivity by leaving no one behind is a key principle of the 2030 Agenda and is reaffirmed by many working groups in formulating the collective and concrete actions. The Digital Economy Working Group (DEWG) has aimed to improve the meaningful participation of people in vulnerable situations and underrepresented groups, among others, in the digital ecosystem through compiling practices and approaches by countries on digital skills and digital literacy. Realizing the pledge to leave no one behind, the Employment Working Group (EWG) has committed to promote inclusive, fair, and sustainable employment for persons with disabilities and accelerate their participation in the labour market by producing Action Plan on Accelerating and Monitoring the G20 Principles for the Labour Market Integration of Persons with Disabilities. The Agriculture Working Group (AWG) prioritized its work to ensure food availability and affordability for all as well as expressing to leave no one behind in realizing its efforts. The Global Partnership for Financial Inclusion (GPI) produced the G20 Financial Inclusion Framework on Harnessing the Benefit of Digitalization, with the objective of boosting productivity and fostering a sustainable and inclusive economy for underserved groups guided by the G20 2020 Financial Inclusion Action Plan. To build inclusive infrastructure, the G20 Infrastructure Working Group (IWG)—with support from World Bank—developed Preliminary Findings Report on Gender Inclusive Approaches in Private Participation in Infrastructure to address gender inequalities in infrastructure projects and enhance private sectors in mainstreaming gender in the project cycle.





I.II.II Fostering Stronger Recovery and Building Resilience

Built upon the urgency to recover from the COVID-19 pandemic which upends efforts to achieve the Sustainable Development Goals (SDGs) globally and the need to ensure resilience in withstanding future shocks and crises, the Indonesian G20 Presidency is putting forth the following strategic, sector-specific concrete and collective actions from the outcome documents of relevant working groups and ministerial meetings:

The DWG produced ‘G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including Least Developed Countries and Small Island Developing States’ containing a multi-year program of collective actions sets out in three key focus areas which are recognized for their positive impacts and multiplier effects to meet the specific needs and to accelerate inclusive, sustainable, and just recovery in developing countries, including LDCs and SIDS. The collective actions include enhancing productivity and competitiveness, resilience, and access to finance, and integrating global value chains of the Micro-, Small, and Medium-sized Enterprises (Key Focus Area 1); ensuring resilience against future shocks and challenges through Adaptive Social Protection (Key Focus Area 2); and fostering a more sustainable growth by promoting Green Economy, including Blue Economy through Low GHG emissions/Low Carbon and Climate Resilient Development (Key Focus Area 3). The collective actions of the Roadmap take into account national circumstances and capabilities, promote global solidarity and foster international partnerships, and are implemented on a voluntary basis.

Specifically with regard to climate change, the DWG reaffirms the commitment, in the pursuit of the objective of the UNFCCC, to tackle climate change by strengthening the full and effective implementation of the Paris Agreement, on the basis of the best available scientific knowledge, reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in light of different national circumstances. The DWG remain committed to the Paris Agreement goal to hold the global average temperature increase well below 2°C and to pursue efforts to limit it to 1.5°C above pre-industrial levels, also as a means to enable the achievement of the 2030 Agenda.

Whilst managing global risks, the Framework Working Group (FWG) has set its workplan which will advance the FWG’s core mandate to maintain a strong, sustainable, balanced and inclusive recovery from the Covid-19 pandemic. In line with its mandate, the FWG discussed the global economic outlook and risks, and appropriate policy responses. The FWG has also explored ways to enhance economic policy preparedness and coordination in dealing with global risks. On top of these discussions, the FWG delivered on the mandate from Finance Ministers and Central Bank Governors to further explore the macroeconomic impacts, including opportunities and risks linked to both the physical and transitions risks of climate change and the associated policy implications. Furthermore, the FWG also worked to achieve appropriate well-calibrated, well-planned and well-communicated exit strategies to minimize negative spillovers and explore ways to address scarring effects to secure future growth. In addition, to tackle the increasing challenges from the





rising food price, the FWG discussed the short and medium-term macroeconomic risks linked to high food price, macro-fiscal policies response, and the role of the global cooperation to address food insecurity.

As the COVID-19 pandemic makes the health sector one of the most affected and affecting sectors to the lives of many, the international community needs to address the current challenges of the health systems, not only to mitigate the current pandemic, but also build preparedness in facing future health emergencies that align with One Health approach. The Indonesian G20 Presidency is committed to working towards achieving the global agenda of vaccinating 70% of the world's population which simultaneously contributes to the achievement of overall SDG, by working to ensure healthy lives and promoting well-being for all, at all ages. The HWG puts forth the importance of global health equity and to bring low-and middle- income countries needs to the forefront of its agenda and reaffirm the collective commitment to respect the right of all persons to the enjoyment of the highest attainable standards of physical and mental health, as well as the need for G20 countries to work together to address health inequalities. Therefore, under the theme of 'Strengthening Global Health Architecture', we have focused our collective efforts on pandemic PPR, with the three health priority issues set by the Presidency, being: Building Global Health System Resilience; Harmonizing Global Health Protocols; and Expanding Global Manufacturing and Research hubs for pandemic PPR. This includes the recognition for the need of predictable and sustainable financing to support pandemic PPR, such as through PPR FIF/Pandemic Fund—to be further elaborated under the subsection of financing. The HWG also reaffirmed the importance of addressing the continuity of health services beyond COVID-19, in light of the repercussions of the pandemic on physical and mental health, and social well-being, paying special attention to women and girls and to the needs of the most vulnerable, due in part to isolation, loss of life, unemployment, food insecurity, increased violence against women and girls, and constrained access to education as well as health services, including sexual and reproductive health, and increased social and economic inequalities.

Another essential aspect for the livelihood of the people is food supply. In order to make countries more resilient to the current and future global food crises, the AWG emphasizes the crucial role of the agriculture sector in providing food and nutrition for all and to ensure inclusive and sustainable economic development, also by leaving no one behind, particularly women and children. At the same time, agricultural and economic measures must consider climate adaptation and mitigation as well as conservation and protection of biodiversity. Common and coordinated actions are critical to efforts to accelerate recovery from the pandemic and build a more sustainable and resilient agriculture and food systems. The G20 commit to step up cooperation and coordination among G20 members to work closely with international organizations, the private sectors, civil society, and other partners, for poverty alleviation and improvement of food security and nutrition for all. In achieving that goal, the AWG is committed to promote (i) resilient and sustainable agriculture and food systems, (ii) open, fair, predictable, transparent, and non-discriminatory agricultural trade to expand food availability and affordability for all, and (iii) innovative agri-preneurship through digital agriculture to improve farmers livelihood in rural





areas. Furthermore, G20 Finance and Agriculture Ministers agreed to undertake a mapping exercise aiming at identifying policy gaps in the global food security response, and tasked the World Bank (WB) and the Food and Agriculture Organisation (FAO) to lead this operation, and report back on the results by early 2023.

The COVID-19 pandemic has greatly disrupted global trade. In an effort for recovery and in achieving the SDGs, the Trade and Investment Working Group (TIWG) is committed to seize and advance the positive momentum by engaging in active, constructive, pragmatic, and focused discussion on WTO reform with other WTO Members on the path leading to the 13th WTO Ministerial Conference as well as reaffirm that the rule-based, non-discriminatory, fair, open, inclusive, equitable, sustainable and transparent multilateral trading system, with the WTO at its core, is indispensable to advancing our shared objectives of inclusive growth, innovation, job creation and sustainable development. TIWG also notes the importance of the contribution of the multilateral trading system to promote the UN 2030 Agenda and its Sustainable Development Goals in its economic, social, and environmental dimensions, in so far as they relate to WTO mandates and in a manner consistent with the respective needs and concerns of Members at different levels of economic development. Global Value Chains (GVCs) have been an important means of increasing the participation of developing countries, including least developed countries, and MSMEs in global trade, playing a pivotal role in facilitating access to knowledge, capital and diffusion of technology beyond the domestic economy. In this context, the TIWG also highlights the importance of assistance programs to strengthen the capacity of inter alia MSMEs, women and young entrepreneurs to participate in international trade, regional and global value chains. TIWG further recognizes the opportunities offered by digital transformation for resilient, sustainable and inclusive economic growth and the importance of supportive and collaborative digital trade policies and digital technology for managing the risk and challenges associated with the digital advancement, sustaining economic activity and speeding up economic recovery.

While bridging digital divides remains a challenge, the digital transformation holds immense potential, especially in driving a stronger recovery and ensuring resilience of digital infrastructure and connectivity. The DEWG emphasized the need to foster international cooperation for a more inclusive, empowering, sustainable, resilient, and innovation-driven digital transformation, while recognizing the role of data and data flows as a key driver for economic growth and development. Discussion on digital connectivity and post-COVID-19 recovery, digital skills and digital literacy, and data free flow with trust and cross-border data flows supported these efforts. Among the outcomes, in addition to stocktaking countries' opinions on various priority issues, it includes the Collection of Existing Practices on Digital Security as a Key Enabler to Support Business Continuity, the G20 Toolkit for Measuring Digital Skills and Digital Literacy, the Collection of Policies and Recommendations to Improve Meaningful Participation of People in Vulnerable Situations in the Digital Economy, and the Compendium of Practices and Policies on Advanced Digital Skills and Digital Literacy.





On the other end, the COVID-19 crisis has created new challenges in the world of work. To mitigate its adverse impact on the labour market and reduce inequalities, the EWG has agreed on the “Policy Recommendation on Promoting Entrepreneurship and Supporting MSMEs as Job Creation Instruments”, which aims to support MSMEs productivity and quality working conditions through a comprehensive approach that leverages the main productivity drivers, including through promoting formalization of enterprises and to protect jobs and workers’ rights. In order to support job creation, human capacity development is also emphasized through strengthening Community-Based Vocational Training (CBVT) which includes promotion of training curricula and methods development to encourage lifelong learning, accessibility to reskilling and upskilling programs, multi-actors’ partnership and community collaboration to improve training quality. The EWG also focused on adapting labour protection to increase resilience for all workers, including through policies to ensure decent working conditions and gender equality, promote fair payment, adjusting minimum wages on a regular basis while taking into account social and economic criteria, etc.

Education and literacy are the backbones in alleviating poverty, addressing unemployment, harnessing digital transformation, achieving long-term overall resilience, etc. The COVID-19 pandemic has also hit the education sector hard and brought about the issue of education inequality into the forefront. The EdWG is thus committed to overcome the rapid rise of education inequality and learning poverty, particularly on those from the most disadvantaged and vulnerable groups, and strengthen commitment to inclusive and equitable quality education, by underlining the need to build cross-sectoral collaboration that will enable us to create a more adaptive and resilient education system. The Pandemic and other current multiple crises have also shown the need to transform education. In higher education and technical and vocational education and training, learning should be made more meaningful and relevant to the present and tomorrow challenges. A particular transformation can be found on the digitalization of education, in which digital technology has helped ensure the education system to function throughout the pandemic and should continue to be optimized while improving digital literacy competencies. However, non-digital resources should also still need to be mobilized to address digital divides.

While the world continues to respond to and recover from the COVID-19 pandemic, other crises that loom large upon us are climate change, environmental degradation and biodiversity loss—to be addressed in the effort of building resilience and achieving sustainable development. To that end, the EDM-CSWG has worked to strengthen existing G20 and global initiatives and frameworks for enhancing land and sea-based actions as well as resource mobilization to support environmental protection and climate objectives. It also discussed policies to promote and increasingly mainstream ecosystem restoration and sustainable land management, strengthening evidence-based and holistic action to halt and reverse biodiversity loss, enhance sustainable and climate resilient water management, commit to do our utmost to end plastic pollution worldwide, enhance climate change adaptation measures—including nature-based solutions and ecosystem-based approaches, improve ocean observation and modelling for data collection and





management, etc. The EDM-CSWG also emphasized the importance of resource efficiency and circular economy for the achievement of sustainable production and consumption thus contributing to addressing climate change, biodiversity loss, land and water degradation and pollution.

With energy transitions being an important part in tackling the problem of climate change, ensuring energy security and clean and affordable energy production, G20 members are set out to implement a voluntary energy transitions roadmap as a pathway toward net zero emission or carbon neutrality in accordance with national circumstances. The transitions processes are expected to be in line with the principles of just transitions, affordable, and sustainable energy transitions. The ETWG has called for G20 members to increase international cooperation in technological solutions through reducing emissions, promoting and investing in clean, safe, sustainable, technologies and approaches which may include energy efficiency measures and different types of renewables, other zero and low emission technologies, including abatement technologies as well as removal technologies, taking into account national circumstances and in accordance with the availability of resources. This technology enhancement initiative improvement must be supported, inter alia, by funding, innovation, and Research, Development, Demonstration, Dissemination & Deployment (RDDD&D) in order to effectively utilize the available clean energy technology and integrating it with the next generation technology.

Another sector derailed by the COVID-19 pandemic is tourism, particularly due to the travel restriction. On the other hand, the pandemic has created a unique opportunity to accelerate the necessary change in the tourism industry in line with the 2030 Agenda and SDGs aimed at more inclusive, sustainable, and resilient sectors. The transformation of the tourism industry and its contribution to the SDGs cannot be achieved without the transformation of its key stakeholders which are the small businesses and communities. In regards to this context, the Tourism Working Group (TWG) has agreed to develop the 'G20 Bali Guidelines: Strengthening Communities and MSMEs as Tourism Transformation Agents – A People-Centered Recovery'. The guidelines aim to provide a framework project in facilitating the transformation of the tourism sector through policy actions targeting MSMEs and communities in the aftermath of the COVID-19 crisis and in the context of the climate and environmental emergency, rising social and territorial inequalities, digitalization, and the global economic changes of the COVID-19 recovery.

I.II.III Scaling-up Financing for Sustainable Development

The implementation of collective actions highly depends on the availability of resources, mainly financing. The COVID-19 pandemic has worsened the already existing financing gap with the increasing in financing needed to overcome the setbacks while the available resource is reduced to cover the COVID-19 mitigation and recovery. Hence, the scaling-up of financing for sustainable development is a requisite in the effort to accomplish the sustainable development, particularly the SDGs by 2030. The Indonesian G20 Presidency puts forth the following measures in financing for the sustainable development:





With financing for sustainable development having been recognized as an integral element of the development work, the DWG under the Indonesian G20 Presidency continues its discussion on financing for sustainable development, particularly on blended finance mechanism. Blended finance can play a key role for unlocking new sources of finance and can effectively complement other approaches in order to deliver the resources needed. To this end, the DWG presents the 'G20 Principles to Scale up Blended Finance in Developing Countries, including Least Developed Countries and Small Island Developing States', and endeavors to develop its implementing guidance. The G20 Principles are developed to advance and provide value added to the established blended finance policy and practitioner frameworks that focus largely on donors or development finance providers. The G20 Principles enrich the existing principles by providing blended finance policy and practitioner frameworks, additional insights, and guidance to address implementation and capacity challenges, and bring blended finance to scale in developing countries including LDCs and SIDS. The DWG is well placed to conduct and endorse work that fills this gap and thereby adds value to the established international policy landscape given its interest in and mandate to foster sustainable development in developing countries, including LDCs and SIDS.

As we begin to prepare for the COVID-19 pandemic recovery phase while continuing to support urgent COVID-19 response needs, the Indonesian G20 Presidency acknowledges the urgency to address the financing for health sector development. G20 Finance and Health Ministers concurred on the importance of addressing pandemic PPR financing gaps. Following the G20 Rome Leaders' Declaration, in 2022, the Indonesian G20 Presidency has operationalized the G20 Joint Finance and Health Task Force, which convenes Finance and Health Ministries' representatives to discuss how to improve the global health architecture for PPR, working on the cross-cutting impact of global health threats. The Task Force has played an important role in establishing the Pandemic Fund (PPR FIF). To that end, the envisioned continuation of the Joint Finance and Health Task Force for pandemic PPR is intended to strengthen cooperation and collaboration between the Finance and Health Ministers. Hence, G20 members have welcomed the recent establishment of Pandemic Fund housed at the World Bank, and are looking forward to the launch of the PPR First Call for Proposal as soon as possible.

Recognizing sustainable finance is critical to a green, resilient and inclusive global economic recovery, and the achievement of the 2030 Agenda for Sustainable Development in line with the UNFCCC and the Paris Agreement, the G20 FMCBG 1st Communique, 17–18 February 2022 developed concrete actions to advance sustainable finance. The FMCBG decided to take forward actions of the G20 Sustainable Finance Roadmap, that is voluntary and flexible in nature, including by: a) reporting and assessing on its progress in addressing the Roadmap priorities, b) developing transition finance framework and improving the credibility of financial institutions' net-zero commitments – which will enable the financial market to support an orderly, just and affordable transitions towards a low-greenhouse gas emissions and climate-resilient economy, c) scaling up sustainable finance markets and improve access for countries and firms, including for developing





economies and SMEs, in an affordable way, and d) welcoming private sectors' growing role in accelerating sustainable recovery alongside public and MDB finance and reaffirm the crucial role of IFIs and public policy levers in addressing market externalities, reducing the cost of low emissions technologies and incentivizing the participation of private capital in sustainable investments that promote green transitions, while considering country specific circumstances. The G20 Presidency organized a Forum on international policy levers for sustainable investment at the margins of the SFWG meeting, to discuss a range of measures that can create an enabling environment for sustainable finance to support an orderly, just and affordable transitions towards low-greenhouse gas emissions and a climate-resilient economy. During the Fourth G20 FMCBG meeting in October 2022, the G20 further committed to tackling urgent global challenges such as climate change and environmental degradation, including addressing biodiversity loss. The G20 also welcomed the progress made across the G20, international organizations, other international networks and initiatives, and the private sector in addressing the priorities of the G20 Sustainable Finance Roadmap, which is voluntary and flexible in nature, and call for further efforts to advance the Roadmap's recommended actions that will scale up sustainability financing. These progress in realizing the concrete actions are captured in the Sustainable Finance Working Group's online dashboard as the repository of relevant work as summarized in the 2022 Sustainable Finance Report. Members are encouraged to contribute to the dashboard on a voluntary basis, taking country circumstances into consideration.

At the Fourth G20 FMCBG meeting in October 2022, the voluntary and non-binding G20/GI Hub Framework on How to Best Leverage Private Sector Participation to Scale Up Sustainable Infrastructure Investment which will consider countries' circumstances was endorsed by the Finance Ministers and Central Bank Governors. This effort aims to revitalize infrastructure investment in a sustainable, inclusive, accessible, and affordable way. It also becomes an enablement, by identifying and prioritizing a list of voluntary, non-binding, non-prescriptive, multi-year actions which can help inspire and inform collaboration between public and private sector that can lead to scaling up private investment in sustainable infrastructure. The G20 FMCBG Meeting through February 2022 Communiqué have also made the commitment to develop actions to leverage private sector participation to scale up sustainable infrastructure development, which will consider countries' circumstances and complement investment from other sources, including public investment and finance provided by MDBs. At their October meeting, G20 Finance Ministers and Central Bank Governors also endorsed the G20-OECD Policy Toolkit on Mobilizing Funding and Financing for Inclusive and Quality Infrastructure Investment in Regions and Cities, prepared with the support of the Asian Development Bank (ADB) and the G20 Compendium of Case Studies on Digital Infrastructure Finance: Issues, Practices and Innovations, to narrow digital divide. The G20 also endorsed the InfraTracker 2.0 which will enable both the public and private sectors towards transformative infrastructure investment post-COVID-19, by providing insights into long-term infrastructure strategies and plans. The G20 FMCBG also endorsed the Quality Infrastructure Investment (QII) Indicators and associated guidance note.





Also in the effort to tackle the problem of climate change and environmental degradation, the EDM-CSWG highlight the role that fiscal policies can play as an effective instrument to foster behaviour changes in businesses and consumers for steering the economy on the whole towards greater sustainability. G20 members supports scaling up sustainable finance for protecting, conserving, sustainably use and restoring all ecosystems and highlight the urgent need to align financial flows with sustainable development, nature and climate objectives. The EDM-CSWG are committed to strengthening policies to enhance the participation in sustainable finance of public and private financial institutions, including multilateral development banks and other relevant public and private institutions, and encourage the provision of financial, technological and capacity building support to developing countries especially LDCs, making the best use of existing governance frameworks and working to identify new and innovative solutions, such as innovative financing mechanisms.

Taking into account the economic disparities between states that hinders energy transitions, energy financing has become a crucial component in fostering energy transitions throughout the world. The ETWG put focus on boosting clean energy investment and financial flows, particularly for developing countries in accelerating energy transitions. The ETWG called for supporting energy sector actions for unlocking and improving inclusive investments for clean energy, including in upstream, through strengthening project pipelines, enhancing policy and regulatory frameworks including de-risking mechanisms, preparing high-quality bankable projects, and streamlining approvals. In addition, the ETWG has also urged further dialogue and action among institutional investors, Multilateral Development Banks, other financing institutions, industries, and policymakers to enhance collaboration, to identify innovative financing options, to promote compatible approaches to green and transitions financing, as well as to provide policy, institutional, and regulatory support.

The International Financial Architecture Working Group (IFAWG) continued its work from 2020 and 2021 to address the economic and financial impacts of the pandemic, climate change and food insecurity particularly for the most vulnerable countries. The G20 welcomed the new IMF's Food Shock Window within its emergency lending instruments. Through the IFAWG, the G20 works to enhance the international financial architecture and take concrete actions to tackle the pandemic and foster recovery, with a focus on five main areas: (i) Debt-related issues, which works on policy-related issues linked to the implementation of the Common Framework and on enhancing debt transparency and sustainability; (ii) The IMF's general SDR channeling, including through the newly-operational Resilience and Sustainability Trust (RST) and voluntary contributions to the RST and to the Poverty Reduction and Growth Trust (PRGT); (iii) Strengthening the Global Financial Safety Net (GFSN) with a strong, quota-based and adequately resourced IMF at its center; (iv) Development finance and coordination among International Financial Institutions as well as continue to explore ways to maximize MDBs' development impact, including through the discussion of options for implementing the recommendations of the G20 Independent Review of the MDBs' Capital Adequacy Framework; and (v) Strengthening financial resilience, including monitoring and discuss the risks associated with volatile international capital





flows, discuss the drivers of currency usage in trade and finance as well as developing local currency capital markets, and discuss macro-financial implications of Central Bank Digital Currencies (CBDCs) for the international monetary and financial system.

Recognizing sustainable investment has become one of the critical instruments for strong economic recovery and the acceleration of sustainable development, it is necessary for the G20 to continue strengthening our cooperation in spurring sustainable and inclusive investment as well as to recognize the importance of sustainable investments flows, to developing countries, especially to least developed countries. Domestic/national key drivers to spur sustainable investment include: (1) Ensuring policy is coordinated and strategic to foster investment in support of sustainable development, (2) Improving open, transparent, non-discriminatory, inclusive predictable environment that foster sustainable investment (3) Ensuring transparency and predictability of investment measures (4) Simplifying and streamlining investment-related administrative procedures. The TIWG commended the sharing of good practices and initiatives by G20 member countries on the promotion of sustainable investment and welcome “G20 Compendium on Promoting Investment for Sustainable Development (Bali Compendium)”.

The Anti-Corruption Working Group (ACWG) discussed enhancing the role of auditing in tackling corruption, sharing best practices in promoting public participation and anti-corruption education and regulatory frameworks and supervisory measures for legal professionals in mitigating corruption-related money laundering risks, as well as understanding the corruption risks in emerging sectors.

I.II.IV G20 Support to Developing Countries for COVID-19 Recovery and Achieving SDGs

Being the leading multilateral economic forum by accounting for 60% of world’s population, 80% of global GDP, and 75% of global exports, the G20 is provided with a strategic opportunity to secure future global economic growth and prosperity. Indonesia as the G20 Presidency in 2022 holds the vision to ensure the impacts of concrete and collective actions produced within one year of its leadership can create impacts to beyond G20 member countries. It put specific emphasis to generate sustainable impacts supporting developing countries, particularly LDCs and SIDS, in fostering global recovery and SDGs advancement.

To better reflect and achieve this objective, the Indonesian G20 Presidency engaged with developing countries in many of its events and meetings, such as side events, workshops, consultation or similar forums. The chair of several regional organizations—which are Chair of African Union, Chair of Association of Southeast Asian Nations, Chair of New Partnership for Africa's Development, Chair of Pacific Island Forum, Chair of Caribbean Community—were also invited to G20 Summit as well as meetings at the ministerial and working group level. The representatives are expected to provide the perspective of their region in sharpening the discussion. Furthermore, several working groups specifically design its priority issues to be timely





and closely related to address the bottlenecks in recovery efforts and SDGs achievement in developing countries.

Under the Indonesian G20 Presidency, as stated in the previous section, the DWG aimed to strengthen the recovery and resilience of developing countries, including LDCs and SIDS through its G20 Roadmap. Realizing that different acknowledged challenges will require different collective actions, the DWG particularly addressed the perspective of developing countries, including LDCs and SIDS throughout the G20 Roadmap. Another priority of the DWG is to advance the existing Blended Finance principles. The DWG specifically designed G20 Principles to Scale up Blended Finance in Developing Countries to more effectively help blended finance reach the last mile, including in LDCs and SIDS. This is also the manifestation of one of DWG mandates as enshrined in the Seoul Development Consensus for Shared Growth, to narrow the development gap.

Not only the DWG, the HWG is one of many working groups in the Indonesian G20 Presidency that puts the perspective of developing countries in its priorities. In one of its collective actions, the HWG acknowledged that 7 countries, namely Argentina, Brazil, India, South Africa, Saudi Arabia, Türkiye, and Indonesia, have volunteered to participate and support an initiative for VTDS manufacturing and research network. This is to bolster the capacity of Global South countries in pandemic PPR. In this context, the hubs are expected to be leveraged, not only by the designated country, but also the regions.

I.III Lessons Learnt and Ways Forward in Optimizing G20 Contributions to 2030 Agenda for Sustainable Development

This section is meant to highlight the lessons learnt from the Indonesian G20 Presidency in optimizing G20 contributions to the implementation of the 2030 Agenda for Sustainable Development. Building on the reflection, the ways forward in addressing the lessons learnt are also presented to be leveraged by the next G20 presidency in improving and further optimizing the G20 contribution to the SDGs achievement. This section is not to duplicate the lessons learnt in the Comprehensive Accountability Report (CAR), but rather to support the upcoming CAR formulation.

In continuing the G20 commitment to implement the 2030 Agenda for Sustainable Development and contribute to the achievement of the SDGs, the Accountability Document remains to play an important role—both for the external and internal purposes. Beyond upholding the transparency and credibility to the external stakeholders, the Accountability Document tracks the progress of the G20 contributions to the SDGs which can help G20 Presidencies to navigate the priority issues, particularly sustainable development policies. Realizing the importance of the document, the G20 aims to further optimize the use of Accountability Document in order to support G20 contributions in implementing 2030 Agenda for Sustainable Development and achieving the SDGs.





In doing so, it is important that the introduction of the Accountability Document to all working groups takes place at the early stage of each G20 Presidency. Beyond the technical reasons, this step will also contribute to the substantial purpose. It provides a starting point for each presidency to continue using the 2030 Agenda for Sustainable Development as its blueprint.

Without having each working group being aware of the past G20 contributions to SDGs achievements, it may result in the heavy contribution to certain goals and less contribution to some others—a scenario that is better avoided, as all Goals are equally important. Therefore, the introduction of the Accountability Document should also be followed by taking into account the previous Accountability Document for reference to move forward. Acknowledging the G20's responsibility to update the list of concrete and collective actions each year, the G20 Presidency could appraise the Goals that are comparatively slow in progress and/or not being addressed enough in the past years, particularly where the G20 has a strategic opportunity to fill the void. Each G20 working group should also be aware of the progress the G20 has made in achieving SDGs and aim to foster the ones relatively slow in progress—while also taking into account the mandate of its working group.

An early introduction of the Accountability Document would also provide opportunity for the upcoming Presidency—which by choice—aims to maintain continuity and foster the legacy issues that are deemed to remain timely and strategic. Complementing the Leaders' Declarations in enshrining the G20 commitments in fulfilling its role as a premier economic cooperation forum, the Accountability Document could be referred to as the document that lays out the commitments, as well as the collective and concrete actions made by the G20 in implementing the 2030 Agenda for Sustainable Development. Hence, the previous Accountability Document can be taken into account in identifying the potential advancement of the legacy issues.

Moreover, the next G20 Presidency would also have the opportunity to leverage the past Accountability Document in its term. After the priority issue formulation at the early stage, the working groups can pick up and build upon the collective and concrete actions reported in the past Accountability Document in putting forward its new actions/commitments. This is also to avoid redundancy and overlapping of actions across Presidencies. Instead, the focus can be shift to advance the current actions or create novel ones.

With these recommendations in mind, the G20 could optimize the utilization Accountability Document which overall foster G20 contribution to the implementation of the 2030 Agenda and the achievement of the SDGs.





I.IV Collective and Concrete Actions by Working Groups and Work Streams Contributing to the Implementation of the 2030 Agenda for Sustainable Development

Name of Working Group	Collective and Concrete Action (2022)	Supporting Documentation Collective Action	Related SDGs
SDS: Financing for Sustainable Development			
Development Working Group	Welcome the G20 Principles to Scale Up Blended Finance in Developing Countries, including Least Developed Countries (LDCs), and Small Island Developing States (SIDS) to target blended finance to local context and employ blended finance to catalyze finance in the last mile, support domestic financial system and market development, scale through systemic and transformational approaches, improve impact management and measurement and promote transparency and accountability by taking into account national contexts and the views of respective countries.	Chair’s Summary of G20 Development Ministerial Meeting on Multilateralism for Sustainable Development Goals, 8 September 2022 Attachment: G20 Principles to Scale Up Blended Finance in Developing Countries, including Least Developed Countries (LDCs), and Small Island Developing States (SIDS)	All SDGs
	Develop a Stocktake Report that builds the basis for understanding the concept of and evidence on blended finance, provides information on successful cases of blended financing, evaluates the efficiency of different models in delivering impact and leveraging private sector finance, etc.		All SDGs
	Develop implementation guidance to turn the G20 Principles into an actionable how-to-tool in a multi-year approach by outlining concrete actions to address the G20 Principles.		All SDGs
	Promote an optimal operationalization and delivery of blended finance in developing countries, including LDCs and SIDS by engaging in a dialogue with the finance sector, developing countries, especially LDCs and SIDS alongside private sector representatives on the implementation of the G20 Principles and the envisioned implementation guidance.		All SDGs
	Encourage International Finance Institutions (IFIs), including MDBs, and other relevant IOs—more broadly to mobilize private finance by assisting developing countries, including LDCs and SIDS in developing blended financial instruments and mechanisms, engineering de-risking facilities, and		All SDGs





	improving their capacity to develop portfolio, etc.		
Finance Track - Sustainable Finance Working Group (SFWG)	Take forward actions of the G20 Sustainable Finance Roadmap, that is voluntary and flexible in nature, including by reporting and assessing on its progress in addressing the Roadmap priorities in the 2022 G20 Sustainable Finance Report.	G20 Finance Ministers and Central Bank Governors Meeting Communique, 17-18 February 2022	All SDGs
	Welcome private sectors' growing role in accelerating sustainable recovery alongside public and MDB finance.	— Chair's Summary of Third G20 Finance Ministers and Central Bank Governors Meeting, 15-16 July 2022	8, 13, 17
	Welcome the establishment of the Sustainable Finance Working Group's online dashboard as the repository of relevant work of the Actions detailed in the G20 Sustainable Finance Roadmap by capturing the progress and illustrating the ongoing work being done by G20 working groups (across finance and Sherpa tracks), IOs, and other international networks and initiatives. Members are encouraged to contribute to the dashboard in voluntary basis, taking into account country circumstances into consideration.	— Chair's Summary of Fourth G20 Finance Ministers and Central Bank Governors Meeting, 12-13 October 2022	All SDGs
	Scale up sustainable finance instruments, with a focus on improving accessibility and affordability, by developing a policy toolbox to improve the accessibility and affordability of sustainable finance instruments that includes identification of barriers and a set of voluntary recommendations for international organizations (including MDBs), country authorities and domestic financial institutions.	— 2022 G20 Sustainable Finance Report — Summary of the Forum on International Policy Levers for Sustainable Investment, 13 June 2022	8, 10, 13, 17
	Reaffirm the crucial role of IFIs and public policy levers in addressing market externalities, reducing the cost of low emissions technologies and incentivizing the participation of private capital in sustainable investments that promote green transitions, while considering country specific circumstances.		7, 8, 9, 10, 12, 13, 17
Finance Track - International Financial Architecture Working Group (IFA WG)	⁶ Commit to step up our efforts to implement the Common Framework for Debt Treatment beyond DSSI in a predictable, timely, orderly, and coordinated manner. Acknowledge the concluding report on the 2020 Shareholding Review of the International Bank for Reconstruction and Development (IBRD) and look forward to the 2025 Shareholding Review. In order to ensure low-income countries can durably access the financing needed	G20 Finance Ministers and Central Bank Governors Meeting Communique, 17-18 February 2022 — Chair's Summary of	1, 8, 10, 16, 17

⁶ Noting that one member has divergent views on debt issues in the box, and emphasized the importance of debt treatment by multilateral creditors like MDBs.





	to fulfill their development needs. The IFAWG will look forward to debt transparency and the analysis of debt vulnerabilities in low and middle-income countries work by the IMF and WB.	Third G20 Finance Ministers and Central Bank Governors Meeting, 15-16 July 2022	
	Welcomes the operationalization of the Resilience and Sustainability Trust (RST) to help eligible low-income countries, small states and vulnerable middle-income countries, address longer-term structural challenges that pose macroeconomic risks, including those stemming from pandemics and climate change.	—	1, 8, 10
	Welcome the voluntary contributions to the RST and call for additional pledges and timely contributions to it and to the Poverty Reduction and Growth Trust (PRGT), especially for subsidy resources, to ensure a broad pool of contributors to meet funding needs.	Chair’s Summary of Fourth G20 Finance Ministers and Central Bank Governors Meeting, 12-13 October 2022	1, 8, 10
	Continue to explore ways, including through balance sheet optimization measures, and other potential avenues, to maximize MDBs’ development impact. Welcome early deliberations and urge MDBs to continue to discuss options for implementing the recommendations of the G20 Independent Review of MDBs’ Capital Adequacy Frameworks within their own governance frameworks, and to deliver an update to the G20 in Spring 2023.		1, 8, 10
	Commit to revisiting the adequacy of quotas and will continue the process of IMF governance reform under the 16th General Review of Quotas, including a new quota formula as a guide, by 15 December 2023.		1, 10
Environment Deputies Meeting and Climate Sustainability Working Group	Support scaling up sustainable finance for protecting, conserving, sustainably using and restoring all ecosystems, such as but not limited to surface and ground water wetlands including peatlands and mangroves, coral reefs, forest, marine and other unique ecosystems with close cooperation and collaboration with the G20 Sustainable Finance Working Group and the Finance track of the G20, and call for additional progress in addressing the priority actions identified in the G20 Sustainable Finance Roadmap for stepping up G20-led efforts concerning finance for nature, biodiversity, circular economy and resource efficiency, water, sanitation and social issues.	Chairs’ Summary of G20 Joint Environment and Climate Ministers’ Meeting, 31 August 2022	17, 12, 13, 14, 15





	Strengthen policies to enhance the participation in sustainable finance of public and private financial institutions, including multilateral development banks (MDBs), and other relevant public and private institutions.		17, 12, 13, 14, 15
	Highlight the role of fiscal policies that can play as an effective instrument to foster behavioral changes in businesses and consumers for steering the economy on the whole towards greater sustainability, leaving no one behind and encourage initiatives to scale up and maximize these instruments, including through international partnerships among countries to finance land protection, conservation, sustainable management and restoration programs and projects.		8, 13, 17
SDS: Infrastructure			
Finance Track - Infrastructure Working Group (IWG)	Endorsed the voluntary and non-binding G20/GI Hub Framework on How to Best Leverage Private Sector Participation to Scale Up Sustainable Infrastructure Investment which will consider country circumstances, and which will complement investment from other sources, including public investment and finance provided by MDBs.	G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022	9, 13
	Remain committed to develop actions to leverage private sector participation to scale up sustainable infrastructure development, which will complement investment from other sources, including public investment and finance provided by MDBs.	Chair’s Summary of Third G20 Finance Ministers and Central Bank Governors Meeting, 15-16 July 2022	9, 17
	Note the Preliminary Findings Report on Gender Inclusive Approaches in Private Participation in Infrastructure in promoting gender considerations during the infrastructure lifecycle and look forward to the final report. This initiative will address gender gaps in infrastructure projects and enhance private sectors in mainstreaming gender aspects in the project cycle.	Chair’s Summary of Fourth G20 Finance Ministers and Central Bank Governors Meeting, 12-13 October 2022	9, 5
	Endorsed the G20 Compendium of Case Studies on Digital Infrastructure Finance: Issues, Practices and Innovations, to narrow digital divide (AIIB).	Annex: G20/GIH Framework on How Best Leverage Private Sector Participation to Scale Up Sustainable Infrastructure Investment	8, 9, 10, 17
	Endorsed the G20-OECD Policy Toolkit on Mobilizing Funding and Financing for Inclusive and Quality Infrastructure Investment in Regions and Cities, prepared with the support of the Asian Development Bank (ADB).		8, 9, 10, 17





Digital Economy Working Group	Acknowledged the role of digital connectivity as an essential enabler of digital inclusion and digital transformation and recognized the need to protect digital infrastructure. It demonstrated the complex interplay between digital connectivity and the social context within which the technology is embedded for expanding connectivity through the provision of policy and regulatory frameworks to support the achievement of the SDGs.	Chair’s Summary of G20 Digital Economy Ministers’ Meeting on The Bali Package, 1 September 2022	8, 9, 10, 17
	Recognized the impact of the digital divide on MSMEs and draw upon existing policies developed and implemented by G20 members, a Compendium was formulated—which provides references to frameworks that support the formulation of digital economy policies, including digital infrastructure and connectivity, digital platforms and digital trade, digital financial services, digital entrepreneurship, digital skills and human capacity, and digital identity.	Annex 1: The Stocktaking on the Extended Concept and Shared Understanding of Digital Connectivity	8, 9, 10, 17
	Hosted the G20 Digital Innovation Network Platform that facilitated cooperation between multi-stakeholders innovation players (such as start-ups, venture capitals, and corporations) and governments at global level.	Annex 2: The Collection of Existing Practices on Digital Security as a Key Enabler to Support Business Continuity	7, 8, 9, 10, 13, 17
	Foster collaboration, promote the exchange of views, share use cases to advance the digital transformation and innovation for public services to facilitate growth and recovery, such as G20 Digital Transformation Expo.	Annex 3: Report on Identifying the Key Enablers of Digital Identity	7, 8, 9, 10, 13, 17
	Welcomed the Smart Village and Smart Island, an initiative of International Telecommunications Union (ITU) to support optimization of digital infrastructure through deployment of digital innovation that advances digital transformation at Small Island and Developing States, and Landlocked Developing States.		8,9, 10, 16, 17
	Exchanged insights and experiences to further common understanding to work towards identifying commonalities, complementarities, and elements of convergence between existing regulatory and policy approaches and instruments that enable data free flow with trust and cross-border data flows.		9, 10, 17
	Foster the discussion on enabling digital identity systems to harness the benefits of the digital economy.		16, 17





SDS: Agriculture, Food Security and Nutrition

Agriculture Working Group	Acknowledge persistent lack of data on FLW and commit to intensify efforts to collect relevant data to support evidence-based policies, including to further share best practices through the Technical Platform on the Measurement and Reduction of Food Loss and Waste (FLW). Acknowledges reducing FLW calls for concerted actions and requires decision-making solutions, and therefore we also support the works of the FAO and UNEP towards closing FLW data gap.	Chair’s Summary of G20 Agriculture Ministerial Meeting on Balancing Food Production and Trade to Fulfill Food for All, 28 September 2022	1, 2, 12
	Committed to step up efforts to enhance sustainable agriculture and food systems and highlight the fundamental priority of safeguarding food security and the importance of both adaptation and mitigation for climate resilient agriculture.		Chair’s Summary of G20 Joint Finance and Agriculture Ministers’ Meeting, 11 October 2022	1, 2, 6, 13
	Reaffirm commitment to promote open, predictable, and transparent trade to ensure food availability and affordability for all.		8, 10
	Acknowledge the role of digital technologies in promoting sustainable agriculture and food systems, and therefore supports a G20 digital food and agriculture knowledge-sharing product (through report or website).		1, 2, 5, 8, 9

SDS: Human Resource Development, Employment and Education

Development Working Group	Support the development of a policy research agenda, conducted by relevant international organizations and stakeholders, aiming at gathering contextual evidence and analysis of Adaptive Social Protection (ASP) and building off existing efforts to map households’ vulnerability and resilience across developing countries that provides the appraisal of the extent to which social protection systems and policy-relevant analysis of households’ resilience. The agenda will develop a ‘climate-related risks and natural hazard sensitive vulnerability measure’ with the potential to better inform the design of ASP in terms of its components and coverage.	Chair’s Summary of G20 Development Ministerial Meeting on Multilateralism for Sustainable Development Goals, 8 September 2022 Attachment: G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including LDCs, and SIDS	1, 13
	Recognize that reinforcing capacity building in developing countries and supporting specific local infrastructures will be key for countries to implement their own adaptive social protection, we aim—in partnership with relevant stakeholders—to promote policy dialogue on this matter		1, 5, 13





	with the purpose of building and enhancing to use digital technologies for deploying Adaptive Social Protection benefits; simplify and smoothen administrative processes in social protection systems, and improve governance; design risk-informed programs, particularly with climate change adaptation and disaster risk reduction approaches that also address gender inequalities, and people living in vulnerable situations; and align development priorities to increase community resilience through social protection instruments.		
	Promote policy research and dialogue platforms and South-South and Triangular Cooperation initiatives for peer-learning, knowledge sharing, exchange of national best practices and capacity building programs on challenges relating to MSMEs informality and formalization pathways, including on the role of digitalization, and with specific challenges faced by women and youth-led and owned enterprises.		8, 16, 17
	Invest in capacity development initiatives to support MSMEs’ digital transformation, promote resilient and safe infrastructures aligned with high-level digital standards, and programs aiming at enhancing the awareness of MSMEs and building their capacities to identify, manage and report on their sustainability-related risks, impacts and contributions to the SDGs.		4, 8, 9
Education Working Group	Emphasize the need to harness the potential of digital technologies in addressing the issues of educational access, quality and equity, and in providing learning experiences that are more interactive, personalized and engaging.	Chair’s Summary of G20 Education Ministers’ Meeting, 1 September 2022	4, 5, 10
	Emphasize the importance of cultivating relevant skills in tertiary or higher education, and technical and vocational education and training through learning and training programmes that are developed and implemented in collaboration with industries, partners and other stakeholders such as: project-based learning, internships, apprenticeships, and entrepreneurship, which better equip the students prior to entering the working world.		4, 8
Employment Working Group	Work with partners to support communities to develop training opportunities tailored to the needs of vulnerable and disadvantaged groups, including low-skilled workers, people at risk of losing their job and workers at the end of their career, particularly in disadvantaged territories, including rural areas.	Chair’s Summary of G20 Labour and Employment Ministers’ Meeting 2022, 13-14 September 2022	5, 9, 10, 16





	<p>Promote the development of training curricula and methods that support lifelong learning which is affordable and sustainable and facilitates access to quality employment particularly for vulnerable and disadvantaged groups, enabling them to make a viable living.</p>	<p>Attachment: G20 Action Plan on Accelerating and Monitoring the G20 Principles for the Labour Market Integration of Persons with Disabilities</p>	<p>4, 5, 9, 10, 16</p>
	<p>Strive to improve access to quality training at the local level, emphasize the local community-based aspect and ensure communities to have access to reskilling and upskilling programs.</p>		<p>4, 5, 9, 10, 13, 16</p>
	<p>Create green jobs through information campaigns, training, and dedicated financing tools.</p>	<p>Attachment: G20 Policy</p>	<p>1, 4, 8, 12</p>
	<p>Promote vocational training options that provide tools for quality entrepreneurship management, and technical assistance for the development, consolidation or formalization of productive entrepreneurship.</p>	<p>Recommendations for Sustainable Growth and Productivity in Human Capacity Development</p>	<p>1, 4, 8</p>
	<p>Facilitate digital and other relevant skills development services for entrepreneurs and MSMEs and the overall digital transition through the deployment of lifelong learning programs.</p>	<p>Development through Strengthening Community-Based Vocational Training (CBVT)</p>	<p>1, 4, 8</p>
	<p>Support policies on labour protection and human-centred working arrangements through ensuring decent working conditions, ensuring gender equality and absence of discrimination, promoting fair payment, responding promptly to economic downturns with a focus on minimizing job and wage losses, adjusting minimum wages on a regular basis, enhancing the ability of the public and private employment services, promote effective labour inspection systems, promoting social dialogue mechanisms and access to fair and transparent dispute resolution mechanisms, and protect workers’ right to freedom of association and collective bargaining.</p>	<p>Attachment: G20 Policy Principles on Adapting Labour Protection for More Effective Protection and Increased Resilience for All Workers</p>	<p>5, 8, 10, 16</p>
	<p>Continue our efforts to provide a more inclusive and comprehensive Occupational Safety and Health (OSH) policy in accordance with the “G20 Approaches on Safety and Health at Work”.</p>	<p>Attachment: Update of the G20 Skills Strategy — 2022</p>	<p>3, 8</p>
	<p>Develop and renew skills for inclusive and resilient labour markets, economies and societies by removing barriers to accessing early childhood education and care; provide targeted, gender-responsive support to all students; equip young people with high level cognitive, socio-emotional and technical skills, develop young people’s digital skills and</p>		<p>1, 4, 5, 8, 10</p>





	environmental literacy; expand access to high-quality TVET; provide access to high-quality post-secondary education and training; promote participation in adult education and training; provide high quality, lifelong, and timely career, learning information and guidance; and harness new technologies to personalize, adapt and recognize high-quality learning.		
	Make the most of skills investments through developing reliable skills assessment and anticipation systems; providing effective active labour market policies; and improving access to the recognition of prior learning as well as alternative credentials.		4, 10
	Strengthen governance for future-ready skills systems with enhancing and promote a strategic, coordinated, multi-level and cross-sectoral approach to develop and use skills within and across countries; involving private sector employers, workers organization and civil society representatives in the governance of skills systems; monitoring and evaluating funding levels, outcomes and impacts at all stages of learning; as well as develop country-level baseline gender-disaggregated data, where available, and report on progress related to key elements of countries' skills systems and SDG 4 related skills targets.		4, 16
	Promote effective anti-discrimination policies in the workplace, covering all stages of employment, including initial recruitment, career development opportunities, and employee retention.		1, 8, 10
	Ensure the availability, and accessibility of high quality education and training programs for persons with disabilities to equip them with the skills they need to participate in an ever-changing labour market including for the digital and green economy.		4, 8, 10
Digital Economy Working Group	Highlighted the importance of making use of the G20 Toolkit for Measuring Digital Skills and Digital Literacy as an adaptable instrument to different country's contexts as well as a complement to existing initiatives, especially with respect to measuring and benchmarking skills gaps to inform policy responses, for the purpose of enhancing digital skills and literacy.	Chair's Summary of G20 Digital Economy Ministers' Meeting on The Bali Package, 1 September 2022	4, 8, 9, 10, 17
	Reiterated the need to empower people in vulnerable situations by strengthening cooperation in bridging digital divides and digital inclusion as well as improving digital skills	Annex 2: Collection of Policies and Recommendation to Improve Meaningful	4, 5 10, 17





	<p>and digital literacy, through enhancing digital accessibility for people in vulnerable situations and underrepresented groups, which are essential to ensuring that no one is left behind, especially those in developing countries—hence, G20 welcome the Collection of Policies and Recommendation to Improve Meaningful Participation of People in Vulnerable Situations in the Digital Economy which showcased experiences and practical information from different G20 members aiming to inspire and devise strategies and public policies toward a more inclusive and empowering digital economy for people in vulnerable situations (rural, women, children, disabled, etc.)</p>	Participation of People in Vulnerable Situations in the Digital Economy	
	<p>Welcomed the Compendium of Practices and Policies on Advanced Digital Skills and Digital Literacy, which outlines, in particular, initiatives and lessons learned from G20 members in harnessing the use of emerging technologies to advance digital skills and digital literacy.</p>		4, 8, 9, 10, 17
Tourism Working Group	Promote vocational education and training, skills development, and lifelong learning of the tourism workforce by engaging industry and technology partners.	Chair’s Summary of G20 Tourism Ministerial Meeting, 26 September 2022	4, 5, 8, 10, 17
SDS: Financial Inclusion and Remittances			
Finance Track - GPMI	<p>Commit to bring forward the financial inclusion agenda and endorsed the G20 Financial Inclusion Framework on Harnessing the Benefit of Digitalization, with the objective of boosting productivity and fostering a sustainable and inclusive economy for underserved groups guided by the G20 2020 Financial Inclusion Action Plan. The framework builds upon a practical implementation Guide for the G20 High-Level Principles for Digital Financial Inclusion, a living database related to digital and innovative financial products and services to MSMEs beyond credit, and a preliminary regulatory toolkit for MSMEs access to digital financial services. To address digitalization and sustainable finance developments, and support financial inclusion and well-being, we endorsed the updated G20/OECD High-Level Principles on Financial Consumer Protection and welcome the updated G20/OECD High-Level Principles on SME Financing.</p>	<p>G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022</p> <p>—</p> <p>Chair’s Summary of Third G20 Finance Ministers and Central Bank Governors Meeting, 15-16 July 2022</p> <p>—</p> <p>Chair’s Summary of Fourth G20 Finance Ministers and Central Bank Governors Meeting, 12-13 October 2022</p>	1, 2, 3, 5, 8, 9, 10





SDS: Industrialization			
Trade and Investment Working Group	Continue to strengthen our cooperation in spurring sustainable and inclusive investment that promotes among other goals, industrialization, employment, living standard, and income growth throughout the world in a fair and just manner.	Chair’s Summary of G20 Trade and Investment Ministers Meeting, 22-23 September 2022	9,17
	Reaffirm that the adoption of digital technologies across all industries has wide ranging implications for the scope, scale, speed and pattern of production, trade and investment.		8, 9, 10
SDS: Inclusive Business			
Employment Working Group	Promote inclusive, fair, and sustainable employment for persons with disabilities in line with the 2030 Agenda for Sustainable Development and the Convention on the Rights of Persons with Disabilities (CRPD), especially Article 27 on Work and Employment (United Nations, 2006).	Chair’s Summary of G20 Labour and Employment Ministers’ Meeting 2022, 13-14 September 2022	1, 5, 8, 10, 11, 16
	Maintain the sustainability for the participation rate of persons with disabilities in the world of work by increasing access to inclusive vocational-entrepreneurial training programs and skills certification-recognition for persons with disabilities; improving workplace infrastructures to be more accessible for persons with disabilities, including promoting physical and digital accessibility; and improving access to social protection for persons with disabilities.		Attachment: G20 Action Plan on Accelerating and Monitoring of G20 Principles for the Labour Market Integration of Persons with Disabilities
	Monitor of G20 Principles for the Labour Market Integration of Persons with Disabilities by sharing voluntarily recent policy initiatives to implement the Principles as part of the G20 annual Employment Plan Self-Reports.		1, 4, 5, 8, 9, 10, 11, 16
			1, 5, 8, 10, 11, 16
SDS: Energy			
Energy Transitions Working Group	Sets out voluntary multiyear actions to get on track to achieve the Sustainable Development Goals (SDGs) and lays pathways towards net zero emissions or carbon neutrality according to national circumstances--in line with the principles of clean, sustainable, just, affordable, and inclusive transitions.	Chair’s Summary of G20 Energy Transitions Ministers Meeting, 2 September 2022	7
	Increase International cooperation in technological solutions through reducing emissions, including in the power and energy-intensive (hard-to-abate) industries & sectors. This technology improvement must be supported by funding, innovation, and Research, Development,		7, 17





	Demonstration, Dissemination & Deployment (RDDD&D) in maximizing the available technology and integrating it with the next generation technology.		
G20 Finance Ministers and Central Bank Governors Meeting – related to Green Agenda	Recognize that policy mix toward carbon neutrality and net zero should include a full range of fiscal, market and regulatory mechanisms including, if appropriate, the use of carbon pricing mechanisms and incentives, and phase out and rationalize, over the medium term, inefficient fossil fuel subsidies that encourage wasteful consumption and commit to achieve this objective, while providing targeted support to the poorest and most vulnerable, and in line with national circumstances. Recognize that G20 Finance Track policy dialogue on the macroeconomic and fiscal impact of climate change policies could benefit from further technical work.	First G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022	7, 8, 9, 10, 12, 13, 17
SDS: Trade and Investment			
Development Working Group	Support international organizations initiatives and support local banking system, including microfinance institutions as well as platforms promoting innovative public-private financing mechanisms for recovery and the 2030 Agenda, including impact investing funds, catalytic grants, concessional loans, guarantee programs and risk sharing facilities through blended finance, and Green, Social, Sustainability-linked financial instruments targeting MSMEs in developing countries, including LDCs and SIDS.	Chair’s Summary of G20 Development Ministerial Meeting on Multilateralism for Sustainable Development Goals, 8 September 2022 Attachment: G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including LDCs and SIDS	8, 9, 10
Trade and Investment Working Group	Reaffirm that the rules-based, non-discriminatory, fair, open, inclusive, equitable, sustainable and transparent multilateral trading system, with the WTO at its core, is indispensable to advancing our shared objectives of inclusive growth, innovation, job creation and sustainable development. We agree that reforming the WTO is key to strengthening trust in the multilateral trading system and therefore, we will continue to work to strengthen foundational principles of the WTO, to ensure a level playing field to foster an enabling business environment and to support the integrity and sustainability of the rules-based multilateral trading system. We also commend the successful conclusion of the WTO MC12.	Chair’s Summary of G20 Trade and Investment Ministers Meeting, 22-23 September 2022	9, 10, 17





	<p>Ensure trade and environment policies are mutually supportive, consistent with WTO and multilateral environmental agreements and should allow for the optimal use of the world's resources as a contribution to accelerating progress towards the achievement of SDGs, including on affordable and clean energy, on industry, innovation and infrastructure, on sustainable consumption and climate actions, life below water, and life on land.</p>		<p>9, 12, 13, 14, 15, 17</p>
	<p>Underscore the importance for countries to move up the value chain in GVCs, In this context, GVCs have been an important means of increasing the participation of developing and least developed countries, and MSMEs in global trade, playing a pivotal role in facilitating access to knowledge, capital and diffusion of technology beyond the domestic economy.</p>		<p>9, 10</p>
	<p>Highlight the importance of assistance programs to strengthen the capacity of inter alia MSMEs, women and young entrepreneurs to participate in international trade, regional and global value chains. In addition, we further acknowledge the importance of full implementation of WTO Trade Facilitation Agreement to enable the continuity of trade flows during a global economic crisis.</p>		<p>9, 10, 17</p>
	<p>Note that domestic/national key drivers to spur sustainable investment include: (1) Ensuring policy is coordinated and strategic to foster investment in support of sustainable development, (2) Improving open, transparent, non-discriminatory, inclusive predictable environment that foster sustainable investment (3) Ensuring transparency and predictability of investment measures (4) Simplifying and streamlining investment-related administrative procedures.</p>		<p>16</p>
	<p>Note the need to promote value added by sustainable and inclusive investment in highly productive sectors such as but not limited to certain sub-sectors of downstream manufacturing and digital services, support developing countries to integrate with regional and global value chains to address poverty and hunger, undertake vocational education policies, boost domestic capability and foster linkage between foreign investors and local enterprises, particularly for MSMEs.</p>		<p>1, 2, 4, 9, 17</p>
	<p>Reaffirm that the adoption of digital technologies across all industries has wide ranging implications for the scope, scale, speed and pattern of production, trade and investment as well as underscore that the adoption of technologies and</p>		<p>9</p>





	innovation in production processes can play an important role in driving sustainable and digital transformations.		
SDS: Anti-Corruption			
Anti-Corruption Working Group	Promote a more prominent role of auditing in the fight against corruption, inter-alia by supporting the role of auditing bodies in contributing to preventing and countering corruption; strengthening the role and capacity of SAIs and public sector internal auditors to identify, prevent and counter corruption in accordance with their mandates; developing robust national frameworks to promote the follow-up of the audit findings related to corruption; strengthening efforts to build and enhance cooperation among SAIs, IAFs, anti-corruption agencies, law enforcement and other relevant institutions in countering corruption; promoting the use of information and communications technologies (ICTs) to support the role of auditing in countering corruption; and encouraging the private sector audit profession to take a role in identifying and reporting corruption.	G20 High Level Principles on the Role of Auditing in Tackling Corruption	16
	Discussed promoting good practices related to public participation and anti-corruption education.	G20 Compendium of Good Practices on Public Participation and Anti-Corruption Education	4, 16
	Discussed promoting good practices in regulating and implementing supervisory measures for legal professionals to prevent corruption-related money laundering, taking the G20 Compendium of good practices on Regulatory Framework and Supervisory Measures for Legal Professionals to Mitigate Corruption-Related Money Laundering Risk as a reference.	G20 Compendium of good practices on Regulatory Framework and Supervisory Measures for Legal Professionals to Mitigate Corruption-Related Money Laundering Risk	16
SDS: Sustainable Growth Strategies			
Development Working Group	Support, in collaboration with International Organizations and developing countries, to scale up dedicated policy support on the design of low GHG emissions/low carbon and climate resilient development strategies and the collective identification of a financially viable pipeline of projects related to green and blue economy in developing countries,	Chair’s Summary of G20 Development Ministerial Meeting on Multilateralism for Sustainable Development Goals,	13, 14, 17





	<p>particularly LDCs and SIDS, through existing initiatives that promotes peer-learning, as well as dialogues on how development co-operation can better assist developing countries in seizing new investment opportunities from the green economy and blue economy and scale up resources.</p>	8 September 2022	
	<p>Support ongoing international cooperation and partnerships on the development, scale-up, and the deployment of low GHG emissions/low-carbon technologies, including through North-South and SSTC, to promote institutional support to developing countries to get policy, regulation, and foster technology transfer on mutually agreed terms and in line with WTO rules that are context-specific and sustainable for developing countries, including LDCs, and SIDS.</p>	Attachment: G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including LDCs and SIDS	13, 17
Energy Transitions Working Group	<p>Boost clean energy investment and financial flows, particularly for developing countries in accelerating energy transitions. In this regard, we support energy sector actions for unlocking and improving inclusive investment.</p>	Chair’s Summary of G20 Energy Transitions Ministers Meeting, 2 September 2022	7, 16, 17
Environment Deputies Meeting and Climate Sustainability Working Group	<p>Commit to mainstreaming and scaling up complementarities in addressing biodiversity loss, climate change, land degradation, decline in the health of ocean and seas, deforestation, pollution, waste, and food insecurity and water safety⁷, availability and accessibility.</p>	Chair’s Summary of G20 Joint Environment and Climate Ministers’ Meeting, 31 August 2022	6, 13, 14, 15
	<p>Promote and increasingly mainstream ecosystem restoration, including land and forest restoration on all types of ecosystems by involving public private partnership, into recovery policies and plans, in line with the UN Decade on Ecosystem Restoration 2021-2030 which encompasses protection, conservation, restoration, and sustainable land management in pursuit of fighting climate change and halting biodiversity loss.</p>		13, 15, 17
	<p>Welcome the progress made towards achieving an ambitious, balanced, practical, effective transformative and robust Post 2020 Global Biodiversity Framework (GBF), and we urge all the parties and countries to finalize and adopt the GBF at the second part of COP15 and, as appropriate, to update National Biodiversity Strategies and Action Plans accordingly.</p>		13, 15

⁷ In the DWG document (G20 Roadmap), the term used is “safe and clean water availability”.





	<p>Commit, consistent with national circumstances, respective capabilities and priorities, to invest in efforts to conserve, sustainably use, protect and restore blue carbon ecosystems and to foster research and development and technological innovation for ocean mitigation and adaptation, as well as improve the protection, conservation restoration, sustainable use and management of coastal ecosystems including blue carbon habitats, in order to enhance their health, integrity and effectiveness in reducing GHG emissions and in building resilience to climate change.</p>		13, 15
	<p>Commit to strengthen evidence-based, effective, and holistic action to halt and reverse biodiversity loss by 2030 and to address direct and indirect drivers of biodiversity loss through national action as well as through, as appropriate, multilateralism and global responses, with a view to realizing the 2050 vision of “living in harmony with nature”, including through the implementation of nature-based solutions and ecosystem-based approaches.</p>		13, 14, 15, 17
	<p>Commit to working towards a successful outcome of the UN 2023 Water Conference and Ramsar COP 14 to enhance integrated, sustainable and climate resilient water management by emphasizing actions to be implemented including protection, conservation, restoration of water-related ecosystems, including wetlands and aquifers, rivers and lakes, sustainable use of water-dependent ecosystem and involvement of relevant stakeholders and development of international collaboration to achieve living in harmony with nature.</p>		12, 13, 14, 17
	<p>Enhance climate change adaptation measures, including nature-based solutions and ecosystem-based approaches.</p>		13
	<p>Emphasize the importance of resource efficiency and circular economy for the achievement of sustainable production and consumption thus contributing to addressing climate change, biodiversity loss, land and water degradation and pollution.</p>		12, 13, 14, 15
	<p>Fully support and are committed to doing our utmost to end plastic pollution worldwide, including by participating in the Intergovernmental Negotiating Committee (INC), established by Resolution UNEA 5/14, based on a comprehensive approach that addresses the full lifecycle of plastic, taking into account, among other things, the principles of the Rio Declaration on Environment and</p>		12, 13, 17





	Development, as well as national circumstances and capabilities.		
G20 Finance Ministers and Central Bank Governors Meeting – related to green transition	Undertake a more systematic analysis of macroeconomic risks stemming from climate change and of the costs and benefits of different transitions.	First G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022	8, 9, 10, 12, 13
Finance Track - Sustainable Finance Working Group	Welcome the progress made across the G20, international organizations, other international networks and initiatives, and the private sector in addressing the priorities of the G20 Sustainable Finance Roadmap, which is voluntary and flexible in nature, and call for further efforts to advance the Roadmap’s recommended actions that will scale up sustainability financing.	First G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022 — Chair’s Summary of Fourth G20 Finance Ministers and Central Bank Governors, 12-13 October 2022	All SDGs
G20 Finance Ministers and Central Bank Governors Meeting – related to Financial Stability Board	Reinforce global financial sector resilience to ensure an equitable economic recovery and to avoid any potential scarring impacts from the pandemic to preserve financial stability. G20 Finance Ministers and Central Bank Governors welcome the interim report of the Financial Stability Board (FSB)’s work on exit strategies and addressing scarring effects in the financial sector, and look forward to the final document in November 2022.	First G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022 — Chair’s Summary of Fourth G20 Finance Ministers and Central Bank Governors Meeting, 12-13 October 2022	8, 16
	Strongly support global policy actions to increase resilience, in particular against cross-border spillovers, including by addressing the identified structural vulnerabilities in non-bank financial intermediation (NBFi) from a systemic perspective, and we look forward to the FSB’s NBFi progress report with policy proposals to address systemic risk in NBFi, including in open-ended funds.		8,9,10,16
	Welcome ongoing work by the FSB and international standard setters to ensure that the crypto-assets ecosystem, including so-called stablecoins, is closely monitored and subject to robust regulation, supervision, and oversight to mitigate potential risks to financial stability.		All SDGs





Trade and Investment Working Group	Support the role of the WTO Trade and Environment Committee as the standing forum dedicated to dialogue between governments on the relationship between trade measures and environmental measures—realizing trade and environment policies should be mutually supportive, consistent with WTO and multilateral environmental agreements, and should allow for the optimal use of the world's resources as a contribution to accelerating progress towards the achievement of SDGs, including on affordable and clean energy, on industry, innovation and infrastructure, on sustainable consumption and climate actions, life below water, and life on land.	Chair's Summary of G20 Trade and Investment Ministers' Meeting, 22-23 September 2022	9, 13, 14, 15, 17
	Welcome the MC12 Ministerial Decision on the Agreement on Fisheries Subsidies as well as recognition by Ministers at MC12 of global environmental challenges, including climate change and related natural disasters, loss of biodiversity and pollution.		14, 17
Tourism Working Group	Contribute to creating resilient and sustainable communities and MSMEs in the aftermath of the COVID-19 crisis and to addressing the environmental challenges, especially climate change, and inequalities among different territories and local communities, digitalization, and the global economic changes while taking into account national circumstances, needs, and priorities through the Guidelines for Strengthening Communities and MSMEs as Tourism Transformation Agents—A People-Centered Recovery.	Chair's Summary of G20 Tourism Ministerial Meeting, 26 September 2022	12,13,14, 15,17
SDS: Climate and Green Finance			
Finance Track – Sustainable Finance Working Group	Remain committed to take actions in support of orderly, just and affordable transitions to achieve the objectives of the 2030 Agenda for Sustainable Development in line with the UNFCCC and the Paris Agreement as well as with the convention on Biological Diversity.	G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022 — Chair's Summary of Third G20 Finance Ministers and Central Bank Governors Meeting, 15-16 July 2022	8, 12, 13, 17
	Welcome the establishment of the Sustainable Finance Working Group's online dashboard and repository of relevant work, to illustrate ongoing and future progress made on the Roadmap, and encourage members to contribute on a voluntary basis, taking country circumstances into consideration.		8, 12, 13, 17
	Reiterate that our policy mix toward carbon neutrality and net zero should include a full range of fiscal, market and regulatory mechanisms including, as appropriate, the use of carbon pricing and non-pricing mechanisms and incentives,	— Chair's Summary of Fourth G20 Finance	7, 8, 9, 10, 12, 13, 17





	<p>and phase out and rationalize, over the medium term, inefficient fossil fuel subsidies that encourage wasteful consumption and commit to achieve this objective, while providing targeted support to the poorest and most vulnerable, and in line with national circumstances.</p>	<p>Ministers and Central Bank Governors Meeting, 12-13 October 2022</p> <p>—</p> <p>2022 G20 Sustainable Finance Report</p>	
	<p>Recognize that G20 Finance Track Policy Dialogue on the macroeconomic and fiscal impact of climate change policies could benefit from further technical work.</p>		7, 8, 9, 10, 12, 13, 17
	<p>Recognize the challenges faced by many developing countries in accessing finance and technology for that purpose. In this regard, urge the fulfilment of the commitment made by developed countries, to the goal of mobilizing jointly USD 100 billion in climate finance per year by 2020 and annually through to 2025 to address the needs of developing countries, in the context of meaningful mitigation actions and transparency on implementation.</p>		7, 8, 9, 10, 12, 13, 17
Finance Track – Framework Working Group	<p>Acknowledge the macro-economic risks stemming from climate change and will continue discussions on the costs and benefits of different transitions.</p>	<p>G20 Finance Ministers and Central Bank Governors Meeting Communique, 17–18 February 2022</p> <p>—</p> <p>Chair’s Summary of Fourth G20 Finance Ministers and Central Bank Governors Meeting, 12-13 October 2022</p>	8, 9, 10, 12, 13
SDS: Global Health			
Health Working Group	<p>Welcome the provision of additional financial resources through the operationalization of the Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response (PPR FIF/Pandemic Fund). The PPR FIF/Pandemic Fund is hosted by the World Bank, and has been established in close collaboration with the WHO which, as the lead international technical agency responsible for PPR and custodian of the IHR (2005), will play a central role in the PPR FIF/Pandemic Fund. The PPR FIF/Pandemic Fund complements the work of existing institutions and provides additional international financing for PPR, especially to support increased PPR capacities for eligible countries.</p>	<p>Chair’s Summary of G20 Health Ministers’ Meeting on G20 Health Ministers’ Action to Strengthen Global Health Architecture, 27-28 October 2022</p>	3, 9, 10, 17





	<p>Encourage countries to enhance cooperation in genomic surveillance and to support international data sharing platforms as well as welcome the establishment of the WHO Hub for Pandemic and Epidemic Intelligence.</p>		3, 10, 17
	<p>Commit to nurturing under WHO coordination an ecosystem of manufacturing and research and development, which encourages strong collaboration between academia, government, research institutions, civil society, philanthropic foundations, international organizations, and private entities as well as acknowledge the importance of public-private partnership, technology transfer, and knowledge sharing on voluntary and mutually agreed terms.</p>		3, 9, 10, 17
	<p>Support science to shorten the cycle for the development, manufacturing, and distribution of safe and effective VTDs, with the ambition to develop VTDs from 300 to 100 days in the long term acknowledging the differences in challenges to develop vaccines compared to therapeutics and diagnostics, following the identification of such threats while maintaining strong regulatory oversight and public confidence, and work to make them affordable and widely available.</p>		3, 9, 17
	<p>Acknowledge the importance of shared technical standards to facilitate seamless international travel, interoperability, and recognizing digital and non-digital solutions aligned with countries' relevant legal provisions including those used for COVID-19 proof of vaccination or verification of tests as well as the IHR (2005) which provide an overarching legal framework for addressing public health emergencies that have the potential to cross borders.</p>		3, 9, 10, 17
	<p>Endeavour to move towards interoperability of systems including mechanisms that validate proof of vaccination, whilst respecting the sovereignty of national health policies, and relevant national regulations such as personal data protection and data-sharing.</p>		3, 9, 10, 12, 17
	<p>Acknowledge that continued global cooperation is necessary to establish trust among countries and support continued international dialogue and collaboration on the establishment of trusted global digital health networks as part of efforts to strengthen prevention and response to future pandemics. Further steps should capitalize and build on the success of the existing standards and digital COVID-19 certificates.</p>		3, 9, 17





Trade and Investment Working Group	Welcome the adoption at the WTO's 12th Ministerial Conference (MC12) of the Declaration on the WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics and Ministerial Decision on the TRIPS Agreement. As we agreed at MC12, no later than six months from the date of the Ministerial Decision on the TRIPS Agreement, WTO Members will decide on its extension to cover the production and supply of COVID-19 diagnostics and therapeutics.	Chair's Summary of G20 Trade and Investment Ministers' Meeting, 22-23 September 2022	3, 10, 17
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II. ANNUAL UPDATE ON G20 DEVELOPMENT COMMITMENTS

II.I Introduction and Overview of the G20 Development Commitments

As part of the commitment to uphold its accountability and transparency, the Development Working Group (DWG) formulated its first accountability report in 2013. This document also helps DWG mapping out and monitoring the development sectors to further strategize its effort in narrowing the development gap. With this view in mind, DWG established the Accountability Framework in 2014 as a guideline in formulating the annual report and agreed on the G20 Modernized Accountability Framework in 2020. Since then, DWG has released an annual accountability report on the active G20 development commitments that have been made since the establishment of DWG in 2010.

In continuing the tradition of monitoring the G20 development commitments progress, the Indonesian G20 Presidency—through the Section II of ‘2022 G20 Bali Update’—provides the progress of the currently active G20 development commitment made in the past years, also complemented with the inclusion of new commitments made under the Italian G20 Presidency. The status of each commitment is determined through the assessment of the progress. To this end, we highlight the contribution of past G20 presidencies and relevant international organizations by reporting the data of the progress.

II.II Progress Assessment of G20 Development Commitments

As envisaged in the Modernized Accountability Framework, the development commitments will be structured and grouped under relevant Sustainable Development Sectors (SDS). Following up on the G20 Rome Leaders’ Declaration (2021), three new development commitments will be added to the list of active development commitments to be reviewed in 2022 G20 Bali Update:

1. *“Recognizing the importance of strengthening the alignment of all sources of Financing for Sustainable Development with the SDGs and the need to address the related financing gaps, in line with existing commitments, we endorse the G20 Framework for Voluntary Support to Integrated National Financing Frameworks, the G20 High-Level Principles on Sustainability-Related Financial Instruments and the G20 Common Vision on SDG Alignment, noting the importance of transparency and mutual accountability. We also ask our Development and Finance Ministers to further enhance their cooperation.”* – Paragraph 14 of G20 Rome Leaders’ Declaration
2. *“We are committed to achieving food security and adequate nutrition for all, leaving no one behind. To this end, we endorse the Matera Declaration and its Call to Action. We encourage partners and stakeholders to collaborate with or join the Food Coalition launched by the FAO as a means to respond to the impacts of COVID-19 on food security and nutrition.”* – Paragraph 15 of G20 Rome Leaders’ Declaration





3. *“We endorse the G20 Platform on SDG Localization and Intermediary Cities, with the support of the OECD and UN-Habitat. We will support intermediary cities in adopting integrated and inclusive urban planning; accelerating their transitions towards clean and sustainable energy and sustainable mobility for all; improving waste management; fostering empowerment and decent work for women, youth, migrants and refugees; assisting disabled and elderly persons; enhancing food systems sustainability; and enabling more equitable access to digital innovations.” – Paragraph 20 of G20 Rome Leaders’ Declaration*

The 2022 G20 Bali Update reviews 36 G20 development commitments, of which **5** are assessed as being “completed”, **31** are assessed as being “on track”, and **0** commitments are assessed as “no progress”.

The following table gives an overview of the status of all 36 active development commitments:

No	Year	Document	Commitment(s)	Status	Progress
2030 Agenda for Sustainable Development					
1.	2017	Hamburg Update to the G20 Action Plan, p. 2	Continue to take forward the Action Plan by agreeing upon and implementing comprehensive and concrete collective actions. Facilitated by G20 work streams in coordination with the Development Working Group (DWG) [...] the list of comprehensive and concrete actions will be updated by successive G20 presidencies.	ON TRACK	The Indonesian G20 Presidency is committed to continuing the implementation of the G20 Action Plan on the 2030 Agenda agreed upon in 2016. The 2022 G20 Bali Update is the manifestation of this commitment with its first section dedicated to exhibiting the Indonesian G20 Presidency's collective actions—through the deliverables of the Finance Track and Sherpa Track—that directly and/or indirectly contribute to the achievement of SDGs. The concrete and collective actions are laid out and categorized under the relevant Sustainable Development Sectors (SDS) with the addition of one new SDS on Financing for Sustainable Development—following the urgency on the matter and priority discussion in the G20.
2.	2017	Hamburg Summit 2017 – G20 Leaders’ Declaration, p. 10	Engage in voluntary peer learning on the implementation of the 2030 Agenda and call upon others to join this important exercise as a complementary action towards Voluntary National Reviews.	ON TRACK	Following up on this commitment, a Voluntary Peer Learning Mechanism (VPLM) was established under the German G20 Presidency in 2017. Since the establishment, there have been four rounds of VPLM conducted under Germany, Argentina, Saudi Arabia, and Italy G20 Presidencies respectively. The latest one was the Germany and Japan VPLM exercise under the Italian G20 Presidency with the topic of whole-of-government and whole-of-society approaches to the sustainable development goals.
3.	2018	Buenos Aires Update to the Action Plan on the 2030 Agenda, p. 4	We will further enhance and deepen the dialogue and knowledge exchange with the engagement groups and other stakeholders at an early stage and in a regular and systematic manner.	ON TRACK	Carrying out the theme of ‘Recover Together, Recover Stronger’, Indonesian G20 Presidency underscores the importance of cooperation and collaboration within and beyond the forum. During its first and second meetings under the Indonesian Presidency, DWG invited all engagement groups and relevant working groups to share their insights to sharpen the DWG deliverables and ensure





					alignment. DWG also invites various regional and international organizations to take part in the DWG meetings. Side events and workshops are also conducted to gain insights from various stakeholders, ranging from practitioners to academicians from diverse backgrounds.
4.	2020	G20 Riyadh Summit, Leaders Declaration, para 22	We endorse the G20 Support to COVID-19 Response and Recovery in Developing Countries.	ON TRACK	As the world is still affected by the repercussions of COVID-19 pandemic, Indonesian G20 Presidency focuses its discussions and outcome document throughout the workstreams to support and accelerate the recovery. Building on and advancing the G20 Support to COVID-19 Response and Recovery in Developing Countries, DWG underscores the importance to also build resilience for the long-term development. Therefore, DWG under the Indonesian G20 Presidency put forward the G20 Roadmap for Stronger Recovery and Resilience in Developing Countries, including LDCs and SIDS. It lays out the challenges and collective actions to accelerate recovery and resilience through 3 key focus area, which are Micro-, Small, and Medium-sized Enterprises, Adaptive Social Protection, and Green Economy and and Blue Economy. DWG under Indonesian G20 Presidency also reaffirm collective support from G20 Development Ministers for multilateral initiatives to ensure equitable vaccine access, foster post-pandemic recovery, and tackle development challenges through the G20 Ministerial Vision Statement.
5.	2021	G20 Rome Leaders' Declaration, para 20	We endorse the G20 Platform on SDG Localization and Intermediary Cities, with the support of the OECD and UN-Habitat. We will support intermediary cities in adopting integrated and inclusive urban planning; accelerating their transitions towards clean and sustainable energy and sustainable mobility for all; improving waste management; fostering empowerment and decent work for women, youth, migrants and refugees; assisting disabled and elderly persons; enhancing food systems sustainability; and enabling more equitable access to digital innovations.	ON TRACK	<p>The OECD and UN have jointly launched the G20 Platform on SDG Localization and Intermediary Cities (G20 PLIC) in November 2021. The launching event was opened by the Italian Vice Minister of Foreign Affairs and International Cooperation; the Indonesian Deputy Minister for Development Funding, Ministry of National Development Planning/Bappenas; the OECD Secretary General; as well as the UN-Habitat Executive Director. Many key experts in urban development, SDGs, as well as representatives of local and national governments and development partners also attended the event.</p> <p>The Secretariat has established the governance and program of work for the G20 PLIC, to be presented and discussed at the first Steering Committee which takes place in July 2022. In addition, the G20 PLIC also plans to organize a High-Level Meeting in the last quarter of 2022. The OECD and UN-Habitat will continue advancing the work of the G20 PLIC and report on the progress of the activities to the G20 Presidency and member countries through an annual report.</p>

SDS: Financing for Sustainable Development





6.	2014	G20 DWG 2014 Brisbane Development Update, p. 36	Ensure developing countries can participate in, and benefit from, the G20/OECD BEPS agenda and related international tax issues. IOs will collaborate with regional tax administration forums to assess how practical toolkits can be produced in 2015 and 2016 to assist developing countries in implementing BEPS action items. In 2015, IOs will also draft a report on options for developing countries on efficient and effective use of tax incentives for investment; and agree on ways to support ongoing efforts to improve the availability of quality transfer pricing comparability data for developing countries.	ON TRACK	<p>The report “Developing Countries and the OECD/G20 Inclusive Framework on BEPS” was published in October 2021. This report provided a stocktake of progress made by developing countries to date, considered international tax norms and guidance in relation to developing countries capacities and priorities, examined the capacity building support to developing countries, analysed the inclusivity of the Inclusive Framework, and identified developing countries views on the future of the Inclusive Framework. The report made ten recommendations covering the different aspects of analysis. The overarching recommendation was for there to be more regular assessments of developing country progress, at a ministerial level, with an annual ministerial dialogue proposed. The first ministerial dialogue took place in November 2021.</p> <p>In July 2022, the Indonesian G20 Presidency organized an G20 Ministerial Tax Symposium on Tax and Development which presented an important opportunity to exchange views on the status of our multilateral cooperation in tax matters and to discuss actions to make the most of developing countries’ participation in this process.</p> <p>In October 22, during the fourth G20 Finance Ministers and Central Bank Governors meeting, the Roadmap on Developing Countries and International Taxation was presented, prepared by the OECD under a mandate from the Indonesian Presidency. The Roadmap emphasizes the importance to implement the technical assistance and remove concrete obstacles to the effective implementation of the BEPS minimum standards.</p>
7.	2014	G20 DWG 2014 Brisbane Development Update, p. 37	Ensure developing countries can participate in, and benefit from Automatic Exchange of Information (AEOI). The Global Forum will work with the DWG, international and regional organizations, and other development partners, to implement a pilot of the AEOI roadmap. The pilot will identify efficient and effective methods to implement the standard, which will in turn inform other capacity building projects on AEOI. G20 members will consider supporting the pilot through information exchange,	ON TRACK	<p>The Global Forum on Transparency and Exchange of Information for Tax Purposes counts 163 members, which are in majority of developing countries. In 2021, the Global Forum provided support to 34 jurisdictions on AEOI, leading to Dominica, Ecuador, and Kazakhstan starting their first AEOI exchanges 2021, and Nigeria and Albania as their first reciprocal exchanges. More broadly, the Global Forum provided support to 75 jurisdictions in 2021 across to all aspects of tax transparency and exchange of information. In total, 24 developing countries are currently exchanging on a reciprocal basis and 12 additional developing countries have committed to start their first exchange by a certain year between 2022 and 2024, and others are currently considering a suitable date for first exchange, with the Secretariat’s support. Currently, this assistance is translating into revenues: at least EUR 30 billion through voluntary disclosure programs and offshore tax investigations since 2009 (including EUR 1.2 billion by African countries). In 2021,</p>





			technical advice, financial support and/or related capacity building efforts.		the Global Forum also released a new strategy to unleash the potential of AEOI for developing countries. More detailed information can be found in https://www.oecd.org/tax/transparency/documents/aEOI-strategy-developing-countries.pdf
8.	2014	G20 DWG 2014 Brisbane Development Update, p. 5	G20 members will, on a voluntary basis: take practical steps to make available tax policy and administration experts to assist international and regional organizations that strengthen developing countries' capacity to participate in and benefit from the G20 tax agenda; implement the DWG's Guiding framework; and support regional (including inter-regional) tax administration forums.	ON TRACK	Tax Inspectors Without Border (TIWB) has launched 104 technical assistance programs in 53 jurisdictions across Africa, Asia-Pacific, Eastern Europe, Latin America and the Caribbean. During COVID-19 restrictions, TIWB program participants have been able to benefit from capacity-building support on 192 remote missions, delivering more than 4000h of assistance to developing countries' tax officials. TIWB experts contributed to the upskilling of more than 950 tax officials on international taxation through the completion of more than 2000 real and strategic audit cases. TIWB has also helped its Host Administration mobilize domestic resources on actual audits, which generated USD 1.6 billion in additional tax revenue. As of 2021, the OECD Revenue Statistics initiative is partnering with almost 80 developing countries and regional organisations in Asia, Africa and Latin America and the Caribbean to produce high-quality, harmonised tax statistics, identifies key trends in public revenues, etc.
9.	2016	Hangzhou Summit 2016—G20 Leaders' Communiqué, para. 36	Continue our work on addressing cross-border financial flows derived from illicit activities, including deliberate trade mis-invoicing, which hampers the mobilization of domestic resources for development, and welcome the communication and coordination with the World Customs Organization for a study report in this regard following the Hangzhou Summit.	ON TRACK	<p>The OECD DAC's work on IFFs is currently concentrated on those IFFs that constitute the most significant macro-fiscal risk for developing countries. This includes current work on IFFs in oil commodity trading, and work commencing on IFFs, de-risking and financial inclusion. Since the previous update, the OECD Academy for Tax and Financial Crime Investigation continued to deliver its programmes online due to COVID-19 restrictions. In 2021, the Academy ran 15 courses, including further "train the trainer" courses leading to the recruitment of more Academy instructors from developing jurisdictions. A further 14 courses are planned in 2022, across the Academy's existing four centres in 2022, as well as an additional 2 courses specifically for the Middle East and North Africa (MENA) Region and the Academy's first course for Francophone jurisdictions. A return to on-site programmes is envisaged in late 2022.</p> <p>Also, since the last report, there have been 2 more Latin America countries signing the Punta del Este Declaration to combat tax evasion and corruption through the effective use of exchange of information. In 2021, the work on wider use of treaty-exchanged information for purposes other than tax has started. The progress made by Latin American countries in fighting IFFs are reflected</p>





					in the annual Tax Transparency in Latin America report (https://www.oecd.org/tax/transparency/documents/tax-transparency-in-latin-america-2021.htm). Finally, a similar initiative has been launched in 2021 in Asia.
10.	2020	G20 Riyadh Summit, Leaders Declaration, para 22	We endorse the Financing for Sustainable Development Framework.	ON TRACK	<p>The Pilot initiative envisaged in the FSD Framework has been launched to support Nigeria’s development strategy. Other developing countries, including low income countries, have expressed interest in learning more about the initiative to possibly join soon. The initiative, currently focuses on domestic economic policy capacity development, has been supported by public and private entities from volunteering G20 members, and advanced and emerging market economies. In addition, Saudi Arabia is collaborating with the Community of Portuguese Language Countries (CPLP) to promote its G20 DWG Financing for Sustainable Development Framework Initiative.</p> <p>In continuing the effort to close the financing gap, DWG under the Indonesian G20 Presidency as pursue financing for sustainable develop (FSD) as one of the priority, particularly concerning the Blended Finance—one of the innovative financing mechanisms recognized in the Financing for Sustainable Development Framework. This year, DWG presents ‘G20 Principles to Scale up Blended Finance in Developing Countries, including Least Developed Countries and Small Island Developing States’ containing 4 main principles and endeavor to develop its implementing guidance.</p> <p>In March 2022, The OECD’s Total Official Support for Sustainable Development (TOSSD) was approved as a data source for indicator 17.3.1 of the SDG global indicator framework: “Additional financial resources mobilized for developing countries from multiple sources”. In April 2022, the latest TOSSD data on 2020 expenditures were released online, including data from traditional providers, new 10 South-South Cooperation providers and multilateral organizations. In addition to that, multiple events, pilot studies are taking place on TOSSD.</p>
11.	2021	G20 Rome Leaders' Declaration, para 14	Recognizing the importance of strengthening the alignment of all sources of Financing for Sustainable Development with the SDGs and the need to address the related financing gaps, in line with existing commitments, we endorse the G20 Framework for Voluntary	ON TRACK	On the INFF, in April 2022, UNDP, UN DESA, and the OECD have established and launched the INFF Facility as a vehicle to take forward the actions of the G20 Framework on INFFs. DWG under the Indonesian G20 Presidency also put forward the second INFF stocktake by UNDP focusing on sustainable investment and blended finance as its unnegotiated deliverable. Initial findings of the stocktake (as of May 2022) show that around 40 countries are expected to develop their financing strategy in 2022. Countries developing INFFs are taking forward more than





			<p>Support to Integrated National Financing Frameworks, the G20 High-Level Principles on Sustainability-Related Financial Instruments and the G20 Common Vision on SDG Alignment, noting the importance of transparency and mutual accountability. We also ask our Development and Finance Ministers to further enhance their cooperation.</p>		<p>250 reforms to strengthen and align both public and private financing with national sustainable development priorities. UNICEF continued engagement with the development of INFFs in over thirty countries and has also supported the integration of social and child-focused SDG goals within INFFs.</p> <p>On the G20 High-Level Principles on Sustainability-Related Financial Instruments, OECD has also published the report “Scaling Up Green, Social, Sustainability, and Sustainability-linked Bond Issuance in Developing Countries” in October 2021. The report was launched at the 2021 Finance in Common Summit in October 2021. The OECD has engaged on subsequent research on “Guidance for sovereign bond issuance” and on “Guidance for corporate/local financial institution bond issuance”. Both reports will be published in 2022. Further work has also focused on peer learning to enable coordinated donor support for GSSS bonds.</p> <p>On the Common Vision on SDG Alignment, UNDP has supported different initiatives in Budgeting for the SDGs in the year 2021-22, including supporting SDG budget coding and tagging initiatives, improve budgeting systems to strengthen linkages between policy (SDG focused), planning, budgeting, and execution systems, helping develop improved local budgeting systems as well as supporting various countries in revenue mobilisation through a new global tax initiative called Tax for SDGs.</p>
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SDS: Infrastructure

12.	2010	Seoul Development Consensus for Shared Growth – Annex II: Multi-Year Action Plan on Development, p. 2	Identify a limited number of regional initiatives with an action plan to reduce bottlenecks and deliver concrete outcomes.	COMPLETED	<p>Following up on the commitment, in 2011, there were several projects identified by G20 High-Level Panel with some progress has been made, such as:</p> <p>-West Africa Power Pool (WAPP): The project is on going. the European Union (EU) is backing the interconnector project between the hydroelectric power plants of Guinea and Mali. The latest European Investment Bank (EIB) support, signed in April 2021, includes a new €170 million 25-year loan for the 225 kV Linsan-Fomi transmission line, as part of €300 million total EIB support for the Guinea-Mali interconnector project (PIEGM). This is alongside €30 million in EU grant support under the External Investment Plan.</p> <p>-Ethiopia and Kenya Power Systems Interconnection: At a cost of \$1.26 billion, the project was co-funded by the African Development Bank (\$338 million), the World Bank (\$684 million), the Government of Kenya (\$88 million) and the Government of Ethiopia (\$32 million). The project entered its operational phase in the course of 2019.</p>
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				<p>Implementation has advanced, with all construction of transmission lines in both Kenya and Ethiopia complete and construction of converter station facilities in both countries complete. Activities are ongoing towards commissioning of the project, including strengthening of the Kenyan grid, and final discussions between the two countries towards the signing of the Power Purchase Agreement. Commissioning is expected to happen by end-2022.</p> <p>-Inga Hydropower: Between 2011 and 2018, IDA and AfDB have supported the rehabilitation of some part of the Inga Hydropower, such as rehabilitate the 1,774 km high voltage direct current transmission line from Inga to Kolwezi, and the rehabilitation of generator 4 of 55 mw at the inga 1 power station. The project which debuted in 2011, extended in 2017, closed in 2020.</p> <p>-North-South Corridor (NSC): Launched in 2015, for a total amount of \$251,140,000; of which AfDB financing is \$189,400,000.</p> <p>-Isaka-Kigali-Musongati Railway: The Republic of Rwanda, Republic of Burundi and the United Republic of Tanzania had collectively decided to construct a new railway line from Isaka to Kigali and from Keza to Musongati via Gitega in Burundi; and to upgrade the existing railway line from Dar es Salaam (DSM) to Isaka. The railway line connects DSM with Isaka (970 km), and the new railway line would connect Isaka with Kigali (494 km) and Keza with Musongati (197 km). AfDB financing was \$11 000 000.</p> <p>-Jordan Railway Project: WB study conducted to understand the economic and jobs creation potential for regional railway connectivity between the GCC and Mashreq countries and beyond, and to quantify the economic and climate benefits of enhancing railway connectivity within the MNA region by 2030.</p> <p>-Scaling up Solar Energy in MENA for Export to European Markets: WBG has several project ongoing, including in Morocco (Noor Solar Power Project). More info on https://projects.worldbank.org/en/projects-operations/project-detail/P164288. IsDB participated in financing PPP solar projects in Egypt and is working with Morocco for more involvement in solar energy. IsDB is working in number of initiatives for attracting the private sector in MENA region in the field of solar energy.</p> <p>-Turkmenistan-Afghanistan-Pakistan-India (TAPI) Natural Gas Pipeline: The approved ADB TRTA budget is \$2.15 million. ADB’s preliminary due diligence had identified several critical issues in the followed procurement processes that are particularly pertinent to the EPC contract for Afghanistan. TPCL agreed to re-procure this contract, while having completed the shortlisting of qualifying EPC contractors in Q1-2021 and</p>
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					<p>expecting to launch the formal tender in Q3/Q4-2021. Despite COVID-19 related delays, ADB had anticipated Board consideration/approval and financial close of the TAPI Project in Q4-2021 and Q1/Q2-2022, respectively. IsDB has financed TAPI project for an amount of USD 700 million and is following its implementation with the Countries.</p> <p>- ASEAN Infrastructure Fund (AIF): As of March 2022, the AIF has committed \$517 million (of which \$361.1 million has been disbursed) for 11 sovereign projects in Southeast Asia across the energy, urban, water and transport sectors, with a total project size of around \$3 billion. ADB committed \$2.5 billion towards these projects. From 2019 to 2022, 29 projects have been identified and structured, and technical assistance has been provided to enable countries to issue sovereign green bonds, etc.</p>
13.	2014	G20 DWG Report on Infrastructure Agenda and Response to the Assessments of Project Preparation Facilities in Asia and Africa, p. 6-7	MDB-based PPFs will collaboratively support governments to develop prioritized lists of infrastructure projects, building on existing cooperation and allotting sufficient time for approaches to be evaluated by the relevant institutions. MDB-based PPFs with a focus on PPPs for infrastructure are requested to report on the key elements of their current approach to country-specific sector diagnostic and approaches to project prioritization.	ON TRACK	<p>The World Bank Group has expanded the Global Infrastructure Facility (GIF) to create sustainable infrastructure opportunities with both public and private partners. Based on a US\$200 million replenishment, a seven-year business plan is expected to deliver more than 200 infrastructure projects and mobilize more than US\$150 billion in total investment in infrastructure across EMDEs as closings are reached over the medium-term. Established in 2014 as a G20 initiative, the GIF is meant to address a critical challenge to private investment in infrastructure in EMDEs: lack of bankable pipelines of sustainable, quality infrastructure investment opportunities that are attractive to private capital.</p> <p>The AfDB has overseen a \$103 million replenishment of Project Preparation Funds (PPFs) for the ADF-15 cycle (2020-2022). PPF resources have benefitted the African Development Fund (ADF) countries in design of transformative projects across sectors, including, agriculture and rural development, social development, agriculture value chains, market development and youth enabling projects, with 46 projects have been approved by the PPF in 23 Regional Member Countries with Madagascar, Côte d'Ivoire, Mozambique, DRC, and Guinea being the main beneficiary countries. Total approvals stand at \$40.2 million. Agriculture, rural development, and social development were the main recipients of PPF approvals.</p>
14.	2014	G20 DWG Report on Infrastructure Agenda and Response to	Initiate a dialogue on factors affecting risk perception in LICs, to better inform risk management and mitigation approaches and explore	COMPLETED	In the Infrastructure Working Group, it was agreed that a G20 Investors Dialogue be organized every year to bring the institutional investors perspective and developing country perspective together to discuss ways to scale up private sector participation in infrastructure and potential





		the Assessments of Project Preparation Facilities in Asia and Africa, p. 7	engagement between institutional investors and other potential stakeholders.		areas of international collaboration.
15.	2015	G20 DWG Inclusive Growth and Development: Antalya Development Roadmap, p. 3	Promote a policy dialogue with LICs, MDBs, regional institutions, investors and relevant stakeholders on crosscutting infrastructure issues requiring joint inputs from both groups.	ON TRACK	<p>The 2021 G20 Infrastructure Investors Dialogue was held under the Italian G20 Presidency in collaboration with the OECD and D20 Long-Term Investor Club. This Dialogue supported ongoing collaboration between the public and private sectors to unlock further investment and sustainability, particularly in light of the role of quality infrastructure investment for recovery. It included sessions on risk mitigation and ESG risk assessment.</p> <p>The 2022 G20 Infrastructure Investors Dialogue is held on 15 July 2022 focusing on leveraging private sector participation in sustainable infrastructure investment. A session at the Dialogue will focus on what G20 countries can do to help creating more bankable sustainable infrastructure projects for EMDEs.</p>
16.	2016	Hangzhou Summit 2016 – G20 Leaders’ Communiqué, para. 39	Reaffirm commitment to promote investment with focus on infrastructure in terms of both quantity and quality. [...] Stress the importance of quality infrastructure investment [...]	ON TRACK	<p>In 2021, G20 Development Ministers underscored that enhancing rural-urban linkages and connectivity, including through the G20 Principles for Quality Infrastructure Investment and the G20 Guidelines on Quality Infrastructure for Regional Connectivity, contributes to the localization of the SDGs.</p> <p>By the end of fiscal year 2021, 96 grants valued at over 26 million US dollars had been awarded in 46 countries, mainly in the transport, urban infrastructure, and water sectors by the World Bank and the government of Japan under the the Quality Infrastructure Investment (QII) Partnership to raise awareness and scale up attention to the quality dimensions of infrastructure in developing countries since 2016.</p>
17.	2018	G20 High Level Principles on Sustainable Habitat through Regional Planning, Way forward, p.4	We call on the OECD to work with other relevant stakeholders to support the G20 in assessing and addressing data needs for a regional planning approach, and also sharing effective experiences, especially those related to the design and implementation of mechanisms to strengthen data collection. We look	ON TRACK	<p>The OECD's Data for Development project and 2021 Development Co-operation Report: Shaping a Just Digital Transformation focus on effective and sustainable investments in national data ecosystems and national statistics with an emphasis on reducing duplication in projects to address data needs as well as data silos which obscure data (e.g in health). The Global Partnership for Effective Development Co-operation will launch Principles for Effective Support to Data and Statistics in December 2022.</p> <p>The OECD has also launched an initiative called "OECD Laboratory for Geospatial data and analysis". The</p>





			forward to a first report in 2019.		<p>Laboratory has organized several workshops where statistical offices and other governmental agencies have shared experiences on how to use geospatial data from different sources, including private ones, to inform policy making, notably in the domain of access to services.</p> <p>On the regional planning approach, OECD Development Center has promoted an initiative called Cities Connect together with UN-Habitat, which has backed regional planning in developing countries to promote dialogue on public policies, and peer-learning for intermediate cities (small and medium). At the same time, they made reports and case studies on the effects of climate change.</p>
18.	2018	G20 High Level Principles on Sustainable Habitat through Regional Planning, Way forward, p.4	Promote effective and multi-stakeholder partnerships to stimulate and deepen the sharing of experiences and lessons learned in regional planning. We call on the IDB and other relevant stakeholders, to support and lead the exchange of knowledge on regional planning and its different dimensions, taking into account the vulnerability of all groups. We suggest that due consideration should be given to gender and the interlinkages with the principles (...)	ON TRACK	<p>At the 5th OECD Roundtable on Cities and Regions for the SDGs (26 April), the OECD launched the policy paper on The Sustainable Development Goals as a Framework for COVID-19 Recovery in Cities and Regions, based on the OECD-CoR Survey.</p> <p>The OECD has also developed the Toolkit to implement a Territorial Approach to the SDGs, including: i) lessons from 10 policy dialogues with cities and regions; ii) successful examples on how cities and regions are using the SDGs as a policy-making tool; iii) a Self-Assessment tool for cities and regions to monitor to what extent they are following the OECD Checklist on A Territorial Approach to the SDGs. The Toolkit will be launched at the World Urban Forum on 27 June 2022.</p>
19.	2019	G20 Osaka Leaders' Declaration, para 13	We stress the importance of maximizing the positive impact of infrastructure to achieve sustainable growth and development” ... “and strengthening infrastructure governance.	ON TRACK	G20 has been continuously working to disseminate and implement the G20 Principles for Quality Infrastructure Investment (G20 QIIP). In November 2021, G20 Leaders recognized the critical role of quality infrastructure investments in the recovery phase and reaffirmed that they would continue to advance the work related to the G20 QIIP. G20 Finance Ministers and Central Bank Governors Endorsed the Compendium of QII Indicators and associated guidance note, developed for the G20 in July, 2022. D20-Long-term Investors Club (D20-LTIC) Statement issued in 2021 emphasized the importance of quality, resilient and sustainable infrastructure to support COVID-19 recovery, create development impact, and strengthen inclusive growth to help achieve the Sustainable Development Goals.
20.	2020	G20 Riyadh Summit, Leaders	We endorse the G20 Guidelines in Quality Infrastructure for Regional	ON TRACK	The joint ACET/AUDA-NEPAD/OECD High Level Technical meeting on 'Quality infrastructure for Africa: Unlocking the strengths of Africa's infrastructure as an ecosystem





		Declaration, para 22	Connectivity.		for growth and jobs’ was held on 28 February 2022, in the framework of the 7th Programme for Infrastructure Development in Africa (PIDA) Week. The session engaged public and private stakeholders who discussed key challenges, opportunities and good practices for achieving an ecosystem-centered approach to infrastructure development in Africa. This type of approach to infrastructure development aims to ensure that investments are optimized to generate spillover effects in other sectors of their economies where possible. The PIDA Week’s Communiqué welcomes the approach under item 24.
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SDS: Agriculture, Food Security and Nutrition

21.	2010	Seoul Development Consensus for Shared Growth – Annex II: Multi-Year Action Plan on Development, p. 6	Promote increased procurement from smallholder producers and strengthen their access to markets in line with domestic and regional strategies.	COMPLETED	<p>In 2021, G20 Agriculture Ministers reaffirmed the importance of promoting responsible investments in agriculture and food systems engaging in innovative technologies (paragraph 7) and will support capacity development, training, and extension services (paragraph 12) for local producers, small-scale producers and family farmers to address key aspects of food systems sustainability. Under the Indonesian G20 Presidency, they also aim to improve the livelihood of farmers in the rural area by promoting innovative agri-preneurship.</p> <p>IFAD financed over 530,000 rural enterprises accessed business development services, 1.5 million members of rural producers’ organizations received support, and more than 3.7 million people were trained in income-generating activities or business management, as outlined in IFAD’s Development Effectiveness 2021 (RIDE).</p> <p>In June 2022, a joint webinar of DWG and Agriculture WG was conducted on the theme of “Enhancing Digital Agriculture and Rural Finance for Food Security” which aimed to empower small-scale and family farmers, particularly in rural areas.</p>
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22.	2011	Cannes Summit Final Declaration – Building Our Common Future: Renewed Collective Action for the Benefit of All, para 72	Confirm commitment to scaling-up nutrition through a combination of direct nutrition interventions and incorporation of nutrition into all relevant policies.	COMPLETED	<p>In 2021, G20 Ministers of Agriculture Communique welcomed the recently endorsed Committee on World Food Security (CFS) Voluntary Guidelines on Food Systems and Nutrition and encouraged all stakeholders to actively contribute to promoting their use and application.</p> <p>IFAD is progressing towards a target of raising the nutritional status of 12 million people in IFAD11 (2019-2021), having provided 1.8 million persons/households with targeted support to improve their nutrition in 2020 alone, and with 70 percent of projects approved in IFAD11 validated as nutrition-sensitive at design. During the IFAD12 period (2022-2024), IFAD will ensure that 60 per</p>
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					<p>cent of new investments and projects are nutrition-sensitive at design.</p> <p>The World Bank Group is deploying short- and long-term responses to boost food and nutrition security by mobilizing support from the IDA Crisis Response Window Early Response Financing mechanism, deploying contingent financing, and restructuring projects. Through new projects and programs, about \$17 billion annually in IDA and IBRD lending is directed for food security (FY21-22), mainly for agriculture and social protection.</p> <p>In addition, at the Tokyo Nutrition for Growth Summit in December 2021, more than US\$27 billion was pledged to address the global malnutrition and hunger crisis. As an outcome of the Summit, the Tokyo Compact on Global Nutrition for Growth was issued with the endorsement of more than 200 stakeholders, indicating a direction for the international society to improve nutrition.</p>
23.	2015	G20 DWG Implementatio n Plan of the G20 Food Security and Nutrition Framework, p. 5	Uphold the FAO’s CFS’ Voluntary Guidelines on the Responsible Governance of Tenure (VGGT) and the principles for Responsible Investment in Agriculture and Food Systems (CFS-RAI) and promote their application, on a voluntary basis, to investment originating in G20 members and support the GAFSP.	ON TRACK	<p>In May 2022, FAO and the United Nations Convention to Combat Desertification (UNCCD) produced a technical guideline outlining the practical applications of the VGGT, in the context of the design and implementation of Land Degradation Neutrality initiatives. The VGGT has also been used by IFAD as a basis for providing guiding principles on access and ownership of land and water (including forests and fisheries) in the design of several loan projects in developing regions.</p> <p>IFAD's Social, Environmental, and Climate Assessment Procedures (SECAP) are also aligned with the CFS-RAI principles. The operationalization of the OECD-FAO Guidance for Responsible Agricultural Supply Chains which uptakes the VGGT and CFS-RAI, continues with key action in 2022 including the launch of e-learning modules on agricultural due diligence in global supply chains and the development of technical handbooks for businesses to address specific risks in the agricultural sector.</p> <p>The Global Agriculture and Food Security Programme (GAFSP) continues to provide financial and technical resources—grants, concessional loans, blended finance, technical assistance, and advisory services. In December 2021, it announced \$121 million in new grants for nine national governments and, for the first time, an additional \$30 million for providing small-scale grants directly to producer organizations to help meet the demand for financing for smallholder farmers and their organizations based in 12 countries worldwide.</p>
24.	2015	G20 DWG	Support human resource	ON TRACK	In 2020, there was US\$5.8 billion in new IBRD/IDA





		Implementation Plan of the G20 Food Security and Nutrition Framework, p.7	development, and particularly economic empowerment of rural women and rural youth, through G20-LIDCs knowledge -sharing forums on enhancing vocational training and promoting food security and nutrition safety nets.		<p>commitments to agriculture and related sectors, such as strengthening safety nets to ensure that vulnerable families have access to food and water, delivering expedited emergency support by fast-tracking financing, rapid country diagnostics and data-based monitoring instruments and partnerships e.g. the Famine Action Mechanism and the Agriculture Observatory, etc.</p> <p>IFAD has also recently refined its targeting guidelines and is currently revising its targeting policy to better understand the priorities and needs of rural women and girls. 41% of IFAD’s investment operations approved during IFAD11 2019-2021 were validated as gender transformative. The IFAD’s SECAP project cycle also mainstreaming gender equality and women’s empowerment issues.</p> <p>UNICEF takes multi-sectoral approach, including between social protection and food nutrition programming, to achieve poverty and nutrition outcomes, through UNICEF’s Nutrition Strategy (2020-2030) and Social Protection Framework (2019) , as well as the new Strategic Plan (2022-2025).</p>
25.	2015	G20 DWG Implementation Plan of the G20 Food Security and Nutrition Framework, p. 10	Improving the investment climate in agriculture sectors of LIDCs by supporting the Platform for Agriculture Risk Management (PARM).	ON TRACK	<p>In 2021, G20 Agriculture Ministers emphasized the contributions of the Platform for Agricultural Risk Management (PARM) to improve resilience of the agricultural sector through a better management of risks.</p> <p>Aside from its regular main focus of work, PARM in its second phase called PARM Horizon 2 (2019/2024) will be offering a new service to the government which is the design of programs for investment. This also includes risk transfer (insurance), in particular for value chains using the new methodology developed by PARM with CIAT. The gender loop is also fully integrated into PARM process and analysis. Finally, PARM is in the process of developing a new window aiming at de-risking investments in the context of Climate Change through agricultural risk management (ARM).</p>
26.	2021	G20 Rome Leaders' Declaration, para 15	We are committed to achieving food security and adequate nutrition for all, leaving no one behind. To this end, we endorse the Matera Declaration and its Call to Action. We encourage partners and stakeholders to collaborate with or join the Food Coalition launched by the FAO as a means to	ON TRACK	The Matera Declaration provided the momentum that was necessary for several international initiative/forums to succeed and/or be launched, such as [i] contributed to the success of the pre-Summit of the United Nations Food System Summit (UNFSS) in July 2022 and the UNFSS itself in September 2021; and [ii] facilitated the success of the “Finance in Common” Summit 2021, including the establishment of a new PDB Platform for Green and Inclusive Food Systems which will provide technical assistance, sharing of expertise, support for innovation, and tools to measure the social and environmental impact





			respond to the impacts of COVID-19 on food security and nutrition.		of investments and to better assess risks. On the Food Coalition, a call was launched in June 2021, inviting FAO Member countries to submit proposals for the pilot projects. Currently, funds and technical expertise are mobilized, in liaison with FAO technical divisions, for three of the projects, involving 10 countries, focusing on [i] the creation of a global network of farmers' markets; [ii] strengthening school feeding programs in three Latin American countries and [iii] promoting the uptake of the CFS Voluntary Guidelines on Food Systems and Nutrition in three Asian countries.
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SDS: Human Resource Development, Employment and Education

27.	2017	Hamburg Summit 2017 – G20 Leaders' Declaration, p.8	Launch the G20 Initiative for Rural Youth Employment in developing countries with a focus on Africa contributing, in alignment with developing countries' strategies, to creating 1.1 million new jobs by 2022 and to providing innovative skills development programmes for at least 5 million young people over the next five years	ON TRACK	<p>The OECD Development Centre, with financial support from Germany, is currently compiling information from members and international organizations to report on lessons learned and targets achieved under the RYE Initiative since 2017. The report will be presented to the G20 by the end of 2022.</p> <p>The African Union has recently endorsed a continental African Agribusiness Youth Strategy (AAYS) and called all member states for implementation, fair representation of youth in policy dialogue and the inclusion in the CAADP Biennial review. The GAFSP and the AU Skills Initiative, explicitly referenced in the G20 initiative, continue to be important mechanisms for creating jobs and skills development opportunities together with programs like the AfDB ENABLE YOUTH or the Opportunities for Youth in Agriculture (OYA) of UNIDO, FAO and the AU. The Committee on World Food Security (CFS) recently endorsed policy recommendations on Promoting Youth Engagement in Agriculture and Food Systems.</p> <p>The OECD study "Jobs for Rural Youth: The Role of Local Food Economies", published in December 2021, looks at job opportunities for rural youth in agriculture and along the agri-food value chain, in particular local food systems.</p> <p>IFAD 12 (2022-2024), will continue its funding to strengthen its youth focus by introducing a new core outcome indicator tracking new jobs/employment opportunities for young people, increasing target to 60% of new investment projects (IFAD 11 was 50%) explicitly prioritizing youth employment, expected 50+ projects will be youth-sensitive in IFAD 12, and introducing new instruments to catalyze funding on generating employment for youth (PSFP, 2RP).</p>
28.	2017	Hamburg	Launch the #eSkills4Girls	COMPLETED	Until this day, #eSkills4Girls has supported measures and





		Summit 2017 – G20 Leaders’ Declaration, p.11	initiative to promote opportunities and equal participation for women and girls in the digital economy, in particular in low income and developing countries		projects in a total of 32 countries worldwide. Over 60.000 girls and women have been trained in basic or advanced digital competencies. The initiative has broadened its portfolio by adding more bilateral projects that promote the digital education of women and girls. Key activities include the promotion of female role models, setting up networks, implementing digital skills training, promoting the integration of digital technologies in vocational training and non-formal education settings, and raising awareness for career prospects in tech. Overall, 48 NGOs has been funded to implement #eSkills4Girls programming workshops in a total of 20 African countries.
29.	2018	G20 Initiative for Early Childhood Development – para 21	We call on IOs, MDBs and other financing institutions to identify and strengthen suitable financial instruments, mechanisms and partnerships and mobilize resources to scale up quality ECD programs in low-income and developing countries based on their national needs and priorities.	ON TRACK	UNICEF is currently developing an online course on public financing for ECD to complement global resource guide on public finance for children in Early Childhood Development. Additionally, UNICEF is working with partners to support countries to advocate for the prioritization of ECD investments, for example by launching its Cost of Inaction tool with ECDAN, a global resource guide on public finance for children in Early Childhood Development.
30.	2018	G20 Initiative for Early Childhood Development – para 28	Engage in international cooperation as a catalyst for scaling-up and improving the quality and accessibility of multi-sector ECD programs, particularly in supporting low income and developing countries.” “To promote opportunities for collaboration through North-South, South-South and Triangular Cooperation which involve a diversity of actors, resources and instruments.	ON TRACK	<p>To date, in its capacity as a platform for knowledge and learning, ECDAN launched its ECD Knowledge Gateway version 2.0, sharing multi-sectoral ECD resources, tools and developments across the sector, including information on costing ECD programmes. International cooperation and coordination have also increased as ECDAN and UNICEF have collaborated with partners on several initiatives and communities of practice, including: A Global Initiative to Support Parents (GISP); the ECE Accelerator to Integrate ECE in Education Sector Plans; and ECD Financing and Costing. On the latter, UNICEF and ECDAN are collaborating on ECD financing and have developed an online Cost of Inaction tool). Launched in 2021, the tool has now been piloted in three countries.</p> <p>The WBG has developed a suite of tools to measure childhood development and early learning quality, including: the Anchor Items for Measuring Early Childhood Development (AIM-ECD), a core set of items with robust psychometric properties across contexts for measuring pre-schoolers' early literacy, early numeracy, executive functioning, and socioemotional development; Teach ECE, an observation tool that captures the quality of teacher-child interactions in preschools; and, the ECD COVID-19 Phone Survey to support countries to capture the impacts of the pandemic on young children and their families.</p>





31.	2019	G20 Osaka Leaders' Declaration, para 28	We reaffirm our commitment to invest in human capital and promote inclusive and equitable quality education for all as emphasized in the G20 Initiative on Human Capital Investment for Sustainable Development.	ON TRACK	<p>Under the Italian Presidency, G20 leaders reaffirmed that access to education was a human right and a pivotal tool for inclusive and sustainable economic recovery. The leaders also committed to ensure access to quality education for all, with particular attention to women and girls and vulnerable students. In addition, G20 education ministers reiterated that the right to education is a human right and the basis for the realization of all other rights.</p> <p>In 2021, the EIB supported human capital development and the education sector, for instance in the Middle East and North Africa region through backing for primary education in Tunisia and post-secondary education in Morocco. UNICEF, World Bank and UNESCO also launched the Mission: Recovering Education in 2021, focusing on safe return to schools for all learners, remedying the learning losses, and supporting teachers. Learning Passport, an online, mobile and offline digital learning platform, that was developed through a partnership between UNICEF and Microsoft, was launched in 13 countries in 2021. By the end of the year, it had reached nearly 2 million children, youth, educators and caregivers with educational content to support continuous learning.</p>
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SDS: Industrialization

32.	2016	Hangzhou Summit 2016 – G20 Leaders' Communiqué, para. 35	Launch the G20 Initiative on Supporting Industrialization in Africa and LDCs [...] with a focus on women and youth; and promoting science, technology and innovation as critical means for industrialization.	ON TRACK	<p>The OECD Development Centre and the AU Commission have continued to develop a space for dialogue, mutual learning and the exchange of best practices on investment and productive transformation on the African continent, including on infrastructures development. The Platform on investment and productive transformation in Africa convened for the second time a High-Level closed-door event in June 2022 that gathered African Ministers and high-level representatives, business executives, investors, representatives from continental and regional institutions, and partner organizations attending the Meeting of the OECD Council at Ministerial Level (MCM) Dialogue with Africa on 9 June 2022 and the 21st AU-OECD International Economic Forum on Africa on 10 June 2022. It also benefited from the participation of business executives of the OECD Development Centre's Emerging Markets Network (EMnet).</p> <p>UNCTAD has conducted numerous studies, through its annual flagship report Trade and Development Report (TDR) and many other publications such as South-South Digital Cooperation for Industrialization: A Regional Integration Agenda on the industrial policy and industrialization including the challenges and opportunities of New Industrial Revolution or Industry 4.0 for developing countries.</p>
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					In line with this initiatives, UNIDO has been developing overarching initiatives such as “The Third Industrial Development Decade for Africa 2016-2025” and organizes the LDC Ministerial Conference, among others.
SDS: Inclusive Business					
33.	2018	G20 Call on Financing for Inclusive Business, para 18	Foster and engage, in accordance with our respective capabilities, in international cooperation initiatives related to inclusive business, particularly in those addressed to low income and developing countries, in coordination with (...) development partners. This includes South-South and Triangular Cooperation in which a diversity of actors, resources and instruments can be integrated.	ON TRACK	G20 continued to advance on its Call on Financing for Inclusive Business. The platform inclusivebusiness.net is a product of the Inclusive Business Action Network’s and it provides up-to-date knowledge and insights on the advancement of inclusive business initiatives. A new layout of the tool is currently under development and to be launched by the end of July 2022.
34.	2018	G20 Call on Financing for Inclusive Business, para 25	Call on MDBs and development finance institutions to boost their efforts towards the sector (...) through financial and non-financial services, and strengthen the impact measurement, management and reporting of their investments.	ON TRACK	<p>The UNDP has launched SDG Impact Standards—4 sets of standards for Private Equity/Venture Capital, Bond Issuers, Enterprises and Development Finance Institutions to help such institutions manage their impact and authenticate their contributions to the SDGs. UNDP has produced these standards as a public good, supported by training and education initiatives to improve IMM practices, especially for the private sector. In the same vein, in partnership with the University of Duke, UNDP co-created content for a SDG IMM course that is hosted on Coursera. Since its launch in mid-2021, the course has already seen an uptake by 10,000 learners from across the globe.</p> <p>In 2021, the EIB enhanced its financing for access to finance, in particular for the most vulnerable through the broad portfolio, including via credit lines and microfinance institutions, alongside technical assistance and advisory services to provide extended access and strengthen literacy of youth and women.</p>
35.	2018	2018 G20 Leaders’ Declaration, para 7	We will endeavor to further create enabling conditions for resource mobilization from public, private and multilateral resources, including innovative financial mechanisms and	ON TRACK	The UNDP is working with more than 40 countries to systematically identify SDG-aligned Investment Opportunity Areas (IOAs) through the SDG Investor Maps. As of June 2022, Investor Maps for 20 countries have been published that have identified nearly 350+ of these IOAs – specific subsectors and business models which are both commercially attractive and catalytic for national





			partnerships, such as impact investment for inclusive and sustainable growth, in line with the G20 Call on Financing for Inclusive Business.		sustainable development priorities. In partnership with relevant government agencies, UNDP is supporting many countries to promote these IOAs to investors and establish mechanisms such as project pipeline discovery and growth stage impact venture accelerator programs to unlock private investment.
SDS: Innovation					
36.	2019	G20 Osaka Leaders' Declaration, para 28	We endorse the Guiding Principles for the Development of STI for SDGs Roadmaps.	ON TRACK	<p>In 2021, G20 leaders recognized the role of technology and innovation as key enablers for the global recovery and sustainable development. The G20 work on Covid19 response in this area was also reinforced in the Declaration of G20 Digital Ministers last year.</p> <p>The OECD has published the OECD Science, Technology and Innovation Outlook 2021 (January 2021). The Outlook reiterated that science and innovation were playing essential roles in providing a better scientific understanding of the virus, as well as in the development of vaccines, treatments and diagnostics, in immediate responses to the COVID-19 crisis. OECD and the Italian National Institute of Statistics (Istat) also organized a workshop on Measuring the Digital Economy on 18 February 2021. The workshop aimed at identifying progress and challenges along the guidelines set in the Roadmap.</p> <p>The UN Guidebook for the preparation of STI for SDG roadmaps was published in 2021. The report was developed jointly by UN-IATT members including the World Bank, UN-DESA, UNCTAD, UNESCO, UNIDO, UN-ESCAP, ESCWA, WIPO and FAO, the European Commission's Joint Research Centre, the Global Sustainable Technology and Innovation Conference Series, the OECD and the Government of Japan.</p>





CULTURE FOR SUSTAINABLE LIVING:
Chair's Summary of the G20 Culture Ministers Meeting,

The G20 Culture Ministers met in Borobudur on September 13, 2022, under Indonesia's G20 2022 Presidency. The meeting was attended by G20 members, invited countries, and international and regional organizations.

PART I

1. Members reiterated their support of the overall theme of the Indonesian G20 2022 Presidency, "Recover Together, Recover Stronger," and its commitment to create an inclusive and sustainable foundation for growth based on culture in a postpandemic era; and the theme of "Culture for Sustainable Living" through five guiding issues: the role of culture as an enabler and driver for sustainable development; the economic, social and environmental benefits of culture-based policies; the efforts to safeguard culture as a common concern and to strengthen the fight against illicit trafficking of cultural property; the importance for widespread & legitimate access to the cultural products and the benefits of cultural economy; and the importance of international resource mobilization to mainstream sustainable recovery of culture.
2. Many members recalled that we are meeting at a time when safeguarding culture and heritage has become a greater challenge particularly at times when the world is experiencing crises, pandemics, natural disasters, and political conflicts including the war in Ukraine. In this regard, some members expressed condemnation of Russia's invasion of Ukraine and its impact on culture and global recovery. Others view that the Culture Ministers' Meeting is not the proper forum to discuss geopolitical issues outside of the cultural sphere. Members have called for peace, cessation of hostilities and an immediate end to war to protect and preserve cultural property, cultural heritage, cultural expressions and cultural identity.

PART II

Ministers expressed broad support for the following actions from our G20 Culture Ministers' Meeting Agenda, noting a range of views elaborating the five guiding issues.

Concerning the role of culture as an enabler and driver for sustainable development:

1. Acknowledging that the COVID-19 pandemic represents an inflection point in history which calls for strengthened international efforts to integrate culture within sustainable development activities, inclusive development, and education, and to protect culture from long-standing and emerging threats;
2. Affirming that to enable a transition towards a system that is more aligned with the Sustainable Development Goals and twelve global commitments outlined in Our Common Agenda, we must develop policies and best practices that draw on the diversity of cultural practices and expressions that contribute to sustainable development;
3. Reiterating the importance of encouraging significant changes in society's ways of life that promote diversity, equity, inclusion, that could support broad participation in sustainable development activities in accordance with national and international laws;
4. Recognizing that culture has intrinsic value beyond its social and economic benefits and the need to lay the groundwork for all cultural and creative actors to work in a free, inclusive and safe environment, preventing all forms of discrimination and fighting against professional and artistic discrimination of any kind in the culture sector; and
5. Calling for the recognition and respect of the cultural rights of the members of Indigenous Peoples and local communities and respect for their cultural heritage to practice and revitalize their cultural traditions, languages, traditional knowledge and customs.

With regard to the economic, social and environmental benefits of culture-based policies:

6. Supporting the creation, implementation and continuation of policies based on bottom-up cultural initiatives that bring together education and training, environmental conservation, social justice, gender equity and equality as well as empowerment of women, Indigenous Peoples and local communities, persons with disabilities, vulnerable populations and youth, to promote more sustainable ways of life and expressions in response to the COVID-19 pandemic and climate change; and

7. Encouraging sustainable investments from the private sector to help diversify the cultural economy which promotes sustainable development and safeguards cultural resources, including biocultural resources, promoting sustainable job creation and fair benefits, protecting small-and-medium cultural businesses, and supporting climate solutions and biodiversity, thereby accelerating the economic, social and environmental recovery, from the COVID-19 pandemic while continuing to prioritize ending the acute phase of the COVID-19 pandemic, while respecting local wisdom throughout the process.

In relation to the efforts to safeguard culture as a common concern and to strengthen the fight against illicit trafficking of cultural property:

8. Supporting the facilitation of public initiatives in the participatory management of cultural resources through the combination of public and private expenditure, institution building, policy framework formulation, training, capacity building, entrepreneurship, and human resource development, also with reference to the G20 Network of Cultural Business Management Training Institutions;
9. Striving to foster an inclusive ecosystem that values the contribution and freedom of expression of those working in the culture, arts and heritage sectors: environmental and cultural professionals, including artists, persons with disabilities, vulnerable populations, youth, Indigenous Peoples and local communities, protected groups, and society-at-large in the policy-making processes, thus making cultural benefits widespread;
10. Encouraging closer cooperation of diverse stakeholders to protect and promote mainstreaming cultural initiatives, focusing on the education for future generations through comprehensive understanding and interpretation of cultural heritage, tangible and intangible, cultural diversity, and to mitigate the vulnerability of cultural and creative sectors in the future; and
11. Encouraging closer cooperation to protect and preserve cultural property and cultural heritage against the natural and human-made destruction, including during times of conflict, theft, looting and illicit trafficking, in order to safeguard and to promote protection of cultural and natural heritage, consistent with UNESCO's 1954 Convention for the Protection of Cultural Property in the Event of Armed Conflict, 1970 Convention on the Means of Prohibiting and Preventing the Illicit Import, Export and Transfer of Ownership of Cultural Property, 1972 Convention Concerning the Protection of the World Cultural and Natural Heritage, and the Rome Declaration of the G20 Ministers of Culture.

Pertaining to the need for widespread legitimate access to the cultural products and the benefits of cultural economy:

12. Supporting the design, development and implementation of policies that ensure an equitable global cultural ecosystem for the benefit of all, respecting the diverse and rich cultural practices of all social groups in all countries, and noting the cultural and creative sectors as drivers of economic growth and tools for inclusive and sustainable development;
13. Striving to build a more accessible, trusted and rights-respecting digital ecosystem that could foster global collaboration and knowledge sharing, and promote both fair benefits and work conditions for artists and cultural practitioners; and
14. Encouraging a more equal and inclusive, non-discriminatory participation throughout the cultural ecosystem, especially towards vulnerable groups, thus working to ensure equal opportunities for all communities to enjoy the benefits of culture.

Lastly, concerning the importance of international resource mobilization to mainstream sustainable recovery of culture:

15. Exploring the creation of the Global Arts and Culture Recovery Fund that could be hosted by UNESCO, on a voluntary basis, for investing in and restoring the cultural economy sector, and for promoting sustainable living, which could be discussed in the Finance Track of the G20;
16. Welcoming the contributions, including through investments of the private sector to help diversify the cultural economy, boost job creation and increase the agility of the culture sector to adapt to uncertain situations;
17. Stressing the importance of raising the visibility of G20 member states' diversity of cultures and ensuring wide access to culture and the possibility to develop cooperation between cultural practitioners of the G20 countries; and
18. Recognizing the importance of cooperation on digitalization in the fields of culture and art, striving for the benefit of cultural mainstreaming in education across G20 countries.

We strived to strengthen global cooperation on culture for sustainable living as part of the global economic recovery and implementation of the 2030 Agenda for Sustainable Development. Hence, we support governments' efforts to rebuild and recover with an aim towards inclusion.

We also welcomed the celebration of the Third World Conference on Cultural Policies and Sustainable Development or MONDIACULT, to be held in Mexico in 2022, organized by UNESCO and the Mexican Government, as a global platform concurrent with the G20 process that will enable Member States to support the impacts of cultural policy on sustainable development globally by discussing policies, priorities, and challenges.

Ministers expressed their appreciation of Indonesia's leadership in the G20 Culture Ministers' Meeting 2022. We look forward to supporting the next presidency of India and Brazil in 2023 and 2024 and to continue the commitment to achieve the G20 agenda on culture under the spirit of partnership and collaboration to lead global recovery and beyond.

Borobudur, 13 September 2022



**G20 CHAIR'S SUMMARY
LABOUR AND EMPLOYMENT MINISTERS' MEETING 2022**

We, the Ministers of Labour and Employment of the G20 members and invited countries, met in Bali on 13-14 September 2022, to discuss recent global labour market challenges and developments, review the progress of our previous commitments, and further our work including through elaborating recommendations and action plans in the context of the pandemic to 'recover together, recover stronger.'

Part I

1. We are meeting against the backdrop of a fragile and uncertain recovery of the global labour market situation, amid the ongoing COVID-19 crisis and rising geopolitical tensions. The compounded effects of the pandemic and conflicts have affected the world of work, causing job losses, the inability to attain decent work for employees, and disruptions on the labour market.
2. We express deep concerns regarding the increased and ongoing conflicts in many parts of the world. Many members express their condemnations to Russia with regard to the war in Ukraine, while others view that Employment WG is not the proper forum to address geopolitical issues. We call for peace, cessation of hostilities and an end to war. We also emphasize the importance of peace as a prerequisite to building a more resilient and inclusive labour markets in a new world of work.

Part II

There is agreement on the following points:

1. We remain committed to a human-centred inclusive, fair, sustainable approach that leads to greater social justice, decent work and social protection for all and that aims to empower people to take advantage of new opportunities, including responding to ongoing and future challenges.
2. The COVID-19 crisis has accelerated changes and created new challenges in the world of work and in our societies. We recognize that the COVID-19 pandemic has exacerbated pre-existing inequalities in many countries and continues to disproportionately affect women, youth, older workers, persons with disabilities and migrant workers. It remains our utmost priority to mitigate its adverse impact on the labour market and reduce inequalities. We will continue to work to overcome these obstacles by enabling inclusive, sustainable, full and productive employment, and decent work for all, leaving no one behind.
3. To recover together, recover stronger, we will continue to build on the work of previous G20 presidencies and relevant international frameworks taking into account the current global context. To achieve our objectives, both nationally and globally, we commit to continue our previous work in pursuit of an inclusive labour market particularly in the

efforts to integrate persons with disabilities; to promote a sustainable development of human capacity including community-based vocational training; to promote job creation through entrepreneurship and micro, small, and medium enterprises; and to strengthen labour protection in the changing world of work. We remain committed to social dialogue to fulfil these objectives.

Accelerating and Monitoring of G20 Principles for the Labour Market Integration of Persons with Disabilities

4. Persons with disabilities face significant barriers compounded by the COVID-19 crisis to accessing and remaining in the labour market, including access to basic services such as employment support, education and training. We are committed to promoting inclusive, fair, and sustainable employment for persons with disabilities in line with the 2030 Agenda for Sustainable Development and the Convention on the Rights of Persons with Disabilities (CRPD), especially Article 27 on Work and Employment (United Nations, 2006).
5. We recognize that the ongoing digital and green transitions present new employment opportunities and challenges for the integration of persons with disabilities. We commit to equipping persons with disabilities with the necessary skills to seize the opportunities brought about by these transitions and new forms of work. We promote the involvement of social partners and organizations of persons with disabilities in digital and green initiatives.
6. We reiterate our commitment made in Argentina in 2018 to the G20 Principles for the Labour Market Integration of Persons with Disabilities, and we commit to accelerating the implementation of these principles. We therefore adopt the “Action Plan on Accelerating and Monitoring of the G20 Principles for the Labour Market Integration of Persons with Disabilities”.

Community-based vocational training for inclusive and sustainable growth anchored in the revised G20 Skills Strategy

7. We recognise that the megatrends affecting the world of work, such as demographic changes, digitalisation, and the green transition transform the effective delivery of education and training. Accordingly, we will adapt our approach to skills development, including through the updated G20 Skills Strategy.
8. We acknowledge that skills strategies must strengthen lifelong learning and address the challenges related to the changing world of work. We are also aware that skilling, reskilling and upskilling are the preconditions for an inclusive labour market and people’s access to decent work opportunities. Effective and accessible training schemes, enabling people to upskill and reskill all along their working lives should be developed. In this context, we have agreed on an updated and extended G20 Skills Strategy to guide these initiatives. This basic approach could be usefully complemented and strengthened by the participatory bottom-up approach of Community-Based Vocational Training (CBVT)¹ which enables people to respond to their most pressing needs and the needs of their local labour market. Therefore, we endorse the “G20 Policy Recommendations for Sustainable

¹ Community-Based Vocational Training (CBVT) is an inclusive model that addresses human capacity building at the local level and can ensure productivity and value addition at the local level, and strengthens the local economy. It encourages the participation of the community and rebuilds trust in institutions given its close proximity to the population, promotes local development and the social and solidarity economy given its decentralised feature, encourages local entrepreneurship to boost the local economy, involves non-government actors through local social dialogue, and assures that no one is left behind in the effort to recover together stronger.

Growth and Productivity in Human Capacity Development through Strengthening Community-Based Vocational Training (CBVT)".

Job creation through entrepreneurship and Micro, Small and Medium Enterprises (MSMEs)

9. We acknowledge that enterprises are under increasing pressure to be more competitive, productive, and create high quality jobs. We recognize the essential roles that micro, small and medium enterprises (MSMEs), play in the economy of all countries and their potential for employment creation.
10. MSMEs can be agile and adaptive to change, however, they have weaker resilience when exposed to major economic shocks. Their productivity is often hampered by their limited access to various financing, technology, and production factors; their limited management capabilities; and business continuity skills. We also acknowledge the challenges in ensuring that all MSMEs in the informal economy are covered by social protection, support and benefit mechanisms.
11. Building on the G20 Entrepreneurship Action Plan (Beijing, 2016), we endorse the "Policy Recommendation on Promoting Entrepreneurship and Supporting MSMEs as a Job Creation Instrument", aiming to support MSME productivity and quality working conditions through a comprehensive approach that leverages the main productivity drivers. We remain committed to promote formalisation of enterprises and to protect jobs and workers' rights.

Adapting Labour Protections to Increase Resilience for All Workers

12. The changing world of work includes the rise of automation and digital technologies, as well as the platform-based economy, which could create more employment opportunities. If the main challenges of workers of the platform economy are not dealt with properly, it could lead to questions about the status of employment of workers, which could put workers in a more vulnerable position than those with standard forms of work with established labour protection. Where this is the case, it is imperative that platform workers are correctly classified and adequately protected to ensure decent work.
13. Furthermore, we acknowledge that climate crisis is having a growing impact on the workers, exposing them to greater health and safety risks at work, requiring tailored responses according to the climates of different countries. We also recognize that there are many Occupational Safety and Health (OSH) related challenges involved in transforming the economy through resource-saving, climate-neutral processes. We are determined to continue our efforts to provide a more inclusive and comprehensive OSH policy in accordance with the "G20 Approaches on Safety and Health at Work (Catania, 2021). We strongly welcome the inclusion of a safe and healthy working environment in the ILO's framework of fundamental principles and rights at work, and we commend the work of the G20 OSH Network to share experiences on effective approaches to improved workers protection.
14. Following the rapid transformation of the world of work due to economic, social, and environmental changes and the COVID-19 pandemic, we acknowledge the need to build on the Policy Options for Adapting Social Protection to Reflect the Changing Patterns of Work (Riyadh, 2020) as well as on G20 Policy Principles to ensure access to adequate social protection for all in a changing world of work (Catania, 2021) through a focus on adapting labour protection for all workers and ensuring its adequacy.

15. We support the strengthening of existing forms of labour protection while also exploring and implementing new forms of protection and improving their application through effective compliance strategies which are supported by evidence that demonstrates further action is necessary. Social dialogue, including freedom of association and the recognition of the right to collective bargaining, is key to maintaining or encouraging peaceful and constructive workplace relations, promoting social justice, inclusive economic growth, improved working conditions, and sustainable enterprises. It also increases resilience to future crises. Therefore, it is essential to involve social partners in closing labour protection gaps to ensure that we recover stronger together in an inclusive, sustainable, and resilient manner.
16. We will accelerate our efforts to foster and adapt labour protection to provide effective protection for all workers. We endorse the “G20 Policy Principles on Adapting Labour Protection for More Effective Protection and Increased Resilience for All Workers”.

Way Forward

17. We thank the Entrepreneurship Research Centre on the G20 economies for its efforts to provide a Measurement Report on the Progress of the G20 Entrepreneurship Action Plan as the academic and information support for this year’s priority issue on entrepreneurship. We look forward to the G20 Entrepreneurship Roundtable in October 2022, which will play an important role to promote the implementation of this Ministerial Declaration as well as the development of entrepreneurship among members.
18. We remain committed to reaching the Brisbane target to reduce the gender gap in the labour market participation rate by 25% by 2025 and to reach the Antalya Youth Goal to reduce the share of young people who are most at risk of being permanently left behind in the labour market by 15% by 2025. In line with the Catania Labour Ministerial Declaration, we will reinforce our efforts to implement the G20 Roadmap towards and beyond the Brisbane Target, and also the G20 Youth Roadmap 2025, as we strive to improve the situation of women and youth in the labour market. We will continue to monitor progress towards these targets and the implementation of the roadmaps and call upon the ILO and the OECD to continue to report on our progress.
19. We will accelerate progress towards universal social protection for all by 2030. To that end, we welcome the UN Secretary-General initiative for a Global Accelerator on Jobs and Social Protection for a Just Transition, which aims to create 400 million decent jobs including in the green, digital, and care economies and to extend social protection coverage to the 4 billion people currently excluded. The initiative could make an important contribution to poverty reduction, decent work and achieving the SDGs.
20. We acknowledge that sustainable value chains are of paramount importance for achieving human rights, decent work for all and protecting the environment. We therefore stay committed and continue to work towards ensuring corporate due diligence including the elimination of child labour and forced labour along value chains.

Closing

21. The Ministers agreed on the following documents as attached:
 - i. Action Plan on Accelerating and Monitoring the G20 Principles for the Labour Market Integration of Persons with Disabilities;
 - ii. The G20 Policy Recommendations for Sustainable Growth and Productivity in Human Capacity Development through Strengthening Community-Based Vocational Training (CBVT);

- iii. Policy Recommendation on Promoting Entrepreneurship and Supporting MSMEs as a Job Creation Instrument;
 - iv. G20 Policy Principles on Adapting Labour Protection for More Effective Protection and Increased Resilience for All Workers; and
 - v. Update of the G20 Skills Strategy
22. We thank the ILO and the OECD for their valuable input to our work and take note of their reports. We also commend their work with UNESCO in the preparation of “the Updated G20 Skills Strategy.” We also value the input, experience, and expertise of the WBG, ADB, and IsDB we received during the Indonesian Presidency.
23. We appreciate the contributions to our work made by B20 and L20 and welcome the continued dialogue held with the engagement groups C20, W20, and Y20 and look forward to continuing this cooperation.
24. We will present the outcome documents to the 2022 G20 Leaders’ Summit for their consideration.
25. We thank the Indonesian Presidency for its dedication and leadership throughout 2022, and we look forward to the continuation of our effort towards improving employment in 2023 under the Presidency of the Republic of India and beyond.



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**The G20 Policy Recommendations for
Sustainable Growth and Productivity in
Human Capacity Development through
Strengthening Community-Based
Vocational Training (CBVT)**



**The G20 Policy
Recommendations for
Sustainable Growth and
Productivity in Human
Capacity Development
through Strengthening
Community-Based
Vocational Training (CBVT)**

2022

The G20 Policy Recommendations for Sustainable Growth and Productivity in Human Capacity Development through Strengthening Community-Based Vocational Training (CBVT)

G20 countries have implemented significant measures to reinforce the delivery of education and training opportunities for people of working age to minimise the negative impact COVID-19 has had on economic growth as well as to prepare them for the work of tomorrow. The pandemic also accelerated the widespread use of digital skills and new forms of work which could be seized as an opportunity in its aftermath.

We acknowledge the critical role of skills development in fostering a human-centred recovery that is inclusive, sustainable and resilient. In line with our previous commitments in Ankara 2015, Mendoza 2018 and Catania 2021, we reiterate our commitment to fostering lifelong learning¹. In addition, in light of the inequalities exacerbated by the pandemic, skills development urgently needs to become more accessible to traditionally under-served groups, such as persons with disabilities.

New approaches to skills development might strengthen and usefully complement our previous and current works², taking into account challenges such as demographic change, the digital transformation, and the green transition. This includes lifelong learning, which can be supported by a participatory approach of community-based training. Strengthening and transforming the trainings delivery is imperative since training is expected to improve the skills and productivity of the people of working age, to reduce job losses during a crisis, and to ensure individuals have the competencies to benefit from the new job opportunities arising in the labour market throughout the recovery and adopting re- and upskilling opportunities to changing needs is important.

Community-Based Vocational Training (CBVT) addresses human capacity building at the local level and opens up the opportunities for communities to organize, run and contribute to sustainable productivity improvements in local economies. CBVT is generally understood as decentralized training for work, focusing on community participation, self-advancement, and empowerment, on the inclusion of disadvantaged groups, and is particularly relevant in rural areas where there is little access to formal institutions. Beyond other policies on education and training that are being implemented by the G20 countries, and also dependent upon national circumstances, CBVT can serve as a training model to address human capacity building at the local level. It has key advantages that distinguish it from other training models. It emphasizes a bottom-up approach. CBVT encourages the participation of the community in several ways.

- First, CBVT ensures that the benefits are felt locally, and it encourages the creation of entrepreneurship and social solidarity enterprises, both of which directly strengthen the local economy.
- Second, CBVT provides for decentralized governance, giving local communities opportunity for choosing a training course to maximize local potential. In this context, CBVT can create training opportunities for sustainable jobs because of the bottom-up mechanism which informs the demand from the local industry to the training design.

¹ G20 Skills Strategy (Ankara, 2015); Policy principles for promoting labour formalization and decent work in the Future of Work and in the platform economy (Mendoza, 2018); G20 Roadmap Towards and Beyond the Brisbane Target: more, better and equally paid jobs for women (Catania, 2021).

² G20 Priorities on the Future of Work (Bad Neuenahr, 2017); Policy Principles for Promoting Labour formalization and decent work in the Future of Work and in the Platform Economy (Mendoza, 2018); Youth Roadmap 2025 (Riyadh, 2020); Update of the G20 Skills Strategy (Bali, 2022)

- Third, CBVT provides avenues for social mobility and for especially disadvantaged and rural communities to build professional identities.
- Fourth, the opportunities for civic participation in CBVT increases and promotes trust in institutions and communities, which is particularly valuable after a crisis.
- Fifth, individuals who live near CBVT providers can access the training in their neighbourhood.
- Sixth, CBVT helps ensure that no one left behind in the age of disruption and that communities can recover together to recover stronger.

Most G20 countries have implemented some form of CBVT model. While there is no one-size-fits-all model, we will strive to improve access to quality training at the local level. Therefore, we emphasize the local community-based aspect in delivering human capacity development to reduce skills gaps and provide more quality employment opportunities for all. This includes digital skills, where gaps among vulnerable and disadvantaged groups have become increasingly visible during the COVID-19 pandemic, and skills for green transition. Reflecting the previous policy priority (Melbourne, 2014)³, national economic growth does not necessarily translate into employment opportunities across regions. The contribution of skills development on the sub-national level may enhance employability and increase the overall growth of region. A local strategy can also encourage enhanced training system flexibility and governance to accommodate the needs of employers, individuals, and the local labour market (Beijing, 2016).

We acknowledge the importance of conducive environment to improve the quality of skills development in addition to the effort for providing labour market access, improving employability, and promoting decent work. Where appropriate, we will work with employers' organizations, trade unions and civil society to strengthen local social dialogue with the view to provide additional support for better access to skills development for targeted group.

In this context, we will make effort to prioritize the following recommendation to strengthen CBVT in line with national circumstances:

1. Work with partners to support communities to develop training opportunities tailored to the needs of vulnerable and disadvantaged groups, including low-skilled workers, people at risk of losing their job and workers at the end of their career, particularly in disadvantaged territories, including rural areas.
2. Promote the development of training curricula and methods that support lifelong learning which is affordable and sustainable and facilitates access to quality employment particularly for vulnerable and disadvantaged groups enabling them to make a viable living.

³ Annex B – Policy Priorities for Creating Better Jobs (Melbourne, 2014)

3. Take any feasible or appropriate measures for communities in response to megatrends and global issues affecting the world of work, to ensure communities have access to reskilling and upskilling programs to equip them for a changing world of work.
4. Adapt training delivery methods to accommodate inclusive training modalities for vulnerable and disadvantaged groups.
5. Promote flexible training frameworks that can address future challenges.
6. Support multi-actor partnerships and community collaboration to improve training quality, the recognition of skills and qualifications acquired through training, financial sustainability and capacity of CBVT providers.
7. Build on and strengthen partnership, participation, and multi-level social dialogue to effectively address community concerns and facilitate local economic empowerment.
8. Enhance local communities' capabilities to lead their CBVT initiatives and to create networks to respond to local needs and economic potential, and integrating socio-cultural and environmental concerns, where possible.
9. Improve integrated labour market information systems that link skills systems and governance to local demand to fill the gap between supply and demand of labour market across different levels of governance.
10. Facilitate collaboration and partnerships between communities for increased productivity and links to national markets and beyond.



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**G20 Policy Principles on Adapting Labour
Protection for More Effective Protection
and Increased Resilience for All Workers**



G20 Policy Principles on Adapting Labour Protection for More Effective Protection and Increased Resilience for All Workers

2022

G20 Policy Principles on Adapting Labour Protection for More Effective Protection and Increased Resilience for All Workers

The world of work faces a fundamental challenge: ensuring sustainable labour protection for all workers, especially during economic downturns. Labour protection, based on international labour standards and national laws, is the outcome of the interplay of policy measures on wages, working arrangements, including hours of work, ability to freely exercise the rights to freedom of association and collective bargaining, protection against discrimination in employment, occupational safety and health (OSH), parental rights at work, and employment protection. Adapting labour protection policies is important to protect workers from economic shocks, inadequate working conditions and to secure their rights at workplace, particularly in situations where workers have few outside options and little bargaining power. Adapting labour protection policies is important for reaffirming the ILO fundamental principles and rights at work, including freedom of association and the effective recognition of the right to collective bargaining.

There are three key determinants of labour protection: the coverage of labour protection measures, the level of protection, and the degree of compliance. “Coverage” refers to the extent to which national regulatory frameworks cover all targeted workers. The “level of protection” refers to how the law or other regulatory measures grant labour protection. “Compliance” refers to whether the laws, regulation, and guidelines are observed in practice. Compliance and enforcement strategies should be seen as an integral part of labour protection policies.

The COVID-19 crisis has accentuated the importance of having inclusive labour protection measures in place. Even before the pandemic, some workers in some regions already had inadequate labour protection to protect themselves from economic shocks. During the pandemic, despite the policies that were adopted to protect the business activities and protect wages and employment, many companies needed to cut their production volume or even shut down operations. As a result, many workers faced income and job losses, especially those in informal employment.

The digital economy changes the landscape of the labour market including through the rise of digital labour platforms and new work arrangements associated with it. In theory, platform workers have the freedom to choose the kind and the execution time of the work they want to do and when, although in practice the algorithm often leaves them with little autonomy, discretion and choice. The platform economy can also offer a smoother transition to workers if they were laid off from their previous job. However, platform workers may find themselves more vulnerable to precarious and lower paid work than dependent workers, because of lower and less fair access to decent working conditions and labour protection including social dialogue.

Policies to provide greater labour protection for platform workers should consider their situation: (i) some are misclassified as self-employed, or are falsely self-employed; (ii) some are correctly classified as self-employed or their status is difficult to determine, but in both cases, they may share some of the same characteristics and vulnerabilities as employees. Classification of employment status needs to be clear in a way to ensure that the rights of people working through digital platform are respected.

As G20 countries move to a green economy, we will need to understand the impact of a green transition on the labour protection of workers. The move to a green economy will present new occupational safety and health challenges with the impacts of climate change and the emergence of new industries such as the use of low-carbon hydrogen fuel.



Beyond the COVID-19 crisis, and particularly due to digital and green transitions, workers could face more frequent moves between jobs because they work in industries impacted by the three key drivers of structural change-digitalisation, decarbonisation, and demographic change. The rise of new forms of work has opened more opportunities but also raised concerns about an increase in precarious employment. In this context, in addition to social protection, labour protection measures also may need to adapt in a human-centred way to a changing world of work. Better access may also be needed for all workers to training, job placements and other measures to facilitate job mobility.

Therefore, based on our previous commitments we will, subject to national circumstances and in cooperation with social partners, consider the following policy principles for further action to ensure appropriate labour protections are adopted in response to ongoing changes in the world of work:

1. Support policies on labour protection and human-centred working arrangements through:

- Ensuring decent working conditions including but not limited to decent working time standards, rest periods, parental leave including shared parental leave, annual leave entitlements, anti-discrimination policies, employment protection and adequate social protection thereby contributing to the physical and mental health of workers.
- Ensuring gender equality and the absence of discrimination for any reason and the protection of the most vulnerable groups at work.
- Promoting fair payment, including for platform workers, to ensure decent level of social welfare and wellbeing.
- Responding promptly to economic downturns with a focus on minimising job and wage losses including through support mechanisms such as job retention schemes.
- Adjusting minimum wages, where applicable, on a regular basis, taking into account social and economic criteria, and in consultation with employers' and workers' organizations to protect workers from the risk of low-paid work.
- Enhancing the ability of the public and private employment services to promote better opportunities for training and job search and assistance to help unemployed people and those facing job loss to find good quality jobs and facilitate labour mobility.
- Promoting effective labour inspection systems to ensure compliance with the law, including through the use of digital technology.
- Promoting social dialogue mechanisms and access to fair and transparent dispute resolution mechanisms, especially for workers working in a non-standard form of work with limited access to these mechanisms.

- Protecting workers' rights to freedom of association and collective bargaining to improve conditions of work and increase workers resilience.

2. Strengthen the implementation of OSH rules and regulations

- Adapting OSH instruments as necessary to support addressing the challenges in the changing world of work.
- Ensuring the understanding of OSH laws and regulations and how they apply to the platform economy and their workers.
- Enhancing social dialogue and cooperation at the national, sectoral and enterprise levels for better tailored solutions to OSH challenges.
- Increasing collaboration between public health institutions and OSH authorities.
- Supporting OSH committee representatives with their duty to assess the changes that might affect the occupational safety and health within their work places, conduct regular preventive inspections and investigations into workplace accidents, injuries and illnesses, and participate in the development, implementation and monitoring of OSH programs, including for employees working in non-standard forms of work.

Further, we commit to strengthening of labour protection for platform workers based on the G20 Policy Options to enhance regulatory frameworks for remote working arrangements and work through digital platforms, which were adopted under the Italian G20 Presidency in 2021¹. Where appropriate, we will monitor regularly the impact of our measures to improve the quality of platform work.

Moreover, in order to better protect workers against the risks posed by the climate crisis, we commit to:

- Promoting inclusive and comprehensive OSH laws and regulations to support the transition to the green economy and ensure safe and healthy work in view of the consequences of the climate crisis.
- Promoting OSH solutions related to innovative new materials in green industries including hazardous substances.
- Promoting the need for workers to acquire new skills and understand OSH requirements for adapting to the climate crisis and shifting to the green economy.
- Adjusting social protection as necessary to better protect the workers affected by the transition to the green economy.
- Involving workers, businesses, and their respective organisations in planning and implementing the shift to the green economy.

¹ "G20 Policy Options to Enhance Regulatory Frameworks for Remote Working Arrangements and Work through Digital Platforms (Catania, 2021).



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**Policy Recommendation on Promoting
Entrepreneurship and Support MSMEs as
Job Creation Instruments**



Policy Recommendation on Promoting Entrepreneurship and Support MSMEs as Job Creation Instruments

2022



Policy Recommendation on Promoting Entrepreneurship and Support MSMEs as Job Creation Instruments

High unemployment and the changing labour conditions due to the COVID-19 crisis made employment creation a major focus for a number of G20 member countries. G20 countries are starting to build a more inclusive and greener economy fit for the future, where everyone can fulfil their potential and gain the skills, training, and experience they need to access high-quality, secure, and sustainable jobs. However, some continue to struggle with limited fiscal capacity to encourage employment creation and absorb the unemployed and new participants into the labour market. In this respect, Entrepreneurship is an important source of job creation. In all countries, most enterprises are micro, small and medium-sized enterprises (MSMEs), and they play an important role in the economy. Over two-thirds of global employment is found in self-employment, and micro and small firms, where productivity gaps with larger enterprises are the widest and decent work deficits the most pronounced. In addition, eight out of ten economic units are informal; thus, jobs in these enterprises are generally informal and often have limited opportunities for decent work.

The COVID-19 crisis has had a disproportionately negative impact on MSMEs than large enterprises. Women or youth-led MSMEs have suffered often from the COVID-19 crisis, partly due to the sectors in which they mostly operate or lack of experience and resources. In addition, micro-and informal enterprises often need further support schemes from the government. MSMEs can be agile and adapt rapidly to change but tend to have weaker resilience than larger enterprises when exposed to deep economic shocks. This can be because of their more limited access to production factors due to financial constraints, poorer management skills, and lower economies of scale. Furthermore, they tend to be more vulnerable to unstable market conditions and uncertain business environments.

The constraints to sustainable growth and quality employment creation that entrepreneurs and MSMEs have faced during and in the aftermath of the COVID-19 crisis are substantive and inter-connected.

To promote entrepreneurship and MSMEs as job creation instruments, we agree to the following policy recommendations in coordination with other ministries and social partners, which can be adapted to our national circumstances with a focus on vulnerable groups and using a gender-responsive approach:

Support a conducive business environment and enterprise formalisation

1. Promote and support equitable, high quality, affordable and inclusive digital infrastructure to support MSMEs to help their business grow.
2. Simplify the business environment through integrated government business registration, permits and licensing services. Consider appropriate channels and messaging on these procedures to ensure that MSMEs from different sectors, locations, sizes, and ownership are aware of and can access required procedures and services.



3. Facilitate and encourage the formalization and growth of MSMEs by reviewing regulations and support programs, notably through simplified registration and legal statutes, incentives, awareness-raising, and direct support such as financial and technical support.

Promote entrepreneurship and entrepreneurial training

4. Develop a network of incubators, including community-based organisations and business development service providers, to support enterprise creation and strengthen existing MSMEs' entrepreneurial, management, networking, marketing capabilities, and innovation capacities.
5. Encourage greening efforts by entrepreneurs and MSMEs to adopt more environmentally sustainable production processes and create green jobs through information campaigns, training, and dedicated financing tools, including presenting a business case to small and micro enterprises.
6. Promote vocational training options that provide tools for quality entrepreneurship management, and technical assistance for the development, consolidation or formalisation of productive entrepreneurship.
7. Facilitate digital and other relevant skills development services for entrepreneurs and MSMEs and the overall digital transition through the deployment of lifelong learning programs.

Help entrepreneurs and MSMEs address challenges and sustain their development.

8. Engage government and closely involve the private sector and social partners to determine and address the root causes of low productivity and decent work deficits including a comprehensive ecosystem approach by coordinating interventions at the national, sectoral, and enterprise level.
9. Promote financial inclusion through a regulatory framework that allows fintech institutions to develop while ensuring financial consumer protection, speeding up business recovery, and alleviating liquidity problems of entrepreneurs and MSMEs.
10. Support financial technologies in simplifying MSMEs' business and managerial processes.
11. Promote the development of new and innovative approaches to support green entrepreneurship and MSMEs' green transitions.



Protect the rights and interests of entrepreneurs, MSMEs, and their employees

12. Promote and support gender-responsive and gender-transformative policies and programs to eliminate gender-based barriers limiting women's full participation in entrepreneurship.
13. Develop and strengthen initiatives to enable and encourage persons with disabilities and other vulnerable groups to be part of entrepreneurship promotion and MSMEs' development agendas.
14. Ensure the inclusion of MSMEs and entrepreneurs in social security programs.
15. Encourage job creation and inclusion in the labour market through incentive programs for MSMEs that promotes the hiring of young people, women, and persons with disabilities.
16. Protect the labour rights and working conditions of the employees of entrepreneurs and MSMEs in line with the ILO's framework of fundamental principles and rights at work.



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**Action Plan on Accelerating and Monitoring
the G20 Principles for the Labour Market
Integration of Persons with Disabilities**



Action Plan on Accelerating and Monitoring the G20 Principles for the Labour Market Integration of Persons with Disabilities

2022

Action Plan on Accelerating and Monitoring the G20 Principles for the Labour Market Integration of Persons with Disabilities

Persons with disabilities often face obstacles in accessing services in health, employment, education, and vocational training which put them at risk of being trapped in severe poverty and being excluded from socio-economic activities

The COVID-19 pandemic has deepened existing inequalities and increased the difficulties persons with disabilities are facing in finding new employment opportunities, and remaining in or returning to the labour market. Therefore, and bearing in mind the current economic situation, it is imperative that efforts to create and expand quality employment opportunities, including the plans to address the socio-economic impact of the pandemic, specifically focus on the needs of persons with disabilities, in particular youth and women with disabilities.

Persons with disabilities may have less access to social protection than persons without disabilities also because of a higher risk of working in low-paid, informal, and precarious jobs. They may also face difficulties in obtaining education and training without sufficient access to assistive devices. In addition, participation in online delivered education and training is particularly challenging due to often inaccessible platforms and materials.

The digital and green economies provide great opportunities for the employment of persons with disabilities if their access to the relevant skills and training is being ensured including access to assistive devices and if Government support to the initiatives in these areas promotes the inclusion of persons with disabilities. Therefore, the initiatives in these areas ensuring the access of persons with disabilities to skilling, upskilling, and reskilling opportunities must be supported.

Employment for persons with disabilities must be supported by the governments, non-governmental organisations, private sector, employers' organisations, and trade unions. Social dialogue and an innovative multi-stakeholder collaboration including organisations of persons with disabilities are keys to recover from the pandemic, face the current economic situation and increase inclusive work participation that would allow persons with disabilities access to the labour market.

A key to better policy for promoting labour market participation of persons with disabilities is the collection and analysis of disability disaggregated data. We see data collection on the labour market participation of persons with disabilities as an integral part of our action plan in pushing for progress towards the G20 Principles for the Labour Market Integration of Persons with Disabilities (Mendoza, 2018).

These principles focus on promoting employment in the public and private sectors according to national circumstances; ensuring the skills supplied match the needs of the labour market according to national circumstances; and developing inclusive legislation and social protection schemes. To push forward their implementation and monitor progress, we endorse an action plan to accelerate and monitor the G20 Principles for the Labour Market Integration of Persons with Disabilities. In this Action Plan, we consider to take the following steps in close cooperation with social partners to accelerate the implementation of the G20 Principles for the Labour Market Integration of Persons with Disabilities and to monitor progress, in line with national circumstances:

1. Accelerating the Participation of Persons with Disabilities in the labour market.

- Strengthen public employment services and other employment support measures to address the needs of persons with disabilities from an intersectional perspective, with special attention to youth and women with disabilities and those located in rural areas.
- Ensure the availability, and accessibility of high quality education and training programs for persons with disabilities to equip them with the skills they need to participate in an ever-changing labour market including for the digital and green economy.
- Encourage and support both the public and private sectors to recruit persons with disabilities by providing appropriate incentives, advice and technical assistance, including to guarantee equal treatment and tackle preconceptions, with a particular focus on small and medium enterprises.
- Promote entrepreneurship opportunities for persons with disabilities through accessible and inclusive training programs and business development services and incentives.
- Ensure the access of persons with disabilities to adequate and comprehensive social protection systems and public employment services that encourage and facilitate employment, allowing the compatibility between disability benefits and income from work and support 'return to work' programs for people who acquire a disability, including by engaging proactively in vocational rehabilitation.
- Promote effective anti-discrimination policies in the workplace, covering all stages of employment, including initial recruitment, career development opportunities, and employee retention.
- Encourage the public and private sectors to provide reasonable adjustments for persons with disabilities in the workplace in order to ensure that persons with disabilities have equal opportunities in employment.
- Develop, according to national circumstances, necessary legal and technical framework to support workers who have family members with disabilities to ensure a right balance between their care responsibilities and work and provide inclusive education and training opportunities for their family members to better equip them with skills.
- Incorporate specific employment support measures aimed at persons with disabilities in comprehensive care programs
- Ensure occupational safety and health policies are inclusive and tailored also on the needs of persons with disabilities.

2. Monitoring of G20 Principles for the Labour Market Integration of Persons with Disabilities

- Share voluntarily recent policy initiatives to implement the G20 Principles for the Labour Market Integration of Persons with Disabilities as part of the G20 annual Employment Plan Self-Reports.
- Subject to the availability of data, we agree on the following framework of indicators, covering the dimensions of employment, job quality, social protection, and skills, to measure progress with the implementation of the G20 Principles for the Labour Market Integration of Persons with Disabilities. We call on the ILO and OECD to report periodically on developments in the labour market situation of persons with disabilities based on these indicators, drawing on data provided voluntarily by G20 Members including by gender and taking into account national circumstances.

Table 1. Framework for suggested indicators to measure progress with the implementation of the G20 Principles for the Labour Market Integration of Persons with Disabilities¹

Domain and indicator	Definition
Employment (EM):	
EM1. Disability gap in employment rate	Difference in the employment rate between persons aged 15-64 without and with disabilities. The employment rate is defined as the percentage share of persons who are in employment.
EM2. Disability gap in unemployment rate	Difference in the unemployment rate between persons without and with disabilities
EM3. Disability gap in hiring rate	Difference in the hiring rate between persons aged without and with disabilities. The hiring rate is defined as the percentage share of all employed people with job tenure of less than one year.
Job quality (JQ):	
JQ1. Disability gap in earnings	Difference in mean (hourly or full-time equivalent) earnings between workers without and with disabilities as a percent of the value for workers without disabilities.
JQ2. Disability gap in low-pay	Difference in the percentage share in low-paid work between employees without and with disabilities. The share in low-paid work is defined as the share of employees earning less than 2/3 of median hourly earnings for all workers.

¹ These are suggested indicators and each G20 member may adapt the indicators, including the use of alternative indicators, and their definition in accordance with their national data.

JQ3a.Disability gap in temporary work	Difference in the percentage share of employees without and with disabilities who are in temporary work. This indicator is more suited to G20 economies with a small share of employees who are working informally but where fixed-term contractual work arrangements are prevalent.
JQ3b.Disability gap in informal work	Difference in the percentage share of employees without and with disabilities who are working informally. This indicator is more suited to G20 economies with a substantial share of workers who are working informally.
JQ4. Disability gap in managerial and leadership positions	Difference in the percentage share of workers in managerial and leadership positions (ISCO-08 group 1) between persons without and with disabilities.
Social protection and poverty (SP):	
SP1. Disability gap in receipt of social protection benefits broadly defined	Difference in the percentage share of non-employed persons aged 15-64 who receive an income replacement benefit (sickness/disability/work injury, unemployment, pension or social assistance) without and with disabilities.
SP2. Disability gap in receipt of social protection benefits narrowly defined	Share of non-employed persons with disabilities aged 15-64 who receive a health-related income replacement benefit (sickness, disability or work injury).
SP3. Disability gap in poverty rate	Difference in poverty rate between persons aged 15-64 without and with disabilities. The poverty rate is defined as the share of persons living in households with equalised income below 60% of the mean income of all households.
Skills (SK):	
SK1. Disability gap in low education	Difference in share with an educational attainment of ISCED-2 or lower between persons aged 25-64 without and with disabilities.
SK2. Disability gap in high education	Difference in share with an educational attainment of ISCED-5 or higher between persons aged 25-64 without and with disabilities.
SK3. Disability gap in youth not in employment, education or training (NEET) rate	Difference in NEET rate between persons aged 15-29 without and with disabilities. The NEET rate is defined as the share of persons

	aged 15-29 who are not in employment; education or training.
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Notes:

- The monitoring of the implementation of persons with disabilities participation in the labour market will be conducted every 4 years by the ILO and the OECD based on countries' voluntarily presented data.
- The report would be presented to the G20 Employment Working Group.



G20
INDONESIA
2022

LABOUR AND
EMPLOYMENT
MINISTERS'
MEETING

13 - 14 SEPTEMBER
2022



Update of the G20 Skills Strategy



Update of the G20 Skills Strategy

2022

Update of the G20 Skills Strategy

Skills are crucial for inclusive and sustainable development in the face of evolving challenges

1. Investing in skills is a key element of the G20 commitment to a human-centred recovery and sustainable development. The future growth, prosperity and resilience of G20 countries should be inclusive and sustainable. This will depend on populations that are equipped with relevant skills and attitudes for the future of work, including technical, cognitive, socio-emotional, green and citizenship skills, as well as enhanced agency and positive dispositions towards learning. Developing adequate skills and updating them over the life course benefits individuals, enterprises, economies and societies, particularly as they navigate the digital transformation and a just transition to an environmentally sustainable and inclusive economy and society.
2. Improvements in the relevance and quality of skills have supported economic prosperity and social cohesion across G20 countries in recent decades, and will underpin the recovery from the pandemic crisis, the digital and green transitions and sustainable development. Further improvements in skills, learners' agency, attitudes and participation could provide an additional boost to long-run growth in all G20 countries, resulting in substantial cumulative increases in living standards, and personal, social and environmental well-being. Skills are also crucial for promoting equal opportunities and gender equality, and for realising the benefits of population growth in some G20 countries, while mitigating the economic effects of population ageing or decline in others. Getting skills right is imperative to meet evolving skills needs and ensure well-being as climate crisis, digitalisation and globalisation re-shape societies, economies and labour markets.

Developing, using and governing skills effectively is critical

3. Realising the potential benefits of skills to support the ongoing recovery, digital and green transitions and sustainable development requires concerted efforts based on social dialogue to ensure that people of all ages and social groups can develop and upgrade their skills, and that all adults can utilise their skills effectively in the labour market and workplaces. Despite major progress in the past decades in improving access to, and the quality of lifelong learning, further efforts are required in all G20 economies to equip populations with a broad range of skills, from early childhood into adulthood, that are recognised and valued in the labour market and contribute to a just, fair and sustainable society. Central to these efforts will be seizing opportunities afforded by new technologies to personalise and adapt quality learning, career guidance and accreditation, and to give people greater ownership over what, how, where and when they learn over the course of their lives. In order to attain the full benefits offered by these new technologies, it is also essential to address the existing digital divide between and within countries. Moreover, it is also essential to ensure that skills are used effectively in labour markets and workplaces. This can be done by improving the link between skills supply and demand, supporting transitions from school to work, promoting participation in training and re-training of vulnerable and under-represented groups, improving the recognition, rewards and matching of skills, and encouraging adults and employers to invest in the acquisition of new skills. Achieving these goals requires effective and co-ordinated skills governance and financing arrangements that involve social partners and civil society, in particular youth representatives.

A set of actionable principles to develop, update, use and govern skills

4. Therefore, in light of evolving challenges and the imperative to strengthen our systems of lifelong learning and skills use, we have renewed and revised the G20 Skills Strategy, adopted in 2015 under the G20 Presidency of Türkiye, as set out below. Drawing on the background paper “Update of the G20 Skills Strategy” prepared by OECD, ILO and UNESCO, the purpose of the updated Strategy is to:

- Reaffirm the importance of a well-functioning and well-resourced system for developing, updating and using skills that is equitable and gender-responsive across the life course, as G20 Members harness the potential of the digital economy for all and transition towards a low-carbon future;
- Underscore the importance of policy coherence through a whole-of-government and whole-of-society approach; and
- Provide a basis for peer learning, partnerships and solidarity between G20 Members, as well as with other countries, with the support of multilateral organisations and fora.

The G20 Skills Strategy: Policy Principles

Reiterating and building on the principles in the 2015 G20 Skills Strategy, the updated G20 Skills Strategy proposes the following principles for countries which they would draw on as relevant to their national circumstances:

- A. Developing and renewing skills for inclusive and resilient labour markets, economies and societies
1. Remove barriers to accessing early childhood education and care, while strengthening its quality and enhancing its coverage.
 2. Provide targeted, gender-responsive support to low-performing students, students from disadvantaged backgrounds and students with special education needs and those at risk of falling behind.
 3. Equip young people with high levels of cognitive, socio-emotional and technical skills, for their full social inclusion and to meet the needs of the labour market.
 4. Develop young people’s digital skills and environmental literacy, to prepare them for a technology-based future and a just transition to an environmentally sustainable economy and society.
 5. Expand access to high-quality technical and vocational education and training (TVET) opportunities, including community-based TVET and apprenticeships, which respond effectively to the needs of the labour market and society, with the involvement of private sector especially MSMEs and social partners.

6. Provide all young adults, including those from vocational pathways, access to high-quality post-secondary (non-tertiary and tertiary) education and training.
7. Promote participation in adult education and training through appropriately funded and more flexible learning opportunities, including through public funding entitlements for learning such as individual learning accounts, where appropriate.
8. Provide high quality, lifelong, and timely career, learning information and guidance, enriched by the engagement of social partners, to youth and adults to support informed field of study and training choices across the life course.
9. Harness new technologies to personalise, adapt and recognise high-quality learning for all individuals across the life course, while supporting those lacking digital skills.

B. Using skills effectively to make the most of skills investments

10. Develop reliable skills assessment and anticipation systems with relevant stakeholders, which leverage technology and data analytics to generate evidence that feeds into skills policies.
11. Provide effective active labour market policies that address the needs of youth, jobseekers, workers and employers, including policies aiming at gender equality and disability inclusion.
12. Improve access to the recognition of prior learning as well as alternative credentials (including micro-credentials) to facilitate flexible and diverse learning pathways.
13. Support employers, especially MSMEs, to assess, recognise, develop and make better use of their employees' skills (including through high performance workplace practices).

C. Strengthening governance for future-ready skills systems

14. Enhance and promote a strategic, co-ordinated, multi-level and cross-sectoral approach to develop and use skills within and across countries, including through co-ordinating bodies at all appropriate levels (local, sub-national, national, regional and international).
15. Involve private sector employers, workers organisations and civil society representatives (including youth associations) in the governance of skills systems, for example to contribute to curricula, pedagogy, quality assurance and labour market information.
16. Agree through social dialogue on how to share the costs of developing the skills of adults among government, enterprises and individuals, with greater support given to low-skilled and/or low-income groups and MSMEs.
17. Monitor and evaluate funding levels, outcomes and impacts at all stages of learning, and for different groups, where feasible.



18. Develop country-level baseline gender-disaggregated data, where available, and report on progress related to key elements of countries' skills systems and SDG4 related skills targets, including skills development, skills use and skills governance, in order to generate lessons learnt that can inform the efforts of G20 member states.



G20 CHAIR'S SUMMARY
TRADE, INVESTMENT AND INDUSTRY MINISTERS MEETING
Bali, 22 – 23 September 2022

1. We, the Trade and Investment Ministers of the G20, chaired by the Minister of Trade, Minister of Investment, and Minister of Industry of Indonesia, met on 22-23 September 2022 in Bali, Indonesia, under the G20 Indonesian Presidency. Noting the spirit of Recover Together, Recover Stronger, we recognise the importance of policy coherence between trade, investment and industry to support the implementation of the United Nations (UN) 2030 Agenda and the achievement of the Sustainable Development Goals (SDGs), as a strong foundation for a resilient, strong, sustainable and inclusive global economic recovery.
2. We underscore that more resilient, sustainable and inclusive growth can be achieved by ensuring that all people benefit from more sustainable trade and investment, including but not limited to industry, agriculture, services and other sectors. In this context, we support promoting a coordinated and inclusive global effort to contribute to addressing global challenges.

PART 1

Ministers have stated their continued support to the G20 Indonesia Presidency and its actions to achieve the deliverables. While consensus has been reached in substantive issues, varying views have been stated with regards to the geopolitical tensions, as follows

3. Members agreed that global economic recovery has slowed and is facing major setbacks as a result of the COVID-19 pandemic, supply-demand mismatches, supply chain disruptions, increased food and energy prices and other crises in many parts of the world especially in vulnerable and least developed countries, and as an adverse impact of the geopolitical security tension in Ukraine. Many members expressed condemnations of Russia's war against Ukraine. Meanwhile, a few members expressed that the Trade, Investment, and Industry Working Group (TIIWG) is not the proper forum to discuss geopolitical issues. Members called for immediate actions to end the war and restore peace and stability

PART 2

The Ministers agreed on the following points:

4. Recalling our commitment to realize a free, fair, inclusive, non-discriminatory, transparent, predictable and stable trade and investment environment, we support the following 6 (six) priority agendas to maintain and accelerate global economic recovery and to promote the achievement of SDGs.

WORLD TRADE ORGANISATION (WTO) REFORM

5. We reaffirm that the rules-based, non-discriminatory, fair, open, inclusive, equitable, sustainable and transparent multilateral trading system, with the WTO at its core, is indispensable to advancing our shared objectives of inclusive growth, innovation, job creation and sustainable development. We agree that reforming the WTO is key to strengthening trust in the multilateral trading system. We will continue to work to strengthen foundational principles of the WTO, to ensure a level playing field to foster an enabling business environment and to support the integrity and sustainability of the rules-based multilateral trading system, as affirmed in Sorrento, Riyadh and Tsukuba.
6. We commend the successful conclusion of the WTO MC12. Building on the outcome documents from MC12, as well as the G20 Leaders' declarations in Buenos Aires, Osaka, Riyadh, and Rome, we commit to seize and advance the positive momentum by engaging in active, constructive, pragmatic, and focused discussion on WTO reform with other WTO Members on the path leading to the 13th WTO Ministerial Conference.

THE ROLE OF MULTILATERAL TRADING SYSTEM TO STRENGTHEN THE ACHIEVEMENT OF SUSTAINABLE DEVELOPMENT GOALS (SDGs)

7. We recognise that reviving global trade and strengthening the Multilateral Trading System with the WTO at its core is crucial to ensuring a sustainable recovery from the COVID-19 pandemic, building a more resilient and inclusive global economy. We note the importance of the contribution of the multilateral trading system to promote the UN 2030 Agenda and its Sustainable Development Goals in its economic, social, and environmental dimensions, in so far as they relate to WTO mandates and in a manner consistent with the respective needs and concerns of Members at different levels of economic development. To this end, we welcome the adoption of outcomes at MC12 that contribute to the achievement of SDGs.
8. We are concerned about the erosion of hard-won gains due to the pandemic and other recent crises that threaten to roll-back progress in achieving SDGs particularly on poverty elimination, zero hunger, good health and wellbeing. Therefore, we welcome MC12 outcomes on food security as a contribution in ending hunger. We further welcome MC12 outcomes on WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics.
9. We believe that trade can and should contribute to the promotion of all dimensions and pillars of sustainable development, including in the environmental area, while respecting concerns of members at different levels of economic development. Trade and environment policies should be mutually supportive, consistent with WTO and multilateral environmental agreements, and should allow for the optimal use of the world's resources as a contribution to accelerating progress towards the achievement of SDGs, including on affordable and clean energy, on industry, innovation and infrastructure, on sustainable consumption and climate actions, life below water, and life on land.
10. We support the role of the WTO Trade and Environment Committee as the standing forum dedicated to dialogue between governments on the relationship between trade measures and environmental measures. G20 participants in the Trade and Environmental Sustainability Structured Discussions and in Informal Dialogue on Plastic Pollution and Environmentally Sustainable Plastic Trade encourage and support the active participation of all WTO members in these processes.

11. We welcome the MC12 Ministerial Decision on the Agreement on Fisheries Subsidies as well as recognition by Ministers at MC12 of global environmental challenges, including climate change and related natural disasters, loss of biodiversity and pollution. We reaffirm the importance of providing appropriate, effective, and relevant support to developing country Members, especially LDCs, to achieve sustainable development, including through technological innovations. We also note that trade can create opportunities for women's participation and economic development in a manner which acknowledges women's different context, challenges, and capabilities in countries at different levels of development, and we further note the importance of gender equality to achieve sustainable socio-economic development.
12. We note the Indonesia's presidency "Non-Binding Guiding Principles to Support Multilateral Trading System for Achieving Sustainable Development Goals (SDGs)."

TRADE AND INVESTMENT ON RELATED INDUSTRIES RESPONSE TO PANDEMIC AND GLOBAL HEALTH ARCHITECTURE

13. We recognise the importance of a strong and adaptable global health architecture and underscore the role of the multilateral trading system with the WTO at its core in supporting increased resilience for COVID-19 and future pandemics. We welcome the adoption at the WTO's 12th Ministerial Conference (MC12) of the Declaration on the WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics and Ministerial Decision on the TRIPS Agreement. As we agreed at MC12, no later than six months from the date of the Ministerial Decision on the TRIPS Agreement, WTO Members will decide on its extension to cover the production and supply of COVID-19 diagnostics and therapeutics.

DIGITAL TRADE AND GLOBAL VALUE CHAINS (GVCs)

14. We recognise that trade can be a source of economic resilience and diversification along supply chains. We also underscore the importance for countries to move up the value chain in GVCs, In this context, GVCs have been an important means of increasing the participation of developing and least developed countries, and MSMEs in global trade, playing a pivotal role in facilitating access to knowledge, capital and diffusion of technology beyond the domestic economy. GVCs also significantly contribute to addressing challenges in reducing poverty and offering new sources and opportunities for jobs and growth.
15. Recalling the "G20 Policy Guidelines on Boosting MSMEs' International Competitiveness" and the "G20 non-binding MSMEs Policy Toolkit", we reiterate the critical role of MSMEs in our economies and recognise their challenges in accessing global markets. We highlight the importance of assistance programs to strengthen the capacity of inter alia MSMEs, women and young entrepreneurs to participate in international trade, regional and global value chains. In addition, we further acknowledge the importance of full implementation of WTO Trade Facilitation Agreement to enable the continuity of trade flows during a global economic crisis.
16. We further recognise the opportunities offered by digital transformation for resilient, sustainable and inclusive economic growth and the importance of supportive and collaborative digital trade policies and digital technology for managing the risk and challenges associated with the digital advancement, sustaining economic activity and speeding up economic recovery. We encourage approaches to digital trade that are inclusive and ensure

no one is left behind. We note the many challenges to be addressed and welcome the discussions of G20 digital economy ministers. We also recall G20 Rome Leaders' Declaration last year.

17. We note the ministerial decision on the work programme on E-Commerce. G20 participants in JSI on E-Commerce encourage and support the active participation of all WTO members in the initiative and look forward to meaningful progress in the lead up to MC13. We note the concerns that have been expressed on rule-making by some G20 members that are not part of JSIs.

SPURRING SUSTAINABLE AND INCLUSIVE INVESTMENTS FOR GLOBAL ECONOMIC RECOVERY

18. We underscore that sustainable investment is critical for strong economic recovery and creation of decent jobs. We are encouraged by the overall growth of SI. We will continue to strengthen our cooperation in spurring sustainable and inclusive investment that promotes among other goals, industrialization, employment, living standard, and income growth throughout the world in a fair and just manner. We recognize the importance of sustainable investments flows, to developing countries, especially to least developed countries.
19. We note that domestic/national key drivers to spur sustainable investment include: (1) Ensuring policy is coordinated and strategic to foster investment in support of sustainable development, (2) Improving open, transparent, non-discriminatory, inclusive predictable environment that foster sustainable investment (3) Ensuring transparency and predictability of investment measures (4) Simplifying and streamlining investment-related administrative procedures.
20. We reaffirm that in addition to environmental imperatives, sustainable, balanced and inclusive investment should prioritize other social and economic imperatives, keeping in mind the local and regional context. To that end, we note the need to promote value added by sustainable and inclusive investment in highly productive sectors such as but not limited to certain sub-sectors of downstream manufacturing and digital services, support developing countries to integrate with regional and global value chains to address poverty and hunger, undertake vocational education policies, boost domestic capability and foster linkage between foreign investors and local enterprises, particularly for MSMEs.
21. We recognise that adequate, affordable and accessible financing is a significant lever for sustainable investments. The international community needs a more conducive policy environment and fair cooperative approaches to mobilize transparent sources of financing for sustainable development. In this regard, like the G20 environment and climate ministerial meeting, we acknowledge that the generation and lawful availability of accurate risk data is crucial in order to support the sustainable development of fair, transparent and bankable projects that can mobilize private financing into developing countries, especially in Least Developed Countries (LDCs). Equitable and just market approaches could also contribute to easing the financing bottleneck for sustainable and inclusive investments while not replacing the need for scaled up public climate finance. We also welcome efforts of some G20 members that have adopted sustainable policies which could scale up sustainable and inclusive investment by private sectors.

22. We commend the sharing of good practices and initiatives by G20 member countries on the promotion of sustainable investment and we welcome “G20 Compendium on Promoting Investment for Sustainable Development (Bali Compendium)”. The compendium can serve as a policy reference for devising and implementing strategies and programs for attracting sustainable investment, in accordance with respective international commitments and taking into account national sustainable development objectives and priorities. We appreciate the efforts of the Indonesia’s presidency, along with the support of all members and our partner UNCTAD in devising the compendium.

COHERENCE BETWEEN TRADE, INVESTMENT AND INDUSTRY

23. Recalling the G20 Rome leader’s declaration, we underscore the role of the Multilateral Trading System in restoring inter alia industrial productivity and agree on the importance of coherence between trade and investment with industrial policies to meet the current and future challenges. We also acknowledge the critical role of industrial policies and the private sector in general to ensure sustainable and inclusive economic recovery and development.
24. Recalling the G20 Trade and Investment Ministerial Statement 2018, we reaffirm that the adoption of digital technologies across all industries has wide ranging implications for the scope, scale, speed and pattern of production, trade and investment. We underscore that the adoption of technologies and innovation in production processes can play an important role in driving sustainable and digital transformations. In that sense, we recognise the importance of advancing cooperation on trade related industry aspects to support sustainable economic development in developing countries particularly in Least Developed Countries.
25. We agree to continue the discussion on the intersection between trade, investment and industry-related matters under the existing trade and investment working group. We note the initiative from the Indonesian Presidency to institutionalize discussion about industrial-related issues and deliberate on those issues in the future in the broader G20 process.

WAY FORWARD

26. With a view to promote the policy coherence of trade, investment and industry that could effectively contribute to a resilient, inclusive and sustainable global economic recovery, we jointly recommend our Leaders to consider these important priorities at the Bali Summit.
27. We thank WTO, UNESCAP, OECD, World Bank, UNCTAD, UNIDO, IMF, WHO, ITC, IsDB and ERIA for their valuable contributions in our discussions and welcome further analysis to support the G20's work on trade, investment, together with trade-related industry matters moving forward.
28. We extend our gratitude to the Indonesian G20 Presidency for its determined efforts and leadership and will continue our cooperation towards India’s G20 Presidency in 2023 and thereafter.



NON-BINDING GUIDING PRINCIPLES TO SUPPORT THE MULTILATERAL TRADING SYSTEM (MTS) FOR THE ACHIEVEMENT OF SUSTAINABLE DEVELOPMENT GOALS (SDGS)¹

GOAL 1: NO POVERTY

Trade has a significant role as an engine for economic growth, sustainable poverty reduction and development. Keeping markets open and resisting trade protectionism in all its forms is essential in this regard, as well as ensuring that trade's benefits are equitably spread among the population.

GOAL 2: ZERO HUNGER

Members should ensure that agri-food trade flows and that it is sustainable, inclusive, equitable and resilient as this is crucial for tackling hunger. We reaffirm the importance of not imposing export prohibitions or restrictions in a manner inconsistent with relevant WTO provisions. We resolve to ensure that any emergency measures introduced to address food security concerns shall minimize trade distortions as far as possible; be temporary, targeted, and transparent; and be notified and implemented in accordance with WTO rules. In accordance with the WTO "Ministerial Decision on World Food Programme Food Purchases Exemption from Export Prohibitions or Restrictions", Members should not impose export prohibitions or restrictions on foodstuffs purchased for noncommercial humanitarian purposes by the World Food Programme.

GOAL 3: GOOD HEALTH AND WELL-BEING

Members can promote the diversification of vaccines and medicines production across both developed and developing economies. Members recognize the important role of an enabling investment environment for FDI involved in the creation of vaccine production capacities abroad in ensuring efficient organization of the production globally. Members underscore that the international intellectual property (IP) system forms part of the broader infrastructure for innovation in health technology. Members also acknowledge the need for regulatory flexibilities. In that sense recalling the Doha Ministerial Declaration on the TRIPS Agreement and Public Health of 2001 and the 2022 Ministerial Declaration Ministerial Declaration on the WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics, we reaffirm that the TRIPS Agreement may be interpreted and implemented in a manner supportive of WTO Members' right to protect public health and, in particular, to promote access to medicines for all.

¹ This Non-Binding Guiding Principle was prepared by the Indonesian Presidency of the G20, under the Presidency's own responsibility, drawing on various inputs from the member States of the G20. It is without prejudice to the positions of individual G20 members and the member States of the international organizations involved.

GOAL 5: GENDER EQUALITY

We encourage Members to design and implement gender-responsive trade policies that create opportunities for women to integrate in the workforce. Members may consider eliminating discriminatory legal barriers and enhancing trade finance access for women entrepreneurs to be able to participate in global trade and supply chains. To bridge the data gap, Member may initiate further sex disaggregated data collection and analysis to gauge women's participation in trade.

GOAL 8: DECENT WORK AND ECONOMIC GROWTH

Members are encouraged to expand non-trade distorting efforts to build trade-related infrastructure in developing countries, with a focus on export diversification and value addition. Members may emphasize voluntary technology diffusion on mutually agreed terms as a factor in long-term economic growth.

GOAL 10: REDUCED INEQUALITY

Members may continue to explore means of addressing global inequality through trade, including by reducing trade costs and fully implementing the WTO's Trade Facilitation Agreement. Members recognizes the importance of increasing access to trade finance, and investment in developing economies. It is also necessary to address the digital divides, including the gender digital divide with the aim of making e-commerce a force for inclusion.

GOAL 12: RESPONSIBLE CONSUMPTION AND PRODUCTION

We encourage Members to design and implement proactive trade policies to scale up circular economy solutions globally. Open and transparent trade policies can also facilitate access at lowest cost to critically important circular economy solutions, from waste sorting machines and devices that break down hard-to-recycle materials to the critical inputs needed to produce biodegradable plastics. At the same time, appropriate action is needed to help ensure that trade in end-of-life products do not pose a threat to human health and the environment.

GOAL 13: CLIMATE ACTION

Trade may contribute to sustainability by improving access to environment-friendly goods, services and technology at lower costs and by allowing an efficient use of natural resources, such as land and water. Members could make efforts to ensure that measures adopted to achieve a sustainable, green economy are transparent, do not discriminate or restrict trade, and are in line with WTO rules. Trade like other economic activities can have direct environmental consequences, including pollution from international shipping and aviation. Efforts by the private sector to reduce such effects, such as decarbonization of the shipping industry may be encouraged by Governments. Members in the Trade and Environmental Sustainability Structured Discussions and in Informal Dialogue on Plastic Pollution and Environmentally Sustainable Plastic Trade encourage and support the active participation of all WTO members in these processes. International cooperation and initiatives such as Aid for Trade could also mobilize funding for green infrastructure and support the private sector in developing countries to adapt and mitigate to climate change.

GOAL 14: LIFE BELOW WATER

Members should expeditiously accept the Protocol amending the WTO Agreement and implement the WTO Agreement on Fisheries Subsidies prohibiting subsidies to a vessel or operator engaged in illegal, unreported, and unregulated (IUU) fishing or fishing related activities in support of such fishing, subsidies for fishing or fishing related activities regarding overfished stocks and subsidies for fishing on the unregulated high seas high-seas fishing. Members are encouraged to support the Fisheries Funding Mechanism to assist with implementation of the WTO Fisheries Subsidies Agreement. We underscore the need to support global efforts to reduce plastics pollution and initiate the transition to a more circular and environmentally sustainable global plastics economy.

GOAL 15: LIFE ON LAND

We recognize that trade has the potential to propel economic transformation toward environmental sustainability and safeguard efforts to protect and restore biodiversity. Therefore, Members are encouraged to design trade policies that can promote sustainable agricultural practices and circular economy models, green infrastructure projects, resource-smart food systems and land restoration, and more energy efficient technologies. We welcome the MC12 Declaration on Responding to Modern SPS Challenges and urge Members to support the work programme to explore how the implementation and application of the SPS Agreement can support life on land.

GOAL 16: PEACE, JUSTICE, AND STRONG INSTITUTIONS

Members may encourage the use of the multilateral trading system as a pathway to development and sustainable peace by establishing creative and interdisciplinary approaches that mainstream trade and economic integration into the peace, security, and humanitarian fields, including the Women, Peace, and Security agenda. Our mutual prosperity depends on stronger multilateral cooperation, respect for the rules-based order, and adherence to international law.



G20 COMPENDIUM ON PROMOTING INVESTMENT FOR SUSTAINABLE DEVELOPMENT

(BALI COMPENDIUM)

September 2022

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ABBREVIATIONS

AEC	ASEAN Economic Community
APEC	Asia-Pacific Economic Cooperation Forum
ASEAN	Association of Southeast Asian Nations
BIT	bilateral investment treaty
BOGA	Beyond Oil & Gas Alliance
BRICS	Brazil, Russian Federation, India, China, South Africa
CCUS	Carbon Capture, Utilization and Sequestration
COP	Conference of the Parties
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
COVID-19	coronavirus disease 2019
CSIRO	Commonwealth Science Industry Research Organization
CTCN	United Nations Climate Technology Centre & Network
EAEU	Eurasian Economic Union
ECA	export credit agency
ESG	environmental, social and governance
ETAF	Energy Transition Accelerator Financing
EV	electric vehicle
FDI	foreign direct investment
FTA	free trade agreement
GEA	green economy agreements
GGGI	Global Green Growth Institute
GHG	greenhouse gas
GIP	Green Investment Principles
GSS	green social and sustainability
GST	Goods and Services Tax
GWEC	Global Wind Energy Council
IBRD	International Bank for Reconstruction and Development
ICMA	International Capital Market Association
ICT	information and communication technology
IDB	Inter-American Development Bank
IEA	International Energy Agency
IFD	Investment Facilitation for Development
IFI	International Financial Institution
IIA	international investment agreement
ILO	International Labour Organization
IMF	International Monetary Fund
IoT	Internet of Things
IPA	investment promotion agency

IPSF	International Platform on Sustainable Finance
IRENA	International Renewable Energy Agency
JSI	Joint Statement Initiative
LDC	least developed country
LPG	liquefied petroleum gas
MoU	memorandum of understanding
MSME	micro, small and medium-sized enterprises
NDC	Nationally Determined Contributions
NGO	non-governmental organization
OECD	Organization for Economic Co-operation and Development
OFDI	outward foreign direct investment
OLADE	Latin-American Energy Organization
PAHO	Pan-American Health Organization
PV	photovoltaic
R&D	research & development
R&D&I	research & development & innovation
RBC	Responsible Business Conduct
RCEP	Regional Comprehensive Economic Partnership
SDG	Sustainable Development goal
SEZ	special economic zone
SME	small and medium-sized enterprise
TACB	technical assistance and capacity-building
TCFD	Task Force on Climate-related Financial Disclosures
TIIWG	Trade, Investment, and Industry Working Group
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNIDO	United Nations Industrial Development Organization
VAT	Value Added Tax
WAIPA	World Association of Investment Promotion Agencies
WHO	World Health Organization
WTO	World Trade Organization

OVERVIEW

Background

On the eve of the adoption of the 2030 Agenda for Sustainable Development, the UNCTAD *World Investment Report* estimated annual investment needs to achieve the Sustainable Development Goals (SDGs) globally to be in the order of \$5 trillion to \$7 trillion per year. Within this estimate, total investment needs in developing countries in key SDG sectors ranged from \$3.3 trillion to \$4.5 trillion per year. Current investment in these sectors is around \$1.4 trillion, implying an annual average investment gap of about \$2.5 trillion.²

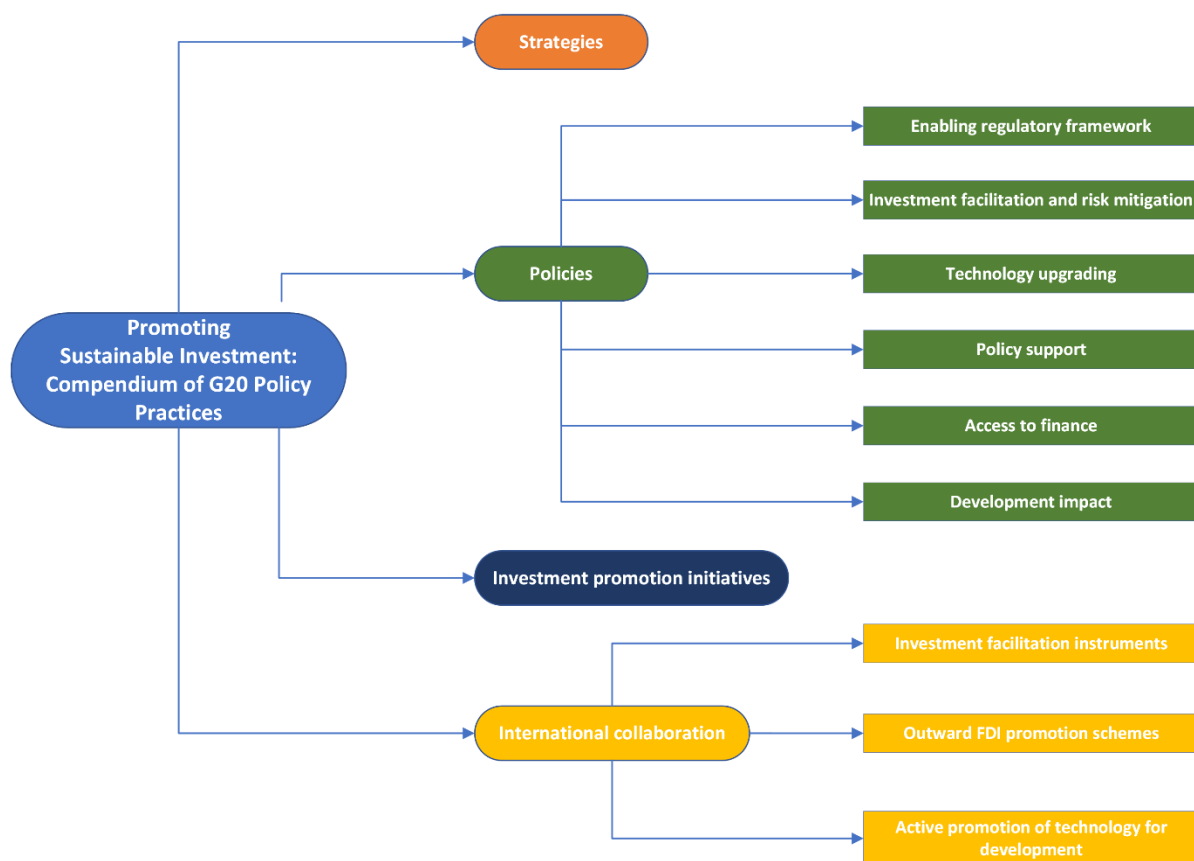
Countries around the world are redoubling their efforts to promote both public and private investment in support of sustainable development. It will be critical that investment promotion strategies focus on the attraction of sustainable investment that can contribute to economic development by enhancing productive capacities, adding value locally and establishing linkages with domestic firms. Investments should bring a truly equitable, resilient, and inclusive development for all.

In this context, the Indonesian Presidency of the G20 has invited G20 members and associated countries to share their policy practices in promoting investment for sustainable development. The ***G20 Compendium on Promoting Investment for Sustainable Development (Bali Compendium)*** compiles the policy measures and experiences of all G20 members and some associated countries in a structured manner. These are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, the Republic of Korea, the Russian Federation, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Türkiye, the United Arab Emirates, the United Kingdom of Great Britain and Northern Ireland, the United States of America and the European Union.

Structure and end use

The compendium, prepared by UNCTAD under the guidance of the Indonesian Presidency of the G20, outlines key areas of investment policies in support of promoting investment for sustainable development (see figure below). These are derived from the issues paper “Promoting Sustainable Investment in Renewable Energy for Global Economic Recovery”, jointly prepared by the Indonesian Presidency and UNCTAD to facilitate the discussions at the Second G20 Trade, Investment and Industry Working Group Meeting, which took place in Solo, Central Java, on 5–7 July 2022. The key findings of the Compendium are highlighted in the next section, followed by the individual countries’ inputs. The Compendium was finalized in light of the comments during the Third G20 Trade, Investment and Industry Working Group Meeting, held in Bali on 19–23 September 2022.

² UNCTAD *World Investment Report 2014*, https://unctad.org/system/files/official-document/wir2014_en.pdf



The Compendium provides examples of a variety of policy measures and practices of G20 members and associated countries. Acknowledging that no one-size-fits-all solution exists, the Compendium presents a range of options for policymakers looking to promote sustainable investment. It is meant to facilitate the sharing of experiences and policy practices. It can serve as a toolkit for countries to pick and choose, adapt and adopt relevant measures and initiatives to formulate their own policy packages. Finally, it could serve as a key reference for international organizations in designing and delivering their technical assistance and capacity-building programmes.

Highlights

Comprehensive strategies and policy practices

Several G20 members and associated countries have adopted pluriannual, comprehensive national strategies and plans designed to provide a roadmap for sustainable development, which include a focus on the promotion of sustainable investment (France 2021, Indonesia 2017, Italy 2017, Japan 2021, the Russian Federation 2021, Singapore 2021, Spain 2020, the United Kingdom 2021, the European Union 2021). In other cases, the strategies themselves do not embed investment promotion components as such, but lay out the directions for the promotion of sustainable production, including carbon neutrality objectives (China 2021, the Republic of Korea 2020) and responsible business conduct (Switzerland 2021). Several of these strategies have been adopted over the past 18 months, mainly in the context of post-pandemic recovery efforts and institutional policies to foster the shift towards a more sustainable and green economy (France 2021, Singapore 2021, Spain 2020, Switzerland 2021, the United Kingdom 2021, the European Union 2021).

In addition, most of the G20 members and associated countries rely on targeted strategies for the promotion of sustainable investment in specific sectors (Argentina, Australia, Brazil, Canada, Indonesia, Italy, Japan, Mexico, the Republic of Korea, Türkiye, the United Arab Emirates). The sectors most often targeted by sustainable

investment promotion efforts include, inter alia, renewable and clean energy (Australia, Brazil, Canada, China, France, Indonesia, the Republic of Korea, Saudi Arabia, South Africa, Spain, Switzerland, Türkiye, the United Arab Emirates, the United Kingdom); energy efficiency, waste management and sanitation (Argentina, Australia, Brazil, Italy, the Russian Federation, Saudi Arabia, Singapore, Spain, Türkiye); as well as transport (Argentina, Brazil, France, Indonesia, Italy, Mexico, the Republic of Korea, the Russian Federation, Spain); finance (Argentina, Mexico, Singapore, the European Union); agriculture (Australia, Canada, Italy) and health (Argentina, the United Arab Emirates).

Among the most frequent policy measures introduced, G20 members and associated countries have implemented fiscal mechanisms to support the transition to a green economy, such as carbon pricing or carbon tax mechanisms (Indonesia, the Russian Federation, Singapore, Switzerland) and income tax relief, tax exemption, tax credits and other benefits to promote the green transition and advance the circular economy (Argentina, Canada, China, Indonesia, Italy, the Republic of Korea, Saudi Arabia, Spain, Türkiye). Non-fiscal incentives are also available and typically include subsidized loans and other financial instruments such as green loans, green insurance, or green funds (Argentina, Brazil, China, Italy, the Republic of Korea, the Russian Federation, Saudi Arabia) often aimed at de-risking investment in climate mitigation.

Technology upgrading in support of sustainable investments is also being promoted by many G20 members and associated countries. Incentive measures target innovative technologies such as hydro, solar or biomass energy production (Australia, Argentina, Brazil, Indonesia, Switzerland, Türkiye, the United Arab Emirates), research in clean hydrogen (Australia, Brazil, Canada, France, the Republic of Korea, the Russian Federation, Saudi Arabia, Singapore, Spain, the United Kingdom), feed-in premium mechanisms (Switzerland, Türkiye), low-carbon heating solutions (Argentina, Australia, the United Kingdom) and non-polluting vehicles (Australia, Italy, Mexico, the Republic of Korea). Technology upgrading is also encouraged through national climate change mitigation strategies (South Africa, Spain, the European Union), the implementation of strategic science and innovation projects to promote technological breakthroughs in carbon technologies (Brazil, Canada, China, the Republic of Korea), or through tailored initiatives to support companies to assess their sustainability situations and put forward action plans to improve them (the Russian Federation, the United Arab Emirates).

Some G20 members and associated countries have also developed national policies to support the emergence and growth of innovative and high-tech start-ups (Brazil, Canada, India, Italy, Spain), including by creating venture capital investment funds for early-stage clean technology companies (Australia). Support provided by G20 members and associated countries to innovative small and medium-sized enterprises (SMEs) also comprises advice, coaching and expert education programmes, assistance in patent search, and guidance for market entry and internationalization (Japan, the Republic of Korea, Switzerland). Furthermore, some G20 members and associated countries have implemented onshoring and localization programmes to promote the development of different industries across the green economy value chain (Indonesia, Saudi Arabia, South Africa), or to promote value chain integration in selected sectors that contribute to sustainable development, including manufacturing of electric bicycles, electric vehicles and their batteries, and solar water heaters and the recycling and hydrogen industries (Argentina, Indonesia).

Several G20 members and associated countries are promoting sustainable investment and responsible business conduct through national environmental, social and governance (ESG) policies (Brazil, Canada), the adoption of standards and regulations (Republic of Korea, Saudi Arabia), and the development of science-based classification mechanisms to assess the sustainability level of economic activities (such as the European Union Taxonomy for Sustainable Activities, the development of the K-taxonomy on green businesses in the Republic of Korea, the Russian Federation's Green Finance Taxonomy, or the United Kingdom's plans to introduce a "sustainable investment label") so that consumers and retail investors can clearly compare the sustainability of their choices. Several G20 members and associated countries have also developed green bond and sovereign green bond schemes with the aim of incentivizing private-sector firms to issue green bonds based on

internationally recognized environmental standards (China, Japan, the Republic of Korea, the Russian Federation, Singapore, Switzerland).

Investment promotion initiatives and investment facilitation instruments

Government entities from G20 members and associated countries, such as line ministries (China), investment promotion agencies (IPAs) (India, Switzerland), regulatory authorities in the energy and financial sectors (Argentina) and export credit agencies (Australia) are increasingly pushing forward sustainable development issues both in their inward and outward foreign direct investment (FDI) promotion efforts. Policy instruments include green development guidelines for overseas investment (China), information sharing about outward sustainable investment opportunities (Australia, South Africa), or financing support (e.g. loans, grants, blending) and investment guarantees and insurance schemes (Germany, Japan, South Africa, Spain, the United Arab Emirates, United Kingdom, United States and European Union). In some cases, these instruments have a specific focus on outward FDI and exports by SMEs (Australia, Italy, Switzerland).

Free trade agreements (FTAs) and international investment agreements (IIAs) are also highlighted by some G20 members and associated countries as key drivers to facilitate international investment (Australia, China, Singapore, Switzerland, the United Arab Emirates). The first “Green Economy Agreement” (GEA), a new type of trade policy instrument intended to facilitate investment while bolstering environmental governance and climate change mitigation capacity, is currently under negotiation between a G20 member and an associated country (Australia and Singapore). Other members are adopting new generation IIAs which seek to foster responsible business conduct and sustainable investment (Brazil, Canada). Finally, two G20 members have signed a Memorandum of Understanding to foster cooperation in promoting sustainable green investment (Indonesia and the Republic of Korea).

International partnerships and initiatives are also considered important forums for facilitating sustainable investment. These include the Beyond Oil & Gas Alliance (France), the Glasgow Financial Alliance for Net Zero (the United Kingdom), the Energy Transition Accelerator Financing (Argentina), the Net Zero Producers Forum (Canada, Saudi Arabia, the United States, and others), the Belt and Road Initiative (China), the Blue Dot Network (Australia, Japan, the United States), the Global Gateway (the European Union), the Middle East Green Initiative (Saudi Arabia) and the International Platform on Sustainable Finance (the European Union).

COUNTRY POLICY PRACTICES

Argentina

Strategies

Comprehensive strategies

In terms of general comprehensive strategies and views related to sustainable investment, Argentina welcomes G20 cooperation to consider ways to strengthen sustainable investment in all sectors related to the UN 2030 Agenda and its Sustainable Development Goals (SDGs).

- In doing so, the G20 should bear in mind the role of international cooperation to create a more predictable environment for productive and infrastructure sustainable investments, and their contribution to spurring trade, building productive and industrial capacity, stimulating job creation, and strengthening connectivity, all in line with the UN 2030 Agenda and its SDGs.

- Our country considers that sustainable investments are a key factor to generate more and better opportunities, especially for MSMEs, promoting thereby their further access to global value chains. In addition, it is important to promote technical assistance to developing countries to promote and facilitate sustainable investments in their economic, social and environmental dimensions in a balanced manner, in order to contribute to development and poverty eradication.

- Argentina is committed to play its part in the G20 TIIWG work on sustainable investment. This commitment is also shown by the participation of our country in the Structured Discussions on Investment Facilitation for Development in the WTO framework since its origins in 2017. We believe that Investment facilitation is paramount to the post-pandemic recovery and to achieving the SDGs. We are convinced that "the setting up of a more transparent, efficient and investment-friendly business climate by making it easier for domestic and foreign investors to invest, conduct their day-to-day business and expand their existing investments" (WTO 2020) will not only have a direct impact in development and in strengthening international cooperation, but will also play a relevant role in revitalizing global investment, especially for developing countries. As a virtuous circle, investment facilitation can help countries attract new investments and retain existing ones, while at the same time increasing confidence to expand further investment facilitation measures. This would create a positive environment to transform investment flows into productive activities of sustainable economies, also encouraging technical assistance and capacity-building for developing countries.

With regards to the national strategies in specific sectors, it is worth to highlight some of the particular programs and strategies for sustainable investment developed in certain sectors related to the achievement of sustainable development, such as energy, industry, mining, health, and finance, among others, as follows:

ENERGY SECTOR-RENEWABLE ENERGIES: Argentina has four incentive programs for the creation and development of the renewable sector: (i) "Large-scale Renewables"(RENOVAR), (ii) "Term Market"(MATER), (iii) "Renewables in isolated rural markets"(PERMER) and (iv) "Distributed Generation".

(i) "Large-scale renewables": RENOVAR - It is an electricity supply program from renewable sources managed by the wholesale operator CAMMESA, following the demand and under the supervision of the Secretary of Energy, through national and international open tender processes for project presentations. It dates from 2016 and is currently in force. It has a scheme that articulates different levels of sovereign payments guarantees, structured in the "Fund for the Development of Renewable Energies" (FODER), which, together with the World Bank Guarantees Program, offer a higher level of security to the awarded projects.

(ii) MATER: It is a contracting mechanism between private parties as an alternative to the joint purchase of renewable electricity. It reaches large users with an average annual demand greater than 300 kW, who negotiate the contractual conditions directly with the renewable generator.

(iii) Distributed Generation: This regime for the promotion of "Renewable Energy Integrated into the Public Electricity Network" establishes the regulatory framework so that all citizens connected to the electricity network can generate energy for their own consumption in households, SMEs, large industries, businesses, manufacturing, agriculture, public entities and bodies, among others. The excess energy generated may be injected into the network, receiving compensation for it. The user-generators (UG) will also be able to access a series of promotional benefits.

(iv) PERMER: It is an initiative that provides access to energy from renewable sources to the country's rural populations that do not have access to electric networks because they are far away from the distribution networks. It is the first program in the promotion of renewable energies available in the country. It consists of various initiatives to provide energy to households, rural schools, communities and micro and small enterprises.

- **ENERGY EFFICIENCY:** Argentina has several programs for the promotion and adoption of energy efficiency measures in several sectors, as follows:

-**RESIDENTIAL SECTOR:** National Housing Labelling Program: Its general objective is to implement a housing energy efficiency certification system, unified for the entire national territory, which allows existing households or households under construction to be classified according to their degree of efficiency in the global primary energy requirement, through an energy efficiency label.

- **PRODUCTIVE SECTOR:** "Learning Networks in Energy Management Systems" (SGEn): Their aim is to improve the energy performance of the organizations that comprise it, collaboratively supporting the implementation

process of Energy Management Systems. They are made up of a group of representatives of between ten and fifteen companies who analyze their energy performance by sharing information on the network, setting a joint goal based on the improvement potentials identified, and meeting periodically to exchange experiences, queries, and progress. "Energy efficiency labelling (EEE) for electrical and gas appliances": Development of labelling regulations and minimum standards for products or appliances that provide an energy service through the use of some form of energy, or whose use has an impact on energy consumption.

- PUBLIC SECTOR: "The Program for the Rational and Efficient Use of Energy in Public Buildings" (PROUREE): Its objective is to reduce the levels of consumption in the buildings of the National Public Administration through the implementation of measures to improve energy efficiency, the introduction of criteria for energy management, and the awareness of the staff in the rational use of resources. - Efficient Lighting Plan (PLAE): It is a national plan for the efficient consumption of energy on public roads, through the replacement of existing lights with LED technology.

- TRANSPORT SECTOR: Labelling of Light Vehicles: It is a tool to position efficiency as a decision variable in the purchase of vehicles up to 3,500 kg. Mandatory and gradual implementation. - Intelligent Transport Program (PTI): It is a voluntary public-private alliance made up of transport companies, freight providers, chambers, federations, providers of efficiency technologies and services, universities and related government agencies, which aim is to promote the implementation of good practices for efficient transport.

- INDUSTRY SECTOR: In 2021, the "Green Productive Development Plan" was launched, which stems from Argentina's commitment to the achievement of sustainable development in its economic, social and environmental pillars in a balanced manner, as well to combat of climate change. It includes a set of initiatives to implement a new sustainable and inclusive paradigm in productive systems. It articulates the State, the private sector and civil society to build a sustainable productive structure. The plan is based on 4 axes: i) Industry for a sustainable economy. Promote electromobility, renewable energies, the knowledge economy, and the renewal of industrial sectors; ii) Encourage the incorporation of the "reuse, recycle and reduce" logic, from product and process design to recycling and final disposal. Promote consumer orientation towards eco-design, reducing environmental impacts; iii) Sustainable production. Adapt production towards environmental protection and promote energy efficiency; and iv) Sustainable industrialization for the use of natural resources. Integrate local stakeholders and regional economies, with environmental controls for the industrialization of natural resources.

- MINING-LITHIUM: The Mining Investment Law, Law No. 24,196, is the main pillar of the regulations, since it establishes that the mining activity is subject to the general tax regime with the modifications established by law. One of the main features is the fiscal stability offered to the subjects registered in the regime for new undertakings and expansions.

The benefits of the law cover the different stages of project development: In the initial stages, all the investments for prospecting, exploration, and studies required to achieve technical and economic feasibility may be deducted from income tax. In addition, the Value Added Tax (VAT) charged on the purchase or import of goods or services used is refunded after twelve fiscal periods since its calculation. During the construction or expansion of projects, companies are exempted from the payment of tariffs on capital goods. Finally, up to 5% of the operating costs of extraction may be calculated as a payment on account of income tax.

Lithium mining contributes to technological development, the development of electromobility and energy transition, and thereby to sustainable development. The projections estimate that by 2030, almost 80% of lithium demand will be destined for the electromobility industry.

The political decision of the national and provincial governments is to take advantage of this international opportunity in order to encourage investments, increase production, develop communities and generate employment opportunities, strengthening the mining value chain.

- HEALTH SECTOR: The public and private production of essentials related to biosimilars, vaccines and other biologicals, has developed current local manufacturing capacities, both public and private, regarding pharmaceuticals, biotechnology and nanotechnology.

- FINANCIAL SECTOR: The National Securities Commission of Argentina (CNV) was a pioneer in the promotion of Sustainable Finance in the Argentine capital market, and since 2018 it has been dedicated to the preparation of educational documents that cover various aspects of sustainability. CNV's first step was the promotion of sustainable investments, through the document 'Guidelines for issuance of green, social and sustainable securities in Argentina' (Guidelines), which constitutes the voluntary framework for issuing GSS bonds, and contains standards that were developed based on the International Capital Market Association (ICMA) Principles.

In addition, in 2020 the CNV created the Sustainable Finance Program (internal plan), which aims to raise awareness among local capital market players about the relevance of integrating environmental, social and governance (ESG) factors into investment decisions.

As part of the Program, and to continue promoting the demand for sustainable products, in 2021 the 'Guide for socially responsible investment in the Argentine capital market' was approved -whose objective is to publicize the scope, objectives and advantages of socially responsible investment- and a special regime for sustainable collective investment products -which involves the creation of funds and financial trusts that invest in sustainable assets, including green, social and sustainability (GSS) bonds- were approved.

Within the Program, the 'Guide for issuance of social, green and sustainable bonds' was also launched, which presents the content of the Guidelines in a summarized and didactic way.

It is noteworthy that all the initiatives were approved after submitting them to public consultation and receiving comments and suggestions from citizens.

Finally, the CNV is currently working with the IDB on a technical assistance consultancy to create its 'Sustainability Strategy and Roadmap' and determine its objectives and sustainable activities in the short, medium and long term.

Policies

Enabling regulatory framework

It is worth to highlight the following enabling regulatory frameworks related to sustainable investments in some relevant sectors:

- ENERGY SECTOR: Law 27,424 - Regime for the Promotion of Distributed Generation of Renewable Energy integrated into the Public Electricity Network- ; Law 27,191 -National Development Scheme for the Use of Renewable Energy Sources for the Production of Electric Power- Modification; Law 26,190: National Development Scheme for the use of renewable energy sources for the production of electricity; Law 25,019: National wind and solar energy regime; Law 26,093: Regulation and promotion regime for the sustainable production and use of biofuels; Decree 140/2007: National Program for the Rational and Efficient Use of Energy; Decree 986/2018: Regime for the Promotion of Distributed Generation of Renewable Energy Integrated into the Public Electricity Network.; Regulatory decrees of the Laws and resolutions of procedures (supply contracts and provision of distributed generation for minor operations).

- INDUSTRY SECTOR: "Green Productive Development Plan" - Resolution of the Ministry of Productive Development N° 352/2021 - <http://servicios.infoleg.gob.ar/infolegInternet/anexos/350000-354999/351956/norma.htm>

- "Soluciona Verde" Program - Resolution of the Ministry of Productive Development N° 674/2021 <http://servicios.infoleg.gob.ar/infolegInternet/anexos/355000-359999/355718/norma.htm>

- "Circular Economy Program" - Resolution of the Ministry of Productive Development N° 767/2021 - <http://servicios.infoleg.gob.ar/infolegInternet/verNorma.do?id=356631>

- "Recycling Cooperative Strengthening Projects" - Resolution of the Ministry of Productive Development N° 846/2021 - <http://servicios.infoleg.gob.ar/infolegInternet/anexos/355000-359999/357345/norma.htm>

- HEALTH SECTOR: Law 27,506. "Regime for the Promotion of the Knowledge Economy": This regulatory framework provides tax benefits for industrial sectors such as biotechnology, nanotechnology, biology, biochemistry, microbiology, etc.

- Law 26,270. "Promotion of Modern Biotechnology", which promotes the development and production of modern biotechnology in the national territory.

FINANCIAL SECTOR: Despite being voluntary, the Guidelines and the Guides adopt the standards of the ICMA Principles for issuance of GSS bonds.

For its part, the special regime for sustainable collective investment products does constitute a regulatory framework that must be followed to create sustainable funds and trusts.

Investment facilitation and risk mitigation

The following examples in investment facilitation and risk mitigation in regards to investment for sustainable development can be mentioned in the energy sector:

RENOVAR: As indicated, the "Fund for the Development of Renewable Energies" (FODER) was instrumented, which, together with the World Bank Guarantee Program, offer a higher level of security to awarded projects.

PERMER: It is a project financed by the IBRD (World Bank) For Distributed Generation: Fund for the Distributed Generation of Renewable Energies (FODIS). The following examples in investment facilitation and risk mitigation in regards to investment for sustainable development can be mentioned in the energy sector:

RENOVAR: As indicated, the "Fund for the Development of Renewable Energies" (FODER) was instrumented, which, together with the World Bank Guarantee Program, offer a higher level of security to awarded projects.

PERMER: It is a project financed by the IBRD (World Bank) For Distributed Generation: Fund for the Distributed Generation of Renewable Energies (FODIS).

Technology upgrading

The following relevant national experiences in promoting technology upgrading in support of sustainable investment can be mentioned:

- ENERGY SECTOR: The aforementioned programs and their results (see sections "Comprehensive strategies", "Enabling regulatory framework and "Investment and risk mitigation") are an example of energy technology upgrading policies in support of sustainable investment, including renewables, clean energy and energy efficiency.

- DIGITAL ECONOMY: Through the Digital Documentary Management Ecosystem, as implemented by the National Secretariat of Technological Innovation, administrative processes are streamlined and improved. Additionally, the digital signatures allow for the creation and linking of documents and digital files. This is due to the support in each instance of the process: with surveys and training, and with the support of experts in digital document management. To implement the Program, the starting point is a selection process from a constructed eligibility matrix, where the organization levels are analyzed and the political, economic, social, technologic, ecologic and legal factors of the applicant local States are individualized. One of the axes of the Federal Digital Public Transformation Program is sustainability, due to the saving of paper and printing ink, storage and transport of printed documents. Therefore, our promotion of technological upgrading is supportive of sustainable investments for the whole public sector in Argentina. In 2026, the Program aims to achieve the digitalization of the public administrations in 70% of Argentina's provincial jurisdictions and the digitalization of 250 local governments. For further information, please consult: Federal Public Digital Transformation Program: <https://www.boletinoficial.gob.ar/detalleAviso/primera/267506/20220728>

Policy support

ENERGY AND INDUSTRY SECTORS: please see sections "Comprehensive strategies" and "Enabling regulatory framework". HEALTH SECTOR: Interdisciplinary initiative integrating the Ministry of Health, the National Health Products Regulatory Agency (ANMAT) and Chambers of Manufacturers to foster Clinical Research beyond COVID-19.

Access to finance

ENERGY SECTOR: Please see section "Comprehensive strategies", Law 27,191 (National Development Scheme for the use of renewable energy sources for the production of electricity). In addition, funds from international cooperation and International Financial Institutions (IFIs) are received. FINANCE SECTOR: All CNV's initiatives regarding sustainable finance can be found on its website: <https://www.argentina.gob.ar/cnv/finanzas-sostenibles-cnv>

Development impact

Some of the examples of the country's experiences in promoting development benefits from investments in sustainable development sectors, are as follows:

- INDUSTRY SECTOR: Since 2021, the "Green Productive Development Plan" has been established with the objectives to promote a federal, inclusive and sustainable development, adding value, generating decent jobs, and combatting climate change, within the framework of relevant international agreements, and promoting productivity and competitiveness. In this regard, the following actions and programs are being developed:

- i) SMEs Plan. Training through webinars on sustainability for SMEs,
- ii) "Program for the Development of the Solar Thermal Industry", to strengthen the supply of solar water heaters through technical assistance and product certification,
- iii) "Program for the Development of the Circular Economy". Comprehensive policy to increase the productive capacity of cooperatives in the recovery of waste, focusing on plastics, paper and cardboard, electrical waste and waste of electronic equipment and used vegetable oil,
- iv) "Program for the Development of Suppliers". Strategic sectors include manufacturers of equipment for the recycling industry; equipment for the control of effluents, emissions and waste; and energy-efficient industrial engines.
- v) "Promotion of Sustainable Consumption". Through the "School of Education for Consumption", consumers have access to courses on sustainable consumption from an environmental, social and economic perspective,
- vi) the "Solucion Verde Program". Development, implementation and adoption of innovative solutions, products or services generated by the "Knowledge Economy" sectors that contribute to the transition towards sustainable development,
- vii) Manufacture of electric bicycles. Promotion of the integration of the value chain of electric bicycles.
- viii) "Sustainable Mobility". Promotion of the demand and supply of non-conventional mobility technologies with a predominant role in public passenger transportation and National Public Administration vehicles,
- ix) Hydrogen Production. Development of the hydrogen value chain,
- x) "National Renewable Cluster". Strengthening of the productive cluster of equipment, services and technology in renewable generation together with the provinces, based on wind, solar and small hydroelectric generation, and xi) "Recycling and Plastic Waste Reduction Pilots". Creation of a scalable modular platform to create technological and productive capacities in the integral use of plastic waste, etc.

- FINANCIAL SECTOR: Please refer to the answer provided in the 'Strategies' column, since, through the Guidelines and the Guides, CNV promotes the issuance of GSS bonds that contribute to the fulfilment of the 2030 Agenda and its SDGs.

Promotion	<p>Investment promotion initiatives</p> <p>Some additional examples of national efforts to promote sustainable investment in certain relevant sectors are the following:</p> <ul style="list-style-type: none"> - ENERGY SECTOR: Program RENOVAR (the different rounds of the program took place between 2016 and 2019) - FINANCIAL SECTOR: Guidelines for issuance of green, social and sustainable securities in Argentina. Guide for socially responsible investment in the Argentine Capital Market. <p>Guide for issuance of social, green and sustainable bonds. Special regime for sustainable collective investment products. For further information, please consult: https://www.argentina.gob.ar/cnv/finanzas-sostenibles-cnv</p>
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International collaboration	<p>Investment facilitation instruments</p> <p>Some of the examples of our collaboration with other countries related sustainable investments are as follows:</p> <p>ENERGY SECTOR: Current international collaborations are related to the exchange and technical training and promotion of renewable energies and energy efficiency. Argentina is a member of the International Renewable Energy Agency (IRENA) and has access to the new Energy Transition Accelerator Financing (ETAFA) and thus our country looks forward to benefiting of its funds with a view to further develop renewable energies.</p> <p>The international collaborations are focused on the promotion and exchange of information, mainly through the International Energy Agency and its Energy Efficiency Hub, as well as the environmental international initiatives. For further details, see column titled Active promotion of technology for development.</p> <p>HEALTH SECTOR: The Pan American Health Organization (PAHO) selected two regional centers for the development and production of mRNA vaccines in Latin America in Argentina and Brazil, in order to address COVID-19 and future infectious disease challenges.</p> <p>Private sector biopharmaceutical company Sinergium Biotech has been selected as a hub in Argentina and will partner with biotech company mAbxience — belonging to the same group — to develop and manufacture the vaccine’s active ingredients. Both companies have extensive experience in the production and development of vaccines and other biotechnological medical products.</p> <p>The selection is the result of a call for expressions of interest promoted by the WHO in April 2021 in which manufacturers and public and private research institutions were invited to contribute to the establishment of technology transfer centres for mRNA vaccines against COVID-19 in emerging economies. The initiative was supported by PAHO/WHO global partners, such as the Medicines Patent Pool.</p> <p>The call attracted some thirty expressions of interest from Latin American companies and scientific institutions. To ensure sustainability and further increase regional capacity, PAHO launched a second call for expressions of interest in August 2021. This call was aimed especially at manufacturers interested in being part of a regional consortium to supply pharmaceutical-grade reagents and other inputs for the production of mRNA vaccines.</p>
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Outward FDI promotion schemes

ENERGY SECTOR: See column related to "investment facilitation and risk mitigation"

Active promotion of technology for development

Some of the examples of Argentina’s support for the active promotion of technology dissemination in certain sectors related to sustainable development are as follows:

ENERGY SECTOR: The active participation in forums such as IRENA, the International Energy Agency (Energy Efficiency Hub), the Latin American Energy Organization (OLADE), the Organization of American States (OAS) and its Energy and Climate Partnership of the Americas (ECPA) and relevant thematic initiatives such as the Global Wind Energy Council (GWEC), constitute the way to promote the development of renewable technologies and energies, while facilitating exchange of experiences with other countries. The South-South exchanges promoted by IFIs, such as the World Bank, have also been forms of promotion of renewables, even there have been challenges for their strengthening since 2020, given the pandemic.

HEALTH SECTOR: Vaccine, therapeutics and diagnostics manufacturing, and research is a key topic for Argentina. We believe that any collaboration activities in this regard should be based on the principles of equity, mutual cooperation and solidarity. Also, we understand this topic is correlated to effective technology transfer, experience sharing, and intellectual property licensing.

Regarding preparedness and response to health emergency capacities, Argentina is participating on the G20 Health Track in the Global South Multilateral Meetings led by the Indonesian Presidency. This is an initiative aimed at creating a Manufacture-Research Hub Collaboration for COVID-19 Vaccines, Therapeutics, and Diagnostics (VTD). Argentina also welcomes that the WTO, at its 12th Ministerial Conference (June 2022), has been able to reach some multilateral agreements, including regarding the intellectual property waiver for vaccines against Covid-19. Our country hopes that the current negotiations allow to complete and finalize these partial agreements towards the extension of the waiver to diagnoses and treatments related to COVID-19.

DIGITAL ECONOMY: Argentina is promoting the conclusion of bilateral or multilateral agreements with different States to promote the legal recognition of electronic documents signed with digital signatures, which favors the development of electronic commerce, among other issues. This is of relevance in the context of the achievement of a strong, sustainable and inclusive post-pandemic recovery, given the growth of the e-commerce and the potential for MSMEs to further integrate to markets through this type of trade.

Australia

Strategies

Comprehensive strategies

The Australian government manages and delivers a number of policies and programs to underpin the supply of reliable, secure and affordable energy. Examples include:

Powering Australia, which includes:

- Rewiring the Nation
- National Electric Vehicle Strategy
- National Reconstruction Fund
- Powering the Regions
- Community Batteries and Solar Banks

Climate Active

Establishing Offshore Renewable Energy Infrastructure

Emissions Reduction Fund

Future Fuels Strategy

Indo-Pacific Carbon Offsets Scheme

International climate change commitments

National Greenhouse and Energy Reporting (NGER) scheme

National Hydrogen Strategy

Renewable Energy Target Scheme

Safeguard Mechanism

Trajectory for Low Energy Buildings

Further information on Australia's energy strategies and frameworks can be found at <https://www.dcceew.gov.au/climate-change/strategies>

Policies

Enabling regulatory framework

Renewable Energy Target Scheme

The Renewable Energy Target (RET) scheme encourages renewable electricity generation. It aims to reduce greenhouse gas emissions from the electricity sector.

The Australian government provides policy advice, implementation support and oversees the operation of the RET scheme in line with the RET legislation:

Renewable Energy (Electricity) Act 2000

Renewable Energy (Electricity) (Small-scale Technology Shortfall Charge) Act 2010

Renewable Energy (Electricity) (Large-scale Generation Shortfall Charge) Act 2000

Renewable Energy (Electricity) Regulations 2001

Establishing offshore renewable energy infrastructure

Australia has many areas that may be suitable for offshore renewable energy infrastructure.

We regulate offshore renewable energy infrastructure in Australian Commonwealth waters under the Offshore Electricity Infrastructure Act 2021 and the associated Regulatory Levies Act and Consequential Amendments Act.

The Trajectory for Low Energy Buildings

The Trajectory for Low Energy Buildings is Australia's national plan to achieve zero energy and zero greenhouse gas emissions attributable to commercial and residential buildings by 2050. It is supported and enabled by Australia's National Construction Code, which is a performance-based regulatory framework covering new buildings and major refurbishments of existing buildings.

Market demand for energy efficient buildings is supported by the Commercial Building Disclosure Program, which requires energy efficiency information to be provided when commercial office space of 1000 square metres or more is offered for sale or lease. Building owners can use the National Australian Built Environment Rating System to obtain a simple, reliable, and comparable sustainability measure that can be used to compare a wide range of buildings, including hotels, shopping centres, apartments, offices and data centres.

Australian Energy Ministers have recently updated the NatHERS Whole of Home rating system to enable building owners, assessors and builders to demonstrate compliance with the increased energy efficiency requirements in the National Construction Code 2022. The new assessment system builds on the existing thermal performance assessment by expanding to include information about the energy use of household appliances.

Flexible building energy efficiency regulation in Australia is complemented by regulation on the sale or supply of high energy using household and commercial appliances and equipment under the Greenhouse and Energy Minimum Standards Act 2012. Appliances and equipment covered by a GEMS determination must meet minimum energy performance standards and other applicable requirements, including the display of an energy rating label.

Investment facilitation and risk mitigation

Foreign investment promotion and assistance available from Austrade and Australian state and territory governments:

As Australia's foreign investment promotion agency, the Australian Trade and Investment Commission (Austrade) promotes Australia as a destination for foreign investment and works to attract and facilitate investment into renewable energy projects and technologies to lower emissions. Austrade also coordinates work across state and territory governments to assist investors with various aspects of the investment process, as well as offering a range of programs to encourage business, innovation and growth within their jurisdictions.

Examples available at <https://www.austrade.gov.au/international/invest/investor-updates/2021/foreign-investment-helping-australia-transition-to-a-green-future>

Technology upgrading

Where Australia invests in low emissions technologies:

We are investing in low emissions technologies and other projects to reduce Australia's emissions.

We do this through agencies like the:

Australian Renewable Energy Agency (ARENA)

Clean Energy Finance Corporation (CEFC)

Clean Energy Regulator (CER), which administers the Emissions Reduction Fund (ERF).

The map at the link below shows where these government agencies are investing in and enabling low emissions projects and technologies:

<https://www.dccew.gov.au/climate-change/strategies/where-we-invest-in-low-emissions-technologies>

Policy support

The Commonwealth Science Industry Research Organisation (CSIRO), our national science agency, is recognised internationally for its quality research and is Australia's largest holder of patents. Its science and engineering skills, equipment and international connections are helping Australian manufacturers penetrate new markets and be environmentally sustainable.

Access to finance

Clean Energy InvClean Energy Investment and Finance

The Australian Government supports clean energy innovation across the spectrum of research and development, demonstration and deployment. Research and development grants are provided by the Australian Renewable Energy Agency (ARENA), the Australian Research Council and the CSIRO. The Clean Energy Finance Corporation (CEFC) through its Clean Energy Innovation Fund invests venture capital in early-stage clean technology companies. As well as its direct investments into these companies, the CEFC also supports the provision of seed capital via specialist accelerator co-investors. The Innovation Fund is operated in consultation with ARENA. Additionally, the CEFC promotes investment in clean energy technologies and projects through the provision of debt and equity.

Australian Renewable Energy Agency

The Australian Renewable Energy Agency is a statutory authority established by the Australian Renewable Energy Agency Act 2011, which commenced operations on 1 July 2012. ARENA provides research, development and deployment grant funding to improve the affordability and increase the supply of renewable energy in Australia.

Clean Energy Finance Corporation

The Clean Energy Finance Corporation (CEFC) is a statutory authority established by the Clean Energy Finance Corporation Act 2012, which commenced operations on 1 July 2013. The CEFC's mission is to accelerate investment in Australia's transition to net zero emissions. The CEFC uses debt and equity funding to promote investment in clean energy technologies. The CEFC does this through direct investments, which attract private sector finance, as well as making indirect investments through the provision of wholesale debt facilities to strategic co-financing partners.

Development impact

Landcare

Landcare is a unique grass-roots movement that started in the 1980s to tackle degradation of farmland, public land and waterways. The movement has expanded and evolved since then, and is achieving results Australia-wide. Individuals and groups practice sustainable agriculture and management of natural resources such as soil, water and native vegetation.

Australian Government investment in Landcare

We recognise and support the important role that community, farming and industry organisations play as part of the Landcare movement.

This involvement builds community capacity to sustainably manage natural resources including reducing adverse impacts and improving the condition of soils, water, vegetation and on-farm biodiversity.

Good condition of natural resources underpins the productivity and profitability of the agriculture, fisheries and forestry industries. It also delivers wider community and environmental benefits.

Smart Farms

The Australian Government has allocated \$136 million to the Smart Farms program (2017-18 to 2022-23). The funding supports the development and uptake of best practice, tools and technologies for farmers and land managers, fishers, foresters and regional communities.

This will help improve the protection, resilience and productive capacity of our soils, water and vegetation which underpin successful primary industries and regional communities. Smart Farms will focus on improving land management practices and biodiversity. It will also support agricultural systems to adapt to significant changes in climate, weather and markets.

Building Landcare Community and Capacity

The Building Landcare Community and Capacity Program (\$39.51 million over 6 years) provides ad-hoc grants for initiatives that directly support the Landcare community and farmer organisations. Activities suitable for funding are based on consultation and emerging issues. 53 projects have been funded to date.

These activities include, but are not limited to, awards and recognition for excellence among the Landcare community; leadership development opportunities; conferences and networking events; communication and community engagement activities and other projects that strengthen the social and technical capacity that underpins the delivery of Landcare; and efforts by Landcare and farming groups to deliver on-the-ground improvements in land management.

Promotion

Investment promotion initiatives

Initiatives to promote renewables, clean energy and energy efficiency

Renewable Energy Target Scheme

Offshore renewable energy infrastructure

Growing Australia's hydrogen industry

More information about initiatives to promote renewable energy can be found at <https://www.dcccew.gov.au/energy/renewable>

Australia's energy strategies and framework

Policy documents and examples of Australia's energy strategies and framework can be found at <https://www.energy.gov.au/government-priorities/australias-energy-strategies-and-frameworks>

The Australian Trade and Investment Commission (Austrade)

The Australian Trade and Investment Commission—Austrade—promotes Australian trade, investment, tourism and education to the world.

More information about Austrade can be found at <https://www.austrade.gov.au/about/about>

International collaboration

Investment facilitation instruments

Free Trade Agreements

Free Trade Agreements are instruments that Australia relies on to facilitate investment with other countries.

A summary of Australia's FTAs that are currently in force can be found at <https://www.dfat.gov.au/trade/agreements/trade-agreements>

Austrade events

The Australian Trade and Investment Commission (Austrade) organises events to inform Australian industries of conditions overseas in countries where businesses would like to invest.

More information about these events can be found at <https://www.austrade.gov.au/events/events>

Ministerial Led Business Missions

Overseas visits by Federal Government Ministers help advance Australia's diplomatic and economic interests and promote the international competitiveness of Australian businesses. Austrade manages and coordinates ministerial led business missions including by the Minister for Trade and Tourism and the Prime Minister.

More information can be found at <https://www.austrade.gov.au/events/federal-government-led-business-missions>

Outward FDI promotion schemes

Export Finance Australia

Export Finance Australia provides finance solutions for Australian exporters and overseas infrastructure development that delivers benefits to Australia.

As the Government's export credit agency, it is an integral part of Australia's international trade and investment focus – supporting businesses, jobs and the community. This can include helping businesses to setup overseas operations.

It plays a critical role for its customers and partners by supporting SMEs, corporates and governments to realise export opportunities and by helping finance sustainable infrastructure in the Indo-Pacific region.

Export Finance Australia works together with banks, other government agencies and its partners to drive international success.

More information about Export Finance Australia can be found at <https://www.exportfinance.gov.au/>

Active promotion of technology for development

Agricultural development and food security

Australia is a trusted regional leader in agricultural and fisheries innovation. Through our development program we are harnessing our expertise to help communities in our region to achieve greater productivity, sustainability, climate-resilience and food security.

Australia supports a range of agricultural initiatives across its bilateral, regional and global programs. Australia also has highly valued technical and managerial capabilities in agricultural research which are being harnessed to improve agricultural productivity in developing countries. Through the Australian Centre for International Agricultural Research (ACIAR), the Government funds research to improve the knowledge and understanding of the challenges our partner countries face. The research also provides an evidence base to evaluate the impact of our work and improve the quality of the Australian aid program. In addition, the Australian Department of Foreign Affairs and Trade (DFAT) and ACIAR work closely with research institutions such as the Consultative Group on International Agricultural Research (CGIAR), the Commonwealth Scientific and Industrial Research Organisation (CSIRO), and research organisations in developing countries to sustainably increase agricultural productivity and enhance rural livelihoods.

More information can be found at <https://www.dfat.gov.au/development/topics/development-issues/agricultural-development-and-food-security>

Brazil

Strategies

Comprehensive strategies

The Investment Partnerships Programme (PPI) is one of the largest initiatives for the attraction of private investments for infrastructure in the world, resulting in around USD 44,56 billion as concession fees and USD 230 billion as expected investment (2016-2022). The programme has enhanced legal certainty for investors, through regulatory improvements and has also incorporated a sustainability/ESG perspective, regarding the following aspects: environmental (renewable energy, management of solid waste/sanitation, reduction of emissions, protection of natural resources); social (public policies, social rights); governance (coordination, control, risk management, transparency).

Policies

Enabling regulatory framework

(i) Law No. 14.026/2020 established the "New Regulatory Framework for Sanitation in Brazil". It aims at the universalization of access to water and sewage treatment in the country. This law provided for a more efficient institutional framework, having the National Agency of Waters (ANA) responsible for introducing general regulations and guidelines based on the best regulatory practices in the sector and performance goals. (ii) In 2020, the National Investment Committee (Coninv) of the Brazilian Foreign Trade Chamber (CAMEX) approved the mandate for the elaboration of an Action Plan on Responsible Business Conduct (PACER) as part of the National Investment Plan 2020-2022. Thus, the Brazilian Government has sought to include initiatives related to ESG policies within the scope of the Plan with the aim of promoting more qualified investments and encouraging the implementation of best practices both within the government and in the business sector.

Investment facilitation and risk mitigation

(i) In 2017, the Central Bank (BCB) launched its Social-Environmental Responsibility Policy. Since then, the National Monetary Council (CMN) Resolution No. 4,943/2021 has redefined risk management to include social, climate and environmental risk, which has to be monitored and reported. Resolution CMN No. 4,945/2021 provided that all financial institutions shall establish a Social, Environmental and Climate Responsibility Policy. Resolution BCB No. 140/2021 restricts access to credit to the agricultural sector in case of violation of social, environmental and climate protection provisions. (ii) In 2019, the Brazilian Foreign Trade Chamber (CAMEX) launched the Direct Investments Ombudsman, a "single window" for investors. (iii) Law nº 10.233/2001 establishes as a principle for land transport the compatibility with the preservation of the environment. The government monitors the concessions, to ensure protection of ecosystems, as well as the mitigation or compensation of the impacts of highways.

Technology upgrading

(i) There are federal funding schemes to support sustainable technologies in the following fields: sustainable fuels; biodiversity; bioeconomy; forest management and reforestation; atmospheric studies; and others. There are also direct investments in research infrastructure to enable these investigations (e.g. SALAS Laboratories, Mamiraua Institute, Torre ATTO, Synchrotron Light Sirius). Startup programs support sustainable innovation, with financial and guidance, in fields such as bioeconomy (SEBRAE's Inova Amazonia). Many other multi thematic programs include sustainable cities, circular economy, environment, energy efficiency, renewable energies, and treatment of pollution, in their priority areas (Inovativa, Finep Startup, BNDES Garagem). There are also institutional projects such as the Brazilian Initiative for Hydrogen (IBH2). (ii) Brazil is part of the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).

Policy support

The Sustainable Airports program, launched in 2019, aims to monitor the development of environmental management in airports and disseminate the sustainable initiatives adopted by airport operators, promoting the reduction of the impacts of civil aviation on the environment. The initiative is in its third edition, and it is a non-regulatory incentive instrument aimed at the dissemination of good environmental management practices in airports and the recognition of proactive initiatives related to the sustainability of air operations.

Access to finance

The National Bank of Social and Economic Development (BNDES) fosters sustainable development and better living conditions by offering credit for financial investments and through specific funds, such as Social Fund, Climate Fund and Amazon Fund. BNDES also supports projects in renewable energy and energy efficiency; sanitation and recovery of brownfields; corporate social investments, social and productive inclusion and microcredit; recovery and preservation of biomes; and urban development and sustainable mobility, healthcare, education and public safety. Examples of recent initiatives: BNDES Parks and Forests; Floresta Viva; RenovaBio; BNDES Blended Finance initiative; BNDES ESG Credit Program. Regarding risk management, recent advances are the reformulation and expansion of the Bank's Exclusion and Conditional Support List and the updating of its Socio-environmental Management of Operations norm.

Development impact

The Federal Government has placed direct funding schemes to support sustainable technologies in the following fields: sustainable fuels for different modes of transportation; biodiversity; bioeconomy; forest management and reforestation; atmospheric studies; and others. There are also direct investments in research infrastructure to enable these investigations (e.g. SALAS Laboratories, Mamiraua Institute, Torre ATTO, Synchrotron Light Sirius). On the side of innovation, there are several startup programs to support sustainable innovation, with financial and guidance, in the fields such as bioeconomy (SEBRAE's Inova Amazonia). Many other multi thematic programs include sustainable cities, circular economy, environment, energy efficiency, renewable energies, and treatment of pollution, in their priority areas (Inovativa, Finep Startup, BNDES Garagem).

Promotion

Investment promotion initiatives

In order to encourage ports to create/encourage and strengthen the adoption of equipment and facilities using renewable energies, there is the RenovaBio Project, aiming to avoid the emission of 620 million tons of CO2 by 2030. And to increase the participation of sustainable biofuels in the Brazilian energy matrix, expanding the consumption of biofuels, advanced biofuels and energy efficiency, there are the following programs: "National Program for the Production and Use of Biodiesel"; Future Fuel Program, Energy Systems for the Future Project"; "ABC+ Program; Andus Project; ProAdapta Project; Pomuc Project" - Aims to encourage initiatives to reduce vulnerability in terms of water, energy, food, social and environmental security, including urban centers.

International collaboration

Investment facilitation instruments

Brazil has developed its own investment agreement model: the Investment Cooperation and Facilitation Agreement (ICFA), which provides legal protection while enshrining investment facilitation as a key element. It creates a Joint Committee which establishes cooperation agendas in areas that improve the investment environment, including the promotion of sustainable investment. ICFA contemplates modern social and

corporate responsibility provisions (Responsible Business Conduct). By committing to the ICFA, investors aim at achieving the highest possible level of contribution to the sustainable development of the host State and the local community, through the adoption of a high degree of socially responsible practices, based on the OECD Guidelines for Multinational Enterprises. Furthermore, the Parties recognize it is inappropriate to encourage investments by lowering the labor and environmental standards.

Outward FDI promotion schemes

See column "Investment facilitation instruments".

Active promotion of technology for development

Action plan to reduce greenhouse gas emissions from civil aviation. Every three years, The Ministry of Infrastructure and the National Civil Aviation Agency bring together stakeholders from the aviation sector to update the Action Plan. The document is part of the commitment signed with the International Civil Aviation Organization - through resolution A37-19 and aims to present the current state of the work developed by stakeholders in the context of climate change mitigation and their plans for future advances. The impact of the proposals is assessed quantitatively, estimating a base scenario for CO2 emissions and the effect of the measures adopted.

Canada

Strategies

Comprehensive strategies

Canada welcomes Indonesia's focus on sustainability and investment, and on how these two areas complement each other. Foreign Direct Investment (FDI) plays an important role in the context of green economic recovery. This is why Canada has been working with policies that support inward FDI attraction in renewables, clean tech and in sectors that support sustainability. Some examples of policies, strategies and initiatives are listed below. Canada is also promoting sustainable investment abroad, especially in developing countries, through initiatives such as FinDev and 2XCanada.

Policies

Enabling regulatory framework

Canada's Private Sector Engagement for Sustainable Development strategy presents an approach to broaden and deepen Global Affairs Canada's engagement with the private sector in Canada and overseas through international assistance and policy programs. The strategy seeks to reinforce Canada's contribution to the achievement of SDGs. The strategy is built around six pillars: The first two pillars seek to expand opportunities for the local private sector to contribute to sustainable development through strengthening the enabling environment (pillar 1) and building capacity (2). The next three focus on partnerships through sharing information (3), advancing practice (4) and mobilizing expertise (5). The last pillar focuses on increasing transnational and local private sector investment toward the SDGs by catalysing capital (6).

Investment facilitation and risk mitigation

See other sections.

Technology upgrading

The Government of Canada announced early in 2022 the creation of the Canadian innovation and investment agency, with initial funding of \$1 billion. The Agency will proactively work with and invest in new and established Canadian industries and businesses to help them make the investments they need to innovate, grow, create jobs, and be competitive in the changing global economy.

Policy support

Canada recognizes the clean tech sector as an important priority for supporting economic growth while working towards the country's climate change commitments. A suite of programs supports the Clean Tech sector, including: The Clean Growth Hub, Agricultural Clean Technology Program and Green Procurement Strategy. A Hydrogen Strategy for Canada was announced in December 2020.

The Department of Finance Canada will engage with experts to establish an investment Tax Credit for Investments in Clean Technology of up to 30%, focused on net-zero technologies, battery storage solutions, and clean hydrogen. The design details of the investment tax credit will be provided in the 2022 fall economic and fiscal update.

Access to finance

The Canada Growth Fund is a new public investment vehicle with an initial capitalization of \$15 billion over five years to attract substantial private sector investments needed to meet our national economic policy goals. This includes reducing emissions and reaching our climate goals; creating low-carbon industries and new technologies to diversify the economy and exports; and restructuring critical supply in areas that are important for future prosperity.

	<p>Development impact</p> <p>Canada continues to support and encourage investment in sustainable development sectors through its Responsible Business Conduct (RBC) approach: The Government of Canada expects Canadian companies active abroad to respect human rights, to operate transparently, and to work in a socially and environmentally responsible manner, while respecting applicable law. In 2022, the Government of Canada updated its Responsible Business Conduct Strategy. This 5-year strategy (2022-2027) sets priorities for the Government of Canada to ensure Canadian companies' contribution to sustainable development by adopting responsible business practices.</p>
<p>Promotion</p>	<p>Investment promotion initiatives</p> <p>Canada's Foreign Direct Investment Attraction Strategy (FDIAS). The objective is to support the Government of Canada's economic growth objectives, including sustainable and inclusive economic recovery, by aligning and guiding federal stakeholders in attracting FDI. This strategy is predicated on the principle that Canada's economic success relies on open and predictable markets while taking into account Canada's national security interests. The role of FDI is even more important in the context of green economic recovery. Foreign investment is an important source of business investment that can drive innovation and sustainable economic growth, particularly in priority sectors.</p>
<p>International collaboration</p>	<p>Investment facilitation instruments</p> <p>Canada's model Foreign Investment Promotion and Protection Agreement (FIPA) aims to protect and promote foreign investment through legally-binding rights and obligations. These include provisions such as the Right to Regulate and Responsible Business Conduct (RBC), which include protection for the environment, sustainable development, and climate change. The role of FDI in Canada is even more important in the context of green economic recovery from COVID-19. Foreign investment is an important source of business investment that will drive sustainable economic growth, particularly in priority sectors that will provide well-paying jobs. While Canada does not have an outward FDI promotion scheme, it does provide protection for investors through investment provisions in FTAs and through its new FIPA model.</p> <p>Canada continues to actively engage in ongoing investment facilitation negotiations at the WTO, under the Joint Statement Initiative on Investment Facilitation for Development.</p> <p>Outward FDI promotion schemes</p> <p>In terms of financial support for sustainable development projects abroad, Canada is supporting sustainable investment through facilities and projects such as 2X Canada, led by FinDev Canada, a subsidiary of Export Development Canada (EDC). The objective of 2X Canada is to contribute to sustainable, inclusive, resilient growth in targeted markets with a focus on enhancing the socio-economic well-being of underserved and vulnerable populations, particularly women in Latin America, the Caribbean and Sub-Saharan Africa.</p> <p>Active promotion of technology for development</p> <p>Canada works closely with the International Energy Agency, IRENA, the Clean Energy Ministerial, Mission Innovation, and the UNFCCC, all of which have core activities around sustainable development technology dissemination.</p> <p>Canada continues to engage with the Climate Technology Centre and Network (CTCN), which provides technical assistance for technology development and transfer and capacity building for developing countries.</p> <p>Canada is also the largest donor to the IEA's Clean Energy Transitions Programme, which advances clean energy technology transitions in emerging economies, particularly through collaborative analytical work, technical cooperation, training and capacity building, and strategic dialogues.</p>

China

<p>Strategies</p>	<p>Comprehensive strategies</p> <p>Achieving carbon peaking and carbon neutrality is a major strategic decision of China. In 2021, the Chinese government made public the WORKING GUIDANCE FOR CARBON DIOXIDE PEAKING AND CARBON NEUTRALITY IN FULL AND FAITHFUL IMPLEMENTATION OF THE NEW DEVELOPMENT PHILOSOPHY, and the ACTION PLAN FOR CARBON DIOXIDE PEAKING BEFORE 2030, which together constitute the overall deployment of carbon peaking and carbon neutralization. It is proposed to improve investment policies, give full play to the guiding role of government investment, build an investment and financing system compatible with carbon peaking and carbon neutrality, strictly control investment in high-carbon projects, and increase support for projects such as energy conservation and environmental protection, new energy, low-carbon transportation equipment, and carbon capture, utilization and storage.</p>
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Policies	Enabling regulatory framework

	Investment facilitation and risk mitigation
	In October 2019, China made public the Regulations on Optimizing the Business Environment. To improve the licensing process, China implements the administrative license list management system, and adjusts the list of administrative licenses in due course and publishes it to the public. In terms of information access, government departments at all levels adhere to openness and transparency in government affairs, and comprehensively promote openness in decision-making, implementation, management, services and results. To enhance the certainty, stability and predictability of the regulatory system, China has improved its business environment by adhering to the principles of marketization and rule of law, and creating a stable, fair, transparent and predictable environment for all types of market players.
	Technology upgrading
In the policy documents such as the WORKING GUIDANCE FOR CARBON DIOXIDE PEAKING AND CARBON NEUTRALITY IN FULL AND FAITHFUL IMPLEMENTATION OF THE NEW DEVELOPMENT PHILOSOPHY AND THE ACTION PLAN FOR CARBON DIOXIDE PEAKING BEFORE 2030, the Chinese government decides to implement key forward-looking and strategic national cutting-edge science and technological projects, so as to realize a breakthrough in the research on low-carbon, zero-carbon and carbon-negative equipment and technologies. Strengthen the application of basic research by focusing on green and intelligent development and clean and low-carbon utilization of fossil fuel, large-scale utilization of renewable energy, new electric power systems, energy saving and among others.	
Policy support	
The Chinese government is committed to promoting the development of energy conservation, environmental protection, and clean energy, and has issued some relevant preferential tax policies. For example, according to the Enterprise Income Tax Law and related policies, the income from investment and operation of public infrastructure as stipulated in the Catalogue of Enterprise Income Tax Preferential Projects for Public Infrastructure Projects, such as wind, ocean energy, solar energy, geothermal power generation projects, etc., gets income tax relief and other benefits. At the same time, the income of enterprises engaged in environmental pollution prevention and control, energy-saving and emission-reduction technology transformation, water-saving transformation and unconventional water utilization projects stipulated in the Catalogue of Enterprise Income Tax Preferential Projects for Environmental Protection, Energy-Saving and Water-Saving Projects can also enjoy corporate income tax preferential policies.	
Access to finance	
Vigorously develop financial instruments such as green loans, green equity, green bonds, green insurance, and green funds, establish carbon emission reduction support tools, and encourage development policy financial institutions to provide long-term stable financing support for carbon peaking actions in accordance with the principles of marketization and rule of law. Encourage social capital to set up green and low-carbon industry investment funds in a market-oriented manner.	
Development impact	

Promotion	Investment promotion initiatives

International collaboration	Investment facilitation instruments
	China has adopted the system of pre-establishment national treatment plus negative list on foreign investment. Constantly update the Foreign Investment Guide of China to guide and facilitate foreign investment by introducing China's investment environment, policies and project information, etc..

Outward FDI promotion schemes

By adhering to market orientation, commercial principles and international practices, the Chinese government improves the level of ODI facilitation, actively negotiates bilateral and multilateral agreements, builds investment cooperation platforms so as to create a favourable environment for OFDI development, and promote mutual benefits and win-win development between China and partner countries.

1.China and 28 countries have jointly endorsed the Guiding Principles on Financing the Development of the Belt and Road, calling upon the governments, financial institutions and companies from countries involved to follow the principles of equal-footed participation, mutual benefits and risk sharing as they work together to build a long-term, stable, sustainable financing system that is well-placed to manage risks.

2.During the Second Belt and Road Forum for International Cooperation, China released the Debt Sustainability Framework for Participating Countries of the Belt and Road Initiative (BRI-DSF) .

3.In 2018, China and UK released the Green Investment Principles for the Belt and Road (GIP) to promote green investment in the Belt and Road region.

Active promotion of technology for development

On FDI, China revised the Catalogue of Industries of Encouraging Foreign Investment, issued the Plan for Development by Utilizing Foreign Investment during the "14th Five-Year Plan" Period in order to lower the bar of foreign-funded R&D centers for the import tax policies on science and technology innovation, optimize the "fast track" system for personnel entry and to promote the steady growth of industrial economy, strengthening policy support for foreign-funded enterprises.

On OFDI, in July 2021, the Ministry of Commerce and the Ministry of Ecology and Environment of China issued the "Green Development Guidelines for Overseas Investment and Cooperation".

France

Strategies

Comprehensive strategies

Policies

Enabling regulatory framework

Investment facilitation and risk mitigation

Technology upgrading

Policy support

Access to finance

Article 77-29° Law No. 2019-486 of 22 May 2019 on growth and transformation of companies (PACTE law) added a specific mission for the Autorité des Marchés Financiers (AMF), making it responsible for ensuring the quality of information provided by asset management companies on their investment strategy and the way they manage risks related to the effects of climate change.

Development impact

Promotion

Investment promotion initiatives

(i) the "France Relance" and "France 2030" investment plans both aim to support the ecological transition by, for example, providing financial support to decarbonize industry and transports, develop green technologies such as hydrogen or batteries, and promote sustainable agriculture. They also aim to unlock private investments for these initiatives. (ii) Held annually, the Choose France Summits aim to promote foreign investments in France, including sustainable investments. The Summits are certified "sustainable events" (ISO-20121) and include panels and workshops on sustainable investment. (iii) Other initiatives have been put in place at the ecosystem-level to promote sustainable investments. The "French Tech Green 20" is a grouping of the most promising French green start-ups, which gives them visibility and helps them attract investors. "Finance for Tomorrow" is an association of the Paris financial center aimed at greening the financial system and promoting sustainable investments.

International collaboration

Investment facilitation instruments

France is a core member of the Beyond Oil & Gas Alliance (BOGA) which is an international alliance of governments and stakeholders working together to facilitate the managed phase-out of oil and gas production.

The alliance aims to elevate the issue of oil and gas production phase-out in international climate dialogues, mobilize action and commitments, and create an international community of practice on this issue. Core members of BOGA commit to end new concessions, licensing or leasing rounds for oil and gas production and exploration and to set a Paris-aligned date for ending oil and gas production and exploration on the territory over which they have jurisdiction.

Outward FDI promotion schemes

Active promotion of technology for development

Germany

Strategies

Comprehensive strategies

Policies

Enabling regulatory framework

Investment facilitation and risk mitigation

Technology upgrading

Policy support

Access to finance

Development impact

Promotion

Investment promotion initiatives

International collaboration

Investment facilitation instruments

Outward FDI promotion schemes

Investment Guarantees of the Federal Republic of Germany hedge eligible German direct investments abroad against political risks that may occur, contributing significantly to economic growth. The policyholder can benefit in many ways under an investment guarantee e.g. the compensation of losses (caused by political events) by the Federal German Government. In a case of project disruption the Federal Government will furthermore provide effective political support to prevent losses. In doing so the investment guarantees help to stabilise German projects abroad and they support German companies to proceed with their investments even under difficult conditions. The ministries in the Interministerial Committee (IMC) decided on measures to implement a strategy designed to take the effects of climate change into consideration in relation to the investment guarantees in 2020. The cover options for projects identified as hazardous to the climate will be restricted under these and conversely, investments in climate-friendly projects will be more strongly promoted. Discussions are currently taking place to provide further incentives for climate-friendly projects.

Active promotion of technology for development

India

Strategies

Attract investment both through domestic and international sources in domestic industry to boost domestic manufacturing especially in sunrise sectors.

Policies

Enabling regulatory framework

To attract investment wherever possible redundant policies/laws are being amended to make them more investor friendly. Some of the initiatives are as under:

- Insolvency and Bankruptcy Code 2016 was introduced to reduce time taken in resolving insolvency, which has now come down to comparable to OECD Countries.
- In order to attract fresh investment in manufacturing and thereby provide boost to 'Make-in-India' initiative of the Government, corporate tax rates on fresh investment in manufacturing has been reduced to 15%. The effective tax rate for these companies shall be 17.01% inclusive of surcharge & cess. Also, such companies shall not be required to pay Minimum Alternate Tax.
- A common tax system for Goods & Services Tax (GST) in the whole country is being followed, which reduced tax burden and compliance requirement on investors.
- Keeping in view India's vision of becoming 'Atmanirbhar', PLI Schemes for 14 key sectors have been announced with an outlay of Rs. 1.97 lakh crore (over US\$26 billion) to enhance India's Manufacturing capabilities and Exports. The 14 key sectors are: (i) Mobile Manufacturing and Specified Electronic Components, (ii) Critical Key Starting materials/Drug Intermediaries & Active Pharmaceutical Ingredients, (iii) Manufacturing of Medical Devices (iv) Automobiles and Auto Components, (v) Pharmaceuticals Drugs, (vi) Specialty Steel, (vii) Telecom & Networking Products, (viii) Electronic/Technology Products, (ix) White Goods (ACs and LEDs), (x) Food Products, (xi) Textile Products: MMF segment and technical textiles, (xii) High efficiency solar PV modules, (xiii) Advanced Chemistry Cell (ACC) Battery, and (xiv) Drones and Drone Components.
- Ease of Doing Business: To improve ease of doing business in the country, government has conducted an exercise with a focus to reduce number of processes, increase transparency and automate interfaces by eliminating physical touch-points. Some of the key reforms encompassing business lifecycle are listed below:
 - Starting a Business: The reforms undertaken have considerably reduced the number of procedures, time taken and cost incurred to start a business in India. For example, New web-form 'SPICE+ and AGILE-PRO' integrates 10 different services related to incorporation of a company.
 - Dealing with Construction Permits: Online Building Permission System (OBPS), introduced by Ministry of Housing and Urban Affairs, is a Single Window for obtaining building permissions and construction permits.
 - Getting Electricity: Process of getting electricity connection has been streamlined by reducing number of procedures and making it online. The charges to obtain a new commercial electricity connection have also been reduced.
 - Trading Across Borders: Time and cost to export and import has been reduced through various initiatives, including the implementation of electronic sealing of containers, upgradation of port infrastructure and allowing electronic submission of supporting documents with digital signatures through e-Sanchit, etc.
 - Resolving Insolvency: Resolving Insolvency has been made easier by promoting reorganization proceedings in practice. The Insolvency and Bankruptcy Code 2016 has been recognized as a mode of resolving insolvency. Also, time taken in resolving insolvency is now comparable to OECD countries.
- Business Reforms Action Plan – State level EoDB Reforms: In a federal country like India, investments are channelized through States/UTs. Therefore, it is essential to drive reform agenda in States/UTs through simplification of processes, introducing online systems, setting up of investors' facilitation centres, etc. As a part of the annual exercise, States/UTs are being recommended to implement a set of reforms spread across areas such as Information Wizard, Single Window Systems, Construction Permits, Inspection Reforms, Labour Regulation Reforms, Environment Regulation Reforms, etc. Some of the reforms are described below:
 - i) Single Window Systems introduced at State-level go a long way in eliminating physical touch-points and acting as a one stop shop for various registrations, licenses, permissions, etc. It enables submission of applications, payments, tracking and final download of certificates.
 - ii) Centralized Inspection System is a unique platform that facilitates compliance inspections of various Departments such Labour, Factories and Boilers at once place. It mandates joint inspection, random scheduling of inspections, computerized risk-based assessment and digital time-bound availability of record of inspection reports, etc.

The aim of BRAP exercise is to create a conducive business environment by streamlining regulatory structures and increasing transparency and efficiency of various government regulatory functions so as to boost private investments. The exercise deals with making procedures efficient and transparent for businesses and reducing physical touch-points. Annual assessment of States/UTs is done by Department for Promotion of Industry & Internal Trade (DPIIT), Ministry of Commerce & Industry on the basis of implementation of these reforms so as to boost the spirit of competitive federalism and encourage States/UTs to adopt international and national good practices.

Investment facilitation and risk mitigation

- In order to make India a more attractive investment destination, the Government since 2014 has implemented several radical and transformative FDI reforms across sectors such as Defence, Pension, Other Financial Services, Asset reconstruction Companies, Broadcasting, Pharmaceuticals, Single Brand Retail Trading, Construction & Development, Civil Aviation, Power Exchanges, e-commerce activities, Coal Mining, Contract Manufacturing, Digital Media, Insurance Intermediaries, etc. In the last one year alone, reforms in the FDI policy have been undertaken in sectors such as Insurance, Petroleum & Natural Gas and Telecom.
- To simplify the approval process of foreign Investment and to promote ease of doing business, the erstwhile Foreign Investment Promotion Board (FIPB) and has been abolished in May 2017 and a new regime has been put in place. Under the new regime, process for granting FDI approvals has been simplified wherein the work relating to processing of applications for FDI has been delegated to the concerned Ministries/ Departments and DPIIT is the nodal department for facilitating the process. Detailed standard operating procedure for approval process has been issued by DPIIT.
- A revamped portal “Foreign Investment Facilitation Portal (FIF Portal)” has been launched as the online single point interface of the Government of India for investors to facilitate Foreign Direct Investment. The portal facilitates single window clearance of applications which are through government approval route. The FIF Portal has now been integrated with the National Single Window System.
- A National Single Window System (NSWS) has been established to provide ease-of-doing-business through a one-stop digital platform. This national portal is integrated with existing clearance systems of the various Ministries/Departments of Govt. of India and State Governments. Now it has become possible to register a company within 24 hours only and also apply for approvals and registrations required during the pre-establishment and pre-operation stages of setting up a business for across the State Governments, Central Ministries, and Departments onto the single platform.
- To provide support and facilitation to investors for investing in India and to boost growth in key sectors of the economy, an Empowered Group of Secretaries (EGoS) was created, which is looking into hindrances being faced by investors, and also take up cross-cutting policy issues. Additionally, Project Development Cells (PDCs) have also been set up in 30 Ministries/Departments to fast track investment in coordination between the Central Government and State Governments and thereby enhance the pipeline of investible projects in India and in turn, increase domestic investment and FDI inflows.
- The increased importance of investments for economic development, coupled with greater competition between locations, has made investment promotion a growing activity of the Government. Government of India has set-up a dedicated National investment promotion & facilitation agency - Invest India. It is the nodal agency for all national investment promotion activities and is the single point of contact for an investor. Invest India (an Investment Promotion Agency of India), has been rated amongst the best IPAs in areas such as adoption of technologies for virtual facilitation & attracting sustainable investments. Invest India in its role as the President of World Association of Investment Promotion Agencies (WAIPA), is spearheading various projects & initiatives towards capacity building of WAIPA members (IPAs of 105 countries).
- To facilitate investors, Invest India website has been established as a digital repository of all the relevant data points for investors to embark on their investment journey in the country. Digital portals have also been created to aid the investor - such as streamlining clearances and approvals through the National Single Window Clearance system, a GIS-enabled industrial land bank portal to explore the different industrial-grade land opportunities and an issue redressal mechanism through a dedicated virtual mechanism for high value infrastructure projects through a Project Monitoring Group (PMG).
- Most of the State Governments have also been proactive in investment promotion over the years and have established sub national IPAs to provide seamless experience to investors.

Technology upgrading

See above section “Investment facilitation and risk mitigation”

Policy support

See above section “Investment facilitation and risk mitigation”

Access to finance

- In order to improve access to finance to industries the following steps are being taken:
- Pradhan Mantri Mudra Yojana (PMMY) scheme was launched on 08.04.2015 to provide access to institutional finance to unfunded Micro/Small business units with collateral free loans up to Rs 10 lakh for manufacturing, processing, trading, services and activities allied to agriculture and to help in creating income generating activities and employment.

- A Fund of Fund of Rs. 10,000 crore is being established to address the various challenges faced by start-ups such as limited availability of domestic risk capital, information asymmetry, constraints of conventional bank finance and lack of hand holding support from credible agencies.
- A Start-up India Seed Fund Scheme (SISFS) is being implemented to provide financial assistance to Start-ups for Proof of Concept, prototype development, product trials, market entry, and commercialization.
- Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) is established by Government to provide collateral free credit to Micro and Small enterprises.

Development impact

- 7th among the top recipients of foreign direct investment (FDI) in 2021: India climbed up one position to 7th among the top recipients of foreign direct investment (FDI) in the last calendar year (2021) after US, China, Hong Kong, Singapore, Canada and Brazil. Further, South Africa, Russia, Mexico, Germany, Israel, and UK are some of the country immediately behind India in terms of FDI Inflows.
- Highest ever FDI Inflow in India since 2000-01 despite pandemic: FDI inflow in India stood at US\$ 45.15 billion in 2014-15 and has continuously increased since then. FDI inflows increased to USD 74.39 billion in the year 2019-20, USD 81.97 billion in 2020-21 and India registered its highest ever annual FDI inflow of USD 84.84 billion (provisional figures) in the financial year 2021-22. Measures taken by the Government on FDI policy reforms have resulted in increased FDI inflow in the country, which year after year is setting up new records.

Promotion

Investment promotion initiatives

International collaboration

Investment facilitation instruments

Outward FDI promotion schemes

Active promotion of technology for development

Indonesia

Strategies

Comprehensive strategies

Indonesia has adopted a comprehensive multi-year strategy to address in an integrated manner investment for sustainable development issues, including investing in downstream manufacturing as well as in renewables, clean energy and energy efficiency, and other sustainable development sectors.

- The GOI ratified the Omnibus Law No. 11/2020 to create a quality business and investment climate so that it can create new jobs in Indonesia. The Omnibus Law regulates many things, including simplification of business licensing procedures, investment requirements, and employment matters.
- To support the Omnibus law in simplifying business licensing, the GOI launched Online Single Submission Risk Based Approach (OSS-RBA) in 2021. The OSS-RBA is a business licensing system that is made based on the level of risk and the scale of business activities. Its purpose is to increase transparency and openness in obtaining business permits with an easier, faster, transparent, and credible process.
- The GOI issued the Investment Priority List (DPI) in Presidential Decree No. 10/2021 concerning Investment Business Field. This is the government's strategies to attract investors to invest in Indonesia. The Investment Priority List (DPI) consists of three sectors, which consist of priority sector, sector that designated to MSMEs and sector with certain requirements. If investors invest in priority sectors, investors will get fiscal and non-fiscal incentives. Fiscal incentives are in the form of reduction of income tax (tax holiday), reduction of tax for taxable income (tax allowance), and exemption from import duty. Meanwhile, non-fiscal incentives are in the form of ease of business licensing, licensing for the implementation of business activities, provision of supporting infrastructure, and guaranteed availability of energy or raw materials.
- The GOI introduces the Presidential Decree no 112/2022 on the acceleration of the development of renewable energy to generate electricity. This policy is imposed to increase the investment and accelerate the achievement of renewable energy in the national energy mix in accordance to the national energy policy and to reduce green gas house emission. This policy provides regulation on both fiscal and non fiscal

incentives to accelerate energy transition. Fiscal incentives are given through the financing and funding mechanism including blended finance from the state budget and other resources.

- The GOI is committed to support the eco-friendly transportation by introducing the Presidential Decree No. 55/2019 on the acceleration of the Battery based Electric vehicles. A more specific regulation was introduced through the Energy and Mineral Resources Ministerial Regulation No. 13/2020 on the provision of the infrastructure of the electric charging of the battery based electric vehicle.

Policies

Enabling regulatory framework

The Indonesian government has issued several regulatory frameworks for preparing a pipeline of bankable SDG investment projects; promoting public-private partnerships in SDG sectors; providing investor guarantees; addressing regulatory barriers and other market regulation aspects.

- During the period of 2016-2020, Indonesia mobilized at least USD 110 million of investment, leveraged through demonstrations of commercially viable business models in rural and industrial areas, benefiting at least 1 million people. Indonesia also developed 60-100 MW³ of clean energy and improved sustainable infrastructure in selected special economic zones, contributing up to 1 million tons of CO₂ emission reduction a year.
- GOI established the Partnering for Green Growth and the Global Goals 2030 (P4G) platform in 2020 with the objective to scale-up funding to public-private partnerships with innovative solutions to advance Indonesia's top sustainable growth priorities in five Sustainable Development Goal areas: food and agriculture, water, energy, cities, clean energy and circular economy. P4G invests in Start-Up (up to \$100,000 in funding) and Scale-Up Partnerships (up to \$1 million in funding) that provide concrete solutions to deliver economic growth in the five area of SDGs. Throughout 2020, the P4G awarded a total of nine partnerships scale-up funding to accelerate their transformative ideas and help countries reach their sustainability objectives and meet their climate ambitions.
- In 2020, the GOI passed Law No. 11 of 2020 regarding Job Creation to revises various provisions in laws across numerous sectors. In February 2021, the government enacted 47 government regulations and four presidential decree to implement the provisions of the Job Creation Law. The law and the derivative regulations are aimed to address the administrative and regulatory barriers to invest in Indonesia.

Investment facilitation and risk mitigation

Indonesia is committed to improving permitting processes and access to information, fostering clarity, stability and predictability of the regulatory regime. The Ministry of Investment/Indonesian Investment Coordinating Board (BKPM) released *Online Single Submission* (OSS) to improve permitting process and broaden access to information about investment projects in Indonesia. The OSS System is an online service system that can be accessed fast by both domestic and foreign investors to manage the investment administration, check the status and find out valid information about investment in Indonesia. This system is integrated with various related government agencies' databases. The investors can easily get investment licenses and various facilities such as the issuance of Business Identification Number (NIB), environmental permit, standard certificate to business permit.

Technology upgrading

The GOI has designed 'Making Indonesia 4.0' as an integrated roadmap to implement a number of strategies to enter the Industry 4.0 era. To support the development of Industry 4.0, Indonesia makes improvement in five main technologies, namely the Internet of Things, Artificial Intelligence, Human-Machine Interface, robotic and sensor technology and 3D printing.

Indonesia has been committed to develop green high-technology to support its priority agenda in down streaming industries. Having rich in natural resources, Indonesia is building electric vehicle battery cell factory in collaboration with the Hyundai Motor Group and LG Energy Solutions. The factory has production capacity as high as 10 gigawatts per hour.

Indonesia also plans to build a green industrial area in North Kalimantan where green technology will be used extensively to produce renewable energy to drive industry. The green industrial area will rely on hydropower by exploiting the flow of Kayan River that stretchers across the province. Indonesia provides facilities, including an easy licensing system and fiscal incentives for investors who are willing to invest in this area

Policy support

Indonesia has initiative in putting in place policy measures to support and encourage investment in sustainable development sectors, particularly in manufacturing.

In 2013, GOI in cooperation with the Global Green Growth Institute (GGGI) initiated the Green Growth Program Indonesia to support the green growth that simultaneously can reduce poverty rate, promote social inclusion, environmental conservation and resource efficiency. This initiative is also designed to achieving ambitious goals of strong, sustainable landscapes and inclusive economic growth in three priority sectors, namely the sustainable energy, sustainable landscapes and sustainable infrastructure in Special Economic Zones (SEZs). This program already run in two phases (2013-2015 and 2016-2020). The first phase achieved good results including the completion of a national green growth roadmap, and the application of a methodology for extended cost benefit analysis which incorporates environmental and social costs and benefits in investment decisions.

The focus of the Phase II is on driving green investment by mobilizing public and private, international and local, green climate finance and shaping green financing vehicles and schemes in Indonesia.

Access to finance

Global Green Growth Institute (GGGI) helps the Government of Indonesia to establish a national funding mechanism for reduce the obstacles and risks of investing in green project.

An example is the design of Environment Fund in which will flow investment and pay-out based on the results of Norway's commitment to Indonesia is worth \$1 billion to mitigate climate change in the sector forestry. It also helps plan, fund investment criteria and guidelines for ensure that the funding mechanism has results in the form of reducing GHG emissions and achieving goals development and the wider environment.

Development impact

The Government of Indonesia has issued Law No. 3/2020 on the Mineral and Coal Mining to accelerate the development of the downstream industry. Down streaming is significant for bringing broad impacts on the national economy, including the foreign exchange earnings from exports and the creation of job. Morowali Industrial Estate, Central Sulawesi is one example of the industry that has succeeded in down streaming nickel ore into stainless steel. This law encourages the utilization of the raw materials to be processed locally and thus produce products that have higher added value to generate more revenue. The presence of foreign companies which invest in the nickel ore processing and refining sector enable the transfer of knowledge and technology to local companies and human resources.

In order to promote investment in sectors that give value add, the Government of Indonesia endorsed investment priority sectors, among others, including export-oriented industry, infrastructure, and energy, particularly on renewable energy and as well as mining which creates value add such as nickel, bauxite, coal, and other natural resources.

Specifically, the Government of Indonesia has recently promoted economic transformation from primary industry to industry based on value (downstream) by prohibiting raw material export starting from nickel in 2020, bauxite in 2022, and copper in 2023. In this case, the raw material will be processed domestically to add value, thus economy based on value add could be achieved. Nickel material, for instance, is famously known as the main component of the electric vehicle, where 35% of EV's components originated from the battery. In this case, 80% of battery components originated from nickel. Therefore, nickel material will be processed by battery industries within the country, and thus EV ecosystem will be established. This, in turn, would greatly contribute to the realization of sustainable investment.

To realize this scheme, the Government of Indonesia has established an electric battery industry in Batang, an integrated industrial area that focuses its area on the realization of industries that give value add. With this scheme, nickel downstream would make Indonesia become the center of production of the electric vehicle. To guarantee the sustainability of the electric vehicle industry ecosystem in Indonesia, the Government of Indonesia has also designed a scheme from upstream to downstream, starting from the mining process of raw materials to the recycling process in the electric vehicle.

Promotion

Investment promotion initiatives

The Indonesian Investment Coordinating Board (BKPM) established the Indonesia Investment Promotion Center (IIPC) to carry out the role as the official representative of the BKPM abroad in charge of promoting Indonesian investment to potential investors abroad. Currently, there are 8 IIPCs spread all over the world: Abu Dhabi (UEA), London (UK), New York (USA), Seoul (South Korea), Singapore, Sydney (Australia), Taipei (Chinese Taipei), and Tokyo (Japan).

In 2010, the GOI has established the National Council for Special Economic Zone (Dewan Nasional KEK) that has authorities to ensure the optimal functioning of eighteen (18) special economic zones where facilities and incentives are provided to attract the investment. The Special Economic Zones are designated areas endowed with geo-economic and geo-strategic advantages and have accessibility to the global market because of their access to the sea port and or airport.

International collaboration

Investment facilitation instruments

The GOI has developed intensive collaboration with Singapore, China, Hongkong SAR of PRC, Japan and Malaysia to increase foreign direct investments in-flow to Indonesia. Five leading sectors dominated the investment realisation in 2020, namely: 1) Transportation, Warehouse and Telecommunication, 2) Basic Metal,

Metal based goods, non-machinery and equipment industry, 3) Electricity, gas and water supply, 4) housing industrial estate and office building, and 5) Food crops, plantation and livestock.

In 2019, GOI and GGGI collaborated with the Korea Forest Services (KFS) to strengthen the cooperation on reforestation and renewable energy. Also, the 2019 Results Report by GGGI gave an example on the Forest Carbon Partnership Facility-Carbon Fund (FCPF-CF). The Government of East Kalimantan through the Emission Reduction Program will provide incentive for protecting one of the world's largest and most biodiverse tropical rainforests and will potentially mobilize USD 110 million Result-Based Payment.

Under the Regional Comprehensive Economic Partnership (RCEP) signed by GOI in 2020, Indonesia implements the RCEP Agreement in stages, namely the elimination of tariffs by 65% at the time of entry into force (EIF) in 2022, 80% for EIF+10 years, and 92% for EIF+ 15-20 years.

Outward FDI promotion schemes

Indonesia encourages national companies to invest in third countries. The objectives of outward investment policies include expanding the market by exploiting the opportunities in the implementation of free trade, particularly the ASEAN Economic Community (AEC); opening market access in third countries that have FTAs with an investment destination; and international of national companies. Outward Direct Investment is seen as business strategy for national firms to expands their operations to foreign countries through e Green field investment, merger/acquisition and/or expansion of an existing foreign facility. To facilitate the outward FDI, the GOI sign bilateral agreement with many countries including Japan, United States, Finlandia, Australia, Poland and Sweden.

Ministry of Investment/BKPM provides support for the national firms to invest abroad by providing relevant information about the outward investment opportunities in its partner countries, including Argentina and Uruguay, ASEAN countries, European countries, Middle East and African countries, India and Oman.

Active promotion of technology for development

The National Research and Innovation Agency (BRIN) carries out tasks in conducting research, development, study and application, as well as integrated inventions and innovations to support the implementation of sustainable development sectors and to achieve promotion of innovative technology for development. In 2022, the National Research and Innovation Agency (BRIN) plans opportunities for cooperation in the field of nuclear technology development with France. This collaboration is aimed at improving nuclear infrastructure and increasing human resource capacity in the field of nuclear technology. In addition, this collaboration is directed at the development of nuclear energy to meet future clean electricity needs.

GOI provides fiscal incentives such as R&D Super Deduction for industries that are willing to fostering innovation and the use of the latest technology in the production process. Maximum gross income deduction of 300% over R&D costs carried out in Indonesia.

Italy

Strategies

Comprehensive strategies

a) Italy has adopted in 2017 the National Strategy for Sustainable Development (NSSD). It is a policy reference framework for public policy and investment making and provides for co-ordination mechanisms across levels. It is structured around the five areas of the Agenda 2030: People, Planet, Prosperity, Peace and Partnership. To these is added a sixth area dedicated to the Vectors for sustainability, elements necessary for transformation. The 5Ps are spelled out in a system of strategic choices and national strategic objectives, specific to the Italian context. With regard to Prosperity, the strategic choices are: 1) financing and promoting sustainable R&D; 2) guaranteeing full employment and quality education; 3) affirming sustainable models of production and consumption. The NSSD annual report (including the Policy Coherence for Sustainable Development (PCSD) report) is discussed every year. Every three years the NSDS must be revised; the Ministry of Ecological Transition has the task of initiating and managing the revision through a broad and participatory institutional process, coordinated by the Presidency of the Council of Ministers. The NSDS has been defined after a dialogue with the Institutions of the State and the Civil Society. The Forum for Sustainable Development was set up to ensure the widest involvement of civil society. It was published in the Italian Official Gazette on the 15th May 2018.

Following the NSSD, Italy has started several initiatives like the National Strategy for the Circular Economy and the Italian Strategy for the Bioeconomy.

b) The National Strategy for the Circular Economy is a policy document released in 2017 and in 2019 providing actions, objectives and measures that are intended to be pursued as institutional policies with the purpose to ensure an effective transition towards a circular economy. The circular economy, understood as a new model of production and consumption aimed at the sufficient use of resources to the circular maintenance of their flow in the country, aims at the eco-design of durable and repairable products to prevent the production of waste and maximize their recovery, reuse and recycling for the creation of new supply categories of secondary raw materials, replacing virgin raw materials.

c) The Italian Strategy for the Bioeconomy sets a goal by 2030 to achieve a 20 percent increase in economic activities and jobs pertaining to the Italian bioeconomy. To make this possible, it will be necessary to:

improve the sustainable and quality production of products in each of the sectors, making more efficient use of the interconnection between them; create more investment in R&I, education, training and communication; and improve coordination between stakeholders and policies at regional, national and EU levels.

Policies

Enabling regulatory framework

a) The National Recovery and Resilience Plan (NRRP) allocates 59,46 bn euro to promote investments in the circular economy, the development of renewable energy sources and a more sustainable agriculture.

b) Decreto del Presidente del Consiglio dei Ministri 6 aprile 2022.

This Decree defines incentives for the purchase of non-polluting vehicles. Specifically, the resources allocated to the recognition of incentives for the purchase of non-polluting vehicles are identified as 650 million euros for each of the years from 2022 to 2024.

c) Decreto legge n. 115 2022, "Decreto Aiuti bis".

This Decree contemplates the possibility of establishing areas of strategic national interest for the implementation of plans or programs involving public or private investment related to sectors of strategic importance.

d) Decreto Legge del 17 maggio 2022, n. 50, "Decreto Aiuti", convertito con la Legge del 15 luglio 2022, n. 91. This Decree introduces energy measures, measures to support business liquidity and economic recovery.

Investment facilitation and risk mitigation

Technology upgrading

Italy has launched inter alia these two initiatives: a) Smart&Start Italia: it funds the birth and growth of innovative and high-tech start-ups.

b) Industria 4.0: it funds digital transition bearing in mind green transition needs (premium for initiatives included)

Additional examples can be easily found here: <https://www.incentivi.gov.it/it>

Policy support

The Ministry for Economic Development enacted the Transition Plan 4.0., enforcing the law n. 160 of 2019, which aimed at giving tax credits for investments in: 1) basic capital goods; 2) research and development, technological innovation, design and aesthetic conception; 3) technical and digital education.

The Ministry for Economic Development can also give subsidized loans and non-repayable contributions for projects of: a) industrial research and experimental development in circular economy; b) sustainable innovations; c) of development to safeguard the environment; d) environmental investments; e) innovative instruments; f) acquisitions of shareholdings in innovative joint ventures; g) investment in innovative start-ups or in SMEs ; h) corporate venture building.

Three specific initiatives deserve a separate mention:

a) Green Public Procurement: we have a wide number of stakeholders in our GPP tables. This is often a slower than market process and it should be revised. However, it serves as input for private investments.

b) Development contract (Contratto di sviluppo): it finances industrial development programs, environmental protection development programs, tourism business development programs, research, development and innovation programs.

c) Fund for innovative investments in agriculture enterprises (Fondo per gli investimenti innovativi delle imprese agricole): it encourages the implementation by agricultural enterprises of investments in new tangible and intangible assets functional to automatic, intelligent and computerized production.

Access to finance

Development impact

Promotion	<p>Investment promotion initiatives</p> <p>The National strategy for the circular economy intends to define new administrative and fiscal tools in order to strengthen the market of secondary raw materials with the purpose to make them competitive in terms of availability, performance and costs compared to virgin raw materials. To this end, the National Strategy produces its effects on the material purchase chain (Minimum Environmental Criteria for green purchases in the Public Administration), on the criteria on the basis of which a waste shall cease to be a waste (End of Waste), on the extended producer responsibility, on the role of the consumer and on the widespread of sharing practices and "product as a service".</p> <p>The National Recovery and Resilience Plan provides for investments in the creation of new plants to manage urban waste and in the upgrade of the existing plants as well as in lighthouse projects in circular economy. The National strategy for the circular economy has been followed by an Implementation Action Plan (IAP) (2020-2025) for the Italian Bioeconomy Strategy describing:</p> <ul style="list-style-type: none"> a) how the circular Bioeconomy can boost the socio-economic recovery in this particular critical period and its key role in the post-COVID 19 phase; b) a detailed action plan 2020-2025 including a series of relevant targeted actions which have been clustered into 4 main macro areas (policy/standards, pilot actions, regeneration of ecosystem services, and stakeholder's engagement); c) flagship projects ready for deployment at national level, to provide concrete examples of how circular Bioeconomy investment can act as catalyst of socio-economic post-COVID 19 restarting; d) legislation needs and economic opportunities; e) a plan for dissemination and monitoring of IAP results and impacts.
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International collaboration	<p>Investment facilitation instruments</p> <p>-----</p> <p>Outward FDI promotion schemes</p> <p>In the framework of the National Recovery and Resilience Plan (NRRP), the Italian Ministry of Foreign Affairs and International Cooperation supports the digital and ecological transition of the Italian Small and Medium-sized Enterprises (SMEs). Through a revolving fund ("Fondo 394"), subsidized financing and soft loans were available to export-oriented companies, for a total amount of 1,2 billion euro. The measure supports digital and sustainable investments of the SMEs, in order to foster their growth and competition on international markets. With the resources made available by the fund, companies can finance investments such as energy efficiency and climate impact mitigation.</p> <p>Active promotion of technology for development</p> <p>-----</p>
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Japan

Strategies	<p>Comprehensive strategies</p> <p>Japan has developed multi-year strategies in sustainable development sectors, in particular related to climate change and energy. For example, in October 2021, three strategies were finalized through Cabinet Decisions- the Sixth Strategic Energy Plan, the Plan for Global Warming Countermeasures and Japan's Long-term Strategy under the Paris Agreement. Together, these strategies set out Japan's plans toward its 2030 emissions reductions targets and vision for carbon neutrality in 2050, spelling out specific policies and measures as well as goals for research and technology development. They were developed through an extensive process of stakeholder dialogue, expert input and comments from the public. In addition, looking ahead to the achievement of net-zero GHG emissions by 2050, under public-private partnerships, we will formulate the roadmap by the end of this year based on the Clean Energy Strategy interim report that outlines the path to socioeconomic and industrial structure reforms for decarbonization.</p>
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Policies	<p>Enabling regulatory framework</p> <p>An example of an enabling regulatory framework in the context of energy efficiency is our Act on Rationalizing Energy Use, first enacted in 1979 and updated several times, most recently in 2022. Among other things, this law sets out reporting requirements for large energy consuming enterprises, requires enterprises to endeavour to continuously improve energy efficiency, and requires manufactures to improve energy efficiency for specific goods, such as cars and electric appliances (Top Runner Program). Together, these measures ensure that the incentives to rationalize energy use are enhanced, encouraging investment for energy efficiency.</p> <p>Investment facilitation and risk mitigation</p> <p>An example of an investment facilitation and risk mitigation measure in the context of clean energy is the Feed-In Tariff (FIT) scheme for renewable energy, first introduced in 2012. This scheme provides strong incentives for renewable energy investment by fixing the purchase price for various types of renewable energy for an extended period of time, e.g. twenty years, greatly reducing the risk of investment. The Ministry of the Environment (MoE) will also establish a new public-private investment fund to achieve carbon neutrality in 2050 and promote investments in this area.</p> <p>Technology upgrading</p> <p>Japan has many measures to provide technology upgrading in support of renewables, clean energy and energy efficiency. For instance, energy efficient installations are promoted thorough subsidies for specified goods that</p>
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meet energy efficiency targets. The Ministry of Economy, Trade and Industry (METI) established a 2 trillion yen Green Innovation Fund in 2021 to encourage research and development of innovative green technologies over a decade-long period, including hydrogen, fuel ammonia and renewables.

Policy support

Please refer to the policies described in other sections, e.g. the FIT scheme and subsidies for energy efficient installations. Other examples include tax incentives and schemes to improve access to finance, detailed in the next section.

Access to finance

The Ministry of Economy, Trade and Industry, together with the Financial Services Agency and MoE, formulated the Basic Guidelines on Climate Transition Finance in May 2021. From Autumn 2021 to Spring 2022, METI has published sector-specific roadmaps to indicate technologies deemed as transitional. Seven hard-to-abate sectors are covered: Iron & Steel, Chemicals, Electricity, Gas, Oil, Cement and paper & pulp. Starting from last summer, METI has selected model cases of transition finance, and has subsidized their certification process. In addition, MoE has developed guidelines for green financial instruments, including but not limited to green bonds and sustainability-linked bonds, to mobilize private capital for ESG issues. The English version of the latest guidelines will be announced soon but the previous versions are available here: Green Bond Guidelines <http://greenfinanceportal.env.go.jp/en/bond/guideline/guideline.html>.

Development impact

SMRJ (Organization for Small & Medium Enterprises and Regional Innovation Japan, which is an incorporated administrative agency.) provides a variety of training programs for executives and managers to acquire practical management knowledge and skills for the sustainable growth of small and medium enterprises.

Promotion

Investment promotion initiatives

Please refer to previous sections.

International collaboration

Investment facilitation instruments

Japan has been actively participating in negotiation of an Agreement on Investment Facilitation for Development under Joint Statement Initiatives including discussion on means of encouraging sustainable investment.

Outward FDI promotion schemes

NEXI (Nippon Export and Investment Insurance is Export Credit Agency invested by Japanese Government) provides Overseas Investment Insurance and Overseas Untied Loan Insurance to cover risks associated with overseas transactions that cannot be covered by private-sector insurance. Overseas Investment Insurance covers losses incurred by Japanese companies with a subsidiary or a joint venture in a foreign country if the subsidiary or joint venture is forced to discontinue business due to force majeure such as war, terrorism and natural disaster.

Overseas Untied Loan Insurance covers losses incurred by Japanese companies, banks, and other institution, that provide a foreign government or company with business funds (which are not tied to export from Japan) for overseas projects that contribute to economic development, or that purchase bonds issued by a foreign government or company for the purpose of financing, if they are unable to collect the loans or the bonds are not redeemed due to i)force majeure such as war, revolution, prohibition of foreign currency exchange, suspension of remittance and natural disaster, or ii) bankruptcy or default of the borrower or the bond issuer. JBIC (Japan Bank for International Cooperation) is a policy-based financial institution of Japan, and conducts lending, investment and guarantee operations while complementing the private sector financial institutions. JBIC contributes to the sustainable development of Japan and the world as a whole by deploying highly professional skills, with a view to realizing a secure and affluent future society.

For example, JBIC has an operation titled GREEN (Global action for Reconciling Economic growth and Environmental preservation) wherein the primary purpose is to support projects with favorable impacts on preservation of the global environment, such as renewable energy projects and energy efficiency projects. Under the GREEN operation, JBIC implements support by using loans, guarantees, and equity investments while mobilizing private funds.

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Operations of JBIC promote sustainable investment by providing companies on overseas business development with supports such as risk mitigation.

Active promotion of technology for development

Mexico

Strategies

Comprehensive strategies

Several efforts have been undertaken to include a sustainability perspective in investments, for example, the creation of the Green Finance Advisory Council (CCFV), the issuance of green bonds and the formation of the Sustainability Committee in the Association of Banks of Mexico. Recent years have been characterized by the entry of innovative investments into the market, the appearance of definitions and concepts aligned with sustainability criteria, as well as the standardization and adoption of international concepts in the national context.

Faced with the opportunity to promote sustainable investments and considering the growing interest in the market to include the sustainability perspective, the Ministry of Economy in collaboration with the SDGs office in Mexico (Agenda 2030) and the Friedrich Ebert Foundation organized the conference "Strategic investments for a sustainable recovery". This conference had the purpose of generating a space for multi-institutional dialogue and discussion to identify potential strategic investments for sustainable economic recovery in the different regions of the country.

The Ministry of Economy developed a methodology to identify the strategic sectors and economic activities to promote green investments. We use economic complexity with a green filter in this process. Also, we been working with the Economic Commission for Latin America and the Caribbean to promote quality FDI which includes a sustainable perspective.

Policies

Enabling regulatory framework

Investment facilitation and risk mitigation

Technology upgrading

Policy support

Access to finance

Development impact

Promotion

Investment promotion initiatives

The Secretaria of Economy has a promotion strategy for the electromobility or zero emission vehicles industries.

Organization of the Electromobility Forum: <https://www.gob.mx/se/acciones-y-programas/foro-de-electromovilidad-287721>

Participation in the Zero Emissions Vehicle Transition Council: <https://zevtc.org/>

Mexico - US Group for the Electrification of Transport: <https://www.gob.mx/sre/es/articulos/el-canciller-erbrard-presenta-grupo-binacional-para-la-electrificacion-del-transporte?idiom=es>

Alliance for the Electromobility in Mexico

<https://www.conuee.gob.mx/transparencia/boletines/transporte/automovilistaeficiente>

[/otrosdocumentos/Plan_estrategico_version_final-comprimido_Procobre.pdf](#)

International collaboration

Investment facilitation instruments

The Zero Emissions Vehicle Transition Council was formed as the world's first political forum through which ministers and representatives from governments from most of the world's largest and most progressive automotive markets – collectively accounting for more than half of all new car sales globally – meet to discuss how to accelerate the pace of the global transition to zero emission vehicles. <https://zevtc.org/>

Outward FDI promotion schemes

Active promotion of technology for development

The Republic of Korea

Strategies

Comprehensive strategies

We are implementing key policies that promote the sustainable development and investment.

As the overarching net-zero policy, Korea raised its 2030 NDC within a short period time after it first declared net-zero earlier in December, 2020. We raised the existing reduction target of 26.3% to 40% (from the peak year for 2018) and continuously checking the implementation status under close communication with our interested parties including industries.

Also, Korea's policy focuses on across-the-board green transition of our economy, nurturing the economic system that stimulates green investment and consumption taking advantage of green industry and technology.

Particularly, in terms of the sustainable financing that is drawing keen attention in the aftermath of COVID-19, domestic discussion on the role of green financing was invigorated. Our relevant authorities earlier in 2020 began to provide policy guide on the corporate disclosure on the environment-related information and also on the issuance of green bonds.

- Guidance on ESG Corporate Disclosure (Jan, 2021)
- Guidance on Green Bonds (December, 2020)

Policies

Enabling regulatory framework

To implement the aforementioned policy directions, our relevant ministries and agencies have been legislating key laws and regulations. For instance, Ministry of Environment enacted the *Framework Act On Carbon Neutrality And Green Growth For Coping With Climate Crisis* and the Ministry of Trade Industry and Energy legislated the *Act On The Promotion Of The Development, Use And Diffusion Of New And Renewable Energy*. Featured objectives of these legal infrastructures are as follows:

"The purpose of this Act is to strengthen policy measures to reduce greenhouse gases and adapt to climate change for preventing serious impacts of climate crisis, to resolve economic, environmental, and social disparity that may arise in the course of transition to a carbon neutral society, and to foster, promote, and revitalize green technology and green industry for a harmonious development of the economy and environment, thereby improving the quality of life of present and future generations, protecting the ecosystem and climate system, and contributing to the sustainable development of the international community." (Article 1, Framework Act On Carbon Neutrality And Green Growth For Coping With Climate Crisis)

"It shall overcome climate crisis through transition to a carbon neutral society, and at the same time, turn it into an opportunity to expand national growth engines, strengthen national competitiveness in the international arena, and create jobs, by boosting investment in and support for green technology and green industries with high growth potential and competitiveness" (Article 3.6, Framework Act On Carbon Neutrality And Green Growth For Coping With Climate Crisis)

Investment facilitation and risk mitigation

Regarding investment facilitation and risk mitigation, the Ministry of Environment implements international standardization of environmental information disclosure system to reflect corporate environmental improvement efforts at home and abroad in order to establish eco-friendly management that generates environmental performance and promote related investment.

Technology upgrading

In relation to sustainable investment support, Korea implements the 'Climate Change Response Technology Development Promotion Act' by the Ministry of Science and ICT to create a research foundation for greenhouse gas reduction and climate change adaptation, systematically developing and promoting cooperation with the international community.

Accordingly, the Minister of Science and ICT, if needed, will prepare a comprehensive technical map to establish technology development strategies for responding to climate change and establish investment directions.

According to the 'Act on the promotion of the development, Use and Diffusion of New Renewable Energy,' if deemed necessary to promote the development, use, and distribution of new and renewable energy

technologies, it may be recommended that a person who engages in an energy-related business to invest in or contribute to the project.

Policy support

In terms of green transition, the Korean government is accelerating our industrial transformation toward low-carbon structure for example by promoting eco-friendly automobiles and also by de-carbonizing of carbon-intensive sectors including the steel industry.

To facilitate the investment needed to expedite these changes, the Korean government is offering comprehensive policy mix in a way that does not harm the global level playing field.

With regard to the digital transformation also, our government is facilitating the private investments in related fields by incentivizing the investment in data/AI sector and supporting experts education.

Access to finance

The Financial Services Commission of Korea is facilitating access to finance in order to promote the carbon neutrality. In this regard, Korea attempts to shift investments away from carbon-heavy industries towards eco-friendly businesses, sustainable projects and green industries. It requires concerted efforts from the public and private sectors as well as a joint framework of goals. The Korean government's pursuit of green finance dates back to 2009 when it announced plans to promote investment in green growth-related industries.

The Korea government continues working on the following area:

A. STRENGTHEN THE ROLE OF THE PUBLIC SECTOR

1) Prepare an investment strategy for state-backed financial institutions to double their investment in green sectors from the current 6.5% to about 13% and consider the launching of a new green finance lending program once the K-taxonomy on green industries becomes available.

2) Create green financing teams within the state-backed financial institutions to improve their work consistency and promote cooperation across different institutions.

3) Seek revisions to the guidelines on the management of water resources funds to ensure that the green and environmental indicators are taken into account when selecting fund managers.

B. PROMOTE GREEN FINANCING IN THE PRIVATE SECTOR

1) Develop K-taxonomy to clearly distinguish between green and non-green industries and activities and seek improvements to the system.

2) Introduce best practice guidelines on green financing to be equally applied to all financial sectors and promote an internalization of the rules after an adjustment period.

3) Draw up a climate risk management and oversight plan for financial institutions (March 2021) to (a) regularly conduct stress tests on the impact of devaluation of carbon-intensive industries on the soundness of financial institution and to (b) study whether to apply climate risk factors in the financial sectors' prudential regulation and supervisory frameworks.

Development impact

Through the 'Framework Act On Carbon Neutrality And Green Growth For Coping With Climate Crisis', public institutions and business operators are encouraged to expand their investment and employment in green technology research and development and green industry.

In addition, the Financial Services Commission and the Ministry of Environment designated several distinct graduate schools to recommend specializing green finance (Inha University, KAIST, Yonsei University Industry Cooperation Group) in order to foster green finance professionals.

Promotion

Investment promotion initiatives

With regard to the Korean government's efforts to expand clean energy finance and investment, Korea is supporting the revitalization of private investment in clean energy with a focus on renewable energy and hydrogen.

In July 2022, a hydrogen fund worth 370 million dollars (KRW 500 billion) was established, and financial support is being provided for hydrogen projects. Incentives will be provided to expand renewable energy, for example, tax credits for RE100 companies for making investment in their facilities.

International collaboration

Investment facilitation instruments

The Korean government is seeking intergovernmental cooperation with key economies, including developing countries, by developing network that will help facilitating technology dissemination, technology development, etc. with regard to green transition in order to make our overseas investment more sustainable.

For example in July 2022, the Ministry of Trade, Industry and Energy (MOTIE) signed a MOU regarding cooperation in promoting sustainable green investment with the Ministry of Trade of the Republic of Indonesia to promote eco-friendly investment in Indonesia and support appropriate technology transfer.

In addition, regarding the cooperation in the green finance field, On May 17, 2021, The Financial Services Commission (FSC) and the Financial Supervisory Service (FSS) of Korea applied for the membership to the Network of Central Banks and Supervisors for Greening the Financial System (NGFS), which was launched in December 2017 with aims to contribute to the management of climate and environment-related financial risks and support implementation of sustainable economic development. By joining the Network, the FSC and FSS plan to actively participate in and contribute to global discussions on green finance and work to strengthen policy alignment of Korea's green finance strategies with global standards.

Also at the 2021 P4G Seoul Summit, the FSC and Korea Development Bank co-hosted a special session on green finance, inviting reputable speakers and panellists from international organizations, multilateral development banks and government agencies to have vibrant discussions on the role of finance in fostering green recovery in the post-pandemic era.

Outward FDI promotion schemes

Active promotion of technology for development

As the abovementioned the MOU with the Indonesian government to promote eco-friendly investment and support appropriate technology transfer has been currently signed, the Korean government will continue to seek ways to promote technology dissemination with other countries as well.

The Russian Federation

Strategies

Comprehensive strategies

The implementation of the SDGs and their respective targets in the Russian Federation is being carried out under Decree of the President of the Russian Federation of July 21, 2020 № 474 "On the national development goals of the Russian Federation for the period up to 2030" and the Unified plan to achieve the national development goals of the Russian Federation for the period up to 2024 and for the planned period up to 2030, approved by order of the Government of the Russian Federation of 01.10.2021 N 2765-r.

Russia has been implementing the package of national policy measures, including the Energy Security Doctrine of the Russian Federation and the State Programme "Energy Development" with a view to ensuring universal access to sustainable and modern energy sources. The energy saving and energy efficiency management system continues to be improved through inclusion of relevant targets in industry strategic planning documents at all levels.

In addition, Russia adopted the Strategy of Low GHG Emission Socio-Economic Development 2050 that provides for the establishment of sustainable investment framework and development of national voluntary carbon market. The Strategy presents the vision of low carbon development pathway of the Russian economy, setting the goal of carbon neutrality by 2060. The document encompasses pathways to increase in low carbon energy generation, including nuclear and renewables, as well as sector-specific and overarching measures for improved energy efficiency. Detailed roadmap of the implementation is currently under development.

Since the Strategy was adopted as a governmental act, it went through the standard procedure of public consultations with the draft document publication at a dedicated portal and the procedure of the stakeholders and public comments review.

Policies

Enabling regulatory framework

The Russian Federation develops enabling regulatory framework to attract sustainable investments into domestic economic.

Green finance taxonomy, covering both green and transition activities, was adopted in 2021. The taxonomy for green projects consists of criteria for projects that are widely recognized as green ones in accordance with international best practices. As for the taxonomy for transition activities, the specifics of the Russian economy were taken into account by experts involved in its development. It includes projects in hard-to-abate industries substantially contributing to Russia's carbon neutrality target.

In addition, the Bank of Russia has amended the Bank of Russia Regulations "On the standards of issuing securities" (#706-P, 19 December 2019) and "On disclosure of information by issuers of issuable securities" (#714-P, 27 March 2020) in order to create a legal basis for issuing «green» bonds. It includes the harmonization of requirements for the green bonds issue in accordance with universally accepted international principles and approaches, as well as the introduction of a definition of sustainable development bonds.

And besides, the Federal Law "On Energy Saving and Energy Efficiency and on Amendments to Certain Legislative Acts of the Russian Federation" defines a set of legal, economic and organizational measures aimed at stimulating energy saving and increasing energy efficiency of the economy of Russia.

Investment facilitation and risk mitigation

The Bank of Russia aims to help companies consider the risks that arise when they comply with sustainable development goals. The recommendations developed by the Bank of Russia in 2020 allow market participants to structure information about their environmental impact and social responsibility of doing business, which will enable investors to assess their long-term financial stability.

The recommendations pay special attention to the composition of non-financial information and the principles of its disclosure. At the end of 2020, the Bank of Russia established the Working Group on Sustainable Development Financing that sets the strategic agenda in this area and controls its implementation.

Technology upgrading

The Energy Efficiency Plan of the Russian Federation provides for stimulating the introduction of advanced technologies and increasing the efficiency of the functioning of existing equipment. In the industry, it is proposed to introduce measures that stimulate the development of technologies aimed at the use of secondary energy or material resources instead of traditional materials.

Strengthening state policy measures for energy conservation and energy efficiency in these sectors will significantly reduce the carbon intensity of the Russia's economy and ensure the achievement of Russia's sustainable development goals.

Russian Federation has developed 51 reference books with the best available technologies that contribute to the achievement of environment protection goals. It is planned to establish indicators of resource and energy efficiency before 2024 to reduce resources and energy consumption and to increase the volume of recycled wastes in production.

Policy support

The progress of SDG 9 achievement has substantively benefited from the implementation of the following federal legislative acts:

- (1) Strategy of Spatial Development of the Russian Federation 2025;
- (2) Transport Strategy of the Russian Federation 2030;
- (3) Comprehensive Plan for the Modernization and Expansion of Main Infrastructure;
- (4) "Safe and Quality Roads" national project;
- (4) "Digital Economy" national project.

These documents particularly aim to increase the share of good-quality urban road network to 85 % by 2024 and transport supply in the regions by 7.7 % in 2024.

Access to finance

Russia has been implementing the Action Plan for Acceleration of Capital Investment Growth Rate and Increase of the share of the Capital Investments in GDP to 25% (13.02.2019 # 1315п-П13) aimed to improve the investment climate, competitive environment, comprehensive infrastructure development.

Development impact

The current nation-wide policy of combating poverty provides for the reduction of the national poverty level at least by half by 2024. This goal will be achieved through the implementation of following national projects: "Demography", "Workforce Productivity and Employment Support" and others, as well as and development and introduction of new support mechanisms.

Free access and integrated development of education are the key priorities of the national project "Education" and other strategic and policy documents (such as the State Programme "Education Development" aimed at ensuring access to preschool education and increased involvement in extended education programmes).

The mentioned national projects also set following goals: (1) to accelerate the annual labor productivity growth of MSMEs in essential non-oil economic sectors by at least 5 %; (2) to increase the employment of MSME sector by 25 million by 2024; (3) to rise the share of SMEs in national GDP by at least 32.5%.

Promotion

Investment promotion initiatives

Special economic zones are being actively created in Russia. Such territories have special regime of business activity. Currently, there are 39 special economic zones of four types (industrial, technology-innovative, tourism and port). At the federal and regional levels, special economic zones are considered as a relevant tool for attracting investment and economy development.

In order to develop sustainable finance in Russia in 2020 the Bank of Russia published the Guidance on Responsible Investment Principles – Stewardship Code for institutional investors to draw their attention to responsible investing and sustainable development issues. Special sustainable development sectors were created at PJSC Moscow Exchange and SPB Exchange.

In July 2021, the Bank of Russia issued non-mandatory Recommendations for public joint-stock companies on the disclosure of non-financial information pertaining to their activities. The Recommendations may also be used by any other organizations interested in increasing their environmental information transparency.

And besides, Russia conducted state information system "Energy Efficiency" (SIS), which collects the information from specialized state centers operating in 56 regions of the Russian Federation. This platform contains information on energy efficiency improvement, statistical information on energy intensity of the country's economy, training materials, other useful literature. In addition, the SIS is a single platform for submitting information (declaration) on the consumption of energy resources by budgetary organizations.

International collaboration	Investment facilitation instruments
	Intergovernmental commissions on trade, economic, scientific and technical cooperation between Russia and other countries contribute to facilitating the implementation of investment projects, including those related to renewables, low-carbon energy and energy efficiency as well as other sustainable development sectors.
	BRICS Understanding of Investment Facilitation. The close cooperation among BRICS countries presents an opportunity to mitigate the effects of the crisis and to contribute to restoration of production cross-border trade and cross-border investments, which in turn are all important factors for recovery of the global economy.
	Outward FDI promotion schemes
	In 2019, Russian Direct Investment Fund (RDIF) has launched the Center for Investment Promotion to attract investment into the Russian regions. The Center will use RDIF's extensive experience of working with international investors to create a centralized information portal on doing business in Russia, investment opportunities across the regions and global best practices.
	Active promotion of technology for development
	Cooperation within APEC, BRICS, UNECE, EAEU

Saudi Arabia

Strategies	Comprehensive strategies
	The Kingdom of Saudi Arabia in 2016 announced its Vision2030, a plan to diversify its economy and transform it into a thriving economy, with an ambitious nation and a more vibrant society. Furthermore, the kingdom is investing heavily in all new clean energy technologies, in addition to diversifying its electricity energy mix to consist of a 50% renewable and a 50% Gas. During its G20 presidency, the Kingdom started implementing the endorsed approach of the Circular Carbon Economy (CCE), and its 4 R's (Reduce-Recycle-Reuse-Remove) utilizing all available technologies and solutions to address GHG emissions. In addition, the Kingdom has announced a net-zero target by 2060, using the CCE as the main driver to achieve its Climate Goals (NDC).
Policies	Enabling regulatory framework
	The Kingdom of Saudi Arabia established a whole ecosystem for "Saudi energy efficiency program" ESCO market which includes: 1- creating a demand by issuing a legal instrument to impose an obligation on the Government sector to retrofit Govt facilities of energy efficiency purpose through direct contracting with the Super-ESCO, which going to tender these projects to ESCOs; 2- regulating the ESCO market through the market regulator, including the licensing and evaluating process. In regards to renewable energy related frameworks and to enable the market and ensure the competitiveness of renewable energy opportunities and support the bankability of the projects, the Kingdom of Saudi Arabia engages in kingdom-wide resource measurement projects, performs site-specific preliminary studies in line with international best practices, secures necessary permits, and tenders utility-scale projects to the market with the aim of increasing the contribution of renewable energy sources in the most efficient and competitively priced manner. The kingdom is also collaborating with Madagascar's Government to set policies and regulations of implementing LPG for clean cooking in alignment with the Kingdom's MGI announcement regarding clean cooking solutions. Standardized and regulated sustainable and innovated construction materials locally and internationally through the Saudi Standards, Metrology and Quality Organization (SASO) with the Principle of WTO Agreement. Furthermore, the Circular Carbon Economy National Program (CCENP), under the Ministry of Energy of the Kingdom of Saudi Arabia, is developing a comprehensive set of regulations across the entire value of chain of Carbon Capture, Utilization, and Sequestration (CCUS). Such regulations are extended to cover emissions control, safety of operations, and fees regulations and audit. Moreover, sets of policies and standards are under development for the carbon management which follow a four-step approach to establish the necessary standards and policies for CCUS deployment in KSA through: <ul style="list-style-type: none"> - Identifying standards and policies required for CCUS - Identifying standards and policies yet to be adopted - Aligning on implementation roadmap with stakeholders.
	Investment facilitation and risk mitigation
	<ul style="list-style-type: none"> - On energy efficiency and to avoid any financial burden on the Govt budget, the Super-ESCO was established with a sufficient fund to carry out the retrofitting activities for the Govt facilities, in exchange of collecting the generated energy savings with shared percentage with the Govt. - KSA announced plans to establish the Riyadh Voluntary Exchange Platform for offsets and credits within the Middle East and North Africa. Following COP26 and the latest agreement in Glasgow on the rules of Article 6 of the Paris Agreement, we are working on launching our updated GHG credits and offsets scheme for the Kingdom which will also contribute to our climate action and will enable further international cooperation with interested peers. - The Kingdom introduced and adopted an integrated system to de-risk Renewable Energy projects. The creation of the Saudi Power Purchasing Company as the full off taker of the output of these projects is a main part of this system. Additionally, the pre-development activities and the Grid impact studies that are performed before tendering these projects plays a crucial role in de-risking Renewable Energy projects in the Kingdom.

Technology upgrading

On energy efficiency, the Kingdom through the "Saudi energy efficiency program" is implementing new energy efficiency standards in power generation, water desalination, and electricity transmission and distribution to reduce 100 Mtpa of carbon emissions. It is also changing its energy mix to meet 50% of the Kingdom's domestic energy needs from renewables, reducing emissions by 175 Mtpa and displacing approximately 1 million barrels of liquid fuel per day by 2030. The Kingdom is using carbon capture technologies to convert the captured CO₂ into 12 tons per day of small-scale green methanol.

It's also on route to become the world's leading hydrogen producer and exporter, by capturing more than 27 million tons of CO₂ by producing 3 million tons of blue hydrogen and 1 million ton of green hydrogen per year. Saudi Arabia has initiated as part of its Vision 2030 several programs that support the development of energy sectors' technologies including renewable energy, energy efficiency and clean energy. Those programs' goals are mainly to support the needs of more deployment of clean sources of energy as well as increasing the level of readiness of new emerging technologies to be commercialized. These efforts are collectively done by various policy making, regulating, educational, and other institutions, such as Ministry of Energy, King Abdullah City for Atomic and Renewable Energy (Kacare) and King Abdullah Petroleum Studies and Research Center, and others. Studying Energy Storage technologies and scaling up the deployment of this technologies is one of the efforts that are exerted in this field.

Policy support

The Kingdom adopted policies to stimulate the participation of the private sector in this field, and updated regulations for renewable energy projects to achieve the goals of the National Renewable Energy Program, in line with the Kingdom's Vision 2030. The current Electricity Law also enables the fast progress of the sector with the introduction of different laws and regulations such as the below 2 MW Renewable Energy Generation, EV charging systems, and smart metering.

Access to finance

To maintain strong economic growth and advance sustainable development, ESG (Environmental, Social & Governance) investments and green finance should enable all energy transitions pathways by: (adopting the Circular Carbon Economy approach and its 4Rs; and support the accelerated investment needed in clean energy technologies including CCUS and Direct Air Capture as well as upgrading existing infrastructure to produce abated hydrocarbons). The Kingdom will support regional initiatives and projects through the Middle East Green Initiative.

Development impact

The expansion of renewable energy in the Kingdom also presents an opportunity for the development of a new industry for renewable energy technology, supported by private sector investment and public-private sector partnerships. Accordingly, the kingdom is working to encourage the private sector to increase investment in the Saudi renewable energy sector by creating a competitive local market for renewable energy, the Kingdom is building on its geographic strengths and obtaining the lowest prices in the world for renewable energy projects, particularly in wind and solar energy generation, further increasing the Saudi Arabia's attractiveness as a destination for foreign investment. Supporting localization also is a crucial part the kingdom is focusing on through enabling the development of different industries to cover the whole supply chain. The Circular Carbon Economy (CCE) National Program, under the Ministry of Energy of the Kingdom of Saudi Arabia, is working with all relevant stakeholders within the Energy ecosystem to ensure investment in skills needed across the CCE value chain. Such investment will develop and drive local and regional opportunities. Example of initiatives under deployment are broadening Technical Vocational Programs to cover the CCUS knowledge needed, adopting required programs for higher education, Energy Sector Reskilling initiatives and Energy Sector Scholarships.

Promotion	<p>Investment promotion initiatives</p> <p>The KSA Green Transition is a nation-wide ambition which includes efforts and commitments to attract and promote investments within the energy sector, mobility and transport, materials, and collaboration with other governmental and non-governmental entities. This priority is well-reflected within the Kingdom's Vision 2030 and economic diversification plans, the launch of the Saudi Green Initiative (SGI) and the Middle East Green Initiative (MGI), and the Circular Carbon Economy National Program, to support green investments and promote inclusive climate action nationally and internationally.</p> <p>The CCE National Program is dedicated to increasing investment in and deployment of novel technologies and fuels to reduce and remove emissions, for instance through aiming to pioneer in the production and export of clean hydrogen, reusing and recycling captured carbon to produce products that can generate value, and more. In line with the Kingdom's industrial and technological leadership, KSA prioritizes major investments in the development of low carbon and renewable energy. For example, the Kingdom invested in electric vehicles (Lucid) and localization of manufacturing, R&D in hydrogen vehicles, turbulent jet ignition, mobile carbon capture, production of sustainable and recyclable solar panels, polymer-based materials, to mention a few. Investments are also promoted at the levels of cities, municipalities and Giga Projects. For example, the Public Investment Fund prioritizes sustainability in its investments, which include the Red Sea Development Company & Amaala, focusing on sustainable tourism, and NEOM, which will include the world's largest hydrogen plant and be a hub for clean and renewable solutions.</p> <p>The Kingdom exerts many efforts to attract and promote investments in the Renewable Energy field. Providing custom exemptions, geographical surveys, pro-development studies, grid impact studies, long term power purchasing agreements, and others and all part of the activities that the kingdom does to attract such investments.</p>
International collaboration	<p>Investment facilitation instruments</p> <p>The Madagascar Project "Energy transition Program" which the kingdom is leading with the OPEC Fund for international development to provide clean cooking solutions to the country in alignment with SDG goals. The kingdom is collaborating with a variety of stakeholders, operators, and funds to promote sustainable, economic growth, and energy security in the region.</p> <p>Outward FDI promotion schemes</p> <p>One of the leading Saudi developers, ACWA Power, investor and operator of power generation and water desalination plants in 13 countries, entered into cooperation with many countries such as South Africa, leading the country's largest renewable energy project, in addition to a \$300 million project in partnership with the Ministry of Energy in Azerbaijan to meet to its goal to generate 30% of its power through renewable energy sources. Additionally, ACWA Power has other large investments such as projects in Uzbekistan, a 100MW wind farm in Nukus and two 500 MW wind farm in Bash and Dzhankelely. The company also has a wind farm project in Morocco with a capacity of 120MW. These international investments are enabled through governmental support by building and reinforcing relationships with various countries in the form of signing and hosting bilateral agreements and other methods.</p> <p>Active promotion of technology for development</p> <p>Saudi Arabia sees international cooperation as an essential enabler for achieving global climate goals, especially in the area of innovation and R&D, for advancing clean energy technologies including these that are needed for achieving net-zero ambitions such as CCUS and Direct Air Capture, as well as low carbon hydrogen solutions. Recently, Saudi Arabia alongside the US, Qatar, Norway and Canada, launched The Net Zero Producers Forum, which aims at developing pragmatic Net Zero strategies, including methane abatement, advancing the circular carbon economy, and development and deployment of clean energy technologies and CCUS. The Kingdom is working to create a sustainable renewable energy sector that includes industries, services, the localization of technologies, and the development of human resources. This being undertaken by identifying the main frameworks required for building the sector also established initiatives dedicated to enable the sector such as technologies localization of renewable energy initiative and human capacity building initiative.</p> <p>The Kingdoms Oil Sustainability Program (OSP) and King Abdullah University of Science and Technology (KAUST) have launched the Fuels, Lubricants, Efficient Engines Technology (FLEET) Consortium for improving the economic and environmental competitiveness of fuel, combustion engines and lubricants in the transportation sector.</p> <p>The consortium contributes to providing the support in engaging relevant entities and facilitating the advancement of research studies, as several leading entities within and outside Saudi Arabia have joined this research consortium, including Saudi Aramco, Bahri, Toyota, Hyundai, Pacific Green Technologies Group, SAPTCO, and others. The Circular Carbon Economy National Program, under the Ministry of Energy of the Kingdom of Saudi Arabia, is working with all relevant stakeholders in the energy ecosystem to accelerate deployment of key R&D themes across the Carbon Capture, Utilization, and Sequestration (CCUS) value chain in order to improve technical and financial feasibility of CCUS technologies. Examples of such efforts are:</p> <ul style="list-style-type: none"> * Build and operate Cryogenic Carbon Capture plant to develop KSA IP and reduce carbon capture costs for high-cost sectors with low CO2 concentration * Deploy Direct Air Capture Unit Pilot in KSA through an international technology provider using locally developed materials * Launch synthetic aggregates pilot in the Kingdom to improve feasibility

- * Launch synfuels pilot in order to assess feasibility of using CO2 to decarbonize hard-to-abate sectors such as aviation and marine
- * Several R&D initiatives to improve technical and financial feasibility of CO2 to chemicals technologies
- * Deploy pilots of CO2 for fertilizers and chemicals

South Africa

Strategies

Comprehensive strategies

South Africa is committed to COP26 and the just transition by moving away from coal to renewable energy, green hydrogen, waste to energy and battery storage. The policy was with all social partners in South Africa via the Nedlac process that brings business, labour, NGOs and government together on policy issues. The strategies are in newspapers, government websites, President's speeches, etc. The just transition is a medium and long-term policy to move away from coal and replace it with clean energy. Invest SA is attracting sustainable green investment in the PV solar sector with two new manufacturers in the PV solar sector.

Policies

Enabling regulatory framework

It is debated in the relevant committees of Parliament and amended if necessary. If the Bill passes through both the NA and the NCOP, it goes to the President for assent (signed into law). Once it is signed by the President, it becomes an Act of Parliament and a law of the land. Regulatory frameworks are legal mechanisms that exist on national and international levels. They can be mandatory and coercive (national laws and regulations, contractual obligations) or voluntary (integrity pacts, codes of conduct, arms control agreements). To provide for the legislative protection of investors and the protection and promotion of investment; to achieve a balance of rights and obligations that apply to all investors; and to provide for matters connected therewith.

CONSCIOUS of the need to protect and promote the rights enshrined in the Constitution;
 RECOGNISING the importance that investment plays in job creation, economic growth, sustainable development, and the well-being of the people of South Africa;
 AFFIRMING that the State is committed to maintaining an open and transparent environment for investments;
 DESIROUS of promoting investment by creating an environment that facilitates processes that may affect investments;
 CONSIDERING the responsibility of the government to provide a sound legislative framework for the promotion and protection of all investments, including foreign investments, pursuant to constitutional obligations;
 SECURING a balance of rights and obligations of investors to increase investment in the Republic;
 EMPHASISING the right to just administrative action;
 RECOGNISING the obligation to take measures to protect or advance persons, or categories of persons, historically disadvantaged in the Republic due to discrimination;
 ACKNOWLEDGING that investment must be protected, in accordance with the law, administrative justice and access to information;

Investment facilitation and risk mitigation

Invest SA/DTIC has worked with the World Bank to improve the permitting system, EIA, construction permits, Deeds office. South Africa is an open society so access to information, clarity and is predictable. For example, the Finance Minister's budget speech is the second most transparent in the world. With the Independent Power Producers programme (IPP), the IPP office adopts a risk mitigation strategy.

Technology upgrading

Art solar is a PV solar company that has the latest technology-M12 for assembling PV panels.

Policy support

A national Framework policy for sustainable development was done by Environmental Affairs in June 2007.

Access to finance

The IDC, DBSa, PIC and commercial banks have supported the IPP process-Independent Power producers programme, which assisted local and foreign investors for funding in the wind, PV solar, CSP sectors.

Development impact

The six master plans from the Department of Trade Industry and Competition (DITC) that are in implementation have embedded investments for sustainable development. The CTFL master plan incentive programme, for example, has specific reference to climate change mitigation strategies. This can also be found in the Steel Master Plan, which has made greening the sector a priority. The master plans also focus on skills upgrades and localisation/onshoring manufacturing with the future of work given focus attention. more: <http://www.thedtic.gov.za/media-room/master-plans/>

Promotion	<p>Investment promotion initiatives</p> <p>South Africa has commissioned 5 bid windows for green energy and an emergency bid round. It further notes SA has been gradually adding utility-scale wind, solar PV and CSP for years, increasing the installed capacity from 467MW in 2013 to 5 027MW by the end of 2020 – 414MW of wind and 558MW of solar PV were added during the year 2020 alone. There is 10% of green energy on the Eskom grid as at 2020.</p>
International collaboration	<p>Investment facilitation instruments</p> <p>Working with UNIDO and UNEP on circular economy information sharing in the CTFL sector. Working with LEADIT (SWEDEN AND INDIA) for green steel - policy work. Working with the ILO for Master plans. Working with the Green Climate Fund.</p> <p>Outward FDI promotion schemes</p> <p>For the roll out for green energy, National Treasury provided guarantees for all independent power producers from bid window 1 to Bid window 5. FDI investors are protected by our constitution. On Outward FDI promotion, we do power-point presentations and highlight the investment opportunities in each sector. For Greenfield projects in South Africa, you need an EIA. The DTIC gives some incentives to investors and the IDC provides loans and take equity in investment projects</p> <p>Active promotion of technology for development</p> <p>-----</p>

Türkiye

Strategies	<p>Comprehensive strategies</p> <p>In policy documents such as the development plan, export strategy and industrial strategy, actions for clean energy, energy efficiency and renewable energy are addressed. These actions were widely communicated and define and communicate the Government's priorities in the medium and long run, including in respect to sustainable investment attraction. The Energy Efficiency Strategy of 2012-2023 defines a set of policies supported by result-oriented goals and devises actions that must be taken to achieve the goals.</p> <p>Türkiye's National Energy Efficiency Action Plan (NEEAP) (2017-2023) includes 55 actions in building and services, energy, transport, industry and technology, agriculture and cross-cutting area, and it is aimed to decrease the primarily energy consumption of Türkiye by 14% in 2023 base scenario.</p>
Policies	<p>Enabling regulatory framework</p> <p>Within the scope of the Investment Incentive System, investments are supported under 4 pillars, namely general, regional, priority investment and strategic investment incentive schemes. Each of these schemes has a different purpose. There are 9 support measures such as VAT Exemption, VAT Refund, Customs Duty Exemption, Tax Deduction, Social Security Premium Support for Employer Share and Employee's Share, Income Withholding Tax Support, Land Allocation and Interest Support. These supports include extremely attractive conditions in terms of amount and duration. Renewable energy investments, environmental investments, technological transformation investments can benefit from these supports. "Loan Support for Heat Insulation in Buildings" package has been implemented by Presidential Decree. Expected energy saving is 1 bcm natural gas by end of 2024. Regulation was published about charging stations for electric vehicles on April 2022.</p> <p>The RES Law (Law No:5346) introduces feed-in-tariffs (FiT) and constant tariffs for each renewable resource which is set out therein. The prices based on the type of renewable resource are provided below. Investors can make use of the incentives provided in the table for a period of 10 years by participating the YEKDEM (Renewable Energy Support Mechanism). Participation to the YEKDEM is not mandatory. Each year, owners of the power plant declare whether they will enter the YEKDEM or not. When a power plant participates to YEKDEM, it cannot get out of the mechanism in that year.</p> <p>YEKDEM: A private power producer generating electricity from renewable resources can voluntarily involve in an alternative mechanism, namely, Renewable Energy Sources Support Mechanism (YEKDEM). Those renewable generators participating to YEKDEM can sell their energy via electricity market/grid at the same time. The objective of YEKDEM is to introduce renewable sources into the economy securely, economically and in a qualified manner, to increase the diversification of energy sources, thus reduce greenhouse gas emissions, utilize wastes and protect the environment.</p> <p>Regarding the hybrid power plants regulation: It entered into the electricity market legislation with the eighth paragraph added to the 7th article of the Electricity Market Law no 6446 with the 43rd article of the "Law on the Amendment of the Mining Law, Some Laws and Statutory Decrees" dated 14/2/2019 and numbered 7164. Afterwards, secondary legislation studies were completed. As of July 1, 2020, applications for the establishment of multi-source electricity generation facilities have started to be received by EMRA.</p>

Moreover, there is another electricity generation model named as YEKA which is managed by the Ministry of Energy and Natural Resources. Onshore wind tenders and solar PV tenders have been carried out up to now. The price ceiling, duration and kind of support and other rules of the tenders vary depending on the type of tender.

Investment facilitation and risk mitigation

Power Futures Market was opened on June 1, 2021 under the operation of Energy Exchange Istanbul (EXIST/EPIAŞ). With the amendment in the Electricity Market Law, EXIST/EPIAŞ had been granted the authority to operate the physically settled power futures market in January 2019. The processes on the secondary legislation had also been completed by EMRA and the legislations regarding power futures market had been published. Power futures market enables market participants to hedge their positions in order to protect themselves from market price fluctuations and anticipate future price expectations (price discovery). It also provides price signals for investors and support long-term security of supply indirectly. It will also contain physical delivery of the electricity.

Technology upgrading

Investments possessing high R&D intensity and innovative technologies and meet the minimum investment and capacity criteria may benefit from investment incentives in various ways. For the investments with the high value added and medium/high-tech investments, Türkiye offers higher tax deduction and interest support rates along with the higher durations for labor premiums. Moreover, there are VAT and Customs Duty Exemptions for machinery and equipment, VAT Refund for construction expenses and land allocation for R&D intense and innovative investments. Within the scope of Karapınar YEKA Solar Power Plant-1, the legal entity that won the tender has an obligation of establishing a photovoltaic (PV) solar module manufacturing factory and also to conduct R&D activities in Türkiye for a minimum of 10 years. This module manufacturing factory is the country's first solar module manufacturing facility with an annual capacity of 1000 MW. Within the scope of YEKA Wind Power Plant -1, the legal entity that won the tender has an obligation of establishing a wind turbine manufacturing factory and maintaining R&D activities for the next 10 years.

Rare Earth Elements Research Institute (NATEN) has adopted to contribute the transition from a linear to a circular economy- sustainable organisation of clean technologies for decarbonised future. To that end, NATEN has carried out several projects on recycling of end-of-life materials to recover critical raw materials and REEs and their use in low-carbon technologies.

Policy support

Within the scope of Decision on State Aids in Investments Decree No:2012/3305 investments are supported under 4 pillars, namely general, regional, priority investment and strategic investment incentive schemes. Each of these schemes has a different purpose. There are 9 support measures such as VAT Exemption, VAT Refund, Customs Duty Exemption, Tax Deduction, Social Security Premium Support for Employer Share and Employee's Share, Income Withholding Tax Support, Land Allocation and Interest Support. These supports include extremely attractive conditions in terms of amount and duration. Renewable energy investments, environmental investments, technological transformation investments can benefit from these supports.

Access to finance

The establishment process of the national energy efficiency financing mechanism is continued.

Development impact

Promotion

Investment promotion initiatives

International collaboration

Investment facilitation instruments

Outward FDI promotion schemes

Active promotion of technology for development

Electricity and natural gas distribution companies can use 2% and 1% respectively of their operating expenses for R&D activities. In these cases, distribution companies submit their projects to the R&D commission of the Energy Market Regulatory Authority (EMRA). If the project is approved by the commission, companies can finance the projects using their approved R&D budget. The development and implementation process of approved projects are monitored by EMRA.

Rare Earth Elements Research Institute (NATEN) under Turkish Energy, Nuclear and Mineral Research Agency aims to act as a bridge between the university, public institutions and the private sector through national and international projects for sustainable investment and circular economy.

For example, joint projects with industry and universities are carried out within NATEN regarding the recovery of rare earth elements and strategic raw materials from fluorescent lamps and electronic waste.

The United Kingdom

Strategies

Comprehensive strategies

The UK has recently published a new Energy Security Strategy that has investment in renewable energy at its heart - we now aim to develop up to 50GW of offshore wind by 2030, of which we would like to see as much as 5GW from floating offshore wind in deeper seas. We will also look to increase the UK's current 14GW of solar capacity which could grow up to five times by 2035. Ocean energy, onshore and remote island wind and bioenergy are also supported.

In 2021, the Government published its Net Zero Strategy: build back greener which set out policies and proposals for decarbonizing all sectors of the UK economy to meet UK's net zero target by 2050. As part of this strategy, the Government will work with the Financial Conduct Authority to introduce a sustainable investment label - a quality stamp - so that consumers and retail investors can clearly compare the impacts and sustainability of their investments for the first time.

In addition to that, the Government's ten-point plan sets out the approach the UK will take to build back better, support green jobs, and accelerate our path to net zero. The plan focuses on increasing ambition in a number of areas, including green finance and innovation. The ten-point plan will mobilise £12 billion of government investment, and potentially 3 times as much from the private sector, to create and support up to 250,000 green jobs.

The UK Energy Supply Chain Taskforce (UKESC) is co-chaired by Department for International Trade & Department for Business, Energy and Industrial Strategy Ministers, to deliver on the increased ambition for the UK supply chain to accelerate our progress towards net zero, which is fundamental to energy security. There are huge export opportunities particularly in decommissioning, hydrogen, CCUS and energy from waste within the supply chain transition; building capability and capacity through experience in domestic projects.

Policies

Enabling regulatory framework

The UK's new UK Green Taxonomy will set a robust standard for which investments count as green, following on from our commitment to reach net zero by 2050. Our new economy-wide Sustainability Disclosure Requirements will see businesses and investment products reporting consistent information on how they impact climate and the environment. As standards for transition plans emerge, the UK Government and regulators will take steps to incorporate these into the Sustainability Disclosure Requirements and strengthen requirements to encourage consistency in published plans and increased adoption by 2023

Investment facilitation and risk mitigation

The WTO joint initiative on investment facilitation for development hopes to create a more transparent, efficient, and predictable climate for establishing cross-border investments, which may increase WTO members' ability to retain FDI flows in sectors including renewable energy.

Technology upgrading

There are a number of initiatives currently underway which are promoting technology upgrading, including Heat and buildings strategy (sets out how the UK will decarbonise our homes, and our commercial, industrial and public sector buildings, as part of setting a path to net zero by 2050), the Boiler Upgrade Scheme (providing grants to encourage property owners to install low carbon heating systems), Heat Pump Ready Innovation Fund (supports the development and demonstration of heat pump technologies and tools, and solutions for optimised deployment of heat pumps) and the Net Zero Hydrogen Fund (worth up to £240 million, will fund the development and deployment of new low carbon hydrogen production to de-risk investment and reduce lifetime costs.)

Policy support

The Investment Atlas highlights strategic green investment opportunities across the UK. Investors can find information about foreign direct investment and capital investment opportunities that are ready for investment conversations across the whole of the UK, with information about the wider sectors these opportunities are in, the business environment, and other support available to help investors enter or expand in the market. It will also give investors ready access to a variety of investment support services, including information about how the new Office for Investment can support high value investors receive the strongest possible cross government support to realise their UK investments.

Access to finance

The UK government has committed to support developing countries through our commitment to provide £11.6bn in climate finance over the period 2021 to 2025.

	<p>Development impact</p> <p>Just Energy Transition Partnerships (JETPs) are innovative country-led partnerships that tailor coordinated international support to individual countries' plans for ambitious and just energy transitions. They bring together domestic resources with support from developed countries and multilateral development banks, alongside private sector investment. This approach builds on existing country partnership approaches that many countries already benefit from. These partnerships are an exciting new model for long term collaboration that simultaneously enables increased climate ambition, delivers social benefits, and channels finance to catalytic actions that accelerate clean transitions in developing countries and emerging economies.</p>
<p>Promotion</p>	<p>Investment promotion schemes</p> <p>-----</p>
<p>International collaboration</p>	<p>Investment facilitation instruments</p> <p>The Glasgow Financial Alliance for Net Zero (GFANZ) was launched in April 2021, in partnership with the UN-backed Race to Zero campaign, to unite net-zero financial sector-specific alliances from across the globe into one industry-wide strategic alliance. Bringing together existing and new net-zero finance initiatives in one sector-wide coalition, GFANZ provides a forum for leading financial institutions to accelerate the transition to a net-zero global economy. Members currently include more than 450 member firms from across the global financial sector, representing more than \$130 trillion in assets under management and advice.</p> <p>The UK continues to work through the OECD Investment Committee on the implementation of the Foreign Direct Investment Qualities Guide and other elements of the FDI Qualities workstream. Guide for Development Co-operation has been designed by the OECD and its members to support the implementation of the Recommendation on Foreign Direct Investment Qualities for Sustainable Development. The Recommendation is the first multilateral agreement on how FDI can be used to achieve the SDGs.</p> <p>The UK's Office for Investment (Ofi) will connect public and private sector expertise while ensuring high and rigorous standards of scrutiny and security. The office supports the landing of high value investment opportunities into the UK which align with key government priorities, such as reaching net zero, investment in infrastructure and advancing research and development.</p> <p>Outward FDI promotion schemes</p> <p>The UK Government is supporting sustainable green infrastructure across the Commonwealth and opening new opportunities for Britain's leading clean tech companies to grow their business around the world. British International Investment will provide up to £162 million [\$200m USD] of capital investment in the hydropower sector in Africa, partnered with Norway's Norfund in a joint venture with energy firm Scatec.</p> <p>Active promotion of technology for development</p> <p>Breakthrough Agenda - Launched by the United Kingdom and a coalition of 42 world leaders, whose countries collectively represent 70% of global GDP, at COP26. The Breakthrough Agenda is an international clean technology plan to help keep 1.5°C in reach. It provides a framework for countries and businesses to join up and strengthen their actions every year, in every sector, through a coalition of leading public, private and public-private global initiatives, and signposts the leading global initiatives that will help ensure success. Bringing together the government with business, the Agenda aims to make clean solutions the most affordable, accessible and attractive option in every sector, by the end of this decade.</p> <p>The UK is also introducing five new virtual Centres of Expertise to provide in-depth advice and coaching for Commonwealth countries on green growth, infrastructure, financial services, public finance and trade.</p>

The United States

Strategies

Comprehensive strategies

The Biden-Harris Administration issued an executive order entitled “Executive Order on Tackling the Climate Crisis at Home and Abroad” which stated that “Domestic action must go hand in hand with United States international leadership, aimed at significantly enhancing global action.” The executive order details that it is the policy of the Administration that climate considerations shall be an essential element of United States foreign policy and national security. The United States will work with other countries and partners, both bilaterally and multilaterally, to put the world on a sustainable climate pathway. The United States will also move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories.

Importantly, the United States has consistently taken the view that the private sector is, generally, best positioned to make investment decisions. In the United States, policy measures affecting investment are highly transparent and are generally subject to robust notice and comment procedures.

Policies

Enabling regulatory framework

The United States has a generally open and welcoming investment climate. In June 2021, President Biden reiterated the longstanding open investment policy of the United States as a "pledge to treat all investors fairly and equitably under the law."

In the United States, investors are able to choose whether to have investment partners and are free to choose which partners to have. The United States does not require investments to achieve a given level of local content, nor are advantages to investments conditioned on achieving a given local content level. Investors can freely remit profits and make other investment-related transfers. Further the United States has strong protections against discriminatory and uncompensated expropriation of investment. Lastly, the United States is a highly transparent and predictable regulatory environment with strong respect for the rule of law and anti-corruption measures. These are the factors which make for a regulatory environment that is conducive to investment.

Investment facilitation and risk mitigation

SelectUSA is the federal government program housed within the U.S. Department of Commerce charged to promote and facilitate business investment into the United States. Since its inception, SelectUSA has facilitated more than \$105 billion in client-verified investment projects, supporting more than 138,000 U.S. jobs. SelectUSA investment specialists help companies find helpful information and interpret unbiased data they need on a wide range of topics – from information on the overall economy and investment trends through industry overviews and data about consumers, U.S. workforce, specialized clusters, and available federal resources. The U.S. International Development Finance Corporation provides political risk insurance, which covers currency inconvertibility, expropriation, political violence, reinsurance, breach of contract for capital markets, and multiple guaranty coverages.

Technology upgrading

In April 2021, President Biden announced a new target for the United States to achieve a 50-52 percent reduction from 2005 levels in economy-wide net greenhouse gas pollution in 2030, building on progress to-date and by positioning American workers and industry to tackle the climate crisis. The United States will invest in innovation to improve and broaden the set of solutions as a critical complement to deploying the affordable, reliable, and resilient clean technologies and infrastructure available today. Secretary of Energy Granholm has made clear that “Accelerating how quickly we get novel technologies to the marketplace will allow us to deploy the clean energy sources needed to combat climate change, lower energy costs, and keep us on course to reaching President Biden’s decarbonization goals. The Department of Energy’s national laboratories are stepping up to address the urgent need to develop solutions for expedited clean energy technology commercialization – from the time a product is researched, developed and patented to its widespread use. “

Policy support

The United States does not, in general, offer financial or other incentives for foreign investment and most incentive programs are open equally to domestic or foreign investors.

Access to finance

The United States hosts the most developed, liquid, flexible, and efficient financial markets in the world. Access to capital is an important reason business choose to invest in the U.S. market, where a wide range of funding sources – from banks and investment firms to venture capitalists and angel investors – enable business innovation and expansion. Companies operating in the United States – from individual entrepreneurs with a dream to established businesses expanding their local physical presence – have access to a wide range of short- and long-term investment sources. Unlike in many other markets, capital investors in the United States are typically not involved in the day-to-day management or operations of the organizations they are funding. Internationally, DFC's Portfolio for Impact and Innovation (PI2) aims to bridge the financing gap for early-stage social enterprises. PI2 allows companies (especially local entrepreneurs) that face challenges accessing financing due to their relative size, short track record, and novel approaches, to obtain loans up to \$10m USD through a streamlined approval process.

Further, DFC offers a Loan Portfolio Guarantee product (LPG) through its Mission Transaction Unit (MTU), which allows DFC to provide a financial institution with a guarantee for a portfolio of loans made to hundreds, if not thousands, of customers.

Development impact

The U.S. International Development Finance Corporation (DFC) is the United States' development finance institution. DFC partners with the private sector to finance solutions to the most critical challenges facing the developing world today. DFC invests across sectors including energy, healthcare, critical infrastructure, and technology. DFC also provides financing for small businesses and women entrepreneurs in order to create jobs in emerging markets. DFC investments adhere to high standards and respect the environment, human rights, and worker rights. DFC is a leader in financing projects that help countries generate power from renewable sources including solar, wind, hydro, and geothermal. DFC offers a variety of tools such as direct loans and guaranties, equity, fund investing, political risk insurance, technical assistance, and feasibility studies. DFC projects are aligned to the SDGs, and the agency uses blended finance mechanisms. The agency has launched a series of climate-focused commitments to extend its work in the developing world.

Net-zero emissions: Using credible assumptions, DFC has committed to achieving net zero emissions in its portfolio by 2040.

Call for climate-focused funds: DFC announced a rolling Call for Applications for funds targeting climate mitigation, adaptation, and/or resiliency.

Call for Distributed Renewable Energy applications: DFC issued a Call for Applications from private companies seeking financing.

Increased technical assistance for climate projects: DFC will commit at least \$50 million over the next five years for feasibility studies and technical assistance to help identify, design, and implement new climate projects.

Risk sharing for climate projects: DFC will develop a risk sharing platform with private sector insurance partners to reduce barriers to financing climate projects and expand the agency's capacity to support innovative projects in challenging environments.

Increased collaboration: DFC will collaborate closely with other development finance institutions and interagency partners to bolster its climate project pipeline.

Chief Climate Officer: DFC created a new position of Chief Climate Officer to lead internal and external coordination on sustainability and climate-related investments.

Promotion

Investment promotion initiatives

The Biden-Harris Administration issued an executive order entitled "Executive Order on Tackling the Climate Crisis at Home and Abroad" which stated that "Domestic action must go hand in hand with United States international leadership, aimed at significantly enhancing global action." The executive order details that it is the policy of the current Administration that climate considerations shall be an essential element of United States foreign policy and national security. The United States will work with other countries and partners, both bilaterally and multilaterally, to put the world on a sustainable climate pathway. The United States will also move quickly to build resilience, both at home and abroad, against the impacts of climate change that are already manifest and will continue to intensify according to current trajectories.

The United States developed a climate finance plan, making strategic use of multilateral and bilateral channels.

International collaboration

Investment facilitation instruments

The Blue Dot Network is a mechanism to certify infrastructure projects that meet robust international quality standards. The United States, Japan, and Australia launched the Blue Dot Network as a multilateral effort to promote principles of sustainable infrastructure development around the world. Blue Dot Network certification will serve as a globally recognized symbol of market-driven, transparent, Paris Agreement-aligned, and financially, socially, and environmentally sustainable infrastructure projects. The Blue Dot Network can contribute to closing the global infrastructure gap by helping attract investment from the private sector, while also improving national policies, benefitting local communities, and promoting transparent, climate-smart, sustainable, and responsible investment.

Outward FDI promotion schemes

The decision on whether or how to invest internationally is a private sector decision that should be made for commercial rather than political reasons. The United States generally does not promote outward investment, but in certain circumstances does help to facilitate such investment. For example, the U.S. International Development Finance Corporation (DFC) provides political risk insurance, which covers currency inconvertibility, expropriation, political violence, reinsurance, breach of contract for capital markets, and multiple guaranty coverages.

Active promotion of technology for development

The United States believes that voluntary and mutually agreed commercial partnerships or arrangements are the most effective way to promote technology for development. The United States reports on its incentives to promote and encourage technology transfer to least-developed country (LDC) WTO members in the annual Article 66.2 Report submitted annually to the WTO TRIPS Council. The broad range of activities covered in this report – including laboratory-based scientific collaboration, capacity building and education, and IP enforcement activities – highlight the United States' efforts to promote effective and voluntary transfer of technology to LDC members.

Singapore

Strategies

Comprehensive strategies

In 2021, Singapore launched the Singapore Green Plan 2030, which is a whole-of-nation movement to advance the national agenda on sustainable development. The Green Plan charts ambitious and concrete targets for this decade, which will strengthen ongoing efforts towards achieving UN's 2030 Sustainable Development Agenda and Singapore's commitments under the Paris Agreement. It also positions Singapore to achieve its long-term net-zero emissions aspirations as soon as viable.

Under the Green Economy pillar of the Singapore Green Plan 2030, Singapore seeks to grow as a leading centre for green finance in Asia. The Green Finance Action Plan was developed by the Monetary Authority of Singapore in 2019 to (i) strengthen the financial sector's resilience to environmental risks, (ii) develop green finance solutions, (iii) build knowledge and capabilities, (iv) support green FinTech innovation and (v) enhance data and disclosures. Some initiatives include a USD 2 billion Green Investment Programme to place funds with asset managers committed to deepen green finance activities and capabilities in Singapore, and Project Greenprint, a technology platform aimed at promoting a green financial ecosystem through mobilizing capital, monitoring commitment and measuring impact of green and sustainable projects.

Under the Sustainable Living pillar of the Green Plan, Singapore hopes to encourage a greener citizenry that consumes and wastes less. The inaugural Zero Waste Masterplan launched in 2019 has mapped out Singapore's key strategies to build a sustainable, resource-efficient and climate-resilient nation. These include adopting a circular economy approach to waste and resource management practices and shifting towards more sustainable production and consumption. The plan supports businesses in turning "trash to treasure" – namely, to recycle or transform waste into useful inputs for production. Notably, JTC Corporation, the government agency which champions industrial development, is working with companies on Jurong Island to build a more sustainable Jurong Island.

Policies

Enabling regulatory framework

Singapore introduced a carbon tax on greenhouse gas (GHG) emissions through the Carbon Pricing Act that came into force on 1 January 2019. The carbon tax forms part of Singapore's comprehensive suite of mitigation measures to reduce emissions; the tax rate is currently set at SGD 5 per tonne of carbon-dioxide equivalent (tCO₂e) from 2019 to 2023. The carbon tax will subsequently be raised to SGD 25/tCO₂e in 2024 and 2025 and \$45/tCO₂e in 2026 and 2027 with a view to reaching \$50-\$80/tCO₂e by 2030. The tax is applied uniformly to emissions from all sectors, including those from the manufacturing, power generation, and water and waste management sectors, with direct reckonable GHG emissions of 25,000 tCO₂e or more annually. This covers around 80% of national emissions. This will provide a strong price signal and impetus for businesses and individuals to reduce their carbon footprint in line with national climate goals.

To support companies during the transition, the Government is prepared to spend more than the expected carbon tax revenue of about SGD 1 billion in the first five years to help companies, including small and medium-sized enterprises (SMEs) and power-generation companies (gencos), improve their energy and carbon efficiency by adopting greener and cleaner technologies and practices. In addition to making changes in the energy sector, Singapore has taken action across the economy, such as switching to cleaner-energy vehicles and improving energy efficiency in buildings. To encourage energy efficiency in the industrial sector, the Energy Conservation Act was revised in 2017 to stipulate more energy management practices, which include minimum energy efficiency standards for common industrial equipment and systems.

Investment facilitation and risk mitigation

Technology upgrading

Singapore is investing resources to pursue R&D in low-carbon technologies such as hydrogen. This includes investment in Low-Carbon Energy Research Funding initiative, investing in research to develop new catalysts to liberate hydrogen from ammonia in a more energy-efficient way and development of a Carbon Capture and Utilisation Translational Testbed which will facilitate the rapid evaluation and test-bedding of emerging capture and utilisation technologies to accelerate industry adoption.

Policy support

Access to finance

In 2017, MAS launched a Sustainable Bond Grant Scheme (SBGS) to encourage the issuance of green, social and sustainability bonds in Singapore by helping issuers to cover additional costs associated with external reviews. In November 2019, MAS set up a US\$2billion Green Investments Programme (GIP) to invest in public investment strategies that have a strong green focus. MAS also launched the Green and Sustainability-Linked Loan Grant Scheme (GSLs) in 2020 to encourage businesses to take up green and sustainability-linked loans. The grant also encourages banks to develop green and sustainability-linked loan frameworks to make such financing more accessible to small and medium-sized enterprises.

Singapore launched the Singapore Green Bond Framework in June 2022. The Framework serves as a governance framework for Singapore sovereign green bond issuances under the Significant Infrastructure Government Loan Act 2021 (SINGA). The Framework details the Singapore Government's (i) intended use of green bond proceeds, (ii) governance structure to evaluate and select eligible projects, (iii) operational approach to manage green bond proceeds, and (iv) commitment to post-issuance allocation and impact reporting.

Singapore sovereign green bonds, also known as Green Singapore Government Securities ("SGS") (Infrastructure), will be used to finance major, long-term green infrastructure in Singapore that qualify under the Framework. Examples of eligible green SINGA projects include the upcoming Cross Island Line and Jurong Region Line. Our rail network expansion will enhance connectivity and encourage more commuters to take mass public transport, which together with walking and cycling, are the greenest ways to move.

To support Singapore's decarbonization efforts and deepen Singapore's green finance market, the Government announced at Budget 2022 that the public sector will take the lead by issuing up to S\$35 billion of public sector green bonds by 2030. These public sector green bond issuances will serve as reference for the corporate green bond market and build on MAS' efforts to develop green financing solutions and markets, by deepening market liquidity for green bonds, and attracting green issuers, capital, and investors. This paves the way for greater private sector green finance activity.

Development impact

In February 2022, MAS and IBF launched the Sustainable Finance Technical Skills and Competencies (TSCs) under the IBF's Skills Framework for Financial Services. The new TSCs set out a robust, common level of sustainable finance proficiency, knowledge and abilities needed for individuals to perform various roles in sustainable finance

The Government has also launched Enterprise Sustainability Programme to enable local enterprises to uplift their capabilities and capture opportunities in sustainability.

Promotion

Investment promotion schemes

Singapore sees bilateral and plurilateral Free Trade Agreements (FTAs) as a practical way for like-minded parties to work towards a more ambitious level of trade liberalization, and therefore complement multilateralism. In order to help further address the needs of the future economy, Singapore is exploring the implementation of Green Economy Agreements (GEA) with like-minded and progressive Members which could potentially forge the pathway for new multilateral agreements in future.

Singapore sees GEAs as a valuable channel that can help to (i) facilitate trade and investment in environmental goods and services, (ii) strengthen environmental governance, and (iii) enhance capacity to address climate change. Some areas of cooperation could include carbon trading, green financing and clean energy solutions. Singapore is currently in the midst of working on the world's first GEA with Australia.

International collaboration

Investment facilitation instruments

Singapore is a co-sponsor of the plurilateral Joint-Statement-Initiative (JSI) on Investment Facilitation for Development (IFD) under the World Trade Organization. The JSI on IFD was launched due to the need to address the trade barriers slowing down and restricting investment processes between countries. The JSI works to (i) create clear and consistent global benchmarks for investment facilitation; (ii) anchor domestic

investment facilitation reforms in shared international commitments; and (iii) provide a global forum to promote best practices.

Outward FDI promotion schemes

Active promotion of technology for development

Spain

Strategies

Comprehensive strategies

The Recovery, Transformation and Resiliency Plan is the strategic tool that the Spanish government has put in practice, following a European strategy for the recovery from the COVID-19 pandemic. The Plan is articulated through strategic goals, assigning funds to them.

One of the main goals is achieving a sustainable economic model, specially through de-carbonization, ecological preservation and tackling social inequalities. The Spanish companies should present projects aligned with the goals in order to receive the funds. The Plan also counts with several reforms in order to transform the regulation and promote the achievement of the goals.

For every law and regulation changed there has been a public consultation to take in consideration the worries of companies and individuals. The Plan has been widely communicated, and the medium to long term achievements and progress is being published on web sites.

The Plan also considers the attraction of investment through public- private schemes for green investment.

Policies

Enabling regulatory framework

As a headline, Spain is conducting a multi-year plan for economic recovery focused on energy transition and resilient ecosystems, among others pillars. This is the so-called "Recovery, Transformation and Resilience Plan". Aligned with it, the "Integrated National Plan for Energy and Climate" (PNIEC for acronym in Spanish) sets out the guidelines for investments and reforms.

Additionally, among those main reforms, Spain has put in force the following ones: Climate change and energy transition law, development of a robust and flexible energy system, deployment and integration of renewables, Renewable Hydrogen Roadmap, Resilience and Adaptation of Ecosystems, Development and Connectivity of Green Infrastructures, Water Law and National Plan for Purification, Sanitation, Efficiency, Savings and Reuse, Law on Waste and Contaminated Soils for an Economy Circular, and Self-consumption Roadmap.

Also, with regards to the Public Sector Contracts Law, Law 9/2017 on Public Sector Contracts has introduced award criteria including sustainability and environmental and social aspects related to the contracts. Companies that have implemented measures in these areas are better positioned to win public procurement contracts with the Spanish Government.

Investment facilitation and risk mitigation

An example would be the mentioned Law on climate change and energy transition (Law 7/2021), whose articles 32 and 33 establish climate risk reporting obligations on credit institutions and aim to facilitate investments in sustainable sectors.

Technology upgrading

The private sector plays a leading role in the fight against climate change and must establish strategies to reduce its CO2 emissions into the atmosphere and promote renewable energies as opposed to fossil fuels in its activities, or invest in R&D&I to develop more sustainable and less emission-intensive technology innovations. The drive to approve legislation on climate change has been underway since 2011 and ended with the Law on Climate Change and Ecological Transition. Also, among other general initiatives aimed at improving R&D&I and business climate (with one of the ultimate goals being improving technology related to the core and horizontal objective of sustainability), there are Business Growth Law Projects ("Créate y Crece"), the Law of Startups, etc.

Policy support

The already cited plans, based on the fundamental laws that have been described, represent some of the best examples of policy support in this sense.

Access to finance

At the national level, Spain has developed a sustainability strategy for export credits with official support through a new Policy on Climate and Sustainability, adopted in 2021. The new strategy applies for both direct financing and pure cover operations. It includes restrictions for the financing of projects in polluting industries as well as incentives for adequately channelling financial resources towards sustainable activities, compatible with the EU taxonomy and in accordance with the OECD Arrangement.

With the purpose of going further on these restrictions and incentives, Spain was a founder member of the "E3F (Export Finance For Future)" international coalition, created in April 2021, where members actively and continuously propose new ways in which export finance could play a greater role in supporting climate change adaptation and mitigation projects. At the OECD level, Spain supports a modernisation of the OECD Arrangement that better integrates current sustainability issues and concerns.

The foundations for these developments started with the signature of the so-called Coalition of Finance Ministers for Climate Action [CAPE (2019)], whereby nearly 20 countries undertake to adopt the Helsinki Principles, a statement of best practices for sustainability in macroeconomic and fiscal policy and public financial management.

Development impact

Promotion

Investment promotion initiatives

We can highlight the Recovery, Transformation and Resiliency Plan, that involves a mayor effort on promoting investments, fully oriented to transform the Spanish economy and achieve a more sustainable economic model.

To achieve the investment needed for this, Spain counts with the funds from NEXT GENERATION EU, but it is also implementing a reform plan to improve the business climate in our country, for attracting investment to this end.

International collaboration

Investment facilitation instruments

ICEX – INVEST IN SPAIN is the State agency that promotes internationalization of Spanish economy. Within ICEX, Invest in Spain Division's provides information to investors, acting as a single-window entry point, and thus facilitating the access to market for investors. Invest in Spain fulfils its mission with four lines of action: a) Attracting new foreign direct investment projects, especially involving countries, sectors and businesses that show greatest growth potential in Spain, b) Positioning of Spain as an internationalized country boasting extremely competitive resources, business center and international investment as well as being a global platform for access to third markets, c) Promoting an improved business climate and regulatory environment, thereby facilitating business activity in Spain, d) Facilitating collaboration between foreign investors and Spanish companies for the development and expansion of activities in our country.

Outward FDI promotion schemes

Following the recommendations of the OECD relating to environmental and political risks that have to be addressed on new BITs, the Spanish investment protection policy includes measures to promote investor's commitment with RBC standards, as well as political space to maintain and improve the regulation protecting sustainable development.

Through CESCE (The Spanish ECA, which is a public-private corporation), Spain provides commercial and political risk insurance with sovereign guarantee to Spanish firms for their outward FDI. CESCE is firmly committed to the fight against climate change and, in line with the objectives set through the Paris Agreement, is firmly committed to the promotion of green projects, offering more beneficial conditions to projects with this consideration. Since 2021, CESCE has put in place a new Policy on Climate and Sustainability with new green export and investment cover policies.

Spain also offers direct financing through the "Corporate Internationalization Fund, F.C.P.J. (FIEM)", which has a specific Line of credit (ECOFIEM), created in 2019, that amounts to 200 million Euro for projects that contribute to the fight against climate change.

Moreover, the Spanish Institute for Official Credit (ICO) is a public bank, tasked with the promotion of the Spanish economy. It offers financing, through different modalities, for investment projects of Spanish companies. ICO contributes to the development of sustainable finance, aligning its activity with the ESG sustainability objectives established by the United Nations in the SDGs of the 2030 Agenda and the Paris Agreements (COP21). 2020 has been a key year for the consolidation of ICO's sustainable financing activity for companies, with the approval of financing operations amounting to 2.76 billion euros linked to sustainable development projects, contributing to economic recovery and boosting the ecological and digital transition. ICO has maintained a high degree of commitment to financing for the development of energy efficiency, mobility, renewable energy development and water treatment projects, among others, for some 1.14 billion euros.

Moreover, COFIDES, the Spanish Development Finance Company, offers financing to investment projects abroad in order to contribute both to the development of the countries receiving the investments and to the internationalisation of the Spanish economy and companies. It also supports the Spanish Agency for International Development Cooperation (AECID) in the management of FONPRODE (Fund for the Promotion of Development).

Active promotion of technology for development

Spain is nowadays focused on the promotion of science and technology. In the field of knowledge development, it is worth highlighting the Spanish Strategy for Science, Technology and Innovation, approved in 2020, to advance in the promotion of scientific research and improve Spain's competitiveness.

Towards the diffusion of technology, we can refer the CDTI-E.P.E. a Public Business Entity under the Ministry of Science and Innovation, which promotes innovation and technological development of Spanish companies. It is the entity that channels requests for aid and support for R&D&I projects of Spanish companies at the national and international levels.

Through both multilateral, bilateral and unilateral projects of international cooperation, the CDTI provides with financing for the creation and diffusion of technology.

ENISA is another public company which promotes internationalization of innovative projects.

Switzerland

Strategies

Comprehensive strategies

The 2030 Sustainable Development Strategy (SDS) adopted by the Federal Council in June 2021 sets out the policy establishing sustainable development as an important requirement for all federal policy areas based on the 2030 Agenda for Sustainable Development. The strategy sets out how the federal administration, the private sector including the financial markets, civil society as well as the education, research and innovation sectors can act as drivers of sustainable development. The strategy focuses on objectives for both national and international federal policy in three priority areas: sustainable consumption and production; climate, energy and biodiversity; and equal opportunities and social cohesion. The SDS has been published and was communicated in Switzerland. The draft strategy was subject to three months of formal public consultation and relevant stakeholders are involved in the implementation of the strategy. It does not embed investment promotion components as such, but lays out the directions for the promotion of sustainable production including responsible business conduct.

Policies

Enabling regulatory framework

Switzerland continues to believe that setting a price on carbon is the most effective way of triggering longer-lasting changes in business models and welcomes continued work at the international level on carbon pricing. Switzerland has imposed a carbon price of CHF 120 per tCO₂ on fossil fuels and has an ETS that is linked to the EU ETS for a set of high-emitting industries.

Switzerland has launched the Sustainable Development Goals Impact Finance Initiative (SIFI), a public-private partnership aimed at supporting innovative impact investment solutions for developing countries (see media release 'New public-private partnership to promote innovative development finance').

See answer in section "Technology upgrading" in what regards renewables and energy efficiency.

Investment facilitation and risk mitigation

Switzerland rates among the top countries in ranking such as the governance indicators (Worldbank) or global competitive report (World Economic Forum). Switzerland Global Enterprise, the Swiss Investment Promotion Agency, provides basic information on the Swiss investment regime in an easily accessible way on the webpage (www.s-ge.com) and in a condensed handbook for investors. The handbook provides information on aspects of Switzerland as a modern and innovative business and technology location as well as information on topics such as economic structure, establishing a company, taxes, innovative technologies, the labour market, work permits, and legal matters. A large amount of specifically relevant information to small and medium-sized enterprises is provided by the SME Portal. This portal contains information, addresses (direct contacts to regional promotion organisations/areas) and useful links for entrepreneurs about the creation of an SME in Switzerland or developments in the international scene for instance. The one-stop EasyGov portal facilitates and centralizes administrative procedures for businesses active in Switzerland. A secure and reliable platform allows companies to electronically process authorization, application and reporting procedures in a single location. EasyGov relieves and saves costs - for both companies and the authorities and makes the administrative tasks simple, fast and efficient.

Technology upgrading

New investments in renewables are supported by a feed-in premium (for larger plants) or investment aid (for hydropower, rooftop solar and biomass). Support is financed by a grid surcharge, which is capped at Swiss cent 2.3/kWh and totals about CHF 1.3 billion per year. Proceeds from the grid levy are also used to finance a hydropower premium, energy efficiency tenders and river renaturation. Switzerland's energy efficiency performance standards for energy-using equipment, vehicles and buildings are largely aligned with those of the EU. A distinct scheme are efficiency tenders. Projects with long payback periods (more than 4 years) are regularly tendered. Switzerland also applies a CO₂ levy on stationary fuels. Two-thirds of proceeds are refunded

to the population, one-third are for a Buildings Refurbishment Program. Transport fuels are also subject to a levy: fuel importers must partly offset induced emissions, which they finance by a levy.

Policy support

In its 2030 Sustainable Development Strategy, the Federal Council outlines the priorities it intends to set to implement the 2030 Agenda over the next ten years. This strategy and the corresponding 2021–2023 Action Plan were adopted by the Federal Council on 23 June. Furthermore, the introduction of TCFD disclosure requirements is planned for larger companies (see media release 'Federal Council initiates consultation on ordinance on climate reporting by large companies': Federal Council initiates consultation on ordinance on climate reporting by large companies). The disclosure requirements are key to enhancing climate related transparency and accountability.

Recommendation to join international net zero alliances: The Federal Council encourages financial institutions to join net zero alliances such as those under the umbrella of GFANZ (Glasgow Financial Alliance for Net Zero). Switzerland also supports international efforts to create greater comparability of those commitments through freely accessible data platforms, for instance by being part of the Climate Data Steering Committee (see media release 'Der Bundesrat will mit Klimatransparenz einen internationalen Spitzenplatz bei nachhaltigen Finanzanlagen'

(<https://www.sif.admin.ch/sif/de/home/dokumentation/medienmitteilungen/medienmitteilungen.msg-id-85925.html>). Swiss Climate Scores: establish what Switzerland views as best-practice transparency on the Paris-alignment of financial investments to foster investment decisions that contribute to reaching the climate goals (see media release 'Swiss Climate Scores' (<https://www.sif.admin.ch/sif/en/home/swiss-climate-scores/brief-summary.html>)). [While the Scores are voluntary, they are aimed at defining what constitutes best practice transparency on climate commitments and disclosure. They aim to provide decision-useful information to investors and customers so that they can decide on their preferred sustainable investment strategy in light of some key climate indicators. Key indicators include current GHG emissions, exposure to fossil fuels, as well as forward-looking aspects such as the share of portfolio companies with verified commitments to net zero, the portfolio's climate stewardship strategy or the level of global warming that would occur if the global economy acted with the same ambition as the companies in the portfolio.]

Framework for the issuance of green bonds: First sovereign green bond issuances are planned for 2022. Switzerland wants to show the example to incentivize more private sector firms to issue green bonds based on internationally recognized green bond standards (see media release 'Federal Council wishes to show its commitment to sustainability with green Confederation bonds' (<https://www.admin.ch/gov/en/start/documentation/media-releases.msg-id-85932.html>)).

Access to finance

Private Infrastructure Development Group (PIDG) with financial contributions by SECO (see media release 'PIDG – Mobilising infrastructure investment in sub-Saharan Africa and south and south-east Asia').

Development impact

Swiss location promotion focuses on value-added and innovative companies. Attractiveness of Switzerland as a business location does address needs and potential measures. The Swiss Government aims to improve the economic framework conditions in order to strengthen the medium-term development of the business location. Twelve projects (initiatives) are at the forefront in 2022, taking into consideration sustainable development. The Government intends to meet the challenges facing Switzerland as a business location. Among the initiatives/proposals, the Government foresees measures on the reduction of regulatory costs for companies and on the regulatory brake, the draft revision of the law on the reduction of CO2 emissions etc.

Promotion

Investment promotion initiatives

In order to prepare Switzerland for energy transition and fundamental changes in the energy markets, the Swiss Government adopted in 2018 the Energy Strategy 2050 (see most significant changes in the regulation). See below for more information. Switzerland Global Enterprise executes in its role as an Investment Promotion Agency a specific mandate to inform foreign partners about the capacity and possibilities of the Swiss Cleantech sectors and thus enhances a collaboration for foreign investors or consumers.

International collaboration

Investment facilitation instruments

Switzerland does not promote FDI abroad. Switzerland maintains however a large network of bilateral investment treaties. The conclusion of such agreements improves the legal security for foreign investors in Switzerland and vice versa, improves the investment climate and thus enhances the attractiveness as a location for international investments.

Outward FDI promotion schemes

The Swiss Investment Fund for Emerging Markets is the development finance institution of the Swiss Confederation. SIFEM promotes long-term, sustainable and broad-based economic growth in developing and emerging countries by providing financial support to commercially viable small and medium-sized companies (SMEs) as well as fast-growing enterprises which in turn helps to create secure and permanent jobs and reduce poverty. SIFEM invests mainly through local funds, banks, leasing companies or microfinance institutions. Typically, SIFEM invests between USD 5 and 15 million in funds, each of which invests in eight to twelve local

companies. Direct investments are mostly in the form of loans to local financial institutions. SIFEM takes risks that are not yet borne by the market. In addition, as a responsible investor, SIFEM promotes good working conditions, environmentally sound production and high business ethics.

Active promotion of technology for development

Switzerland has supported the development of LC3, a new type of high-tech, eco-friendly cement which is helping to reduce the environmental footprint of the industrial and construction sectors, which are responsible for almost 40% of global carbon emissions. Cement production alone accounts for between 7% and 8% of total CO2 emissions generated by both sectors. LC3, which was developed by EPFL in cooperation with Universidad Central de Las Villas in Cuba and the Indian Institutes of Technology New Dehli and Madras, is now being piloted at global level. As part of the Building Energy Efficiency Project (BEEP) in India, the federal administration assisted the Indian government in producing the first construction code for energy-efficient housing.

The United Arab Emirates

Strategies

Comprehensive strategies

The UAE Government has ambitious strategic development objectives and realises its vision through wise policies and initiatives that aim to drive the economy and foster happy societies. These development plans were accompanied by exceptional projects for more than half a century, even as it aspires for a more diversified, competitive and adaptable economy based on science and innovation. The UAE's future endeavours are spearheaded by inclusive strategies towards achieving a digital and knowledge-based economy. In efforts to enhance the investment environment in the UAE and compete amongst competent economies in inward and outward of FDI globally, the UAE launched the National Agenda for Inflow of FDI and the National Agenda for Outflow of FDI, with a set of targeted sectors and countries for each inward FDI and outward FDI. It was developed in collaboration with concerned entities in UAE such as DEDs, IPAs (ex: Dubai FDI and Abu Dhabi Investment Office), PMO. It targeted some sustainable sectors to focus on in terms of investment attractions.

Policies

Enabling regulatory framework

The UAE has advanced a set of laws that align with the national investment directives including well-established legislative structures that aim to attract foreign investment. The Commercial Companies Law of 2020 is a qualitative leap in legal legislation, encouraging investment and business establishment, granting foreign investors the ability to establish companies and to have full ownership of their companies. Investment opportunities are offered in all economic sectors and activities, with the exception of activities with a strategic impact. Find more on: <https://www.moec.gov.ae/en/legislative-environment>

(See section "Policy support"). The Ministry of Industry and Advanced Technology is entrusted with the development, issuance and management of standards and regulations for the country, as well as tracking and management of conformity to the regulations. This effectively includes the drafting of regulations in partnership with stakeholders (private/government), which enable and accelerate the circular economy and equip the UAE for ensuring that technologies of the future are well leveraged with the appropriate mitigations well in place.

Additional regulatory frameworks are in development stages, notably research and development regulatory frameworks which optimize fund allocation to research and the maximization of commercialization opportunities.

Investment facilitation and risk mitigation

Risk mitigations are covered within BITs, which aim to protect state-to-state investments.

Technology upgrading

The UAE is prioritizing digital transformation and has launched innovative policies to attract new investments, especially in the areas of artificial intelligence, Internet of Things, financial technology, e-commerce, and information and communications technology, among others. This presents many new investment opportunities for investors.

13 Targeted Sectors for Inflow of Investment ranging from: retail and e-commerce marketplaces, Agriculture Tech, healthcare, manufacturing, financial tech, logistics, entertainment, streaming and gaming, supply chain, space, medical & wellness tourism, ICT sector, renewable energy, and education.

24 Targeted Sectors for UAE Investors abroad ranging from: education tech, cybersecurity, e-healthcare/ e-pharma, renewable power generation/ water supply, smart buildings, robotics, blockchain, carbon-capture technology, transport infrastructure, 5G infrastructure, healthcare facilities therapeutics and devices, senior housing & care organizations, consumer companies, 3D printing, IoT & sensors, sustainable transport, sustainability in food consumption, subscription-based products/ digital content, financial tech, E-commerce platforms, Artificial Intelligence, Augmented reality/ virtual reality, renewable energy, agriculture Tech.

UAE's active promotion of technology for development is an initiative that was recently launched to support manufacturing companies assess their sustainability situation and put forward an action plan to become more environmentally sustainable.

Policy support

The UAE has advanced a set of laws that align with the national investment directives, including well-established legislative structures that aim to attract foreign investment. The Commercial Companies Law of 2020 is a qualitative leap in legal legislation encouraging investment and business establishment, granting foreign investors the ability to establish companies and have full ownership of their companies. Investment opportunities are offered in all economic sectors and activities, with the exception of activities with a strategic impact. Investment incentives are available for the manufacturing sector.

Find more on: <https://www.moec.gov.ae/en/legislative-environment>

Access to finance

The UAE's Emirates Development Bank has updated its strategy and is presently offering a range of funding solutions on competitive terms to Industrial and manufacturing, food and agriculture, healthcare, education businesses, and green financing to convert businesses to renewable energy use. These funding solutions are offered to SMEs as well as larger enterprises.

Further funding and credit insurance solutions are offered through Etihad Credit Insurance and Abu Dhabi Export Office, as well as the commercial banking sector which is expected to play a greater role than hitherto seen.

Development impact

As a signatory to the Paris Accord, the UAE has made a real commitment to Net Zero by 2050. A roadmap is presently under development and update which will target the Industrial, logistics, and energy and utility sectors, ensuring there is a sensible path to achieving Net Zero in the targeted timeframe, with clear initiatives towards decarbonation, carbon capture and a transition towards ultimately predominantly clean energy sources.

A nation-wide In-Country-Value (ICV) program has been launched in 2021, which seeks to maximize value creation in-country, with multiple incentives offered to higher scoring companies. This program is being leveraged precisely "to localize steps of the value chain; boosting domestic capability and promoting business linkages between international investor and the local private sector, particularly in value-added activities, etc."

Promotion

Investment promotion initiatives

NextGen FDI is a national initiative which aims to attract digitally enabled businesses from all over the world and provide them with the necessary market entry fundamentals needed to launch and scale from within the UAE. It ultimately aims to support the growth of the nation's knowledge-driven economy. More than 40 free zones allow tax exemptions and 100% ownership for foreign investors. The UAE also provides these investors great flexibility in selecting the most appropriate zones for establishing their businesses. Free zones are located throughout the UAE, allowing investors to engage in a wide variety of economic businesses and activities.

The UAE does not impose income tax on individuals, investors or corporates, with the exception of oil companies and branches of foreign banks. As a country with a free economy model since inception, it allows individuals and investors to freely repatriate their profits in entirety.

The UAE grants long-term residence visas, for durations that extend from 5 to 10 years, to investors, entrepreneurs, and talented individuals. This allows expatriates and their family members wishing to live, work or study in the UAE to settle, establish their businesses, and enjoy the benefits of extended residency.

Low customs tariffs have contributed to cementing the status of the UAE as a trade hub. Government tariffs in the country range from 0% to 5%. Thereby, the UAE leads global and regional trade, ranking 3rd worldwide, and 1st in the Arab world in the arena of re-exporting.

International collaboration

Investment facilitation instruments

To improve its development goals, the UAE signed 107 agreements (BITs) with other countries to protect and encourage investments. With a network of the UAE's key trade partners, these agreements aim to protect investments from all non-commercial risks like nationalisation, expropriation, sequestration and freezing. They also aim to allow the establishment of investments and licensing such investments and confirm the free transfer of profits and other returns in a freely transferable currency, as well as granting national treatment in accordance with the laws enforced in the UAE, and other objectives that ensure the protection and encouragement of investments in the UAE.

Outward FDI promotion schemes

The country developed the UAE National Agenda for Outward of Investments which aims to opening new markets for Emirati investors and facilitating their ability to access promising opportunities and projects, especially in the priority sectors that serve the country's efforts in food security files, attracting and localizing advanced technology, and digital transformation, and identifying new opportunities through which it is possible to develop and expand the business portfolio of Emirati companies abroad.

The UAE through these set of targeted initiatives and agenda aims to be among the top 10 countries for outflow of FDI.

The country has developed a set of targeted sectors including: education tech, cybersecurity, e-healthcare/ e-pharma, renewable power generation/ water supply, smart buildings, robotics, blockchain, carbon-capture technology, transport infrastructure, 5G infrastructure, healthcare facilities therapeutics, and devices, senior housing & care organizations, consumer companies, 3D printing, IoT & Sensors, sustainable transport, sustainability in food consumption, subscription- based products/ digital content, financial tech, e-commerce platforms, Artificial Intelligence, augmented reality/ virtual reality, renewable energy, agriculture Tech.

Active promotion of technology for development

As part of the UAE's Industry 4.0 program, the UAE has established an Industry 4.0 Champions Network with 17 local and global Tech Champions in order to promote technology adoption and development in many sectors, including sustainability. The network specifically worked on an initiative to support 50 manufacturing companies assess their current sustainability situation and put forward an action plan to become more environmentally sustainable. Moreover, Industrial Enablement Centers are being established to promote advanced digital production technologies through technical training, demonstration, piloting and providing a platform for collaboration between public, private and academic institutions.

Additionally, as part of the UAE's goal to promote international collaborations in science and technology, a number of partnerships have been formally established with key countries with a focus on advanced technology and sustainability. Also, the UAE actively overlooks and plans delegation visits and programs that aim to showcase its tech ecosystem and the offerings available. This is done either through conferences, virtual tours or site visits.

From an R&D perspective, there is a large number of research and development being done in sustainability. The establishment of the Emirates Research and Development Council is going to support in governing R&D in these sectors, as well as establishing a funding mechanism for the long term.

The European Union

Strategies

Comprehensive strategies

The Strategy for financing the transition to a sustainable economy, adopted in July 2021, aims at consolidating what has been achieved since 2018 and taking into account the recent evolutions, specifically focusing on four areas:

TRANSITION: the need for financing the transition of all sectors in the economy, not only financing already sustainable activities;

INCLUSIVENESS: the increased need to be inclusive, taking on board SMEs and citizens into the sustainable journey, especially after the pandemic;

RESILIENCE AND CONTRIBUTION OF THE FINANCIAL SECTOR: the need to set the incentives right and ensure resilience in the financial sector, as it plays a key role in helping the real economy transition to sustainability; the concept of double materiality is core for the EU sustainable finance agenda.

GLOBAL AMBITION: finally, the new global context, with renewed commitments by major jurisdictions, where the EU can build on its leadership and could further engage with EU partners.

Policies

Enabling regulatory framework

The EU taxonomy for sustainable activities is a science-based classification system that allows financial and non-financial companies to share a common definition of sustainability, when determining their investment choices. It translates the European Green Deal objectives by defining and classifying what is in line with a net zero trajectory by 2050, based on a rigorous methodology. It is a voluntary tool, defining performance criteria for activities to be considered aligned with the EU climate and environmental objectives, creating a common language for investors and companies and helping connect finance to the transition efforts happening in the real economy.

Investment facilitation and risk mitigation

To align with the European Green Deal, the financial sector itself will need to be more resilient to the risks posed by climate change and environmental degradation and also improve its contribution to sustainability. This requires a comprehensive approach which consists of the systematic integration of both financially material sustainability risks (outside-in) and sustainability impacts (inside-out) in financial decision-making processes. It is crucial that both angles of the materiality concept are duly integrated for the financial sector to contribute pro-actively and fully to the success of the European Green Deal. The double materiality perspective is the compass of the EU approach to sustainable finance: the EU Taxonomy provides clear definitions for economic activities that are considered environmentally sustainable, against which investors and companies will need to report. The Taxonomy Disclosures Delegated Act specifies the information that non-financial undertakings and financial institutions must disclose under the Non-Financial Reporting Directive (NFRD) as regards the extent to which their activities are taxonomy-aligned. Further to this, the Corporate Sustainability Reporting Directive, soon to be adopted, will require listed EU large companies and SMEs to disclose their

transition and decarbonisation plans and the progress towards achieving them, therefore providing meaningful and comparable sustainability data to financial sector players. The Sustainable Finance Disclosure Regulation is a disclosure regime with significant behavioural implications that requires for instance financial entities to report on how they consider so-called principal adverse impacts of investments on ESG sustainability factors. Finally, the European Single Access Point, currently under negotiations, will be the first step towards the EU Financial Data Space and will give investors seamless access to financial and sustainability-related company information, including ESG data.

Technology upgrading

The Taxonomy Climate Delegated Act, applying from January 2022, includes activities that make a substantial contribution to the environmental objectives of climate change adaptation and mitigation. It lists over 170 economic activities, those that make the most significant contributions to the two environmental objectives covered here, climate adaptation and climate mitigation. Therefore, it covers 13 sectors with the highest contributions to CO2 emissions (energy, manufacturing, transport, buildings), and economic activities that enable their transformation. Notably, the Taxonomy Climate Delegated Act lists forest management, forestry conservation, etc. as economic activities within the sector of forestry. Within transport, it lists freight rail transport, inland passenger water transport, etc. Within manufacturing, manufacture of cement, of aluminium, etc.

Policy support

- Regulation (EU) 2020/852 of the European Parliament and of the Council of 18 June 2020 on the establishment of a framework to facilitate sustainable investment, and amending Regulation (EU) 2019/2088 (OJ L 198, 22.6.2020, p. 13–43).
- Commission Delegated Regulation (EU) 2021/2139 of 4 June 2021 supplementing Regulation (EU) 2020/852 of the European Parliament and of the Council by establishing the technical screening criteria for determining the conditions under which an economic activity qualifies as contributing substantially to climate change mitigation or climate change adaptation and for determining whether that economic activity causes no significant harm to any of the other environmental objectives (OJ L 442, 9.12.2021, p. 1–349).

Access to finance

The proposal for a Regulation on European green bond standards (EU GBS) will set a gold standard for how companies and public authorities can use green bonds to raise funds on capital markets to finance such ambitious large-scale investments, while meeting tough sustainability requirements and protecting investors. It is a voluntary standard to help scale up and raise the environmental ambitions of the green bond market. The new EU GBS will be open to any issuer of green bonds, including companies, public authorities, and also issuers located outside of the EU. It is currently being discussed by co-legislators.

There are four key requirements under the proposed framework:

- Taxonomy-alignment: The funds raised by the bond should be allocated fully to projects that are aligned with the EU taxonomy;
- Transparency: Full transparency on how the bond proceeds are allocated through detailed reporting requirements;
- External review: All European green bonds must be checked by an external reviewer to ensure compliance with the Regulation and taxonomy alignment of the funded projects;
- Supervision by the European Securities Markets Authority (ESMA) of reviewers: External reviewers providing services to issuers of European green bonds must be registered with and supervised by the ESMA. This will ensure the quality of their services and the reliability of their reviews to protect investors and ensure market integrity.

The Commission/DG INTPA is actively supporting partner countries in putting in place the conditions for a conducive investment climate that promotes sustainable investments, working to promote sustainable investment policies and regulations, to facilitate access to finance to sustainable investments, and to put forward sustainability into the private public dialogue with all stakeholders.

Development impact

In the 2021 Strategy, the Commission committed to raise the level of ambition at the international level, by deepening cooperation on sustainable finance bilaterally and multilaterally, in particular to promote convergence of approaches and to provide the private sector with usable tools and metrics, such as taxonomies. The Commission is also advocating for international forums and standard-setters, such as the Financial Stability Board, to develop ambitious standards and principles sustainable finance, in particular advocating for a comprehensive approach based on the double materiality concept. Further international work is needed on disclosure, building where appropriate on the recommendations of the Task Force on Climate-related Financial Disclosures and other international initiatives. Work will be intensified with partners through the International Platform on Sustainable Finance (IPSF), to support the interoperability and comparability of taxonomies and to promote transition finance.

Promotion	<p>Investment promotion initiatives</p> <p>The Taxonomy Climate Delegated Act includes 25 energy activities based on renewables. It also contains extensive energy efficiency measures and improvements in sectors including building renovations, to help reduce emissions.</p>
International collaboration	<p>Investment facilitation instruments</p> <p>The EU launched on 18 October 2019 the International Platform on Sustainable Finance (IPSF), together with other founding members, namely the relevant authorities of Argentina, Canada, Chile, China, India, Kenya and Morocco.</p> <p>Since then, Hong Kong Special Administrative Region of the People’s Republic of China (Hong Kong SAR of PRC), Indonesia, Japan, Malaysia, New Zealand, Norway, Senegal, Singapore, Switzerland and the United Kingdom also joined the IPSF. Together, the 18 members of the IPSF represent 55% of greenhouse gas emissions, 50% of the world population and 55% of global GDP.</p> <p>The work of the IPSF is also informed by twelve additional observers, such as the IMF, the World Bank, the UNDP, or the European Investment Bank.</p> <p>The platform is a forum for dialogue between policymakers, with the ultimate objective of scaling up the mobilisation of private capital towards environmentally sustainable investments. The IPSF therefore offers a multilateral forum of dialogue between policymakers that are in charge of developing sustainable finance regulatory measures to help investors identify and seize sustainable investment opportunities that truly contribute to climate and environmental objectives. Through the IPSF, members can exchange and disseminate information to promote best practices, compare their different initiatives and identify barriers and opportunities of sustainable finance, while respecting national and regional contexts.</p> <p>Additionally, the European Commission, on a regular basis annually and/or semi-annually, cooperates with partner third countries in the financial area by organizing international financial fora, where sustainable finance are one of the core topics usually discussed. Some examples are the US-EU Joint Financial Regulatory Forum, the EU-Japan Joint Financial Regulatory Forum, and EU-Asia-Pacific Forum on Financial Regulation.</p> <p>Accelerating private financial flows towards EU partner countries will be critical to collectively deliver on our global sustainability agenda. The Commission is therefore providing dedicated support to help scale up sustainable finance, including by supporting the development of sustainable finance frameworks and sustainability-related instruments including green bonds sharing the EU experience (taxonomy, benchmarks, standards, sustainability-related disclosures) and by providing de-risking mechanisms to crowd in private investors in sustainable investment in developing markets by covering part of the risks that investors are not ready to take, notably through the European Fund for Sustainable Development (EFSD+). Finally, the Commission will develop a comprehensive strategy to help further accelerate the flow of international and domestic private capital towards sustainable investments in low- and middle-income countries. To this end, a dedicated high-level expert group (HLEG) will be created to provide state-of-the-art recommendations to the Commission about transformative and innovative actions the EU can take to scale up sustainable finance in low- and middle-income countries, so as to accelerate private financial flows for a green, just and resilient recovery in EU partner countries.</p> <p>In addition, the Commission/DG INTPA puts in place several instruments and programmes to support the promotion of sustainable investment actions, both from the policy/regulatory side, by providing TACB to partner countries in addressing sustainability in their investment policies, but also by promoting access to finance in and for sustainable investments.</p> <p>Finally, the European Commission and the EU High Representative have set out the Global Gateway, a new European strategy to boost smart, clean and secure links in digital, energy and transport sectors and to strengthen health, education and research systems across the world.</p> <p>Outward FDI promotion schemes</p> <p>On 9 June 2021, the EU adopted Regulation (EU) 2021/947 establishing the Neighbourhood, Development and International Cooperation Instrument – Global Europe (NDICI - Global Europe), whose actions contribute to climate and biodiversity mainstreaming in line with the European Green Deal and the inter-institutional agreement.</p> <p>The new NDICI- Global Europe instrument merges several former EU external financing instruments. It aims to support countries most in need to overcome long-term developmental challenges and will contribute to achieving the international commitments and objectives that the Union has agreed to, in particular the 2030 Agenda and its Sustainable Development Goals and the Paris Agreement.</p> <p>With an overall allocation of €79.5 billion, the NDICI - Global Europe instrument covers the EU cooperation with all third countries, except for the pre-accession beneficiaries and the overseas countries and territories from the geographic programmes.</p> <p>The NDICI-Global Europe instrument unifies grants, blending and guarantees (the latter previously subject to specific rules and regulations, such as the EIB’s External Lending Mandate), which allow the EU to strategically promote public and private investment worldwide in support to sustainable development through the European Fund for Sustainable Development Plus (EFSD+). Investments are backed by an up to €53.4 billion External Action Guarantee, which will also cover the pre-accession countries.</p>



2022 G20 Tourism Ministerial Meeting

Chair's Summary

We, the G20 Ministers responsible for tourism, met virtually and in person in Bali, on 26 September 2022, to discuss and build consensus around policy priorities and concrete deliverables to improve the efficiency and effectiveness of tourism recovery in the post-pandemic era and to accelerate tourism transformation toward a more human-centered, inclusive, sustainable, and resilient future of the tourism sector.

PART I

1. We met against the backdrop of climate emergency, a fragile and uncertain global socioeconomic outlook, and ongoing geopolitical tensions, amid the consequence impacts of coronavirus disease (Covid-19) with widespread effects particularly on tourism as one of the most heavily affected sectors.
2. We expressed deep concerns regarding the increased and ongoing conflicts in the world, which have negative effects on global economic recovery and supply chain, increased energy and food insecurity, as well as affected the tourism industry, creative economy, and the well-being of informal workers. Many members expressed their condemnation to Russia with regard to the war in Ukraine, while others viewed that Tourism WG is not the proper forum to address geopolitical issues.

PART II

There is agreement on the following points:

3. We believe that tourism connects people, promotes understanding, and encourages global peace, therefore a strong multilateralism by building on the works, consensus, and achievements for tourism recovery in the G20 forum should be the highest priority.
4. We take into account that prior to COVID-19, travel and tourism had become one of the most important sectors in the world economy, accounting directly for 4 percent of global GDP (UNWTO) and 10.3% when considering its direct, indirect, and induced impacts (WTTC). In addition, it supported 195 million jobs directly (UNWTO) and more than 330 million jobs in total worldwide. However, data from the World Tourism Organization (UNWTO) shows that the global pandemic has put approximately 100 million of jobs at risk, many in micro, small, and medium-sized enterprises (MSMEs) that employ a high share of women, who represent 54 percent of the tourism workforce. Natural and cultural heritage which has also been endangered.
5. We acknowledge the imperative of rising from the COVID-19 crisis through further targeted actions to stimulate a human-centered, inclusive and sustainable recovery and identify ways to improve the sector's resiliency. We reaffirmed our commitment to strengthen tourism

resiliency declared under Japan's 2019 Presidency, Saudi Arabia's 2020 Presidency, and Italy's 2021 Presidency and recognize the importance of further efforts.

6. We acknowledge the importance of establishing a global framework for safe and seamless travel to support the tourism sector's continued recovery and make travel more resilient to future threats. We commend and look forward to collaborating with the G20 Health Working Group which seeks to harmonize safe travel procedures including the cross-border recognition of COVID-19 vaccine certificates.
7. We warmly welcome the Guidelines for strengthening Communities and MSMEs as Tourism Transformation Agents – A People-Centered Recovery, a report by the World Tourism Organization – UNWTO, as annexed, and encourage stakeholders to take action based on the Guidelines' five lines of recommendation.
8. The Guidelines provide guidance on key policies that can contribute to creating resilient and sustainable communities and MSMEs in the aftermath of the COVID-19 crisis and to addressing the environmental challenges, especially climate change, and inequalities among different territories and local communities, digitalization, and the global economic changes while taking into account national circumstances, needs, and priorities which among others include:
 - a. Developing targeted policies based on social dialogue and multi-stakeholder collaboration to promote vocational education and training, skills development, and lifelong learning of the tourism workforce by engaging industry and technology partners;
 - b. Stimulating entrepreneurship including through tourism business incubation and promoting the creation of decent jobs in tourism;
 - c. Strengthening linkages between the tourism sector and local communities by encouraging partnerships with local suppliers;
 - d. Bridging the innovation gap and promoting responsible innovation;
 - e. Developing supportive guidance for MSMEs to enable them to tap into digitalization, improve their products and boost their productivity;
 - f. Ensuring equality and non-discrimination, with particular attention to young people in vulnerable situations, promoting the application of gender-equality and the application of the equal opportunity principle for all youth in tourism including equal remuneration for work of equal value, equal participation and equal treatment;
 - g. Implementing, within respective national policy, more sustainable and environmentally friendly practices; and
 - h. Improving tourism data, including the use of big data, the implementation of international statistical standards and the development of adequate methodology for Measuring the Sustainability of Tourism (UNWTO) as evidence-based policy-making by facilitating data sharing including through public-private partnerships.

9. We welcome the discussion paper on maximizing the synergies between the tourism, cultural and creative sectors prepared by the OECD, and encourage countries to take action to leverage these synergies to support a strong recovery.
10. We further recognize that the creative economy, which involves knowledge-based economic activities and human creativity, contributes to improving the tourism economy and vice versa, through innovation and preservation of cultural heritage and diversity, which encourages an inclusive creative and cultural ecosystem, while providing an opportunity to elevate people's livelihood.
11. To overcome the impact of the pandemic, we emphasize the importance of strengthening the resilience of local communities and MSMEs by creating an enabling environment and strengthening synergies between tourism and the creative economy.

Closing

12. We, the G20 Tourism Ministers, reaffirm our commitment to design and implement policies to expedite an inclusive, sustainable, and resilient tourism recovery for a better future for the sector and renewal through people-centered transformation, innovation, public-private and international cooperation, the promotion of social dialogue and the creative economy. We ask the Tourism Working Group to explore possible collaboration in the aforementioned fields to support the recovery of the sector.
13. We express our gratitude to the Indonesian G20 Presidency for its leadership and agree to continue and enhance our cooperation for further progress under India's G20 Presidency in 2023.

G20 Presidency Documents:

1. Guidelines for strengthening Communities and MSMEs as Tourism Transformation Agents – A People-Centered Recovery
2. Discussion paper on maximizing the synergies between the tourism, cultural and creative sectors



G20 BALI GUIDELINES FOR STRENGTHENING COMMUNITIES AND MSMEs AS TOURISM TRANSFORMATION AGENTS

A PEOPLE-CENTRED RECOVERY

ANNEX TO THE CHAIR'S SUMMARY



G20
INDONESIA
2022



UNWTO
World Tourism Organization



G20 BALI GUIDELINES FOR STRENGTHENING COMMUNITIES AND MSMEs AS TOURISM TRANSFORMATION AGENTS

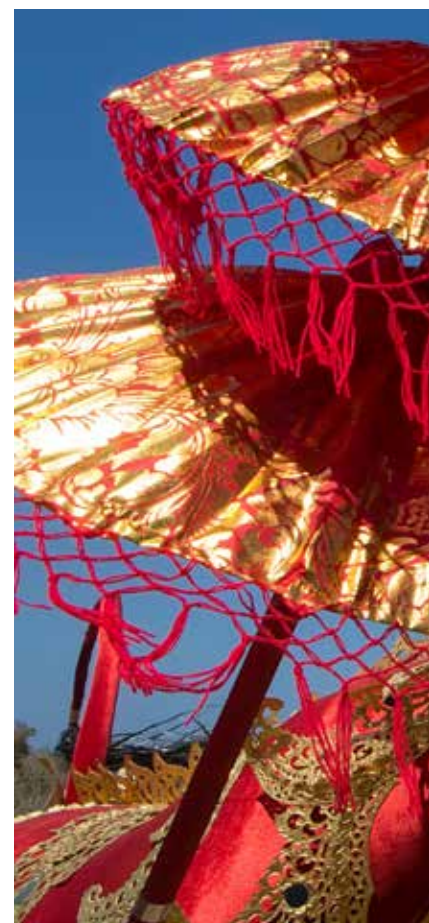
A PEOPLE-CENTRED RECOVERY

ANNEX TO THE CHAIR'S SUMMARY

Final version, 26 September 2022



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MESSAGE

**ZURAB POLOLIKASHVILI,
SECRETARY-GENERAL,
WORLD TOURISM ORGANIZATION (UNWTO)**



At the request of the Indonesian G20 Presidency, the World Tourism Organization (UNWTO) developed, in coordination and consultation with the G20 Tourism Working Group, the *G20 Bali Guidelines for Strengthening Communities and MSMEs as Tourism Transformation Agents – A People-centred Recovery*.

The Guidelines build on the G20 Tourism Working Group's efforts in the past two years: starting with the G20 Guidelines for *Inclusive Community Development through Tourism* and the *Guidelines for Action on Safe and Seamless Travel* endorsed by the G20 Tourism Ministers' Meetings in 2020 under the Saudi Presidency, along with the more recent *G20 Rome Guidelines for the Future of Tourism*, as well as the as the Principles for the *Transition to a Green Travel and Tourism Economy* which were endorsed and welcomed, respectively, by the G20 Tourism Ministers' Meeting of 2021 under the Italian Presidency.

The present guidelines further elaborate on the work of UNWTO to mitigate the impact of COVID-19 on tourism and to support recovery by putting women's empowerment Centre Stage, addressing the sociocultural impacts of the pandemic, accelerating sustainable and green transitions, promoting education and skills development, and advancing digitalization in tourism while taking into account different national circumstances.

The guidelines include references to other G20 workstreams, highlight examples from G20 and guest countries and include possible concrete actions to be undertaken by the G20 countries and other relevant stakeholders as per request of the Indonesian Presidency. A full set of case studies as provided by G20 and guest countries is also included in the report.

We would like to express our sincere gratitude to all G20 and guest countries for their contributions through the survey prepared for the purpose of developing these guidelines, as well as the revisions of the consecutive drafts. We also thank all the international organizations taking part in the Tourism Working Group under the G20 Indonesia Presidency for their valuable input and trust this document will guide the G20 into advancing the contribution of tourism into a more inclusive sustainable and resilient tourism sector and the achievement of the 2030 Agenda.

MESSAGE

**SANDIAGA SALAHUDDIN UNO,
MINISTER OF TOURISM AND CREATIVE
ECONOMY, REPUBLIC OF INDONESIA**

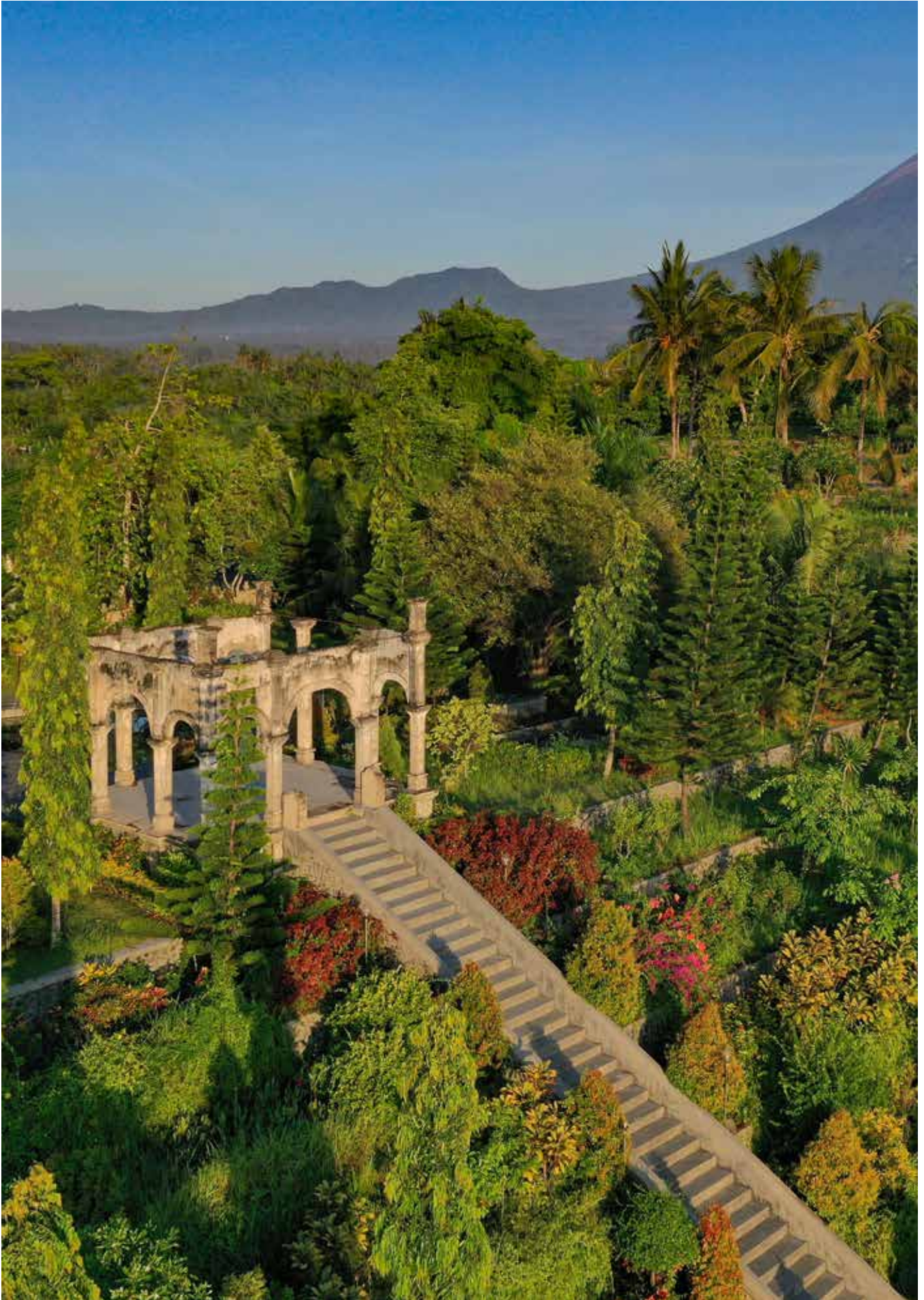


International tourism continues to demonstrate steady post Covid-19 recovery. In the first five months of 2022, the number of international arrivals increased by threefold compared to the year before. Nevertheless, we should not be complacent because international arrivals remain less than half of the pre-pandemic level. Moreover, growing headwinds loom large as geopolitical instability, soaring inflation, food and energy crises could possibly jeopardize tourism recovery. With these potential hurdles it is all the more critical for all countries to work hand in hand to reinvigorate tourism. After all, tourism is a major engine of the global economy that was among the hardest hit by the pandemic – without the revival of tourism we cannot recover together nor recover stronger.

Against such backdrop, I am truly delighted that the G20 Tourism Working Group is able to adopt the *G20 Bali Guidelines for Strengthening Communities and MSMEs as Tourism Transformation Agents – A People-centred Recovery*. The Guidelines embody a number of policy best practices in the five main lines of actions including human capital: jobs, skills, entrepreneurship and education; innovation, digitalization and creative economy; women and youth empowerment; climate action, biodiversity conservation and circular economy; and policy, governance and investment frameworks. These lines of actions are essential to put the holistic wellbeing of our people at the heart of tourism recovery. We do not wish for tourism to just simply rebound, we need it to be better in serving the needs of our communities by creating good jobs, empowering the marginalized and safeguarding our planet, which our guidelines aim for.

I wish to extend my utmost appreciation to all partners who make these Guidelines possible. Particularly, I wish to commend all of the G20 members for graciously sharing their policy insights for the Guidelines. I also earnestly applaud UNWTO as the key institutional partner of our G20 presidency for steadfastly working together with us to continuously improve the Guidelines. Last but not least, I wish to thank Indonesia's G20 presidency team for their hard work over the past year to coordinate the refining of the Guidelines.

It is my sincere hope that our work does not stop with the adoption of the Bali Guidelines. What is more important than the Guidelines is to ensure that they will lead to greater collaborative endeavour, not just to restore tourism to the way it was before the pandemic but to uplift it even higher, to be more resilient, inclusive and sustainable in the future. And I believe, with our shared good will, the Bali Guidelines will take us there.



INTRODUCTION

“Building on the work made in 2020, we will continue to support a rapid, resilient, inclusive, and sustainable recovery of the tourism sector, which is among those hardest hit by the pandemic, with a particular focus on developing countries and MSMEs. We endorse the G20 Rome Guidelines for the Future of Tourism and commit to taking action to fulfil its objectives, in particular with regard to safe mobility and seamless travel and sustainability, and digitalization. We will explore collaboration in the fields of creative economy and innovation in support of tourism.”

G20 Rome Leaders Declaration

“It is imperative that we rebuild the tourism sector in a safe, equitable and climate-friendly manner.”

António Guterres, Secretary-General, United Nations¹

“This crisis is an opportunity to rethink the tourism sector and its contribution to the people and planet; an opportunity to build back better towards a more sustainable, inclusive and resilient tourism sector that ensures the benefits of tourism are enjoyed widely and fairly.”

Zurab Pololikashvili, Secretary-General, World Tourism Organization (UNWTO)

¹ United Nations (2020/b), *Policy Brief: COVID-19 and Transforming Tourism*, online available at: <https://www.un.org/en/coronavirus/UN-response> [08-08-2022].



FROM CRISIS ...

Tourism was one of the economic sectors most impacted by the COVID-19 pandemic. In 2020, international tourist arrivals dropped by 71% amid widespread travel restrictions, bringing international tourism back to the level of 30 years ago.²

The economic contribution of tourism, which amounted to USD 3.5 trillion in 2019, or 4% of world GDP, measured in tourism direct gross domestic product (TDGDP) was cut by more than half in 2020, plunging by USD 1.8 trillion.³ Millions of jobs disappeared or were supported by government employment schemes. The crisis impacted particularly women; youth; micro-, small, and medium-sized enterprises (MSMEs); and the informal sector.

Other related sectors were also strongly affected, namely the cultural and the creative sectors (CCS). According to UNESCO, in 2020, there was a 66% drop in site visitations and a 52% decline in revenues at surveyed sites. OECD projected that, along with tourism, cultural and creative sectors were among the most affected, with jobs at risk

ranging from 0.8% to 5.5% of employment across OECD regions.⁴

While vaccine equity remains a major challenge, the progress made on vaccination, alongside increased coordination among governments, resulted in the easing of travel restrictions and rising consumer confidence in 2021. As a result, international tourist arrivals grew by 4% as compared to 2020 and the economic contribution of tourism (measured in tourism direct gross domestic product) rose slightly from USD 1.7 trillion to USD 2.2 trillion, much sustained by domestic tourism, yet still well below the pre-pandemic value of USD 3.5 trillion.⁵

Looking ahead, important downside risks may affect the pace of recovery. The deterioration of the economic situation, aggravated by geopolitical tensions, high energy prices, food insecurity, record inflation levels and hiking interest rates risk impacting on households spending and operational conditions of companies, particularly MSMEs.

2 World Tourism Organization (2022/c), *UNWTO World Tourism Barometer*, volume 20, issue 3, May 2022, UNWTO, Madrid, DOI: <https://doi.org/10.18111/wtobarometereng>.

3 World Tourism Organization (n.d./b), 'Impact assessment of the COVID-19 outbreak on international tourism', online available at: www.unwto.org [08-08-2022]. Updated internally by UNWTO on 15 August 2022.

4 Organisation for Economic Co-operation and Development (2020), 'Culture shock: COVID-19 and the cultural and creative sectors', OECD policy responses, online available at: <https://www.oecd.org/coronavirus/en/policy-responses> [08-08-2022].

5 World Tourism Organization (2022/e), *UNWTO World Tourism Barometer*, volume 20, issue 5, September 2022, UNWTO, Madrid, DOI: <https://doi.org/10.18111/wtobarometereng>.



... TO TRANSFORMATION

Prior to COVID-19, the tourism sector recorded continuous growth over decades, creating significant benefits – both direct and indirect – in terms of socioeconomic development and employment. Yet, this growth also brought important challenges related to the carrying capacity of destinations, impact on natural and cultural resources, on the social structures of communities, climate change, employment quality, as well as a fair distribution of income generated by the sector.

Furthermore, the crisis has exposed the vulnerability of the sector, with incidence on MSMEs and local communities, as well as women, youth and informal workers.

But, as per the UN Secretary-General *Policy Brief: COVID-19 and Transforming Tourism*, “while sustaining the livelihoods dependent on the sector must be a priority, rebuilding tourism is also an opportunity for transformation with a focus on leveraging its impact on destinations and building more resilient communities and businesses through innovation, digitalization, sustainability, shared responsibilities and partnerships.”⁶

The pandemic has demonstrated yet again, that unsustainable practices have to be urgently addressed. The underlying factors of biodiversity loss and climate change are the same that drive the emergence of pandemics and require that the relationship between people and nature be re-assessed.⁷

As travel restrictions are gradually lifted and the sector advances its recovery, there is an opportunity to leverage the acceleration of digitalization, the growth of the cultural and creative sectors, and the greater demand of consumers for sustainable experiences, ethical business practices and a direct interaction with communities. All these trends can lead to lower visitation density, more diversified and higher value tourism developments, as well as a more equal distribution of benefits from tourism.

Translating these trends and opportunities into inclusion and resilience within local communities and among MSMEs can accelerate the transition of the sector towards a real future transformation. Yet, such transition to more sustainable models of tourism will require coordinated policies across levels of government together with the private sector.⁸

6 United Nations (2020/b).

7 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES (2020), *Workshop Report on Biodiversity and Pandemics of the Intergovernmental Platform on Biodiversity and Ecosystem Services*, IPBES secretariat, Bonn, DOI: [10.5281/zenodo.4147317](https://doi.org/10.5281/zenodo.4147317) and online available at: <https://ipbes.net/pandemics> [12-08-2022].

8 Organisation for Economic Co-operation and Development (2021/a), ‘G20 Rome guidelines for the future of tourism: OECD Report to G20 Tourism Working Group’, *OECD Tourism Papers*, 2021/03, OECD Publishing, Paris, DOI: <http://dx.doi.org/10.1787/d11080db-en>.

Organisation for Economic Co-operation and Development (2021/b), ‘Managing tourism development for sustainable and inclusive recovery’, *OECD Tourism Papers*, 2021/01, OECD Publishing, Paris, DOI: <http://dx.doi.org/10.1787/b062f603-en>.

The background of the page is a detailed stone relief carving. It features several panels: a large animal (possibly a bull or elephant) at the top left, a seated figure in the middle left, a seated figure in the middle right, and a reclining figure at the bottom left. The carvings are weathered and set against a textured stone wall.

01 AIMS AND SCOPE



MSMEs are the backbone of the tourism sector, accounting for an estimated 80% of all tourism businesses worldwide and reaching as much as 98% in some G20 economies, as concluded in the survey conducted for the purpose of the current guidelines.

At the same time, the pandemic has exposed their vulnerability and that of local communities for whom tourism is an important pillar of livelihoods, inclusion, as well as a driver for the conservation of natural and cultural resources.

Faced with challenges of sustainability, human capital and digitalization, the transitions of tourism to a more sustainable and inclusive model, and the progress of its contribution to the Sustainable Development Goals (SDGs) cannot be achieved without advancing the transformation of MSMEs and communities.

The *G20 Bali Guidelines: Strengthening Communities and MSME as Tourism Transformation Agents – A People-centred Recovery* aim to provide a framework to advance the transformation of the tourism sector through policy action on MSMEs and communities.

The guidelines are steered by the theme of the Indonesian G20 Presidency 'Recover Together, Recover Stronger' and its three priority issues:

1. Global health architecture;
2. Digital transformation; and
3. Sustainable energy transition.

They aim to provide guidance on key policies and practices to create more resilient and sustainable communities and MSMEs in the aftermath of the COVID-19 pandemic and in the context of the climate change, biodiversity loss and pollution challenges, rising social, economic and territorial inequalities, digitalization and the current global economic challenges.

The guidelines have been informed by the extensive desk research, as well as a survey conducted among G20 and Guest countries. The survey focussed on:

- **The impact of COVID-19 on tourism** globally and in the G20 economies;
- **Policy responses of G20 and guest countries to mitigate the impact of COVID-19** on tourism, particularly on communities and MSMEs;
- **Challenges and priorities for recovery and resilience** globally, and specifically for MSMEs and communities; and
- **Case studies** on how **MSMEs and communities** have adapted during the pandemic and beyond.

Within this context, the guidelines are built around five pillars of action:

Pillar 1: Human capital: jobs, skills, entrepreneurship and education

Looking into market needs, talent management, education and skills development, as well as policies and practices to create new and added-value jobs, considering that the strengthening of human capital is key to increase productivity and to promote decent work⁹ opportunities for all in the tourism sector to enable the sector to better respond to the changing requirements.

Pillar 2: Innovation, digitalization and the creative economy

Focussing on how to spur innovation in local communities, create the infrastructure and develop the necessary skills for digitalization, as well as linking urban and rural territories. This line of action is also aimed at making the creative economy a driver of a more diversified tourism value chain, increase the competitiveness of MSMEs, the attractiveness of destinations and their overall (cultural and tourism) branding.

Pillar 3: Women and youth empowerment

With a special focus on the actions necessary to create decent jobs for women and youth, who are the backbone of the industry, as well as to empower them and promote their role in local communities as policy or business champions, entrepreneurs, workers and innovators. The objective of this segment is also to harness the critical role of education and skills to promote the full inclusion of both groups, which is critical to the future resilience of local communities worldwide.

Pillar 4: Climate action, biodiversity conservation and circularity

Focussing on the transitions to a more sustainable tourism model and progress towards achieving the Paris Agreement goals. Addressing tourism's use of energy, land, water and food resources and reducing greenhouse gas (GHG) emissions, biodiversity loss and waste.

Pillar 5: Policy, governance and investment frameworks

Focussing on the need to create holistic tourism policies and measures, investment conditions and adequate governance models that support the areas mentioned above taking into account national circumstances, needs and priorities.

HOW TO USE THE GUIDELINES

For each of the five pillars mentioned above, the guidelines include four elements:

1. An assessment of the challenges and opportunities both in the short and medium/long term;
2. A set of guidelines for G20 and guest countries;
3. Links to other G20 workstreams; and
4. Proposed concrete actions to be considered by G20 countries on a voluntary basis as per the vision of the Presidency. These actions are proposals for common initiatives which can be embraced by a group of G20 countries or by G20 countries and international organizations.

The below table provides an overview of the guidelines, as well as the proposed concrete actions and links to G20 workstreams.

⁹ The International Labour Organization (ILO) defines decent work as "productive work for women and men in conditions of freedom, equity, security and human dignity". https://www.ilo.org/wcmsp5/groups/public/---dgreports/---exrel/documents/publication/wcms_172612.pdf.

Table 1.1: Summary of guidelines, proposed concrete actions and link to G20 workstreams

GUIDELINES	PROPOSED CONCRETE ACTIONS	LINK TO G20 WORKSTREAMS
PILLAR 1: HUMAN CAPITAL: JOBS, SKILLS, ENTREPRENEURSHIP AND EDUCATION		
<ol style="list-style-type: none"> 1. Improve the current situation in the collection of disaggregated data and the analysis of the tourism labour market. 2. Support tourism MSMEs recovery and resilience with specific programmes. 3. Enhance the linkages to other sectors along the tourism value chain and reduce leakages. 4. Promote active policies and initiatives that stimulate entrepreneurship. 5. Promote access to universal, adequate, gender sensitive and sustainable social protection, fair wages, decent working conditions, occupational safety and health, and protect all workers against violence and harassment and advance the transition towards formality, within existing international and national legal frameworks. 6. Enable new skilling (skills acquisition), upskilling and reskilling for workers throughout their working lives. 7. Maximize the use of digital tools in education and skills development, and support tourism practitioners with the necessary certified digital learning tools to foster recognition of prior learning in order to ease the re-entry into the job market, especially for those with informal work histories. 8. Promote the development of multi-stakeholder partnerships in building a new approach to education and training in tourism. 9. Encourage the industry-led engagement in the update of competency standards and curricula as well as national mechanisms to drive tourism skills policy and develop campaigns that value employment in tourism, attract and retain talent. 10. Promote the creation and skills development for sustainable jobs. 	<ol style="list-style-type: none"> 1. Evaluate the creation of a voluntary G20 Tourism Exchange Programme promoting internships across G20 countries coordinated by educational institutions and the Ministries of/with a portfolio of tourism according to the capabilities, laws and regulations enacted in participating countries. 2. Promote and expand existing online training such as the UNWTO Tourism Online Academy as a global aggregator of online training for tourism.^a 	<p>Development Working Group: Particularly on its first priority issue of 'Strengthening Recovery and Resilience to Withstand Future Crises' upon which the DWG seeks to formulate a deliverable dubbed as 'G20 Roadmap to Stronger Recovery and Resilience in Developing Countries, LDCs and SIDS'.</p> <p>Employment Working Group: Particularly its third priority issue namely 'Sustainable job creation towards changing world of work' and its second priority issue, 'Human Capacity Development for Sustainable Growth of Productivity'.</p> <p>Education Working Group: Particularly its second priority issue 'Digital technologies in education' and its last priority issue 'The Future of Work Post-COVID-19'.</p> <p>Business 20 and Labour 20.</p>

a) World Tourism Organization (n.d./e), 'UNWTO Tourism Online Academy', online available at: <https://www.unwto-tourismacademy.ie.edu> [09-08-2022].



GUIDELINES

PROPOSED CONCRETE
ACTIONSLINK TO G20
WORKSTREAMS**PILLAR 2****INNOVATION, DIGITALIZATION AND THE CREATIVE ECONOMY**

1. Foster innovation along the whole tourism value chain with a particular focus on digitalization and the creative economy.
2. Promote the creation of market intelligence systems and train MSMEs and communities to use them.
3. Foster partnerships with tech companies to accelerate digital transformation, innovation and sustainable solutions for MSMEs and startups in the tourism sector.
4. Prioritize digitalization within tourism policy and promote specific programmes to support the digital transformation of MSMEs and communities.
5. Support the digital transformation of rural areas.
6. Foster responsible innovation that focusses on solutions which are socially desirable and undertaken with the public interest in mind.
7. Promote market and product diversification through the creative industries, digitalization and community development through tourism.
8. Harness the value of intellectual property (IP) for tourism as a powerful tool to boost tourism development and competitiveness among MSMEs and communities.
9. Foster technology to promote safe mobility and step up consumer confidence, as well as improve preparedness for future crises.

1. Evaluate adhering to the UNWTO Digital Futures Programme.
2. Evaluate, in cooperation with the relevant national authorities, the creation of a network of Living Museums to strengthen the cultural and creative industries and sectors (CCI) ecosystem.

Digital Economy Working Group:

Particularly its first priority issue 'Connectivity and Post-COVID-19 Recovery', as well as its second priority issue, 'Digital Skills and Digital Literacy' on which the working group seeks to devise a 'G20 Toolkit for Measuring Digital Skills and Literacy'.

Business 20, Science 20 and G20 Culture.



GUIDELINES

PROPOSED CONCRETE
ACTIONSLINK TO G20
WORKSTREAMS**PILLAR 3****WOMEN AND YOUTH EMPOWERMENT**

- | | | |
|--|---|---|
| <ol style="list-style-type: none"> 1. Take measures to address the gender pay gap in tourism. 2. Promote entrepreneurship with dedicated programmes targeted at women. 3. Advance women's full and equal participation in leadership, policy and decision-making. 4. Promote education and training in tourism through programmes specifically for women and youth. 5. Place gender equality at the core of tourism policies and business practices. 6. Empower women's participation in the community and civil society in tourism. 7. Advance the measurement of tourism data on gender and age for better policies. 8. Integrate the targeting strategies with women's and youth labour market profiling to make it easier for the public and private sectors to reach youth and women in occupational categories | <ol style="list-style-type: none"> 1. G20 members are encouraged to join and commit to the action plan of the <i>Global Report on Women in Tourism</i>, which provides a framework that includes concrete steps that will help actors in the private and public sectors boost tourism's empowering potential for women. 2. Leveraging G20 EMPOWER Alliance through increasing its network of women leaders and entrepreneurs in the tourism sector. | <p>Empower Initiative particularly on its second priority issue 'Women in MSMEs as Drivers of Economic Growth: Context, Connect and Change'.</p> <p>Women 20 and Youth 20.</p> |
|--|---|---|

GUIDELINES

PROPOSED CONCRETE
ACTIONSLINK TO G20
WORKSTREAMS**PILLAR 4****CLIMATE ACTION, BIODIVERSITY CONSERVATION AND CIRCULARITY**

<ol style="list-style-type: none"> 1. Accelerate the transition towards low GHG emissions in tourism. 2. Engage the tourism sector in GHG emissions removal. 3. Capture the value of conservation through tourism. 4. Support conservation efforts through tourism. 5. Invest in nature-based solutions for sustainable tourism. 6. Invest in transition of the tourism value chains towards circularity. 7. Prioritize sustainable food approaches for circularity. 8. Shift towards a circularity of plastics in tourism. 9. Steer recovery funds towards sustainable tourism and promote sustainable finance mechanisms. 	<ol style="list-style-type: none"> 1. G20 members are encouraged to take an active role in the promotion of the <i>Glasgow Declaration on Climate Action in Tourism</i>, which provides a framework to accelerate measurement, mitigation and adaptation efforts in tourism, as well as in the <i>Global Tourism Plastics Initiative</i> that unites the tourism sector behind a common vision of a circular economy of plastics. 	<p>Environment and Climate Sustainability Working Group</p> <p>Energy Transition Working Group</p> <p>Business 20</p>
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GUIDELINES

PROPOSED CONCRETE
ACTIONSLINK TO G20
WORKSTREAMS**PILLAR 5****POLICY, GOVERNANCE AND INVESTMENT FRAMEWORKS**

1. Align tourism development with the 2030 Agenda for Sustainable Development.
2. Strengthen whole of government, multi-level coordination for tourism planning and management and community development.
3. Enhance tourism governance through public-private-community partnerships (PPCPs).
4. Promote human capital development through targeted policies and programmes for education and capacity building for communities attending to diversity and inclusion.
5. Enable frameworks for tourism investments.
6. Promote strategies and schemes to safeguard tourism investment in coordination with investment promotion agencies (IPAs) and governments.
7. Strengthen support for tourism investment from financial institutions, including international financial institutions, and foster the development of alternative modes of finance.
8. Ensure that tourism is integrated in overall crisis management policies and actions.
9. Develop procedures for meeting the needs of tourists affected by crisis situations and adhere to the Global Code for the Protection of Tourists.
10. Improve tourism data, including the use of big data, for evidence-base for policymaking, planning and management, and advance towards Measuring the Sustainability of Tourism (MST).
11. Enhance international cooperation and official development assistance through tourism, with a particular focus in the recovery and resilience of MSMEs and communities.

1. Evaluate collaborating with international organizations by facilitating information for the development of a central online tool and APP that can provide comprehensive, transparent and updated information on global travel requirements.
2. Support the processes of harmonization of travel protocols and mutual recognition of certificates being developed by the G20 Health Working Group, while respecting the national sovereignty of each State in this matter.

Development Working Group:

Particularly on its first priority issue 'Strengthening Recovery and Resilience to Withstand Future Crises' upon which the DWG seeks to formulate a deliverable dubbed as 'G20 Roadmap to Stronger Recovery and Resilience in Developing Countries, LDCs and SIDS'.

Trade, Investment and Industry Working Group:

Particularly on its priority issue 'Spurring Sustainable and Mutually Beneficial Investments'.

G20 Health Working Group:

Particularly priority 2 on Harmonizing global health standards focussed on the Harmonization of COVID-19 and other Vaccine-Preventable Diseases (VPD) Certificate Recognition at Point of Entry.

Business 20.



02 TOURISM AND COVID-19

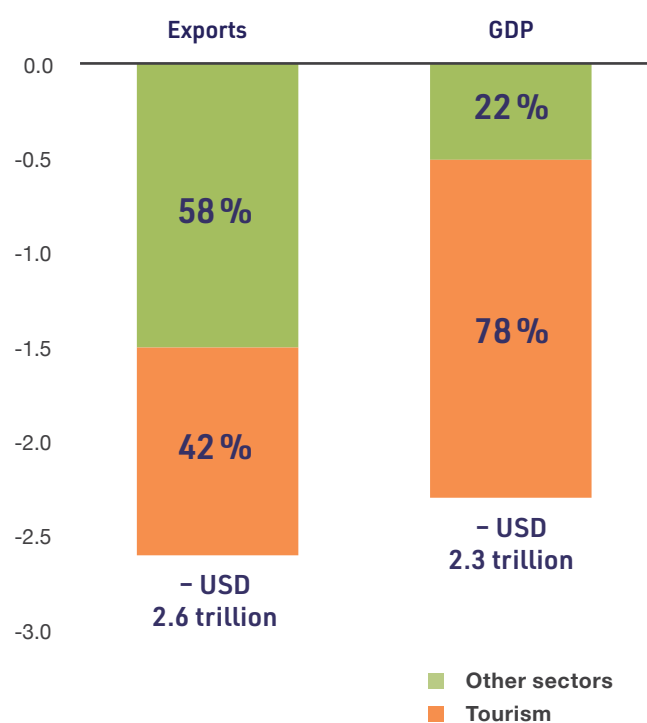
ON THE ROAD TO RECOVERY



The COVID-19 pandemic has been a major crisis of recent history. For tourism, it has brought an unprecedented disruption, with a massive drop in travel resulting from a global lockdown and widespread restrictions put in place to curb the spread of the virus. As of 6 April 2020, 96% of all worldwide destinations had introduced travel restrictions in response to the pandemic.¹⁰

2020 brought international tourism back to the levels of 30 years ago. International arrivals declined by 71%, from 1.5 billion to 400 million, by far the largest annual fall in the sector's history. This compares with the fall of just a 4% drop registered at the peak of the 2009 global economic crisis. UNWTO estimates that the economic contribution of tourism which amounted to USD 3.5 trillion in 2019, or 4% of world GDP, measured in tourism direct gross domestic product (TDGDP) was cut by almost half in 2020, plunging by USD 1.8 trillion, to 2.0% of world's GDP. This represents almost 80% of the overall decline in the value of world's GDP in 2020.¹¹

Figure 2.1:
Decline in global exports and GDP, 2020 (USD trillion)



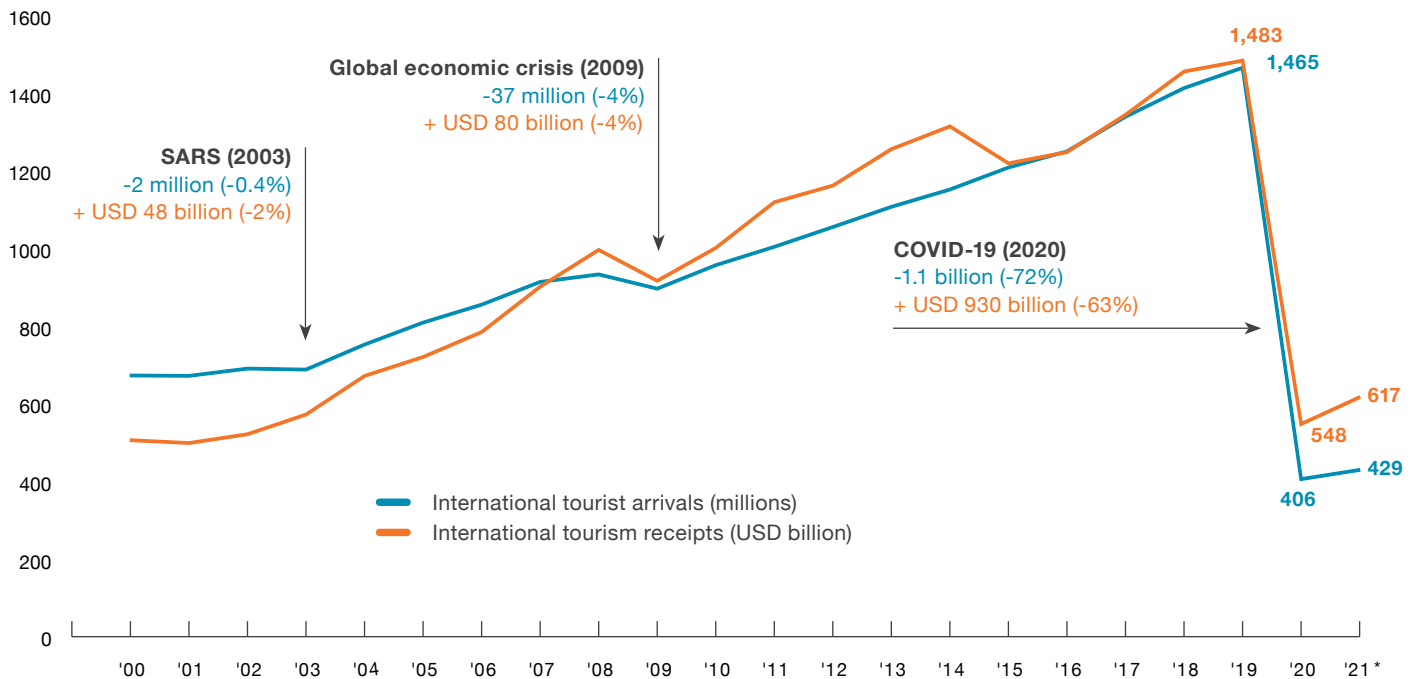
Note: Data as of August 2022.

Source: World Tourism Organization (UNWTO), World Trade Organization (WTO) and International Monetary Fund (IMF).

¹⁰ World Tourism Organization (n.d./c), 'Travel Restrictions', online available at: <https://www.unwto.org/covid-19-travel-restrictions> [22-08-2022].

¹¹ World Tourism Organization (2022/c).

Figure 2.2: International tourism, 2000–2021



Note: Real percentage change (local currencies, constant prices)

Source: World Tourism Organization (2022), as of August 2022.

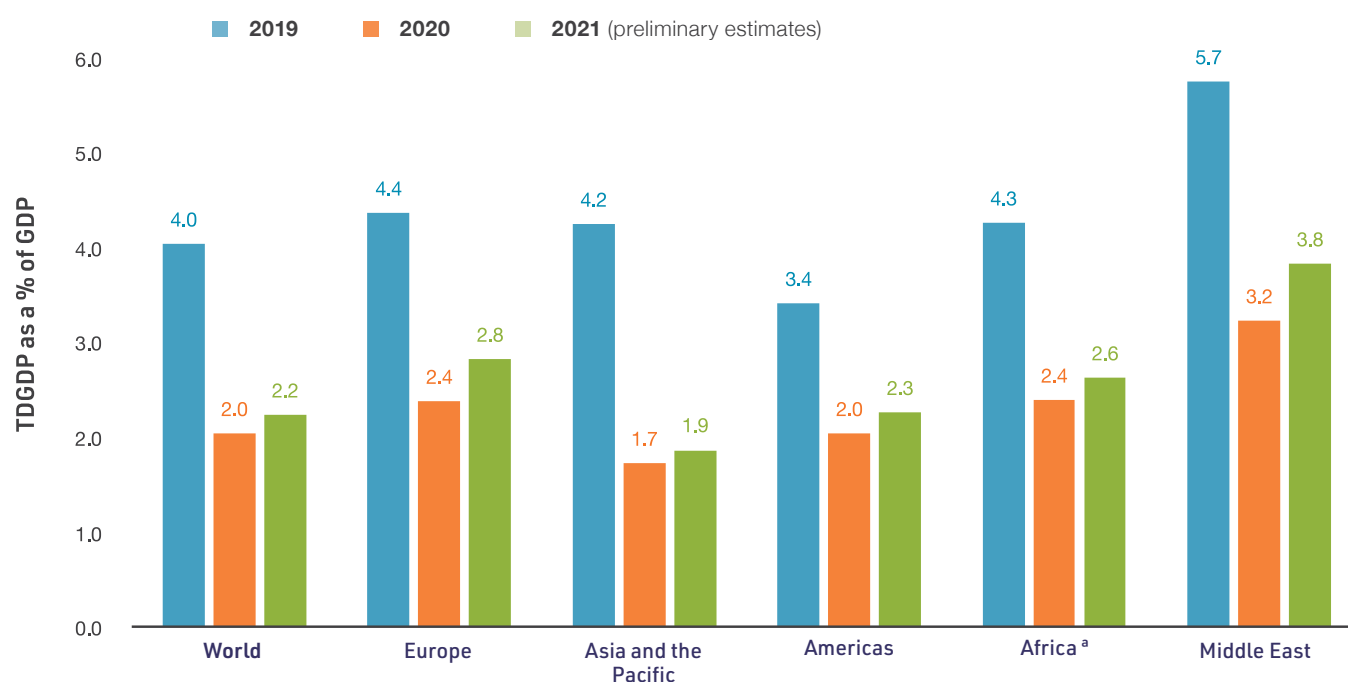
In addition to the tragic loss of life and the devastating impact of the COVID-19 pandemic on health and communities, the crisis has decimated the world of work and put millions of jobs at risk. There was increased unemployment and underemployment, loss of incomes, business closures and bankruptcies, supply chain disruption, rising informality and insecurity of work, and new and exacerbated occupational safety and health (OSH) challenges. Women, young workers and migrants working in tourism have suffered disproportionately from the crisis.¹² Gender equality in the sector has deteriorated, with women across the world suffering disproportionate income and livelihoods losses – withdrawal from education and training, violence, exclusion from decision-making processes, access to health services and being burdened with the majority of the responsibility for unpaid care and domestic work.¹³

By end of 2021, less than two years after the declaration of a pandemic by the World Health Organization (WHO), various vaccines were approved, and more than 50% of the world's population had received at least one dose. While vaccine equity remains a challenge, the progress that has been made, alongside increased coordination among governments, has resulted in a significant easing of travel restrictions and rising consumer confidence. International tourist arrivals grew by 4% in 2021 as compared to 2020.

The economic contribution of tourism (measured in tourism direct gross domestic product – TDGDP) is estimated at USD 2.2 trillion in 2021, above the USD 1.7 trillion in 2020, but still well below the pre-pandemic value of USD 3.5 trillion. Much of the improvement resulted from the recovery in the domestic markets.

12 International Labour Organization (2021/b), *Resolution I: Global call to action for a human-centred recovery from the COVID-19 crisis that is inclusive, sustainable and resilient*, adopted text, ILO, Geneva, online available at: https://www.ilo.org/ilc/ILCSessions/109/reports/texts-adopted/WCMS_806092/lang--en/index.htm, also available at: <https://www.ilo.org/global/lang--en/index.htm> [22-08-2021].

13 International Labour Organization (2021/a), *Report IV: Inequalities and the World of Work*, ILC.109/IV(Rev.), ILO, Geneva, online available at: <https://www.ilo.org/global/lang--en/index.htm> [22-08-2022].

Figure 2.3: Direct tourism GDP, 2019–2021 (% of GDP)

Note: a) Estimates for Africa should be interpreted with caution due to limited official data.

Source: World Tourism Organization (UNWTO), as of August 2022

After the impact of the Omicron variant at the end of 2021, data shows international tourism is recovering at a strong pace. Arrivals increased 221% year-on-year in the first five months of 2022 to an estimated 250 million. Despite the strong rebound, international tourism remained 54% below 2019 levels. Recovery is expected to consolidate throughout 2022, as more destinations ease restrictions and pent-up demand is unleashed. Based on better-than-expected results, as well as booking trends, UNWTO revised its outlook for 2022 upwards, with international arrivals now expected to reach 55% to 70% of 2019 levels in 2022.¹⁴ Nonetheless, recovery is still uneven among regions and industries with many MSMEs still facing important challenges, namely, increased cost due to the deterioration of the economic situation and the liquidity challenges of two years with no income.

¹⁴ World Tourism Organization (2022/d), *UNWTO World Tourism Barometer*, volume 20, issue 4, July 2022, UNWTO, Madrid, DOI: <https://doi.org/10.18111/wtobarometereng>.

G20 ECONOMIES AND COVID-19

The impact of COVID-19 on tourism has been felt among G20 economies at a varying degree depending on geographic location and weight of tourism in the national economies and jobs. In 2021, the opening of destinations to vaccinated travellers by mid-year, particularly in Europe, has led to a comparative improvement among the G20 countries as a group. Data for 2022, confirm that G20 economies, as a whole, are recovering faster than the world average. International tourist arrivals in the G20

countries stood at -45% as compared to 2019 values in the first five months of 2022 as opposed to -54% for the world.¹⁵

Yet, overall, G20 economies lost around 700 million international tourist arrivals annually, almost USD 1.4 trillion in exports from tourism and around USD 2.9 trillion in tourism direct GDP in the cumulative of 2020 and 2021.

Figure 2.4:
Impact of COVID-19 on the G20 economies, 2019–2021



Note: International tourism revenues consist of international tourism receipts and passenger transport fares.
Source: World Tourism Organization (UNWTO), as of August 2022

POLICY RESPONSE TO THE IMPACT OF COVID-19 ON TOURISM

The COVID-19 crisis has prompted an unprecedented policy response among governments around the globe, focussing on fiscal, monetary, social and employment-related measures. Globally, governments have deployed substantial resources to protect jobs and boost their economies throughout the crisis. Government interventions, such as employment retention schemes, have mitigated the impact of the COVID-19 pandemic and safeguarded many jobs in the tourism sector, particularly in developed countries.¹⁶

To a varying degree, all G20 countries have implemented measures to support the tourism sector, and a majority among them specific measures benefiting MSMEs.¹⁷ Fewer measures have been developed specifically to target communities. Despite these interventions, many businesses and workers in the tourism sector – in particular those working in the informal economy and international migrant workers – have been significantly affected while many developing countries have not had access to the resources to effectively implement employment retention schemes.¹⁸

16 International Labour Organization (2022/b), *The future of work in the tourism sector: Sustainable and safe recovery and decent work in the context of the COVID-19 pandemic*, TMSRTS/2022, ILO, Geneva, online available at: https://www.ilo.org/wcmsp5/groups/public/---ed_dialogue/---sector/documents/meetingdocument/wcms_840403.pdf [22-08-2022].

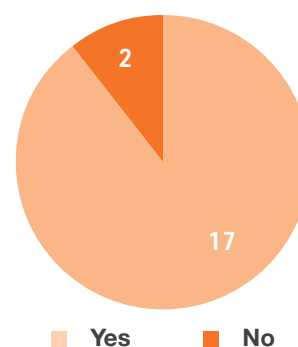
International Labour Organization (2022/a), conclusions of the Technical meeting on COVID-19 and sustainable recovery in the tourism sector, 25–29 April 2022, Geneva, online available at: https://www.ilo.org/sector/activities/sectoral-meetings/WCMS_824066/lang--en/index.htm [22-08-2022].

17 The only exception being the European Commission in view of its mandate.

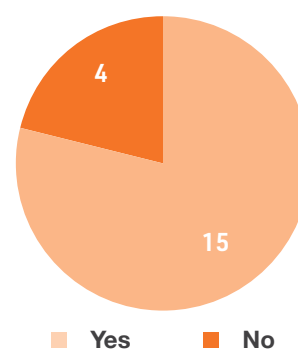
18 International Labour Organization (2022/b).

Figure 2.5:
Review of G20 policy responses to mitigate the impact of COVID-19 in tourism, specifically for communities and MSMEs

Has your country developed specific mechanisms to support tourism MSMEs?



Has your country developed specific mechanisms to support local communities?



Source: G20 and Guest Countries Survey (m=19)

A sunset over the ocean with a boat in the foreground. The sky is a mix of blue, orange, and yellow, with some clouds. The water is calm and reflects the colors of the sky. A boat is visible in the foreground, with its mast and rigging visible. The text is overlaid on the image.

03 CHALLENGES AND PRIORITIES FOR RECOVERY AND RESILIENCE



The present section summarizes the results of a survey conducted among G20 and guest countries between January 2022 and May 2022 (see annexes 3 and 4). On the immediate, priorities aim at promoting the domestic market, increase safety and regain visitors' trust with the ultimate goal of restoring pre-pandemic arrivals and spending. Looking on the medium term, key common priorities focus on:

- **Retaining and attracting talent;**
- **Upskilling, reskilling and newskilling** the workforce;
- **Digital adaptation** for MSMEs and communities;
- **Improving multilevel coordination** and whole of government approach;
- Promoting **evidence, data driven policies;**
- **Broadening visitation** to **underserved communities** and promote **new products** and **destinations;**
- Attracting **private sector investment;** and
- Supporting the **transition towards a green travel** and tourism economy.

Table 3.1: Priorities for recovery and resilience as per the survey of G20 and guest countries

PILLARS OF ACTION	G20 AND GUEST COUNTRIES PRIORITIES
PILLAR 1 HUMAN CAPITAL: JOBS, SKILLS, ENTREPRENEURSHIP AND EDUCATION	<ul style="list-style-type: none"> ▪ Review national policies and strategies to ensure adequate human capital in tourism ▪ Increase level of skills and qualification ▪ Attract, regain and retain the workforce (create new and exciting employment and training opportunities) ▪ Prepare an agile, secure and resilient workforce ▪ Make work in tourism more attractive ▪ Support the development and influence of tourism startups ▪ Data and research
PILLAR 2 INNOVATION, DIGITALIZATION AND THE CREATIVE ECONOMY	<ul style="list-style-type: none"> ▪ Digital and technology adaptation, particularly for MSMEs and rural communities ▪ Renovation and innovation in infrastructure, products and services to increase the quality and sustainability of the offer in line with local specificities ▪ Development of locally resourced creative industries with intellectual property (IP) potential ▪ Increase the attractiveness of tourism and cultural systems ▪ Modernize tangible and intangible infrastructure of cultural heritage and improve digital access and use of cultural assets
PILLAR 3 WOMEN AND YOUTH EMPOWERMENT^a	<ul style="list-style-type: none"> ▪ Training and skills development ▪ Inclusive community development ▪ Levering public-private partnerships and the private sector to promote inclusion
PILLAR 4 CLIMATE ACTION, BIODIVERSITY CONSERVATION AND CIRCULARITY	<ul style="list-style-type: none"> ▪ Transformation in terms of climate change and sustainability ▪ Implement sustainable practices at destinations, including sustainable production and consumption ▪ Promote seasonal and geographical dispersal of visitors ▪ Expand the scope and strengthen funding for climate action and sustainable infrastructure ▪ Adopt a sustainable tourism evidence-based approach ▪ Promote financing for destinations and companies to, among others switch to clean energy in tourism infrastructure and transport, foster circularity restore natural ecosystems and protect biodiversity ▪ Advance biodiversity preservation and conservation ▪ Provide and communicate supply of sustainable products
PILLAR 5 POLICY, GOVERNANCE AND INVESTMENT FRAMEWORKS	<ul style="list-style-type: none"> ▪ Tourism as a structural policy ▪ Collaboration frameworks including reinforcing public/private sector coordination ▪ Improve data and insights for evidence-based policies ▪ Attract new investments and grow private sector investment ▪ Policies for the domestic market ▪ Financial products to support the value chain, priority to MSMEs ▪ Sustainable and inclusive funding ▪ Planning for epidemic prevention ▪ Sustainable policies

a) Note by the editors: the issue of youth and women empowerment is hardly present in the results of the survey.



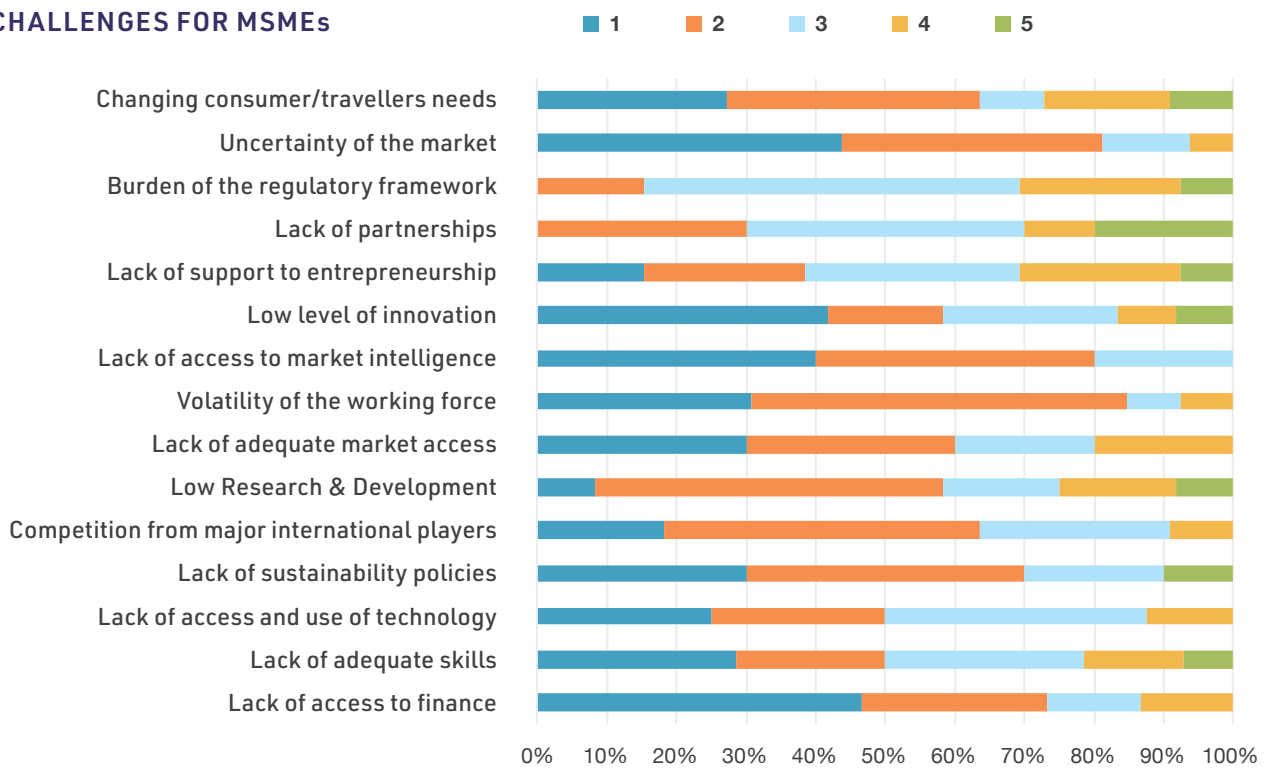
Within the priorities above, making MSMEs and communities true agents of transformation will require according to the results of the survey addressing the following challenges (by order of importance and noting that some are strongly intertwined):

The below is included in detail in the following graphs summarizing the priority awarded by G20 and guest countries to the various challenges ahead for MSMEs and communities in advancing these transitions.

For MSMEs	For communities
<ul style="list-style-type: none"> ▪ Lack of access to finance ▪ Lack of access to market intelligence ▪ The market uncertainty in view of a still ongoing pandemic situation ▪ The volatility of the working force ▪ Changing consumer trends and needs ▪ Low level of innovation 	<ul style="list-style-type: none"> ▪ The uncertainty of the market and changing consumer trends ▪ Leakages (revenue generated by tourism in the community which does not stay in the community, apart from any tax that may be drawn from tourism revenues in accordance with the legal tax framework of the country) ▪ Lack of education and skills ▪ Lack of adequate infrastructure and governance ▪ Excessive dependence on tourism

Figure 3.1: Key challenges for MSMEs

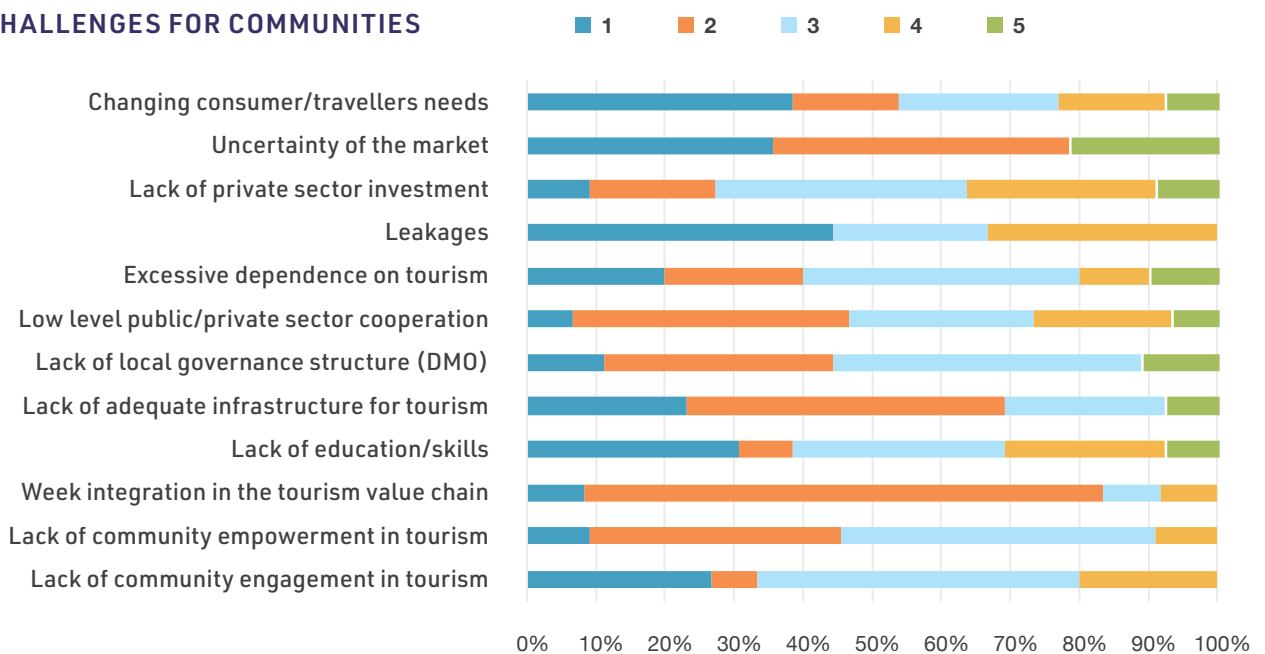
MAIN CHALLENGES FOR MSMEs



Notes: Multiple answers were possible.
 Relevance of challenges from 1 to 5, being 1 'more relevant' and 5 'less relevant'.
 Source: Survey of G20 and invited countries, March 2022 (m = 19)

Figure 3.2: Key challenges for communities

MAIN CHALLENGES FOR COMMUNITIES



Notes: Multiple answers were possible.
 Relevance of challenges from 1 to 5, being 1 'more relevant' and 5 'less relevant'.
 Source: Survey of G20 and invited countries, March 2022 (m = 19)





04 GUIDELINES

PILLAR 1

HUMAN CAPITAL: JOBS, SKILLS, ENTREPRENEURSHIP AND EDUCATION

THE LABOUR GAP

With an immense impact on jobs in the tourism sector, the pandemic also accelerated a series of shifts happening in the world of work, education and training. While some countries are still a distance away from recovering the previous levels of employment, in those where recovery has been stronger the workforce has become another challenge to be addressed. The pandemic exacerbated certain longstanding challenges, particularly labour gaps. Tourism businesses previously faced challenges filling jobs that were sometimes perceived as being low-wage and low-skilled, with little chance of career advancement or steady employment; with pandemic shutdowns, laid-off employees in tourism appear to be moving into other sectors, leaving many tourism jobs unfilled. For example the food and beverage services industry in Canada reported 145,100 job vacancies in Q3 2021, up from 67,400 in Q3 2019.

EDUCATION AND SKILLS: BUILDING A NEW APPROACH TO SKILLS DEVELOPMENT

At the same time, the tourism sector like many others faces the challenges of disruptive business models, new working modalities, consumer shifts, and technology and communication transformations. The World Economic Forum already predicted that “on average, by 2020, more than a third of the desired core skill sets of most occupations [would] be comprised of skills that are not yet considered crucial to the job” in 2016.¹⁹

The ability to build a new approach to skills development and adapt to the new forms of work will be crucial, especially in areas related to the management of people and the promotion of autonomy in decision-making at all levels. Networking – and network structures, which have redefined and expanded the classic boundaries of organizations – represent the most natural form of relationship in the knowledge society against more rigid organizational schemes, providing flexibility, agility and anticipation capacity. Likewise, societal changes demand a higher level of work-life balance requiring a new vision on what factors are fundamental to attract and retain talent. Finally, creative thinking is essential to succeed in modern, globalized economies based on knowledge and innovation.²⁰

19 World Economic Forum (2016), *The Future of Jobs – Employment, Skills and Workforce Strategy for the Fourth Industrial Revolution, Executive Summary*, WEF, Geneva, online available at: <https://www.weforum.org> [22-08-2022].

20 World Tourism Organization (2019/c), *The Future of Work and Skills Development in Tourism – Policy Paper*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284421213>.



For professionals, technical and vocational educational and training (TVET) systems, skills development and life-long learning systems will be critical to develop their skills continuously (the ‘finish studying to start working’ paradigm is no longer valid), with special relevance in those less automated or more complex skills, such as problem-solving, analytical skills, critical thinking, creativity, management, coordination of people, emotional intelligence or cognitive flexibility. This is particularly important for adaptive skills and digitalization.²¹

All players should encourage and promote technical and vocational education and training (TVET), skills development, and life-long learning systems, practical and physical skills, as well as most complex skills – the latter less likely to be automated (social and emotional

skills such as empathy, self-efficacy, responsibility and collaboration, cognitive and meta-cognitive skills such as critical thinking, creative thinking, learning-to-learn and self-regulation)²².

In all the above it is essential to stress – when looking at the future of work – that work is not a commodity and that all actors need to have a human-centred approach in order to “act with urgency to seize the opportunities and address the challenges to shape a fair, inclusive and secure future of work with full, productive and freely chosen employment and decent work for all.”²³

The tourism sector must find a mechanism of collaboration among all players including businesses, industries’ representatives and training providers – be it public

21 Organisation for Economic Co-operation and Development (2021/d), ‘Preparing the tourism workforce for the digital future’, *OECD Tourism Papers*, No. 2021/02, OECD Publishing, Paris, <https://doi.org/10.1787/9258d999-en>.

22 Organisation for Economic Co-operation and Development (2019), *Future of Education and Skills 2030. Conceptual learning framework: Skills for 2030*, OECE, Paris, online available at: https://www.oecd.org/education/2030-project/teaching-and-learning/learning/skills/Skills_for_2030_concept_note.pdf [22-08-2022].

23 International Labour Organization (2019/a), *ILO Centenary Declaration for the Future of work, 2019*, ILO, Geneva, online available at: <https://www.ilo.org/global/lang--en/index.htm> [22-08-2022].



or private – to identify demand-driven measures that address the skills gap, strengthen curricula and training tools, and promote reskilling, upskilling, and newskilling for the existing workforce.

In that regard, the pandemic has also demonstrated the immense opportunities of virtual learning which should be incorporated as one part of the set of learning methods in the future, including when arranging technical assistance, training and mentoring for local communities, as well as the MSMEs. At the same time, formal tourism education should be strengthened to ensure the quality of human capital in tourism and the adaptation to market needs and changes. This includes expanding on skills by developing cultural, creative and innovative activities in the secondary and tertiary education curricula, while also improving the competence and professionalism of teachers and lecturers and emphasizing vocational education and higher education.

ATTRACTING AND RETAINING TALENT AND CREATING ADDED VALUE JOBS

Indeed, the increasing challenges related to the attraction and retention of talent in tourism mean the sector needs to promote value-added jobs, improve job-related conditions, including life-work balance, tackle inequalities and focus on career development especially for women, youth and people in vulnerable situations, including people with disabilities, parents returning to the workforce, mature aged workers and indigenous peoples. Likewise, it is essential to promote skills and education in new areas such as advanced communication, informatics and digital technology that would increase inclusive job opportunities in the tourism sector. Education and skills in hard and soft skills need – as mentioned – refinement and tourism education needs to cut across many other areas. This, in turn, will require a better understanding of the tourism jobs, skills and education landscape.

GUIDELINES – PILLAR 1

HUMAN CAPITAL: JOBS, SKILLS, ENTREPRENEURSHIP AND EDUCATION

1 Improve the current situation in the collection of disaggregated data and the analysis of the tourism labour market.

Adequate policies to support jobs and education need to be based on evidence and data. These will be particularly important to understand the panorama of tourism MSMEs and create adequate programmes to support their recovery and resilience. This requires stepping up efforts in the measurement of the tourism value chain and labour markets in line with international standards (*International Recommendations for Tourism Statistics 2008* and *Tourism Satellite Account – TSA*)²⁴, including developing or improving the collection of tourism businesses and employment statistics disaggregated by age, sex, occupation and employment status, and urban–rural divide. It also requires developing further research on tourism MSMEs and labour markets by regularly collecting and disseminating good practices and data on trends and developments related to businesses and employment in tourism, including resilient and sustainable recovery practices, recruitment and retention of workers and existing and newly emerging labour shortages and possible measures to address them.²⁵ Likewise, countries may consider to this end the creation of Observatories on Employment and Education in Tourism to promote a systematic approach to data and policy analysis.

2 Support tourism MSMEs recovery and resilience with specific programmes.

MSMEs represent 98% or more of all tourism business among the few G20 and invited countries providing data on this indicator (3 out of 17)²⁶; they should be allocated specific programmes to support their continued recovery while transitioning to a higher resilience against digital and sustainability challenges. Many tourism MSMEs are indebted and in a fragile situation following the pandemic. As governments start to wind down the COVID supports and repayment of loans now become due, rising costs are squeezing already tight margins, while the cost of credit is also rising. Schemes with a vision of building resilience should particularly focus on the transition of workers and economic units from the informal to the formal economy and supporting MSMEs in addressing market uncertainty, accessing relevant data and insights, access and upskilling for technologies and supporting the creation of innovative products that diversify the overall tourism supply.

24 The *International Recommendations for Tourism Statistics 2008* (also known as IRTS 2008) provides a comprehensive methodological framework for collection and compilation of tourism statistics in all countries irrespective of the level of development of their statistical systems. The *Tourism Satellite Account* (TSA) is a standard statistical framework and the main tool for the economic measurement of tourism.

World Tourism Organization (n.d./d), 'UN standards for measuring tourism', UNWTO, Madrid, online available at: <https://www.unwto.org/standards/un-standards-for-measuring-tourism> [22-08-2022].

United Nations (2010), *International Recommendations for Tourism Statistics 2008*, UN, New York, online available at: <https://www.e-unwto.org/doi/book/10.18111/9789211615210>.

United Nations; Commission of the European Communities, Eurostat; World Tourism Organization and Organisation for Economic Co-operation and Development (2010), *Tourism Satellite Account: Recommended Methodological Framework 2008*, UN, New York, online available at: <https://www.e-unwto.org/doi/book/10.18111/9789211615203>.

25 International Labour Organization (2022/a).

26 G20 survey conducted for the development of the present Guidelines, see annex 4.



3 Enhance the linkages to other sectors along the tourism value chain and reduce leakages.²⁷

This implies promoting a higher integration of other sectors in the tourism supply chain, promoting policies and initiatives that increase the consumption of goods and services that can be competitively sourced locally, and implementation of sustainable and socially responsible enterprises as promoters of innovation and decent work, as well as the preservation of the destinations' social cohesion, cultural and natural resources. The improvement of the integration of the tourism value chain and the inclusion of other sectors, particularly financial and technological services, health and wellness, agriculture, culture and creative industries, is essential to improve innovation, productivity and the multiplier positive effect of the tourism sector on the whole of the economy and job creation.

4 Promote active policies and initiatives that stimulate entrepreneurship.

This includes initiatives to connect startups with investors and governments and frameworks that support innovation, technology access and open data. Incubating more entrepreneurs, with attention to diversity and inclusion among the entrepreneurs, is one of the routes that could be taken. This can include, among others, business development, managerial or business relations, in particular for MSMEs in the fields of tourism and creative economy. The process of business incubation could also be accelerated by quality partnership and facilitation programmes with larger enterprises in tourism and creative economy sectors, as well as technology partners. In addition to bottom-up incubation (private-led incubation), it is also possible for governments to scout potential new business and develop top-down incubation programmes in cooperation with state owned enterprises (SOEs).

²⁷ Tourism leakage occurs when revenue generated by tourism is lost to outside economies.



5

Promote access to universal, adequate, gender sensitive and sustainable social protection to all engaged in the tourism sector, fair wages, decent working conditions, occupational safety and health, and protect all workers against violence and harassment,²⁸ advancing the transition towards formality within existing international and national legal frameworks.

As a policy guidance, and according to national circumstances, consider the ratification and implementation of ILO's International Labour Standards, and in particular the Working Conditions (Hotels and Restaurants) Convention, 1991 (No. 172) and Recommendation (No. 179) and the Transition from the Informal to the Formal Economy Recommendation, 2015 (No. 204) the Indigenous and Tribal Peoples Convention, 1989 (No. 169) the ILO Guidelines on decent work and socially responsible tourism²⁹ (2017), the Convention on Violence and Harassment 2019 (No.190) and the Violence and Harassment Recommendation (No.206). The ILO Guidelines on Decent Work and Socially Responsible Tourism provide a reference tool to address labour-related challenges and opportunities for the sustainable development of the tourism sector.

6

Enable newskilling (skills acquisition), upskilling and reskilling for workers throughout their working lives.

Actively engage in diversified skills development, certification, technical, vocational and educational training (TVET) systems, and life-long learning policies, programmes and strategies, including through social dialogue and partnerships across the education and training sectors as a means to promote decent work opportunities for all and enable the sector to better respond to the changing requirements. The improvement should also be holistic, meaning that it is not only in a technical aspect of tourism and/or creative economy, but also in the strategic aspect such as leadership, management and monitoring. Training and mentoring from central or local governments is one of the measures that can be taken to support such programmes. Such approach should be based on life-long education and learning, and the development of soft skills (creative thinking and innovation, problem-solving, team work, empathy, etc.), as well as key cultural and technology competencies (to valorize the cultural offering of the territories). It should include the development of key skills in areas such as communication, customer focus, product development, marketing and promotion (especially online marketing), the compliance with international standards, in particular food safety, accommodation quality, safety and health, and universal accessibility, as well as tourism planning and policymaking at national and local level.

28 International Labour Organization (2022/a).

29 The ILO Guidelines on decent work and socially responsible tourism include a non-exhaustive list of international labour standards.



7 Maximize the use of digital tools in education and skills development, and support tourism practitioners with the necessary certified digital learning tools to foster recognition of prior learning.

This will ease the re-entry into the job market, especially for those with informal work histories.

The potential of digital technology that the pandemic has shown for education and training should be maximized with the expansion of tourism education and online training, training for the creative industries and promote network opportunities that promote cultural and creative industries (CCI)-based potential in tourism.

8 Promote the development of multi-stakeholder partnerships in building a new approach to education and training in tourism.

This includes engaging with social and technology partners, developing linkages and matching programmes. Also, while many vocational schools majoring tourism and hospitality are not located near tourism destinations, the efforts to connect future tourism workers and employers should be bridged by governments, in particular national education and tourism administrations. Linking the private sector and formal education in tourism and hospitality should also be initiated to reduce job waiting time for future graduates. Develop mechanisms for collaboration among representatives of government, employers, workers, academics, researchers and training providers, as well as between-sector stakeholders at national and regional/local level, especially employers and workers.³⁰

³⁰ OECD: These issues were addressed under the digital pillar of the G20 Rome Guidelines (guidelines for action). This is now being progressed by countries, with good examples.

See: Organisation for Economic Co-operation and Development (2021/d), p. 41; and

Organisation for Economic Co-operation and Development (2021/c), 'Preparing the tourism workforce in Portugal for the digital future', *OECD Tourism Papers*, No. 2021/04, OECD Publishing, Paris, p. 23, DOI: <https://doi.org/10.1787/bcada146-en>.



9

Encourage the industry-led engagement in the update of competency standards and curricula, as well as national mechanisms to drive tourism skills policy and develop campaigns that value employment in tourism, attract and retain talent.

A career in tourism should be made more attractive by updating competences, future growth, and individual career opportunities and working conditions, but also the image of a job in the sector in order to attract and retain the right talent.

10

Promote the creation of and skills development for sustainable jobs.

The understanding of, and commitment for green jobs supporting an adequate transition for workers and employers towards a low carbon, climate change decelerating, environmentally friendly and socially respectful development should be a crucial part of the future of work in tourism. Sustainable jobs need to be integrated in all tourism-related policies on employment and business, including skills development for biodiversity conservation and climate change mitigation.



LINK TO OTHER G20 WORKSTREAMS

- **Development Working Group:** Particularly on its first priority issue 'Strengthening recovery and resilience to withstand future crises' upon which the Development Working Group seeks to formulate a deliverable dubbed as 'G20 Roadmap to Stronger Recovery and Resilience in Developing Countries, LDCs and SIDS'.
- **Employment Working Group:** Particularly its third priority issue, 'Sustainable job creation towards changing world of work' and its second priority issue, 'Human capacity development for sustainable growth of productivity'.
- **Education Working Group:** Particularly its second priority issue 'Digital technologies in education' and its last priority issue 'The future of work post-COVID-19'.
- **Business 20** and **Labour 20**.

PROPOSAL FOR CONCRETE ACTIONS

1. Evaluate the creation of a **voluntary G20 Tourism Exchange Programme** promoting internships across G20 countries coordinated by educational institutions and the ministries of/with a portfolio of tourism according to the capabilities, laws and regulations enacted in all participating countries.
2. **Promote and expand existing online training such as the UNWTO Tourism Online Academy** as a global aggregator of online training for tourism.³¹

31 See for further information: World Tourism Organization (n.d./e).

PILLAR 2

INNOVATION, DIGITALIZATION AND THE CREATIVE ECONOMY

THE DIGITAL TRANSFORMATION

The pandemic has accelerated the needs and use of digitalization that has been underway for decades as the response to improve customer experience and seamless interaction of businesses and between businesses and customers. Customers with Internet access began shopping remotely, many employees began working from home, and many businesses adopted digital business models to keep operations running and some revenue flowing. Globally, 58% of global customer interactions were being deployed within the digital realm, accelerating its growth for around three years' time. UNCTAD mapped 16% to 19% growth in e-commerce transaction in 2020, and more than USD 26.7 trillion in global e-commerce transaction were recorded.

The challenge in digitalization mostly concerns equal access to digital infrastructure and devices, as well as how digitalization can actually connect all potential resources for the benefit of users, instead of being a divider or creating gaps among users. Unequal access to

digital infrastructure and devices, as well as lack of skills are important factors to be considered in overcoming the digital gap. This is the case in tourism, where in many countries MSMEs account for over 90% of all businesses.

Moreover, nowadays the digital divide can even deepen the inequality, discrimination and exclusion of those with limited access to new technologies, even to a greater extent, particularly when it comes to rural communities and people with limited digital skills.

The digital transformation is essential not only for increasing competitiveness of MSMEs and communities, but also to advance seamless travel. As indicated in the Rome Guidelines, countries should "explore ways to promote the use of digital traveller identity, biometrics and contactless transactions to facilitate safe and seamless travel. The use of such procedures has become more widespread in recent years and should be accelerated in the interests of safe mobility. Requirements include the interoperability of technologies and systems, and mutual recognition of appropriate authorities and other users,



together with respect for data privacy based on agreed international standards and principles and in accordance with national laws and regulations.”³² The importance of this agenda has become even more relevant in facilitating travel in the context of COVID-19 when the use and mutual recognition of digital certificates and clear communication of travel requirements has been instrumental in restoring safe mobility, easing travel restrictions and building travellers’ confidence. As indicated in the Chairman’s statement of the High Level Meeting on Safe International Travel organized by Spain and OECD on 7/8 July 2022, there “was consensus that an interoperable, flexible and pragmatic approach to the adoption of vaccination, recovery and testing certificates as an instrument to improve the safe and seamless recovery of international travel is vital.”³³

32 Organisation for Economic Co-operation and Development (2021/a).

33 Organisation for Economic Co-operation and Development (2022), *High-Level Meeting on Safe International Travel, Ibiza, Spain, 7–8 July 2022 – Chair’s summary*, Ibiza, online available at: <https://www.oecd.org/health/safe-international-travel/> [22-08-2022].

ADVANCING INNOVATION

Innovation in tourism is essential to achieve sustainable, inclusive and resilient tourism, as well as safe, seamless and sustainable tourist journeys. Innovation intends to bring tangible and intangible benefits to tourism stakeholders and the local community, improve the value of the tourism experience and the core competencies of the tourism sector and so enhance tourism competitiveness and sustainability. Innovation in tourism may cover areas such as tourism destinations, tourism products, technology, processes, organizations and business models, skills, architecture, services, tools and/or practices for management, marketing, communication, operation, quality assurance and pricing.

One key challenge that is currently in the spotlight is to innovate and provide “experience tourism”, which is preferred in these trying times. Innovation should spur value-added products, strengthen tourism linkages with other sectors, reduce costs and support the implementation of planning and management solutions that contribute to the economic, sociocultural and environmental sustainability of the sector.

Yet, to bridge the tourist experience and sustainability gap and drive innovation in tourism, innovation strategies should consider innovation policies in the tourism sector and cover scientific research, technology commercialization, information technology (IT) investments, education and skills development, taxation, trade, intellectual property (IP), government procurement and regulatory policies in an integrated fashion.

These challenges might require innovation and investments to create programmes to address skills shortages and gaps.³⁴ Embracing digitalization throughout the tourism ecosystem will help to drive

the ability of business to build resilience by fostering digital technologies, but at the same time it will provide opportunities to retain and develop strategies to upskill human capital and implement digital technologies MSMEs. For this reason, UNWTO launched the Digital Futures Programme, which seeks to accelerate economic recovery of the tourism sector by supporting SMEs to unleash digital technologies to create jobs and enhance future resilience in the linkages of the tourism value chain post-COVID-19.

As presented in the *UNWTO Investment Guidelines*,³⁵ venture capital (VC) investment in the travel tech sector has experienced continuous growth throughout the last decade. Around USD 455 billion has been invested in travel and mobility tech startups from 2010 to 2019.³⁶ Surprisingly, despite the 2020 drop in global investment, the amount of funding towards the travel tech sector remains not only stable, but experiences a marginal increase compared to 2019.

However, it is also important to mention that globally, the VC investments in emerging economies represent less than 1% of total investments in travel tech startups. There must be a real push in investments vehicles to support and foster innovation and travel tech startup solutions in emerging economies, as well as open opportunities to invest in untapped markets with growing potential demand.³⁷

34 Organisation for Economic Co-operation and Development (2021).

35 World Tourism Organization (2021/d), *UNWTO Investment Guidelines – Enabling Frameworks for Tourism Investment*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284422685>.

36 World Tourism Organization (2021/e), ‘UNWTO Travel and Tourism Tech Startup Ecosystem and Investment Landscape’, online available at: <https://www.unwto.org/travel-and-tourism-tech-startup-ecosystem-and-investment-landscape> [22-08-2022].

37 World Tourism Organization (2021/d).

BUILDING UP ON THE SYNERGIES BETWEEN TOURISM AND THE CREATIVE ECONOMY

“The creative economy involves, inter alia, knowledge-based economic activities and the interplay between human creativity and ideas, knowledge and technology, as well as cultural values or artistic, cultural heritage and other individual or collective creative expressions”³⁸.

UNESCO makes an emphasis on goods, services and activities of cultural, artistic and heritage nature, originated in human creativity. It also underscores the prominent role of the cultural value chain which allows for creative industries to reach their audience and the market.³⁹

Cultural and creative industries and sectors are the lifeblood of creative economy. They include advertising, architecture, visual arts and crafts, design, fashion, audio-visual (including film, television, video games and multimedia), photography, music, performing arts, (electronic) books and publishing, software, computer games. Besides these, the culinary arts should also be considered.

The creative economy is the sum of all the parts of the creative industries, including trade, labour, production and dissemination. Today, the creative industries are among the most dynamic sectors in the world economy providing new opportunities for developing countries to leapfrog into emerging high-growth areas of the world economy.

The creative industries possess a significant commercial and cultural value, and as such feed in the product development within the cultural tourism ecosystem, enriching its overall offer on the market.

To infuse the value of the creative industries in tourism and ensure that tourism can in turn support the development of the creative arts some critical issues need to be addressed. These include a suitable working environment, a just, fair and inclusive creative economy ‘ecosystem’ with dignified working conditions, a special attention paid to informal and freelance creators, decent pay and growth opportunities. Data collection, consultation of industry workers and women and youth perspectives should also be considered. Creative economy approaches can also be leveraged by tourism to stimulate innovation and develop new business models, products and experiences. More specific issues for building linkages between tourism and the creative economy to drive value in both sectors include mechanisms to embed creativity in the destination and stimulate visitation, networks and creative clusters, public-private-community partnerships, support co-creation with user-generated experiences, creative storytelling and branding, etc.⁴⁰

Furthermore, as a sector whose economic activities rely on human capital, intellectual property (IP) and creativity, assisted by advanced technology that can create products or services with potential IP value and innovation, tourism should advance the relationship with intellectual property. Therefore, its challenges lay in the elements within its ecosystem; from the creators/human capital (such as education, access and network), to the creative products/services (such as manufacture, material supply and IP rights), to the market/users (such as marketplaces, stages and compensation/awards), as well as the research and development that would provide input to creative actors for their next works, which expands to research institutions, feedback/critics, discovery of new techniques, new technology, etc.

38 United Nations (2020/a), *International Year of Creative Economy for Sustainable Development*, Resolution A/C.2/74/L.16/Rev.1, UN Digital Library, New York, online available at: <https://digitallibrary.un.org/record/3847697?ln=es> [22-08-2022].

39 United Nations Educational, Scientific and Cultural Organization (n.d.), ‘What do we Mean by the Cultural and Creative Industries?’, Capacity-Building Programme in Africa, Document No. 11, UNESCO, online available at: <https://en.unesco.org/creativity/sites/creativity/files/digital-library/What%20Do%20We%20Mean%20by%20CCI.PDF> [22-08-2022].

40 Organisation for Economic Co-operation and Development (2014), *Tourism and the Creative Economy*, OECD Studies on Tourism, OECD Publishing, Paris, <https://doi.org/10.1787/9789264207875-en>.

GUIDELINES – PILLAR 2

INNOVATION, DIGITALIZATION AND THE CREATIVE ECONOMY

1 Foster innovation along the whole tourism value chain, with a particular focus on digitalization and the creative economy.

- Linking tourism and creative industries in the areas of product development and, design of engaging and interactive experiences in the existing cultural tourism destinations;
- Developing new products and experiences at destinations, as well as new destinations and their marketing strategies;
- Examine means of financing programmes for the creative industries linked to tourism and facilitating their access to loans;
- Focussing on developing and hosting those events which can feature the creative industries of the destination, aligned with its values and objectives and its overall positioning;
- Placing gastronomy tourism as a pillar of tourism development for its ability to create added value experiences and the links with agriculture, traditions and innovation; and
- Investing in innovation and digital transformation applied to the promotion and conservation of tangible and intangible cultural heritage, as well as the online commerce channels managed by cultural creators and social enterprises to leverage on their creative industries.

2 Promote the creation of market intelligence systems and train MSMEs and communities to use them within relevant regulation frameworks.

Among the main challenges identified by surveyed countries in the transformation of MSMEs and communities is the lack of market intelligence. Governments can develop systems of market intelligence to support companies and destinations, and provide them with mentoring initiative that allow them to keep abreast with changing patterns of demand and trends. This requires proper previous investment in digital infrastructure which is critical for the development of both MSMEs and communities.

3 Foster partnerships with tech companies to accelerate digital transformation, innovation and sustainable solutions for MSMEs and startups in the tourism sector.

The private sector can enable synergies to facilitate digital training programmes to uptake the use of digital technologies and tools to increase competitiveness for MSMEs and startups in the tourism sector.⁴¹

41 World Tourism Organization (2021/d).



4 Prioritize the digitalization within tourism policies and promote specific programmes to support the digital transformation of MSMEs and communities.

These can have a focus on big data and the Internet of things (IoT), digital payments, artificial intelligence, contactless and identification technology, and apps.

5 Support the digital transformation of rural areas.

Ensure the presence of necessary infrastructure to enable widespread digital coverage, promote policies and investment that reduce the digital gap between rural and urban territories in terms of infrastructure, access and skills. While virtually all urban areas in the world are covered by a mobile broadband network, gaps in connectivity and Internet access persist in rural areas. Globally, 76% of households in urban areas have Internet usage, almost twice as many as in rural areas (39%).⁴²

6 Foster responsible innovation that focusses on solutions which are socially desirable and undertaken with the public interest in mind.

Funders, researchers, interested and affected parties, including the public, all have a role to play in innovation. When it comes to businesses, responsible innovation means taking into account and taking steps to address the potential impacts of introducing a new product, service, process or business model. Responsible innovation also takes into account the impact on the innovator, investors, customers, suppliers and society. New innovative products, services, processes and business models are better when the benefits for society can be accomplished and any potential downsides avoided. The innovative tourism industry shall emerge as triumphant, where challenges turned into opportunities and innovation.

⁴² International Telecommunication Union (2020), *Internet use in urban and rural areas, 2020*



7 Promote market and product diversification through the creative industries, digitalization and the promotion of community development through tourism.

Investing in infrastructure, technology and skills development in local communities will contribute to build new destinations and diversify tourism experiences with the ultimate goal of dispersing demand in time and space while creating new opportunities for growth and decent jobs in remote areas, new destinations or territories in decay. Digital access and upskilling are key to the development prospects of local communities, as this is the best avenue after the pandemic for them to access the tourism and creative industries markets.

8 Harness the value of intellectual property (IP) for tourism.

IP is a powerful tool to boost tourism development and competitiveness among MSMEs and communities. A report by the World Intellectual Property Organization (WIPO) and UNWTO on the value of intellectual property in boosting tourism shows how the IP system creates a favourable ecosystem for innovation, entrepreneurship and investment in the sector.⁴³ The IP system is designed to promote creativity and innovation and support efforts by individuals, businesses and other actors to differentiate themselves and their products and services in the marketplace, whether through trademarks, geographical indications, copyrights or patents. IP can be included in tourism product development – from destination branding to tourism policies. It can be used to leverage and raise funds and add value to tourism services and products, as well as to protect and promote local knowledge, traditions and cultural heritage.

43 See: World Tourism Organization (2021/a), 'New report shows value of IP to the tourism sector, press release', UNWTO, Madrid, online available at: www.unwto.org [22-08-2022].

You can consult the full report through: World Intellectual Property Organization and World Tourism Organization (2021), *Boosting Tourism Development through Intellectual Property*, WIPO, Geneva, DOI: <https://doi.org/10.18111/9789284422395>.



9

Foster technology to promote safe mobility and step up consumer confidence, as well as improve preparedness for future crises.

The advances in safe and seamless travel introduced prior to the pandemic have been in some cases halted, and in other cases accelerated. This includes the use of digital tools for the check in with airlines and accommodation or for the verification of travel documents, such as certificates of vaccination or testing. The use of mobile applications can also be fostered as a key tool to promote clear, easy and up-to-date information to consumers on travel requirements. Finally, as stressed at the High Level Meeting on Safe International Travel organized by Spain and OECD on 7/8 July 2022 in support of the Presidency, “in order to ensure seamless and functional interoperability between different types of certificates, participants encouraged countries to work towards technological solutions that promote recognition in line with legal provisions applicable across countries of different types of interoperable certificates, which could eventually include the establishment of a system of systems, i.e., a global directory of trusted digital services and a trust network federator that facilitates trust across diverse formats of certificates and their implementations”⁴⁴.

LINK TO OTHER G20 WORKSTREAMS

- **Digital Economy Working Group:** Particularly its first priority issue ‘Connectivity and Post-COVID-19 Recovery’, as well as its second priority issue, ‘Digital Skills and Digital Literacy’ on which the working group seeks to devise a ‘G20 Toolkit for Measuring Digital Skills and Literacy’.
- **Business 20, Science 20 and G20 Culture.**

PROPOSAL FOR CONCRETE ACTIONS

1. **Evaluate adhering to the UNWTO Digital Futures programme** which seeks to accelerate economic recovery of the tourism sector by supporting MSMEs to unleash digital technologies to create jobs and enhance future resilience in the linkages of the tourism value chain post-COVID-19. The programme has the ambition to reach out at least 1 million SMEs providing online trainings to uptake the use of digital technologies and tools to increase competitiveness for SMEs.
2. **Evaluate, in coordination with the relevant national authorities, the creation of a network of Living Museums** to strengthen the cultural and creative industries (CCI) and sectors ecosystem within the context of experience tourism. The network could add value to (in) tangible commodities, share and promote strategies in developing and monetizing the IP potential, as well as the benefits from the advancing digital and communication technologies, and conduct research and development through a synergy among all stakeholders.

44 Organisation for Economic Co-operation and Development (2022).

PILLAR 3

WOMEN AND YOUTH EMPOWERMENT



WOMEN AND YOUTH – THE MOST AFFECTED BY THE CRISIS

The COVID-19 pandemic has caused structural changes in employment across size and sector with a major impact on women and youth. In most regions of the world, women make up the majority of the tourism workforce, yet tend to be concentrated in the lowest paid and lowest status, as well as informal jobs in tourism and perform the vast majority of unpaid work in family tourism businesses.

While the COVID-19 crisis has affected workers throughout the industry, women's employment has fallen more than that of men. While tourism specific data are unavailable, global data is indicative of the scale of the challenge in the industry. In 2021, there were still 13 million fewer women in employment compared to 2019 worldwide, while men's employment was projected to recover to 2019 levels. Meanwhile, only 43.2% of the world's working-age women were employed compared to 68.6% of working-age men.⁴⁵

Gender equality in the tourism sector has deteriorated, with women across the world suffering disproportionate income losses and being burdened with the majority of the responsibility for unpaid care and domestic work. Subsequently, women in tourism have been pushed into inactivity by the care work crisis. There is a risk that the COVID-19 pandemic could reverse hard-won gains on gender equality and women's rights across the tourism sector and the wider economy, with negative implications for economic growth, productivity and sustainability. Potential issues for the sector include stagnation in the progress of reducing gender pay and employment gaps in many places and an increase of violence against women and harassment.⁴⁶

Youth workers are the most affected in terms of rising unemployment at the beginning of the pandemic (between February and March 2020).⁴⁷ This not only increases the unemployment rate of youth in short run, but there would also be a long-term scarring effect of future employment for those who graduate in the pandemic era,

45 International Labour Organization (2019/b), *Policy Brief – Building Forward Fairer: Women's rights to work*, ILO, Geneva, online available at: <https://www.ilo.org/global/lang-en/index.htm> [22-08-2022].

46 International Labour Organization (2021/a).

47 reports such as Organisation for Economic Co-operation and Development (2010).



often referred to as “class of corona”.⁴⁸ This is due to the fact that they will be less likely to be able to accumulate working experience, thus, as the economy bounces back, this “class of corona” would be less favoured by companies compared to the fresh graduates at that time.

The challenges for recovery and resilience are large and complex considering that the revival of the tourism sector does not only depend on the internal variables of the business itself but also on external variables, such as:

1. While in some countries the increasing population of young job seekers is causing oversupply in the labour market, in others there are growing labour shortages;
2. Long-term effects of the pandemic to the future employment opportunities for “class of corona”;
3. The decrease in the number of work units that match the skills of young people and at the same time new work units are increasing due to technological disruption, but have not been able to absorb additional young and female workers;
4. The global economy is targeting more the population of young people and women as users rather than producers of products or derivatives of technology products;
5. Information technology products have not been able to reach tourism MSMEs proportionally, thus preventing the dominant youth and women businesses from developing their business in a sustainable manner; and
6. Discriminatory laws and corporate practices and negative sociocultural norms that create barriers for women to enter and progress in the sector.

48 International Labour Organization (2020).

GUIDELINES – PILLAR 3

WOMEN AND YOUTH EMPOWERMENT

Considering the G20 Roadmap Towards and Beyond the Brisbane Target: More, Better and Equally Paid Jobs for Women, as well the Actions for Women's Empowerment in the Field of Tourism included in annex 1 of the G20 Tourism Ministers' Meeting held in Kuchan, Hokkaido, Japan, on 26 October 2019.

1

Take measures to address the gender pay gap in tourism by:⁴⁹

- Tackling adequate social protection for women and addressing unpaid work; and
- Systematically address the sexual harassment and violence committed against women workers in the tourism sector,

2

Promote entrepreneurship with dedicated programmes targeted at women:

- Work to ensure that women's tourism businesses can become formalized, and contribute to women's social and financial inclusion;
- Expand and diversify women's market access and fair trade for their tourism products and services;
- Support women to expand and diversify their tourism products and services;
- Introduce measures to improve women's work-life balance in tourism and encourage an equal division of unpaid care work in tourism communities; and
- Expand women's access to digital technologies, including digital tourism platforms.

49 World Tourism Organization (2022/a), *Gender Mainstreaming Guidelines for the Public Sector in Tourism*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284423248>.

World Tourism Organization (2022/b), *Gender-inclusive Strategy for Tourism Businesses*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284423262>.

For guidelines 1 to 7 see: World Tourism Organization (2019/b), *Global Report on Women in Tourism – Second Edition, Key Findings*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284420407>.



3 Advance women's full and equal participation in leadership, policy and decision-making:

- Work towards gender balance at all levels, including in senior management of tourism companies;
- Address the lack of high-level women's leadership in decision-making spaces in the private and public sector tourism bodies and agencies;
- Ensure ILO policies on maternity and care responsibilities are respected; and
- Actively support women's representation and leadership in trade unions.

4 Promote education and training in tourism through programmes specifically for women and youth.

This includes training on soft skills, networking and high-level training for career progression. Build targeted training for women to ensure that they can use digital technologies to innovate through digital technologies in tourism.

5 Place gender equality at the core of tourism policies and business practices – and the experiences of diverse women – throughout policy, programme and strategy development.

It is encouraged to provide gender equality training for tourism policymakers, managers and employees, adequate regulation and integrate women empowerment into all phases of the tourism policy and programme cycle.



6

Empower women's participation in communities and civil society in tourism:

- Facilitate women's voice in community and household decision-making; and
- Support women's tourism networks, NGOs and tourism cooperatives to actively work towards women's empowerment in the sector.

7

Advance the measurement of tourism data on gender and age for better policies.

It is recommended to regularly collect and report employment data that is disaggregated by sex, age, occupation and rural/urban divide, – where possible – formal and informal employment, gender pay gaps, entrepreneurship, education and training, leadership and decision-making, time use and work-life balance. Such data should be regularly provided to UNWTO to ensure an international analysis and comparative insights and conduct gender analysis.



8

Integrate the targeting strategies within the women and youth labour market profiling to make it easier for the public and private sectors to reach youth and women in occupational categories.

This is particularly important at the lower layers of the skill structure. It will include the training or drilling skills, knowledge of women and youth so as it will strengthen data centres for tourism and business, thus reduce risk of failure in entrepreneurship.

LINK TO OTHER G20 WORKSTREAMS

- **Empower Initiative** particularly on its second priority issue 'Women in MSMEs as Drivers of Economic Growth: Context, Connect and Change'.
- **Women 20** as well as **Youth 20**.

PROPOSAL FOR CONCRETE ACTIONS

- G20 members are encouraged to join and commit to the action plan of the *Global Report on Women in Tourism – Second Edition*,⁵⁰ which provides a framework that provides concrete steps that will help actors in the private and public sectors boost tourism's empowering potential for women;⁵¹ and
- **Leveraging G20 EMPOWER Alliance** though increasing its network of women leaders and entrepreneurs in the tourism sector.

50 World Tourism Organization (2019/a).

51 Access the Action Plan through the following publication:
World Tourism Organization (2019/a), *Global Report on Women in Tourism – Second Edition*, UNWTO, Madrid,
DOI: <https://doi.org/10.18111/9789284420384>.
Direct link to the Action Plan: https://www.e-unwto.org/pb-assets/unwto/191121_action_plan_women_in_tourism_2nd_ed.pdf [12-08-2022].

PILLAR 4

CLIMATE ACTION, BIODIVERSITY CONSERVATION AND CIRCULARITY

As outlined in the One Planet Vision for a Responsible Recovery of Tourism from COVID-19 which was released by UNWTO in June 2020 and subsequently reaffirmed in the UNWTO Recommendations for the Transition to a Green Travel and Tourism Economy, developed in 2021 in partnership with the G20 Tourism Working Group, recovering from the pandemic must also tackle the underlying reasons for sustainability challenges, such as unsustainable consumption and production patterns.

Sustainable consumption and production approaches are based on an understanding of the systemic linkages to environment and social outcomes of the entire life cycle of economic activities. By integrating sustainable consumption and production in the tourism value chain, solutions that go beyond technical resource efficiency measures can be developed to ensure outcomes across sustainability dimensions. Sustainable consumption and production patterns have the potential to address the triple planetary crisis of climate challenges, biodiversity loss, and waste and pollution.

CLIMATE ACTION

According to UNWTO/ITF research released in December 2019 on the occasion of the United Nations Climate Change Conference – COP 25 – in Madrid, the tourism sector was estimated to increase its emissions by at least 25% by 2030 if the current climate ambitions of the sector remain unchanged.⁵² While the COVID-19 pandemic led to a reduction of greenhouse gas (GHG) emissions globally in 2020, emissions already rebounded in 2021 reaching their highest absolute levels ever.⁵³ It is therefore expected that emissions from tourism would also rapidly rebound as operations restart, and hence the need to transform tourism operations for climate action continues to be of utmost importance for the sector to remain in line with goals of the Paris Agreement, reflecting equity and the principle of common but differentiated responsibilities and respective capabilities, in the light of different national circumstances.⁵⁴

52 World Tourism Organization and International Transport Forum (2019), *Transport-related CO2 Emissions of the Tourism Sector – Modelling Results*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284416660>.

53 International Energy Agency (2022), *Global Energy Review: CO2 Emissions in 2021*, IEA, Paris, online available at: <https://www.iea.org> [22-08-2022].

54 United Nations Climate Change (2015), 'Article 2(b)', *Paris Agreement*, online available at: <https://unfccc.int> or https://unfccc.int/files/meetings/paris_nov_2015/application/pdf/paris_agreement_english_.pdf [13-09-2022].



Transforming tourism operations for climate action requires, among others:

- Promoting the introduction of targets based on science and measurement and disclosure of GHG emissions;
- Enhancing mitigation and adaptation efforts to reduce GHG emissions of tourism operations and value chains, including climate-aware tourism promotion, scaling up rail and electric charging infrastructure, as well as fostering the availability of all inclusive, affordable, reliable and viable energy systems; and
- Reinforcing the engagement of the tourism sector in adaptation to climate change and emission removal.

In November 2021, at UNFCCC COP26 in Glasgow, UNWTO launched the Glasgow Declaration on Climate Action in Tourism with the aim of building a consistent approach that will accelerate climate action in tourism.

The Declaration, which is a voluntary commitment to accelerate climate action in tourism, has already been subscribed by more than 500 signatories, including countries, businesses, destinations and supporting organizations.



BIODIVERSITY CONSERVATION

The COVID-19 pandemic has raised awareness of the importance of a healthy environment as a natural barrier for future pandemics, notably in the case of zoonotic diseases.⁵⁵ Biodiversity decline risks causing dangerous and irreversible breakdowns of terrestrial, freshwater and ocean ecosystems, threatening the foundations of social and economic provisioning systems. To mitigate the threat of biodiversity loss, consumption and production should follow the flow of natural resources along supply chains.⁵⁶

A healthy environment is also directly connected with the competitiveness of the tourism sector. In many destinations, the conservation of marine and terrestrial ecosystems, protected areas and species largely depends on tourism revenue and operators. Enhancing such conservation efforts can enable a more sustainable recovery and contribute to fighting illegal wildlife trade. Supporting the development of monitoring mechanisms that would regularly capture the value of conservation through tourism would enable the tourism sector to capitalize on its conservation efforts.⁵⁷ To mitigate the threat of biodiversity loss, consumption and production along supply chains should align with sustainability and circularity principles, including regeneration of ecosystems, taking into account national circumstances, needs and priorities.

At the same time, investing in nature-based solutions has to drive innovation in tourism towards sustainability and – besides mitigating the environmental impacts of tourism activity, actions should also be adapting to those impacts – resulting in better management and regeneration of scarce natural resources such as water, coral reefs, wetlands, mangroves and coastlines, and foster disaster resilience both in urban and natural environments.⁵⁸ Investments in nature-based solutions also respond well to the expectations of a growing demand for experiences in nature while producing both environmental and livelihood benefits for local communities.

Tourism is well positioned to contribute to the Post-2020 Global Biodiversity Framework⁵⁹ by supporting conservation, sustainable use and also equitable sharing of benefits. The importance of visitor fees to sustain protected areas, and the fact that 40% of protected areas are managed by indigenous communities who depend on tourism as complementary income, is a case in point to promote a stronger link between tourism and conservation. Additionally, the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) posits that wildlife watching, a form of nature-based tourism, raises awareness and facilitates connections to nature, in addition to bringing local benefits, such as direct income generation, to local communities. In 2018, wildlife watching contributed

55 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES (2020).

56 International Resource Panel (n.d.), 'Building Biodiversity', IRP, online available at: <https://www.resourcepanel.org/reports/building-biodiversity> [22-08-2022].

57 World Tourism Organization (2021/b), *Recommendations for the Transition to a Green Travel and Tourism Economy*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284422814>.

58 https://platform.think-nature.eu/system/files/thinknature_handbook_final_print_0.pdf

59 Convention on Biological Diversity (2021), *A New Global Framework for Managing Nature through 2030*, Montreal, online available at: <https://www.cbd.int/article/draft-1-global-biodiversity-framework> [22-08-2022].



USD 120 billion to global gross domestic product (five times the estimated value of the illegal wild species trade), sustaining 21.8 million jobs.⁶⁰ The relevance and links of tourism to protected areas has also become evident during the pandemic in two ways:

1. The increased visitation in some natural areas, namely in Europe and North America, which led to the need to implement restrictions and access mechanisms; and
2. The lack of resources from tourism threatened many protected areas, particularly in Africa where natural parks suffered a significant decline in visitation.⁶¹ IPBES reports that, prior to the COVID-19 pandemic, protected areas received 8 billion visitors globally and generated USD 600 billion per year, with species-rich countries experiencing the highest increases in rates of tourism visitation.⁶²

While long-distance transportation for tourism has grown dramatically over the last 20 years with international departures and arrivals tripling globally, intensive tourism significantly increased the presence of invasive alien species (IAS) which threaten native species and ecosystem health.⁶³ Thus, it remains an urgent task to further promote coordinated action on IAS.⁶⁴

The High Level Panel for a Sustainable Ocean Economy convened its 25th Member Representative meeting in Mexico City on 9 May 2022 to reflect on the work of the Ocean Panel thus far, to discuss how to accelerate the delivery of the ocean action agenda and raise the profile ocean issues on the international stage. During the meeting, representatives discussed a variety of topics that included improving and implementing sustainable tourism measures, food from the sea as a way to address food insecurity and advancing goal-based plans for the sustainable and equitable development of ocean areas. The meeting was the first in-person representative meeting since the COVID-19 pandemic began, as well as a pivotal point in 2022, hailed as the Ocean Super Year. The Ocean Super Year is a plethora of opportunities for the Ocean Panel to highlight the solutions the ocean presents and the importance of transitioning to a sustainable ocean economy where sustainable production, effective protection and equitable prosperity go hand-in-hand.

60 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES (2022), *Summary for policymakers of the thematic assessment of the sustainable use of wild species of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, IPBES secretariat, Bonn, DOI: 10.5281/zenodo.6425599 and online available at: <https://zenodo.org/record/6810036#.YsgYNPFTXDt> [01-09-2022].

61 European Commission, Directorate-General for International Partnerships and Spenceley, A. (2021), *Tourism and visitation to protected areas amid COVID-19 – Guidance for protected area authorities and managers*, Publications Office of the European Union, DOI: <https://data.europa.eu/doi/10.2841/772>.

62 Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services – IPBES (2022).

63 Brondízio, E.S.; Settele, J.; Díaz, S. and Ngo, H.T. (eds.) (2019), *The global assessment report on biodiversity and ecosystem services*, IPBES secretariat, Bonn, Germany, ISBN: 978-3-947851-20-1, online available at: https://ipbes.net/system/files/2021-06/2020%20IPBES%20GLOBAL%20REPORT%28FIRST%20PART%29_V3_SINGLE.pdf [22-08-2022].

64 see e.g. European Commission (n.d.), 'Invasive Alien Species', EC, Brussels, online available at: <https://ec.europa.eu/environment/nature/invasivealien/> [22-08-2022].



CIRCULARITY

The COVID-19 crisis has raised awareness of the importance of local supply chains and the need to rethink how goods and services are produced and consumed, both key elements of a circular economy. Integrating circularity and further advancing resource efficiency in the tourism value chain represent an opportunity for the tourism sector to embrace a sustainable and resilient growth pathway.

Before the COVID-19 pandemic, the circular economy was being increasingly discussed as a strategic approach for the tourism sector, notably from the point of view of minimizing its environmental impacts, given the potential of circularity to decouple growth from sustainable resource and land use. Currently, the discussion on circularity also emphasizes the capacity of circular economy to provide societal benefits, including sustainable jobs, and build resilience.

The integration of circular economy principles and practices in tourism is in its initial stages but has significant potential given that tourism is trade in services.⁶⁵ The extensive transversal value chain of tourism offers numerous opportunities to make longer, better more circular use of the materials and products

utilized to deliver tourism services, creating value and partnerships, and bringing landfill waste as close to zero as possible.

For tourism businesses, circularity can bring increased competitiveness, not only in connection with opportunities for innovation, differentiation and the diversification of income streams. The circular economy allows businesses to take responsibility for the impacts of their operations while creating competitive advantages in the long term and promoting employee and customer retention. **For tourism destinations**, circularity, including circular economy, offers the opportunity to enhance sustainable development, generating wellbeing for the local population through the creation of new jobs and more inclusive local value chains, thus creating a virtuous circle between businesses and territories. **For tourists**, the circular economy brings an opportunity to leave a positive footprint, to travel with purpose, and can lead to multiplier effects when it comes to the transformation of the whole tourism ecosystem through behaviour change.

Circularity as an overarching approach with processes such as reducing and reusing, repairing, refurbishing, remanufacturing, repurposing and recycling can reduce economic leakages in the tourism value chain, as well as waste and pollution.⁶⁶ Food represents an entry point for

65 World Tourism Organization (2019/d), 'Tourism in The World Trade Organization (WTO) Aid For Trade Global Review 2019', press release, UNWTO, Madrid, online available at: www.unwto.org [22-08-2022].

World Trade Organization (2019), *Aid for Trade Global Review 2019: Supporting Economic Diversification and Empowerment*, WTO, Geneva, online available at: https://www.wto.org/english/tratop_e/devel_e/a4t_e/gr19_e/gr19programme_e.htm [22-08-2022].

66 United Nations Environment Programme (n.d./b), UNEP circularity platform, online available at: <https://buildingcircularity.org/> [22-08-2022].



circularity in tourism value chains, notably in connection with food waste reduction which also presents an opportunity for businesses to reduce costs and improve efficiency while curbing GHG emissions. Addressing plastic pollution can also be a catalyzer for circularity in tourism and, beyond reducing marine litter, contribute to the preservation of the attractiveness of destinations while creating new jobs and triggering multi-stakeholder precompetitive collaboration on topics such as waste management at the destination level, which in turn can have a positive effect on human and ecosystem health.

Among several initiatives in this area, in January 2020, UNEP and UNWTO, in collaboration with the Ellen MacArthur Foundation (EMF), launched the Global Tourism Plastics Initiative (GTPI) proposing a common vision for tourism stakeholders to transition to a circular economy for plastics. The initiative aims to work across the tourism value chain with relevant stakeholders including suppliers and waste management platforms, accommodation (large multinational companies and SMEs), tour operators, cruise lines and online booking platforms. The GTPI is aligned with the New Plastics Economy Global Commitment,⁶⁷ also led by EMF in collaboration with the UNEP, and operates as its tourism sector interface. It fosters that tourism businesses,

destinations and supporting organizations are committing to a set of ambitious and actionable targets around the elimination of unnecessary and problematic plastics, the introduction of reuse models and collaboration on value chain level to increase recycling rates and recycled content. In 2021, the GTPI increased its signatories by 250% (from 46 to 115) and was officially presented by the UNWTO Executive Council, which encouraged UNWTO Member States to take an active role in the initiative. The GTPI is led by UNEP and UNWTO in collaboration with EMF. The initiative supports the tourism sector enhancing its readiness for the upcoming international treaty on plastic pollution.⁶⁸

Yet, several barriers are preventing firms from capturing circular economy opportunities. Key barriers include the need to overcome existing habits and customs, the unintended consequences of existing regulations, high upfront costs, other financial barriers, as well as and lack of enabling infrastructure and investment. MSMEs will be particularly important to engage in circular economy efforts yet often face barriers to implementing changes due to skill gaps, lack of information and awareness of capital requirements.

67 The New Plastics Economy Global Commitment provides a suitable framework for governments wanting to address the shift towards a circular economy of plastics in their economies (beyond the tourism sector). The Global Tourism Plastics Initiative is fully aligned with the New Plastics Economy Global Commitment. For more information, please visit Ellen MacArthur Foundation (n.d.), 'Looking ofr the New Plastics Economy?', online available at: <https://www.newplasticseconomy.org/projects/global-commitment> [01-09-2022].

68 For more information, please visit: World Tourism Organization (n.d./a), 'Global Tourism Plastics Initiative', UNWTO, Madrid, online available at: <https://www.unwto.org/sustainable-development/global-tourism-plastics-initiative> [22-08-2022].



THE NEED FOR A PARADIGM SHIFT

As outlined above, the development of these situations demands a transformation for the tourism sector, both in the context of tourism sector management in the economic aspect but also in relation to environmental issues, health, the use of technology and community empowerment in realizing tourism that is resilient, of high quality, sustainable, inclusive and people-centred. As such, there is a need to reform the tourism policy framework, and to shift it from a growth-oriented paradigm that solely relies on the increasing visitor numbers as the primary objective, without considering the capacity to deal with increased tourism or other akin policy goals⁶⁹ to one with a better integrated policy that is capable to deal with significant interconnected policy challenges, and able to produce a sustainable vision. The success of tourism should not be measured in visitor numbers alone, but also focus on the positive impacts that tourism can provide

at the local level, i.e., benefits to local economies and communities, as well as its external impacts on society and the environment.

It is not without consequence that transitioning to a more sustainable model of tourism development will require a substantial investment. Financial sourcing for such investment is the main challenging part. The suitability of available finance instruments, perceived impact of sustainable investment in tourism, incentives (or disincentives) to implement sustainable business practices, and the policy framework support are some of the obvious challenges in this regard, taking into consideration different national circumstances, needs and priorities. The limited understanding on the impacts of tourism on destinations and local communities are also hindering the development and implementation of evidence-based, long-term strategic plans with the aim of developing tourism in a sustainable manner.

69 Peeters et al. (2018).



UNWTO believes that investments could accelerate more sustainable transitions in the tourism sector. The pandemic opened up opportunities for green buildings and retrofitting. The need to reduce emissions present a USD 24.7 trillion investment opportunity in the green buildings sector of emerging market cities between now and 2030. This represents a USD 1.5 trillion opportunity in hotels and restaurant buildings alone. This is a formidable driver to create investment opportunities as it promotes sustainability through cost efficiency, brand equity and better guest satisfaction, and respond to the increasing demand and new consumer behaviour favourable towards sustainability.

For this purpose, UNWTO has been collaborating with the International Finance Corporation (IFC) promoting green finance mechanisms to create new markets for green retrofits by providing integrated offering of advisory, technical support and capital; with the purpose to facilitate retrofit greening by providing hotels with access to financing through local financial institutions. This

programme involves countercyclical financing for hotels to stimulate medium-term post-COVID-19 recovery of the hotel sector, leveraging low occupancy to retrofit and acquire new assets, with the ultimate purpose to preserve jobs in emerging markets, targeting small and medium hotels.

As an initiative led by international organizations during the COVID-19 crisis, the exchange of information across levels of government, the private sector and internationally has been crucial for decision-making and managing the pandemic. Capitalizing on lessons learned will be key to implement recovery plans efficiently and enhance global resilience. More inclusive and smart destination management and partnerships can lead the way for sustainability to play a pivotal role in the recovery of tourism.

GUIDELINES – PILLAR 4

CLIMATE ACTION, BIODIVERSITY CONSERVATION AND CIRCULARITY



1 Accelerate the transition towards low GHG emissions in tourism.

Enhancing mitigation efforts to reduce emissions in the tourism sector, including through investments to develop low-GHG emissions transportation options, sustainable and green infrastructure and operations, is key to resilience, sustainable and green infrastructure and operations, as well as to addressing the growing demand from consumers for more sustainable tourism supply.⁷⁰

2 Engage the tourism sector in emission removal.

Supporting the engagement of the tourism sector in adaptation to climate change and GHG emissions removal, through both natural and technological methods is necessary. The use of nature-based solution systems for carbon removal through the restoration of high carbon density ecosystems, as well as engaging with technologies that would abate, avoid and remove emissions.

3 Capture the value of conservation through tourism.

While the reduction of economic activity during COVID-19 has to some extent reduced the pressures on the environment, there are many destinations where the conservation of marine and terrestrial ecosystems, protected areas and species largely depends on tourism revenue and operators. Supporting monitoring mechanisms that would regularly capture such contribution and the value of ecosystem services through tourism at destination level would enable the tourism sector to capitalize on its conservation efforts taking into account different national circumstances, needs and priorities.

⁷⁰ In the case of the European Union member states are bound by the EU emission trading system (EU ETS). United Nations Climate Change (2015), 'Article 6'.



4 Support conservation efforts through tourism.

This is including through policy and regulatory functions to support multi-use protected areas. The uptake of carefully targeted marine park zoning is an effective model for sustainable tourism management, which can support environmental, social and economic priorities, and enable full participation of coastal communities and indigenous peoples. The risk of poaching, encroachment or overexploitation grew in wildlife destinations as tourism was on hold, directly threatening the very assets upon which the tourism sector needs to be rebuilt. The role of tourism to sustain conservation and fight illegal wildlife trade, as well as the need to reduce the movement of invasive alien species through tourism⁷¹ should therefore be acknowledged in recovery plans and support made available for conservation efforts by tourism stakeholders to continue. Tourism also contributes to the preservation of cultural and historical sites.

5 Invest in nature-based solutions for sustainable tourism.

Nature-based solutions⁷² have potential to drive innovation in tourism towards sustainability and, besides mitigating the environmental impacts of tourism activity, result in better management of scarce natural resources such as water, coral reefs, wetlands, mangroves, posidonia meadows and coastlines, and foster disaster resilience both in urban and natural environments.⁷³ Investments in nature-based solutions also respond well to the expectations of a growing demand for experiences in nature, while providing both environmental and livelihood benefits to local communities.

71 Council of Europe (2017), *European Code of Conduct on International Travel and Invasive Alien Species*, Strasbourg, online available at: <https://www.coe.int/en/web/portal/home> and <http://rm.coe.int/090000168075e833> [22-08-2022].

72 Nature-based solutions are locally appropriate actions that address challenges such as climate change and provide human well-being and biodiversity benefits by protecting, sustainably managing and restoring ecosystems.

United Nations Environment Programme (n.d./a), 'Environment Security', UNEP, Nairobi, online available at: <https://www.unep.org/explore-topics/disasters-conflicts/what-we-do/nature-based-solutions> [22-08-2022].

73 https://platform.think-nature.eu/system/files/thinknature_handbook_final_print_0.pdf.



6

Invest in the transition of tourism value chains towards circularity.

Circular economy processes such as reducing and reusing (user to user), repairing, refurbishing and remanufacturing (user to business), repurposing and recycling (business to business) can reduce economic leakages in the tourism value chain, as well as waste and pollution.⁷⁴ Supporting the integration of circular economy processes in tourism is an opportunity which can promote innovation, the creation of new sustainable business models and jobs with added value for customers and local economic development.⁷⁵ The efficient use of energy and water are essential measures.

7

Prioritize sustainable food approaches for circularity.

Food represents an entry point for circularity in tourism value chains through sustainable procurement (local and organic sourcing, sourcing from market surplus or collective procurement), sustainable menus (including healthy and plant-rich dishes) and food waste and loss reduction and management. Mainstreaming food loss and waste reduction in tourism has potential to support the recovery of small and large businesses as it presents an opportunity to reduce costs and improve efficiency while curbing GHG emissions. Encouraging circularity in the food value chain of the tourism sector also offers opportunities for local food security in addition to cost and emissions reductions. A focus on indigenous flora and fauna can also promote biodiversity and habitat protection

⁷⁴ United Nations Environment Programme (n.d./b).

⁷⁵ International Labour Organization (2020/a), *COVID-19 and the world of work – Jump-starting a green recovery with more and better jobs, healthy and resilient societies*, ILO, Geneva, online available at: <https://www.ilo.org/global/lang-en/index.htm> [22-08-2022].

8

Shift towards a circularity of plastics in tourism.

Addressing plastic waste and pollution can be a catalyzer of circularity in tourism through the elimination of unnecessary and harmful plastics, integrating reuse models safely, engaging the value chain to advance the use of recyclable materials and collaborating to increase recycling rates for plastics.⁷⁶ The increased use of personal protective equipment during the pandemic has exacerbated the need to take action on plastic pollution. Supporting the shift towards circularity in the use of plastics can reduce marine litter and plastic pollution, preserve the attractiveness of destinations and trigger multi-stakeholder precompetitive collaboration on topics such as waste management at destination level, which in turn can have a positive effect on human and ecological health.

9

Steer recovery funds towards sustainable tourism and promote sustainable finance mechanisms

in collaboration with the multilateral and private sector to create new markets for green investments by providing integrated offering of advisory, technical support, and capital; with the purpose to facilitate access to financing through greener instruments to stimulate medium-term post-COVID-19 recovery, taking into account national and regional contexts and circumstances, but also fostering the diffusion of technologies to enable digitalization and climate resilience of the tourism sector. Financing for the recovery of tourism should strive to balance the urgent support needed for business survival, job retention and the restart of tourism operations with longer-term goals such as ecosystems protection and climate change mitigation and adaptation, and waste reduction which not only affect the global economy but also offer opportunities for creating sustainable and decent jobs.

LINK TO OTHER G20 WORKSTREAMS

- **Environment and Climate Sustainability Working Group**, particularly on its first priority issue namely 'promoting sustainable recovery' on which the working group seeks to establish a "guidance on the implementation of the Post-2020 Global Biodiversity Framework", as well as its second priority issue which is 'Enhancing Land and Sea based Actions to Support Environment' on which the working group aims to create G20 Action Plans on enhancing cooperation on ecosystem-based actions (coastal, etc) and ocean-based climate actions;
- **Energy Transition Working Group**, particularly on its priority issues 'Smart and Clean Technologies Scaling Up' and 'Advancing Energy Financing', and
- **Business 20**.

PROPOSAL FOR CONCRETE ACTIONS

G20 members are **encouraged to take an active role in the Glasgow Declaration on Climate Action in Tourism**, which provides a framework to accelerate measurement, mitigation and adaptation efforts in tourism, as well as in the **Global Tourism Plastics Initiative** that unites the tourism sector behind a common vision of a circular economy of plastics.

76 World Tourism Organization (n.d./a).

PILLAR 5

POLICY, GOVERNANCE AND INVESTMENT FRAMEWORKS

CRISIS RECALLS THE IMPORTANCE OF POLICY AND GOVERNANCE

One of the key outcomes of the COVID-19 crisis has been the importance of adequate governance mechanism in the tourism sector that allow for the coordination and cooperation among tourism stakeholders, among the various levels of governments and among tourism and other relevant sectors.

At the same time the changes emerging from post-crisis, and accelerated in the last two years, recall the importance of strengthening public-private partnerships and working with and for communities. Moving forward governments should work closely with communities and destination management organizations to build tourism capacity and address challenges, including planning and funding. Such enhanced governance will require:

- Greater coordination and coherence of public and private sector actions;
- Stronger governance mechanisms for a whole of government approach;

- New approaches to industry engagement;
- New models of community development through tourism; and
- Stronger destination marketing/management organizations (DMOs).

Finally, tourism is a cross-cutting issue. Tourism governance must be built through collaboration to create a tourism ecosystem that is resilient, effective and competitive. A consistent focus on sustainability can bring various actors together, provide new areas of work and attract potential investment. Participatory approaches which involve local stakeholders are key to success. Therefore, building strong governance related to the ecosystem starting from the central, regional and local governments is essential. Lastly, the rapid development of tourism, government commitment and success in the tourism sector should be capitalized on by inviting more investment. Promoting sustainable investment is essential to fostering sustainable growth and building local communities and MSMEs.



INVESTMENT FRAMEWORK

The COVID-19 pandemic has made clear that sustainable tourism requires sustainable investments at the centre of new solutions, and not just of traditional investments that promote and underpin economic growth and productivity. It has also highlighted the importance of non-traditional investments that enhance innovation through the creation and dissemination of new solutions to decarbonize the sector. To harness the advantages of investments, it is critical that governments promote policies, as well as new investment vehicles to recover, retain and attract foreign direct investments (FDI).

While international travel picked up in 2021, foreign direct investment (FDI) in the tourism cluster remained largely subdued, as the sector continues to stagnate following the coronavirus pandemic and the ensuing economic volatility. FDI project numbers in the tourism cluster fell by a further 8% in 2021, from 271 investments in 2020 to 250 in 2021. Job creation and capital investment in tourism FDI over the period also declined by 34% and 42%, respectively.⁷⁷

The lack of connectivity infrastructure is still happening; and there is a need for funding for the development of infrastructure. However, the public-private partnership practice in the sector is still not optimally developed.

With the rise of the green and sustainable movement, many investors are leaning toward green and sustainable investment, meaning that the industry has to adapt its practices, taking into account national and regional contexts to be environmentally friendly, which can take a long time, particularly for refurbishment of ageing assets, however there is the opportunity to produce strong return on investment (ROI) from efficiency gains.

The estimated losses caused by COVID-19 in the tourism sector produced high employment of unskilled labour which will vary naturally according to the proportion of unskilled labour employed in the tourism sector in each country. Tourism is an important source of income for many developing countries accounting for 50% of total exports for many small economies, particularly small islands developing states. Tourism has relatively low barriers to entry and employs a high share of young people and women.

⁷⁷ FDintelligence (2022), 'Global greenfield investment trends in tourism', *Tourism Investment*, August 2022.

GUIDELINES – PILLAR 5

POLICY, GOVERNANCE AND INVESTMENT FRAMEWORKS

1

Align tourism development with the 2030 Agenda for Sustainable Development

by actively engaging in national Sustainable Development Goals (SDGs) processes, strengthening SDG engagement and commitment from all stakeholders in tourism: communities, civil society organizations, local/municipal authorities, private sector, financiers and investors.

2

Strengthen whole of government, multi-level coordination for tourism planning and management and community development.

This includes adopting an integrated approach to inclusive community development through a whole-of-government approach and effective cooperation and coordination at all levels – community and local, through destination marketing/management organizations (DMOs). To that end, it will be essential to strengthen the skills and capacity of DMOs to effectively plan and manage their destinations.

3

Enhance tourism governance through public-private-community partnerships (PPCPs), which enable the collective development of tourism products and services, as well as the management of community resources for mutual benefit through jointly assuming risks and responsibilities while sharing resources and competences.

- Successfully transitioning to a more sustainable, inclusive and resilient tourism model will largely depend on public private collaboration and partnerships;
- Enhancing collaboration and promoting social dialogue between government, employers and workers organizations, as well as other key stakeholders along the tourism value chain, internationally and at destination level; and
- Prioritizing inclusive participatory approaches is crucial to ensure an efficient implementation of recovery plans.



4 Promote human capital development through targeted policies and programmes for education and capacity building for communities attending to diversity and inclusion,

including self-governance within communities that enable efficient decision-making, ownership and leadership concerning tourism. Empowering communities to better engage and promote tourism development requires specific skills, adequate workforce housing, and amenities, especially in the contexts of local communities, attracting staff and any tourism development affecting their lives.

5 Enable frameworks for tourism investments,

which requires new quality data and knowledge to go beyond the attraction and promotion of investments, towards smart and sustainable investments that expands the value of MSMEs and impacts positively on communities. This also requires the participation of stakeholders beyond the public-private-community partnerships in order to understand the nature and dimensions of the tourism sector. The generation of data-driven frameworks should allow to measure equity and non-equity tourism FDIs, as well as its impact on labour, technology and sustainability.



6

Promote strategies and schemes to safeguard tourism investment, in coordination with investment promotion agencies (IPAs) and their respective governments.

The strategy could be grouped around two phases:

1. The main aim of the first phase is focussed on the retention and survival of existing investors in the realm of tourism; while
2. The second phase is focussed on rethinking tourism investment strategy while considering the long-term implications of the crisis on the tourism sector and its recovery.

7

Strengthen support for tourism investment from financial institutions, including international financial institutions, and foster the development of alternative modes of finance.

Banks, other financial institutions and trade bodies should be encouraged to pay more attention to the financing of tourism as a form of trade and a vehicle for sustainable economic growth. Tourism may benefit from openness to alternative modes of finance, particularly investment and financing that include asset-based, risk-sharing modalities. Strengthening environmental, social and governance (ESG) frameworks will help in achieving sustainable tourism investment.



8

Ensure that tourism is integrated in overall crisis management policies and actions.

Often tourism is highly affected by natural and man-made crises. Therefore, the needs of tourism should be understood and fully integrated in overall crisis management policies and actions, requiring close collaboration across government and between tourism bodies, other sectors and stakeholders, especially those responsible for the provision of emergency services. Safeguard the tourism sector by promoting a common understanding of resilience that identifies risks in tourist destinations, correlations and risk drivers, and applies possible courses of action that are realistic and practicable in a participatory process. Resilience for communities, destinations and MSMEs can be established through risk-informed management and policies, which integrate existing and future climate and disaster risks in political and development decision-making.

9

Develop procedures for meeting the needs of tourists affected by crisis situations and adhere to the Global Code for the Protection of Tourists.

Travellers caught up in a crisis away from home should be given priority assistance. Plans could include procedures to track and trace travellers, establish their condition, give essential information and provide assistance.⁷⁸ This may include the use of geo-located mobile devices, apps and possibly big data, while following international standards and procedures to respect data privacy.

⁷⁸ World Tourism Organization (2020), *Recommendations for the Assistance to International Tourists in Emergency Situations*, UNWTO, Madrid, online available at: www.unwto.org [22-08-2022].



10 Improve tourism data, including the use of big data,⁷⁹ for evidence-based policymaking, planning and management, and advance towards the Measurement of Sustainability in Tourism

in line with the UNWTO Measuring the Sustainability of Tourism framework. At the same time, it is essential to enhance the use of big data in tourism; therefore, governments need to cooperate with the private sector and develop a legal framework to support data sharing.

11 Enhance international cooperation and official development assistance through tourism, with a particular focus in the recovery and resilience of MSMEs and communities.

This includes assisting communities in accessing funds to help set up their priority support facilities, including healthcare, sanitation, communication, accessibility and education infrastructure, as well as develop necessary tourism infrastructure and services, encouraging at the same time the role of tourism in inclusive community development through official development assistance agencies, as well as international and regional financing institutions.

⁷⁹ Asian Development Bank and World Tourism Organization (2021), *Big Data for Better Tourism Policy, Management and Sustainable Recovery From Covid-19*, ADB/UNWTO, Manila and Madrid, DOI: <https://doi.org/10.18111/9789284423095>.



LINK TO OTHER G20 WORKSTREAMS

With regard to pillar 5, the Tourism Working Group should consider collaborating and ensuring cross referencing with the work of:

- **Development Working Group**, particularly on its first priority issue 'Strengthening Recovery and Resilience to Withstand Future Crises' upon which the working group seeks to formulate a deliverable dubbed as 'G20 Roadmap to Stronger Recovery and Resilience in Developing Countries, LDCs and SIDS'.
- **Trade, Investment and Industry Working Group**, particularly on its priority issue 'Spurring Sustainable and Mutually Beneficial Investments'.
- **G20 Health Working Group**, particularly priority two on 'Harmonizing global health standards' focussed on the Harmonization of COVID-19 and other Vaccine-Preventable Diseases (VPD) Certificate Recognition at Point of Entry.
- **Business 20**.

PROPOSAL FOR CONCRETE ACTIONS

1. Evaluate collaborating with international organizations by facilitating information for the development of a **central online tool and application that can provide comprehensive, transparent and updated information on global travel requirements**. This plays a critical role in enhancing travellers' confidence and promoting seamless travel. Furthermore, any information tool could be used and/or adapted to any future situations/crises that lead into border or other mobility restrictions, thus contributing to enhance travel safety, security and resilience.
2. **Support the processes of harmonization of travel protocols and mutual recognition of COVID-19 vaccine certificates being developed by the G20 Health Working Group while respecting the national sovereignty of each State in this matter.**



05
CONCLUSION

RECOVER TOGETHER, RECOVER STRONGER

The COVID-19 pandemic has accelerated the many challenges facing society – from climate change, biodiversity loss and waste challenges to the growing inequalities within and between countries, passing by the digital revolution. It has also stressed the importance of coordination and solidarity and the need for enhanced multilateralism to address global and interconnected challenges.

The G20, born of the 2009–2010 economic crisis, can and should lead in shaping the global post-pandemic transformation ensuring the achievement of the 2030 SDGs targets are on track.

Balancing the interest and priorities of G20 developed and developing countries, the Group can work together to enhance sustainability, resilience and inclusion in trade, investment, employment, agriculture, health, education, human capital and MSMEs.

Tourism, one of the most relevant and cross-cutting economic sectors, but also one of the most affected by the pandemic, can and should play a key role in such process but only through a holistic governance and policy approach that supports and accelerates the transformation of **two core elements of the tourism sector: MSMEs and communities**. They are the most vulnerable part of the tourism value chain but also the most important in a people-centred recovery and future.

In this sense, the implementation of the above guidelines and proposed concrete actions can effectively contribute to address some of the global challenges identified by the Indonesian Presidency, namely:

- Off track achievement of the Sustainable Development Goals;
- Disrupted global supply chains;
- Unbalanced restriction of international mobility;
- Increasing risks related to climate change;
- Lack of food security;
- Environmental sustainability disturbances;
- Energy shortage;
- Potential gap on financing pandemic prevention, preparedness and response;
- Downside risks on fiscal sustainability;
- Price instability and inflation pressure; and
- Inequality on vulnerable groups and countries.



ANNEX 1 SURVEY OF G20 AND GUEST COUNTRIES – RESULTS

A1.1

TOURISM IN THE G20 ECONOMIES



The information included in this annex results from a survey conducted among G20 and guest countries between January and July 2022 (see annex 4). It comprises information from 19 out of 27 surveyed countries, among which 17 out of 20 G20 members.

Table A1.1: Overview of tourism in the G20 economies, 2019 and 2021

Overview of international tourism and its economic importance in the G20 countries, 2019 and 2021								
	International tourism							
	International tourist arrivals		Total revenues ² (exports in balance of payments)		International tourist arrivals per 100 inhabitants		International tourism revenues per capita	
	(million)		(USD billion)				(USD)	
	2019	2021	2019	2021	2019	2021	2019	2021
World	1,465	429	1,750	728	19	5	230	90
G20	1,002	333	1,172	515	21	7	240	110
% of world	68.4	77.6	67	71				
Other	463	96	578	213	16	3	200	70
% of world	32	22	33	29				
European Union (27)	540	210	496	263	122	47	1,115	591
Austria	31.9	12.7	25.9	11.9	360	142	2,923	1,334
Belgium	9.3	3.2	10.6	7.6	82	28	924	660
Bulgaria	9.3	2.7 ¹	4.8	2.7	134	39	696	399
Croatia	17.4	10.6	12.0	10.9	420	13	2,899	2,665
Cyprus	4.0	1.9	3.3	2.0	454	216	3,721	2,246
Czech Republic	14.7	3.9 ¹	8.0	3.4	137	109	745	313
Denmark	14.8	5.9 ¹	8.7	4.5	254	102	1,490	772
Estonia	3.3	0.8	2.3	0.9 ¹	252	5	1,747	657 ¹
Finland	3.3	0.8	5.9	1.6	60	15	1,077	281
France	90.9	48.4	70.9	44.7	138	61	1,089	683
Germany	39.6	11.7	58.4	22.2	48	14	703	267
Greece	31.3	14.7	23.1	13.7	292	25	2,152	1,286
Hungary	16.9	7.9	7.3	4.1	173	8	749	422
Ireland	11.0	..	14.9	3.4	221	..	3,004	681
Italy	64.5	26.9	52.0	25.5	108	45	869	431
Latvia	1.9	0.6 ¹	1.6	0.5	101	34	822	271
Lithuania	2.9	0.9 ¹	1.7	0.6	104	232	604	223
Luxembourg	1.0	0.8	6.3	5.1 ¹	170	119	10,185	8,090 ¹
Malta	2.8	1.0	1.9	0.8	557	157	3,848	1,511
Netherlands	20.1	6.2	23.8	10.4	116	36	1,377	596
Poland	21.2	8.4 ¹	16.0	10.1	56	12	422	268
Portugal	24.6	6.5 ¹	24.6	13.8	239	63	2,394	1,336
Romania	2.7	0.8	4.2	3.6	14	283	219	185
Slovakia	6.4	3.2 ¹	3.4	1.3 ¹	118	16	615	243 ¹
Slovenia	4.7	1.8	3.3	1.5 ¹	226	88	1,611	703 ¹
Spain	83.5	31.2	79.7	34.5	177	66	1,692	729
Sweden	7.4	1.8 ¹	9.2	6.1	72	18	890	581
Argentina	7.4	0.3	5.7	0.4	16	1	126	10
Australia	9.5	0.2	47.9	17.0	37	1	1,875	663
Brazil	6.4	2.1 ¹	6.1	3.0	3	1	29	14
Canada	22.1	3.1	29.8	13.1	59	8	793	343
China	65.7	8.0 ¹	35.8	11.3	5	1	25	8
India	17.9	6.3 ¹	31.7	13.5	1	0	23	10
Indonesia	15.5	3.9 ¹	18.4	0.5	6	1	69	2
Japan	31.9	0.2	49.2	5.2	25	0	390	42
Korea, Republic of	17.5	1.0	25.5	11.1	34	2	492	214
Mexico	45.0	31.9	25.8	20.6	36	25	204	159
Russian Federation	24.6	6.4 ¹	17.2	6.4	17	4	118	44
Saudi Arabia	17.5	3.5	19.8	4.6	51	10	580	131
South Africa	10.2	2.3	9.1	2.1	17	4	154	35
Türkiye	51.2	29.9	41.4	28.5	62	35	498	337
United Kingdom	39.4	10.7 ¹	52.7	22.7	59	16	789	336
United States of America	79.4	22.1	239.1	83.0	24	7	728	250

Sources: World Tourism Organization, World Trade Organization and Organisation for Economic Co-operation and Development.

	Exports – international tourism				Tourism Satellite Account (TSA) ³	
	Share of total exports		Share of services exports		Tourism as percentage of GDP	Tourism as percentage in total employment
	(%)				(%)	
	2019	2021	2019	2021	2019 or earlier	2018 or earlier
World	6.9	2.6	28.1	12.4	4.0	..
G20	6.0	2.3	24.2	10.6	3.9	≈ 6
% of world						
Other	10.0	3.4	42.0	21.6	5.3	..
% of world						
European Union (27)	6.1	2.9	21.5	10.9	4.5	5.1
Austria	10.2	4.4	33.9	17.0	6.5	6.4
Belgium	1.9	1.1	8.7	5.6	..	6.7
Bulgaria	10.8	5.3	42.4	25	..	..
Croatia	34.9	27.6	69.8	65.1	11.4	..
Cyprus	18.2	9.2	22.6	11.1	..	..
Czech Republic	3.5	1.3	26.2	11.3	2.9	4.5
Denmark	4.4	2.1	10.4	4.8	2.4	8.8
Estonia	9.6	3.8 ¹	28.8	13.5 ¹	5.4	4.3
Finland	5.5	1.4	16.7	4.7	2.6	5.5
France	8.2	5.0	24.1	14.7	7.4	7.5
Germany	3.2	1.1	16.8	5.8	3.9	4.8
Greece	27.8	15.5	51.3	33.3	6.8	10
Hungary	4.8	2.4	24.3	15.8	6.7	9.6
Ireland	3.6	0.7	6.0	1.0	..	10.3
Italy	7.9	3.6	42.9	25	5.9	8.3
Latvia	7.1	1.9	25.1	8.9	4.5	8.5
Lithuania	3.6	1.1	12.6	3.9	3.1	4.9
Luxembourg	4.8	4.1 ¹	5.5	4.6 ¹	..	8.3
Malta	9.5	3.7	11.3	4.4	6.1	..
Netherlands	2.4	1.0	8.6	4.2	4.4	6.3
Poland	4.8	2.4	22.9	12.6	1.2	..
Portugal	23.1	12.9	62.4	43.2	8.0	9.8
Romania	4.0	3.0	14.0	10.8	2.8	..
Slovakia	3.3	1.4 ¹	27.2	13.1 ¹	2.8	6.3
Slovenia	6.1	2.8 ¹	35	18.6 ¹	5.3	7.7
Spain	16.2	6.9	50.7	29.2	11.8	13.5
Sweden	3.9	2.3	12.2	7.8	7.0	3.4
Argentina	7.1	0.5	40.0	4.8	..	..
Australia	14.0	4.4	67.5	37.7	3.1	5.2
Brazil	2.4	1.0	17.9	9.1	..	..
Canada	5.4	2.2	28.4	12.6	2.1	3.9
China	1.3	0.3	12.7	2.9	..	..
India	5.9	2.1	14.7	5.7	3.8	5.6
Indonesia	9.2	0.2	58.2	3.9	4.1	..
Japan	5.4	0.6	23.7	3.1	2.0	9.6
Korea, Republic of	4.0	1.4	25.7	9.1	..	2.3
Mexico	5.3	3.9	82.0	75.5	8.7	6.0
Russian Federation	3.6	1.2	27.5	11.4	3.8	..
Saudi Arabia	6.9	1.7	81.9	39.4	2.2	..
South Africa	8.6	1.6	61.5	23.0	2.8	..
Türkiye	16.9	10.1	65.1	50.2	..	7.7
United Kingdom	6.1	2.6	13.0	5.4	3.2	4.7
United States of America	9.5	3.3	27.3	10.8	2.9	4.3

Notes: 1) Data corresponds to 2020.

2) Total revenues include international tourism receipts in destinations plus passenger transport receipts.

3) TSA data refers to direct contribution. Source for tourism as a percentage of GDP is UNWTO. Source for percentage of employment is OECD.

Table A1.2: Impact on domestic tourism

Country	Overnight stays (million)			Change (%)	
	2019	2020	2021	2020/2019	2021/2020
G20 economies					
Argentina	141.3	81.2	93.4	-42.5	+15.0
Canada ^a	See note	See note	See note	See note	See note
China	6,006	2,879	3.250,0	-52.1	+12.9
European Union					
France ^b	851.0	659.3	643.2 (Sep.)	-22.5	+9
Germany ^c	406	270	244.0 (Oct.)	-33.5	-4.8
Indonesia ^d	722.2	518.7	not available	-28.2	
Japan	311	168	not available	-46.0	
Mexico ^e	98	54	not available	-44.9	
Saudi Arabia	268.8	228.5	324.3 (July)	-15.0	
Spain	119.6	51.2	84.2 (Nov.)	-57.2	+71
South Africa	28.5	17.0	12.5 (Nov.)	-40.4	-20
Türkiye ^f	46.9	31.5	40.152 (Oct.)	-32.8	+42
United Kingdom ^g	99.1	not available	not available		
United States of America ^h	not available	not available	not available	-33	+27.5 (estimate)
Guest countries					
Netherlands	25.8	20.2	not available	-21.7	
United Arab Emirates	8.0	8.6	not available	+7.5	+9

- Notes: a) Data on income: CAD billion 76.6 (2019); CAD billion 47.5 (2020); CAD billion 40.5 (Jan–Sep. 2021). –33% 2021 vs 2019.
b) Includes commercial and non market accommodation.
c) Includes arrivals and overnight stays in accommodation establishments with 10 or more bed places or on tourist camp sites with 10 or more camping pitches.
d) Based on mobile data positioning.
e) Nights in hotels and similar establishments.
f) Ministry of Culture and Tourism Survey (licensed by the Ministry and the Municipality).
g) Domestic Tourism Survey suspended in 2020 and Q1 2021.
h) Domestic persons trips (DPT); US Travel Association, estimate.

Source: G20 and Guest Countries Survey. Not revised by UNWTO.

Table A1.3: Impact on employment – Employment in the Tourism Industries

Country	Full time jobs (× 1,000)			Change (%)	
	2019	2020	2021	2020/2019	2021/2020
G20 economies					
Argentina ^a	1.260	not availble	not availble		
Brazil	2.100	1.700	not availble	-19.0	
Canada ^b	0.692	0.490	486 (Sep.)	-29.2	-30 (Jan.-Sep. vs 2019)
China	5.161	not availble	not availble		
European Union	16.300	not availble	not availble		
France ^c	2.000	not availble	not availble		
Germany ^d	2.900	not availble	not availble		
India ^e	76.000	79.600	not availble	+4.7	
Indonesia	14.960	13.460	not availble	-10.0	
Japan	0.260	0.240	not availble	-7.7	
Mexico	2.286	2.005	not availble	-12.3	
Spain	2.395	2.067	2.307	-13.7	+11.6
South Africa ^f		2.596 (Q3)	2.448 (Q3)		-5.7 (Q3)
United Kingdom	1.700	not availble	not availble		
United States of America ^g	6.070	3.887	not availble	-36.0	
Guest countries					
Netherlands	0.498	0.425	not availble	-14.7	
United Arab Emirates	0.749	0.574	not availble	-23.4	-23.3

Notes: a) Jobs in branches of activity linked to tourism.

b) Total employment: 2.1 million in 2019; 1.6 million in 2020; and 1.7 million in 2021 (-20% compared to 2019).

c) Hospitality lost 237,000 employees between February 2020 and February 2021.

d) 6.8% of the workforce.

e) Estimate as per 3rd Tourism Satellite Account (direct and indirect).

f) 17.7% of total employment in Q3 2019 and 17.1% in Q3 2020.

g) Full and part time jobs.

Source: G20 and Guest Countries Survey. Not revised by UNWTO.

Table A1.4: Impact on tourism industries

Country	Number of tourism establishments (× 1,000)			Change (%)	
	2019	2020	2021	2020/2019	2021/2020
G20 economies					
Argentina ^a	15.9	15.8	not availble	-0.6	
Brazil	250.5	260.8	not availble	4.1	
Canada ^b	109.4	108.2	103.7 (mid year)	-1.1	
European Union	2,400	not availble	not availble		
France ^c	29.9	29.3	not availble	-2.0	
Germany ^d	51.2	48.9	48.4	-4.5	-0.5
Indonesia ^e	643.6	630.0	643.6	-13.6	
Italy	500.0	not availble	not availble		
Mexico	113.1	113.0	not availble	-0.1	
Spain	292.4	283.1	not availble	-9.3	
Türkiye	12.4	12.8	13.5	+0.4	+5
United Kingdom	208.9	not availble	not availble		
Guest countries					
Netherlands	64.6	68.2	not availble	+3.6	
United Arab Emirates ^f	1.1	1.0	not availble	-0.1	-6

Notes: a) Hotels and parahotels.

b) This excludes tourism establishments with 0 employees (+ 128,700 for 2019; + 138,300 in 2020; and + 144,400 in June 2021).

c) Accommodation only. 200,000 restaurants plus in 2019.

d) Includes accommodation establishments with 10 or more bed places and tourist camp sites with 10 or more camping pitches.

e) Except food and beverages serving industries

f) Hotel establishments only.

Source: G20 and Guest Countries Survey. Not revised by UNWTO.

Table A1.5: Impact on GDP

Country	Indicator	2019	2020	2021
G20 economies				
Argentina	AR Pesos	413.482	not available	not available
Brazil	Share (%)	7.7	not available	not available
China	Share (%)	11.05	4.01	not available
European Union	(EUR billion)	1,297	not available	not available
France	Share (%)	8	not available	not available
Germany	Share (%)	3.9	not available	not available
India	Share (%)	5.01	5.16	not available
Indonesia	Share (%)	4.97	4.05	4.2
Italy	Share (%)	13%	not available	not available
Japan	(JPY million)	11.145	not available	not available
Mexico	(MXN million)	1,956,848	1,475,107 ^a	not available
Saudi Arabia	(USD billion)	32.64	12.61	not available
Spain	Share (%)	12.4	5.5	not available
South Africa	Share (%)	3.7	not available	not available
Türkiye	Share (%)	4.6	1.7	not available
United Kingdom	(GBP billion)	48	not available	not available
United States of America	(USD million)	624,741	356,813	not available
Guest countries				
Netherlands	Share (%)	4.4	2.4	not available
Singapore		4	not available	not available
United Arab Emirates	(USD billion)	22.6	8.7	not available

Note: a) See for details: <https://www.inegi.org.mx/temas/turismosat/> [14-09-2022].

Source: G20 and Guest Countries Survey. Not revised by UNWTO.

Table A1.6: Share of SMEs in tourism (%)

Country	2019	2020	2021
Canada ^a	99.8	99.8	99.9
European Union	99.9		
France	80		
Spain	99.9	99.9	

Note: a) 8.3% of all SMEs in the country are in tourism (8% in 2021).

Source: G20 and Guest Countries Survey. Not revised by UNWTO.

A1.2

REVIEW OF G20 POLICY RESPONSES TO MITIGATE THE IMPACT OF COVID-19 IN TOURISM, SPECIFICALLY ON MSMEs AND COMMUNITIES



Table A1.7: Policy responses of G20 countries on the impact of COVID-19 in tourism, specifically on MSMEs and communities (n = 19)

	Yes	No
2.1: Policy response to mitigate the impact of COVID-19 in the tourism sector. Has your country developed specific mechanisms to support the tourism sector?	19	0
2.2: Specific support measures for MSMEs. Has your country developed specific mechanisms to support tourism MSMEs?	17	2
2.3: Specific support measures for local communities affected by tourism COVID-19 crisis. Has your country developed specific mechanisms to support local communities?	15	4
2.4: Assessment of policies. Did your country assess the impact of the measures implemented to support tourism, particularly those aimed at MSMEs and communities?	7	12

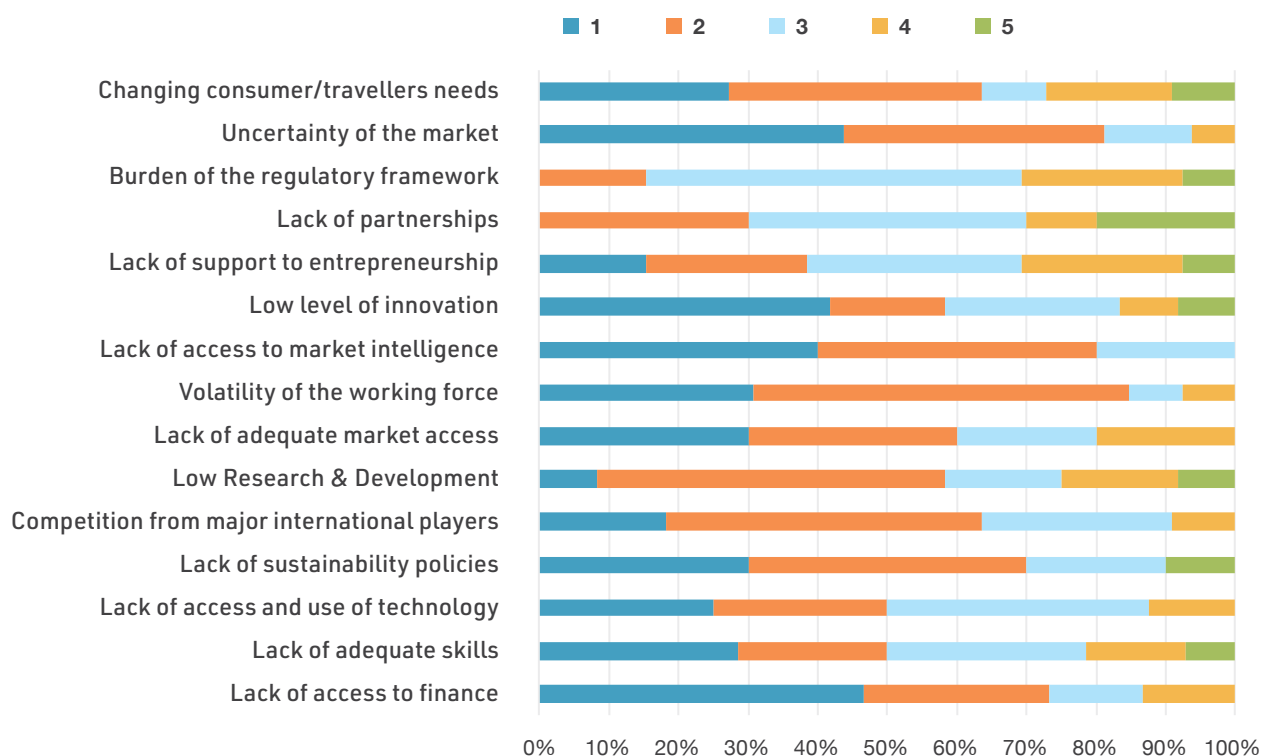


A1.3

MAPPING CHALLENGES, OPPORTUNITIES, AND PRIORITIES OF THE G20 ECONOMIES FOR TOURISM RECOVERY AND RESILIENCE – CHALLENGES AND OPPORTUNITIES FOR MSMEs AND COMMUNITIES

Figure A1.1: What are the main challenges moving forward for tourism recovery and resilience with a focus on MSMEs?

MAIN CHALLENGES FOR MSMEs

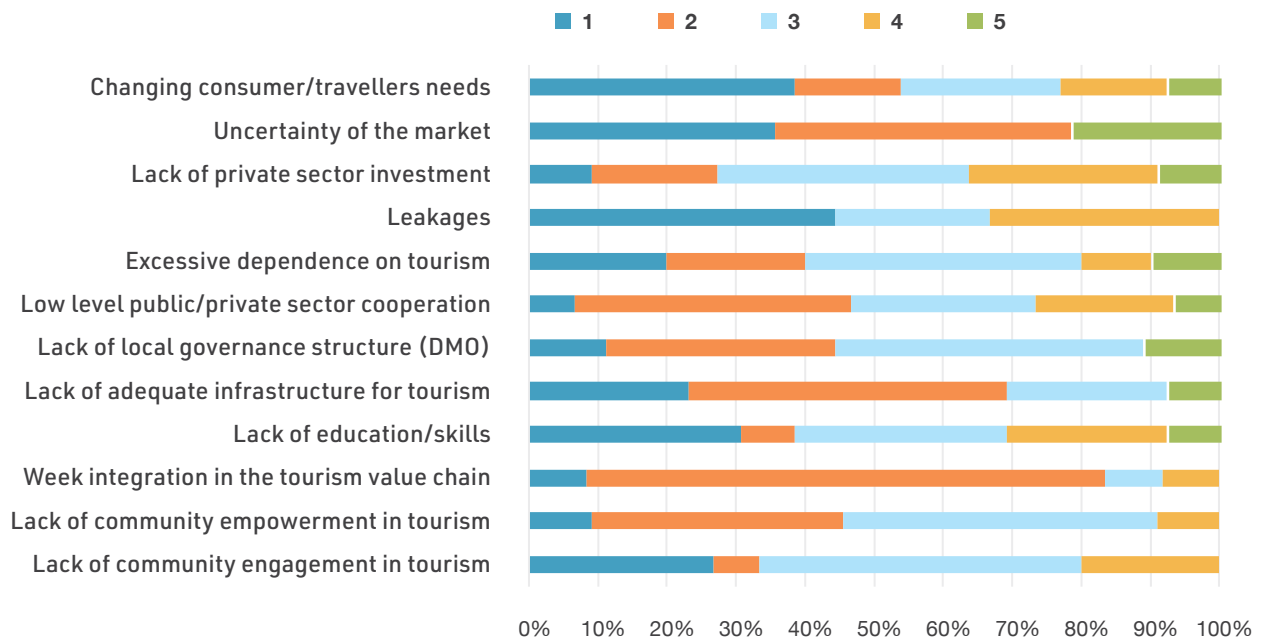


Notes: Multiple answers were possible.
 Relevance of challenges from 1 to 5, being 1 'more relevant' and 5 'less relevant'.

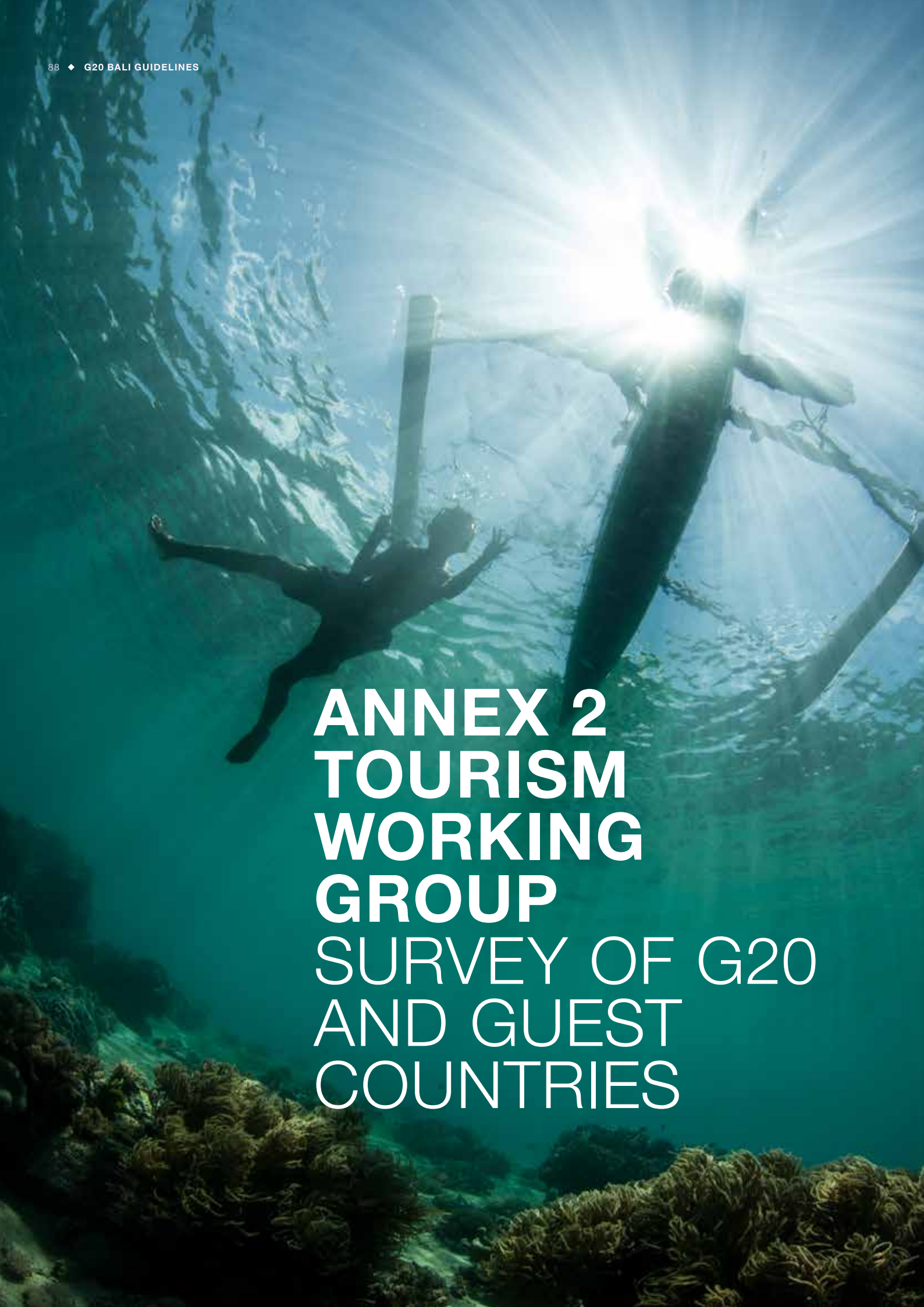


Figure A1.2: What are the main challenges moving forward for tourism recovery and resilience with a focus on communities?

MAIN CHALLENGES FOR COMMUNITIES



Notes: Multiple answers were possible.
 Relevance of challenges from 1 to 5, being 1 'more relevant' and 5 'less relevant'.

An underwater photograph showing two divers swimming in clear blue water. The sun is shining from the surface, creating a bright starburst effect. In the foreground, there is a coral reef. The text is overlaid on the right side of the image.

ANNEX 2
TOURISM
WORKING
GROUP
SURVEY OF G20
AND GUEST
COUNTRIES

GUIDELINES FOR STRENGTHENING COMMUNITIES AND MSME AS TOURISM TRANSFORMATION AGENTS: A PEOPLE-CENTERED RECOVERY

G20 2022 Tourism Working Group – Survey of G20 and Guest Countries

UNWTO has been tasked to support the Indonesian Presidency in the development of the ‘Guidelines for Strengthening Communities and MSME as Tourism Transformation Agents: A People-Centered Recovery’, as per the Issue Note attached.

Bearing in mind ‘The Rome Guidelines for the Future of Tourism’, the document aims to gather countries’ experiences to seize the opportunity to leverage the acceleration of digitalization, the growth of the knowledge-based economy, and consumers’ greater appetite for sustainable experiences to advance lower density, more diversified, and higher value tourism development.

The Guidelines endeavour to translate these opportunities into inclusion and resilience in communities and Micro, Small, and Medium Enterprises (MSMEs) and build them as agents of transformation towards a more inclusive, sustainable, resilient, and digital tourism sector with a focus on the following five lines of action:

1. Human Capital: Jobs, Skills, Entrepreneurship and Education.
2. Innovation, Digitalization, and the Creative Economy.
3. Women and Youth Empowerment.
4. Climate Action, Biodiversity Conservation, and Circular Economy.
5. Policy, Governance, and Investment Frameworks..

The development of the Guidelines will be informed by the following:

1. Analysis of the current situation of the tourism sector globally and in the G20 economies;
2. Review of G20 policy responses to mitigate the impact of COVID-19 in the tourism sector specifically in terms of communities and MSMEs;
3. Mapping of challenges and priorities of the G20 economies for Recovery and Resilience in this area;
4. Identification of good practices on how MSMEs and communities have adapted during the pandemic and beyond;

Responses from this survey as well as other research will help inform the focus of the Guidelines while ensuring an effective engagement and sharing of experiences among the G20 while identifying priorities and areas of action across the G20.

The Presidency wishes to thank you in advance for your kind collaboration in submitting the response to the below survey by 11th January 2021 the latest to tourism@g20-indonesia.id and scarvao@unwto.org.

Ministry of Tourism and Creative Economy of
The Republic of Indonesia
tourism@g20-indonesia.id

Country Information

[Redacted]

Country:

[Redacted]

Organization:

[Redacted]

Contact details for further information:

[Redacted]

1. SITUATION OF THE TOURISM SECTOR GLOBALLY AND IN THE G20 ECONOMIES

1.1. IMPACT OF COVID-19 ON THE TOURISM SECTOR

Please share key data and insights on the impact of COVID-19 on the tourism sector of your country.

	Indicator	2019	2020	2021 (Change in %; indicate period; e.g. January–July)	Comments
International tourism	International tourist arrivals				
	International tourism receipts				
Domestic tourism	Overnight stays				Indicate if another indicator is used
Employment	Full-time jobs				Indicate if another indicator is used
Economic Impact	Direct tourism GDP				
	Tourism industries – number of tourism establishments				
	Share of MSMEs in tourism				

Other relevant indicators:

1.2 OVERALL ASSESSMENT

Besides the data included above please share an overall assessment of the impact of COVID-19 on the tourism sector in your country, identifying major past, ongoing, and future challenges connected with the impact of the pandemic and its recovery, focussing in particular on MSMEs and communities:

2. REVIEW OF G20 POLICY RESPONSES TO MITIGATE THE IMPACT OF COVID-19 IN TOURISM AND SPECIFICALLY IN TERMS OF COMMUNITIES AND MSMES

2.1 POLICY RESPONSE TO MITIGATE THE IMPACT OF COVID-19 IN THE TOURISM SECTOR

Has your country developed specific mechanisms to support the tourism sector?

Yes No

If yes, please describe them below

Area of intervention	Please describe
Fiscal policies	
Monetary policy	
Employment-related measures	
Social measures	
Other:	

If not, please identify how/which global measures benefited the tourism sector

Area of intervention	Please describe
Fiscal policies	
Monetary policy	
Employment-related measures	
Social measures	
Other:	



2.2 SPECIFIC SUPPORT MEASURES FOR MSMEs

Has your country developed specific mechanisms to support tourism MSMEs?

Yes No

If yes, please describe them:

Area of intervention	Please describe
Fiscal policies	
Monetary policy	
Employment-related measures	
Social measures	
Other:	

If not, please identify how/which global measures benefited tourism MSMEs

Area of intervention	Please describe
Fiscal policies	
Monetary policy	
Employment-related measures	
Social measures	
Other:	



2.3 SPECIFIC SUPPORT MEASURES FOR LOCAL COMMUNITIES AFFECTED BY TOURISM COVID-19 CRISIS

Has your country developed specific mechanisms to support local communities?

Yes No

If yes, please describe them:

Area of intervention	Please describe
Fiscal policies	
Monetary policy	
Employment-related measures	
Social measures	
Other:	

If not, please identify how/which global measures benefited local communities

Area of intervention	Please describe
Fiscal policies	
Monetary policy	
Employment-related measures	
Social measures	
Other:	



2.4 ASSESSMENT OF POLICES

Did your country assess the impact of the measures implemented to support tourism, particularly those aimed at MSMEs and communities?

Yes No

If yes, please describe them:

Area of intervention	Please describe	Reach	Impact-assessment
Fiscal policies			
Monetary policy			
Employment-related measures			
Social measures			
Other:			

3. MAPPING CHALLENGES, OPPORTUNITIES, AND PRIORITIES OF THE G20 ECONOMIES FOR TOURISM RECOVERY AND RESILIENCE

3.1 CHALLENGES AND OPPORTUNITIES FOR MSMEs AND COMMUNITIES

What are the main challenges moving forward for tourism recovery and resilience with a focus on MSMEs?

Challenges - Please rank top 5

1 = more relevant | 5 = less relevant

Challenges	Rank
Lack of access to finance	
Lack of adequate skills	
Lack of access and use of technology	
Lack of sustainability policies	
Competition from major international players	
Low Research & Development	
Lack of adequate market access	
Volatility of the working force	
Lack of access to market intelligence	
Low level of innovation	
Lack of support to entrepreneurship	
Lack of partnerships	
Burden of the regulatory framework	
Uncertainty of the market	
Changing consumer/travelers needs	
Other (please specify):	

What are the main challenges moving forward for tourism recovery and resilience with a focus on communities?

Challenges - Please rank top 5

1 = more relevant | 5 = less relevant

Challenges	Rank
Lack of community engagement in tourism	
Lack of community empowerment in tourism	
Weak integration in the tourism value chain	
Lack of education/skills	
Lack of adequate infrastructure for tourism development (including technological)	
Lack of local governance structure (destination management organizations)	
Low level of public/private sector cooperation	
Excessive dependence on tourism	
Leakages	
Lack of private sector investment	
Uncertainty of the market	
Changing consumer/travelers needs	
Other (please specify):	

Please share possible opportunities for tourism recovery and resilience with a focus on MSMEs in your country:

Please share possible opportunities for tourism recovery and resilience with a focus on communities in your country:

3.2 G20 PRIORITIES FOR RECOVERY AND RESILIENCE

Please identify your country's overall priorities for Recovery and Resilience in the tourism

Priority	Description
1.	
2.	
3.	
4.	
5.	

Please identify your country's priorities for Recovery and Resilience in relation to MSMEs in tourism

Priority	Description
1.	
2.	
3.	
4.	
5.	

Please identify your country's priorities for Recovery and Resilience in relation to communities in tourism

Priority	Description
1.	
2.	
3.	
4.	
5.	

4. MSMEs AND COMMUNITIES AS AGENTS OF TRANSFORMATION IN TOURISM

Please indicate the three key factors you consider critical to make MSMEs agents of transformation for tourism and describe how they should be addressed

Factor	Description
1.	
2.	
3.	

Please indicate which three key factors do you consider critical to make communities agents of transformation for tourism and describe how they should be addressed

Factor	Description
1.	
2.	
3.	



5. IDENTIFICATION OF GOOD PRACTICES ON HOW MSMEs AND COMMUNITIES HAVE ADAPTED DURING THE PANDEMIC AND BEYOND

Please note that we hope to use these case studies as examples throughout the report and will consult with you on their final format/text.

Please share relevant case studies related to how MSMEs and communities in your country have adjusted during/post the pandemic. This can include specific national or local policies as well as measures taken by associations/private sector

CASE STUDY 1 – MSMEs

Name:

Description:

Relevant features/outcomes:

Relevant weblinks and support materials:

Other relevant information:

CASE STUDY 2 – COMMUNITIES

Please share any case studies of existing national programmes or initiatives aimed at promoting inclusive community development through tourism and include as many cases as available using the template below for each. Please note that we hope to use these case studies as examples throughout the report and will consult with you on their final format/text.

Name:

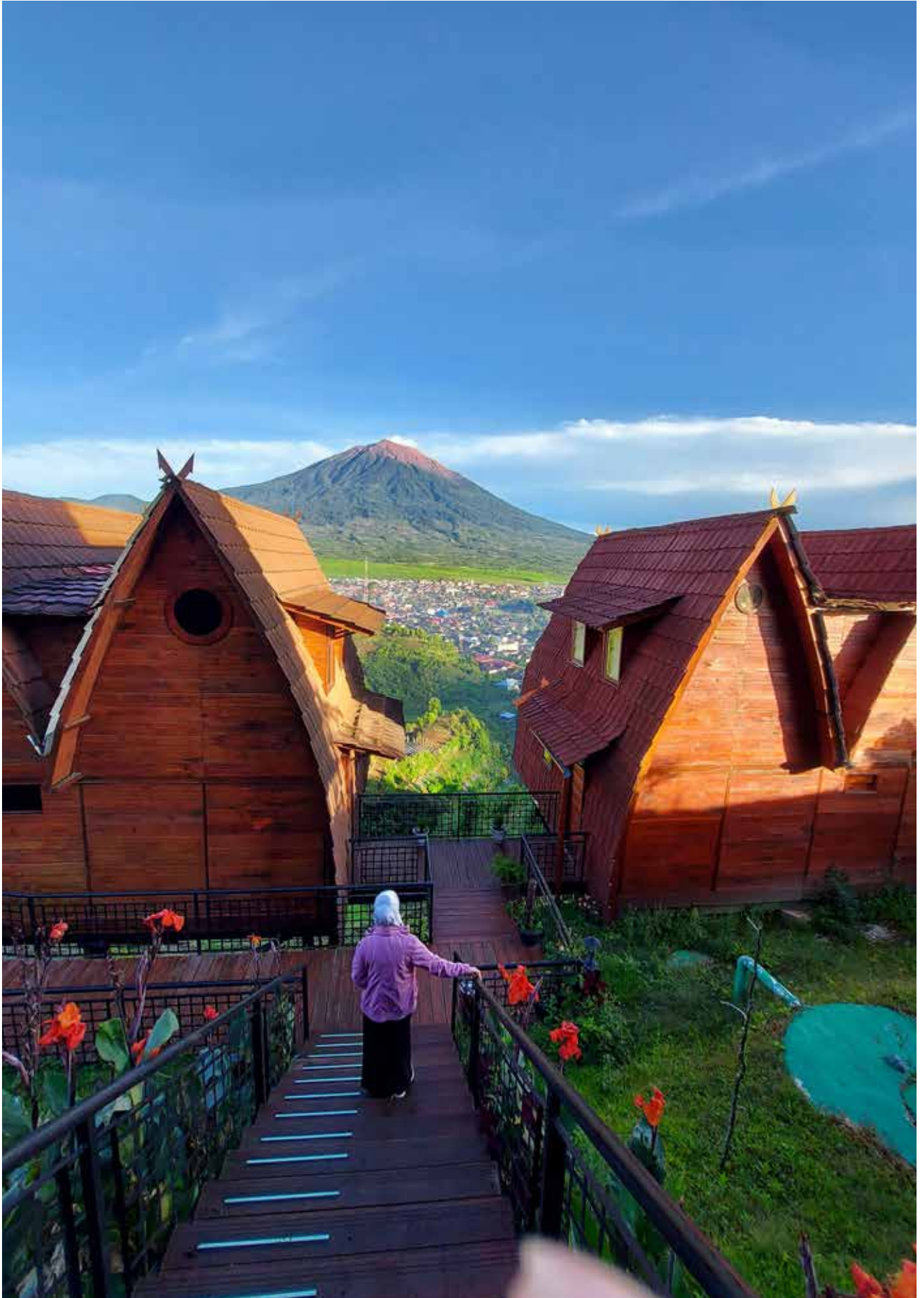
Description:

Relevant features/outcomes:

Relevant weblinks and support materials:

Other relevant information:

Thank you very much for your collaboration.



LIST OF ACRONYMS AND ABBREVIATIONS

ADB	Asian Development Bank	NTA	national tourism administration
ASEAN	Association of Southeast Asian Nations	NGO	non-governmental organization
CAD	Canadian dollar	PGC	paid generated content
CBT	community-based tourism	PPCP	public-private-community-partnership
CCS	cultural and creative sectors	R&D	research and development
CCI	cultural and creative industries	ROI	return on investment
CCIS	cultural and creative industries and sectors	OECD	Organisation for Economic Co-operation and Development
CO ₂	carbon-dioxide	OSH	occupational safety and health
DEI	diversity, equity and inclusion	SMEs	small and medium-sized enterprises
DMO	destination marketing/management organization	SDG	Sustainable Development Goal
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit	TDGDP	tourism direct gross domestic product
ECV	electric combustion vehicle	SIDS	small islands developing states
EGD	European Green Deal	SOE	state-owned enterprise
EUR	euro	TSA	Tourism Satellite Account
FDI	foreign direct investment	TVET	technical and vocational education and training
FIT	fully individual travel	UK	United Kingdom
GBP	United Kingdom pound	UN	United Nations
GEF	global environment facility	UNCTAD	United Nations Conference on Trade and Development
GHG	greenhouse gas	UNDP	United Nations Development Programme
GDP	gross domestic product	UNEP	United Nations Environment Programme
GTPI	Global Tourism Plastics Initiative	UNESCO	United Nations Educational, Social and Cultural Organization
IAS	Invasive Alien Species	UNFCCC	United Nations Framework Convention for Climate Change
ICE	internal combustion engine	UAE	United Arab Emirates
ICT	information and communication technologies	UN-Women	United Nations Entity for Gender Equality and the Empowerment of Women
IDB	Islamic Development Bank	UNWTO	World Tourism Organization
IDR	Indonesian rupiah	UGC	user generated content
ILO	International Labour Organization	USD	United States dollar
IFC	International Finance Corporation	VPD	vaccine-preventable diseases
IMF	International Monetary Fund	VC	venture capital
IoT	Internet of things	WB	World Bank
IP	intellectual property	WEF	World Economic Forum
IRTS	International Recommendations for Tourism Statistics	WHO	World Health Organization
IT	information technologies	WIPO	World Intellectual Property Organization
JICA	Japan International Cooperation Agency	WTO	World Trade Organization
LDCs	least developed countries	WWF	World Wildlife Fund
KPIs	key performance indicators	WTTC	World Travel & Tourism Council
MSMEs	micro-, small and medium-sized enterprises		
NEPAD	African Union Development Agency – NEPAD (AUDA-NEPAD)		

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G20 BALI GUIDELINES FOR STRENGTHENING COMMUNITIES AND MSMEs AS TOURISM TRANSFORMATION AGENTS

A PEOPLE-CENTRED RECOVERY

CASE STUDIES

ANNEX TO THE CHAIR'S SUMMARY



G20
INDONESIA
2022



UNWTO
World Tourism Organization



G20 BALI GUIDELINES FOR STRENGTHENING COMMUNITIES AND MSMEs AS TOURISM TRANSFORMATION AGENTS

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Final version, 26 September 2022





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01 EXAMPLES OF G20 AND GUEST COUNTRIES INITIATIVES

TOURISM AND COVID-19: MEASURES TO SUPPORT RECOVERY



CANADA

Through Budget 2021, the Government of Canada is providing measures totaling CAD 1 billion over three years to assist the tourism sector's recovery. This includes an investment of CAD 500 million for the Tourism Relief Fund (TRF) to support tourism entities strategically adapt their products and services to public health requirements, while planning and investing in recovery efforts for future growth.

The TRF comprises CAD 485 million delivered by the Regional Development Agencies (RDAs), of which CAD 50 million will specifically support indigenous tourism initiatives, and CAD 15 million for a national priorities stream administered by Innovation, Science and Economic Development Canada (ISED). Eligible projects will fall under one of two themes:

- **Product development:** Projects that enhance tourism experiences, help tourism businesses adapt to the 'new normal', modernize tourism offerings, and encourage the sector to adopt more environmentally sustainable and inclusive practices; or

- **Destination development:** Projects that can position communities to take advantage of post-pandemic opportunities through strategic planning for medium- to long-term investments, as well as supporting destination development.

The national priorities stream will support pan-Canadian and national stakeholder associations to help their members address challenges at a national level. These include measures to assist in labour market skills development and recruitment, strategies for digital adoption and bolstering organizational capacity.

From the onset of the pandemic to April 2022, the Canadian tourism and hospitality sector has received an estimated CAD 23 billion in support through the emergency programmes of the federal government, including various liquidity measures.



CHINA

China issued several Policies on Promoting the Recovery and Development of Difficult Industries in the Service Sector, these include in 2022 in the fiscal area:

- Full play to the guiding role of market-oriented tools to support inclusive small and micro enterprises, provide incentive funds for 1% of the incremental balance of inclusive small and micro loans of local corporate banks, and make good use of the rolling quota of CNY 400 billion for relending to guide financial Institutions have increased their inclination to difficult industries, especially the service industry. Financial institutions are encouraged to handle market entities in the service industry that meet the loan renewal conditions as normal loan renewal business, and shall not blindly reluctant, withdraw, cut off or suppress loans, and maintain reasonable liquidity.
- Continue to promote the reduction of fees and profits in the financial system, implement the downward adjustment of the loan market quoted rate (LPR) and the reduction of the relending interest rate to support agriculture and small businesses, promote the continued decline of the actual loan interest rate on the basis of the substantial reduction in the previous period, and urge and guide banks to reduce the account service fees, CNY transfer and remittance fees, and bank card swipe fees will reduce the operating cost pressure of small and micro enterprises and individual industrial and commercial households in the service industry.
- Continue to implement the travel agency's temporary refund of tourism service quality guarantee policy, maintain 80% of the temporary refund amount for eligible travel agencies and encourage places where conditions permit to further increase the temporary refund ratio. At the same time, speed up the pilot work of replacing insurance deposits with insurance, and expand the scope of the pilot programme of replacing insurance deposits with insurance.
- Strengthen the cooperation between banks and enterprises, establish and improve the project financing demand database of key tourism enterprises, and guide financial institutions to meet the conditions and have good development prospects. Key cultural and tourism market players, such as travel agencies should increase credit input and appropriately increase the loan amount.



- Encourage banking financial institutions to reasonably increase the effective credit supply for tourism. Establish a financing risk prevention and control mechanism for key enterprises. Guide financial institutions to reasonably reduce the interest rate of newly issued loans and take the initiative to give profits to tourism enterprises that have difficulties in production and operation affected by the pandemic. Encourage qualified tourism enterprises to issue corporate credit bonds and expand diversified financing channels for tourism enterprises.
- Increase the support for inclusive finance for qualified small and medium-sized enterprises in travel agencies, tourism performances and other fields that are expected to develop well. Give full play to the active role of cultural and tourism financial service centres, and establish a financing demand database for small, medium and micro tourism enterprises. Encourage banking financial institutions to provide small loan support to individual industrial and commercial households such as tourism-related start-ups, small and medium-sized enterprises and themed homestays.

In terms of employment support, Provinces with a large balance of unemployment insurance and work-related injury insurance funds can implement the policy of deferred payment of unemployment insurance and work-related injury insurance premiums to tourism enterprises in stages. The specific measures shall be determined by the people's government provincial-level. Eligible tourism enterprises can apply for a deferral of payment with the approval of the people's government of the insured place.

National support was complemented with a series of measure by the Provinces. For example, in the Hubei Province CNY 2 billion was used from the national debt funds for more than 400 ticket-free tourist attractions in the Province, while the Guangdong Province expanded the coverage of the liability insurance coverage of travel agencies, encouraged insurance institutions to optimize the service process of underwriting claims, simplify claims procedures, improved claims efficiency, strengthened insurance protection capabilities, and enriched cultural and supply of travel insurance products. Yunnan Province distributed no less than CNY 200 million of cultural tourism consumption coupons free of charge for projects such as accommodation, catering, cultural and creative, entertainment, sports, department stores and refined oil sales to support the implementation of relevant policies.



FRANCE

Between March 2020 and November 2021, the state's support to the sector amounted to more than EUR 38 billion. With the new plan Destination France, the state is mobilizing more than EUR 1.9 billion (EUR 1.25 billion of loans from public banks and EUR 650 million of investments from the state) to continue its commitment, hand in hand with professionals and local authorities, to consolidate the position of France as a world leader in tourism.

In addition, in order to strengthen the rebound and support for mountain destinations particularly affected by the health crisis and measures implemented, the Government has launched a major plan to support investment called 'Avenir Montagnes', mobilizing nearly EUR 650 million of public funds (state and regions), which will generate investments of EUR 1.8 billion. The plan aims to respond to the specific problems of the mountain regions by diversifying the tourism offer, supporting the ecological and energy transition and, finally, by rehabilitating the real estate of a sector which is particularly affected by the crisis. An additional effort to promote the mountain regions in France and overseas by Atout France has also been decided to accelerate the recovery of tourism activity and associated revenues.

For further information on Destination France, please consult: <https://www.gouvernement.fr/destination-france-le-plan-de-reconquete-et-de-transformation-du-tourisme>.

INDONESIA

The Indonesian Government has released the National Economic Recovery (PEN) 2022 budget for USD 31 trillion. This budget will be used mainly in three groups of programmes:

- Health (USD 8.5 trillion): vaccination, hospital incentives, tax incentives and COVID-19 mitigation;
- Social protection (USD 10.7 trillion): family protection, food assistance, pre-employment training and layoff incentives, village stimulus, and other social incentives and stimuli;
- Economic resilience (USD 12.4 trillion): labour incentives, food resilience, digital transition, MSMEs, and tourism and creative economy.

The tourism and creative economy recovery budget (USD 318 million) will be utilized for national tourism recovery key activities, such as micro digital training, Clean-Health-Safety-Environment Sustainability (CHSE) training and certification, various stimuli, and micro finance for MSMEs and tourism villages.



ITALY

Over EUR 1.9 billion has been provided by the Ministry of Tourism with several funds to support travel agencies, tour operators, tour guides, hotels, fairs and congresses, and passenger transport companies with open buses in urban and suburban areas – categories significantly damaged by COVID-19 containment measures –, besides several tax measures.

In terms of support for enterprises in the sector, under the special and exceptional rules governing the intervention of the Guarantee Fund for small and medium-sized enterprises, was specifically envisaged that, until 31 December 2021, the Fund's guarantee may be cumulated with other forms of guarantee on loans for real estate investment operations in the tourist and hotel sectors, including the thermal sector, with a minimum duration of 10 years and an amount exceeding EUR 500,000. In addition, for tourism companies, the extraordinary moratorium on the payment of instalments of loans due was extended from 30 June 2021 until 31 December 2021, limited to the share capital.

Furthermore, the following measures were implemented to support employment:

- Allowances for seasonal workers in tourism and spa establishments. Seasonal employees in the tourism and spa sectors, as well as temporary workers employed by user undertakings operating in the same sectors which have involuntarily terminated their employment relationship between 1 January 2019 and 17 March 2020 granted the following allowances: Only for seasonal employees: EUR 600 for the month of March; for all these workers, including in employment: EUR 600 for April, EUR 1,000 for May; an all-inclusive allowance of EUR 1,000 paid three times; and additional allowances, equal to EUR 2,400 and 1,600 respectively
- Fixed-term workers in tourism and thermal. Fixed-term employees in the tourism and spa sectors granted an allowance if they meet the following conditions: ownership, during the period from 1 January 2019 to 17 March 2020, of one or more fixed-term employment contracts in those sectors of a total duration of at least 30 days; ownership in 2018 of one or more fixed-term or seasonal employment contracts in one of the two sectors mentioned above, of a total duration of at least 30 days. These workers were granted an allowance of EUR 600 for each of the months of March, April and May, an all-inclusive allowance of EUR 1,000 paid three times and additional allowances of EUR 2,400 and EUR 1,600 respectively.
- Contribution relief. A total exemption of contributions was granted to employers recruiting fixed-term workers (including seasonal workers) in the tourism and spa sectors after 15 August 2020 and by 31 December 2020. This benefit was granted only for the period of the contracts concluded, but, in any case, up to a maximum of three months, up to a maximum of EUR 8,060 on an annual basis.



SAUDI ARABIA

Saudi Arabia responded to the pandemic through key interventions that were designed to support the economy. This included but was not limited to:

- A SAR 70 billion (USD 18.7 billion or 2.7% of GDP) private sector support package which included the suspension of government tax payments, fees and other dues, to provide liquidity to the private sector and an increase in available financing through the National Development Fund;
- Increased resources available to the Ministry of Health to fight the virus;
- Exemptions for companies operating in the tourism sector from issuance/renewal license fees;
- Authorizing the use of the Unemployment Insurance Fund (SANED) to provide support for wage benefits, within certain limits, to private sector companies who retain their Saudi staff (SAR 6 billion, 0.2% of GDP in 2020);
- Ease of restrictions on expatriate labour mobility and their contractual arrangements;
- A stimulus package, including SAR 50 billion (USD 13.3 billion) for SMEs. Under the programme, SAR 30 billion were allocated for banks and financing companies to delay loan payments due from SMEs for six months; and
- A SAR 670 million programme to help businesses defer loan payments due in 2020.



- With a population of approximately 35 million people (2020), Saudi Arabia has handled international travel restrictions resiliently in part by promoting domestic tourism. 2020 saw the largest domestic tourism campaign in Saudi history, during which there was increasing visitation to target destinations by more than 30% year on year, and a 33% increase in spend on hotels, restaurants and recreation/cultural activities, compared to the same period in 2019. In addition, having reached greater than 70% of the Saudi population fully vaccinated, and having a strong health system in place, the Saudi Government was able to remove most COVID-19 related travel restrictions on 5 March 2022, including PCR test requirements. As a result, Saudi Arabia is experiencing a fast resumption in international visitors and a blossoming of in-person domestic cultural activities.



SPAIN

The Government of Spain has deployed since April 2020 a wide array of support schemes applicable to the tourism sector, including:

- **Guaranties to companies on commercial loans:** Up to 30 September 2021, 139,095 companies in the tourism sector had received guaranties covering financing for EUR 18,254 million.
- **Social Security exemptions:** EUR 3,099 million up to September 2021 to workers in the tourism sector.
- **Unemployment benefits to furloughed workers:**
 - EUR 5,594 million by September 2021 paid to 1,976,000 furloughed permanent workers in the tourism sector.
 - EUR 812 million by September 2021, mostly paid to furloughed seasonal workers in the tourism sector.
- EUR 2,564 million paid to furloughed self-employed workers in the tourism sector by September 2021.
- **Non-reimbursable grants:** Grants to an amount of Euro 7,000 million to companies and self-employed workers in the tourism sector
- **Fiscal policies:**
 - Fiscal incentive to renegotiate rental contracts to tenants in tourism sector benefiting over 300,000 tenants with a cost of EUR 324 million.
 - Tax moratorium for the period January–October 2021 to companies and self-employed workers in the tourism sector. It has benefited 617,000 companies and workers for a total amount of EUR 2,668 million of postponed payments.



TÜRKIYE

In Türkiye, by the beginning of the pandemic the “Economic Stability Shield Program” has been launched in order to balance the adverse effects of the pandemic, including actions like tax cuts, debt payment delays and allowing remote working. Together with monetary and fiscal measures, and financial support programmes for MSMEs, the Safe Tourism Certification Program, which was implemented as of June 2020 by the Ministry of Culture and Tourism (MoCT), has also contributed to the safe recovery of the tourism and travel sector, providing a wide range of measures to be adopted in related services and facilities.

Moreover, within the scope of the measures taken against the COVID-19 pandemic, in order to provide support to tourist guides who could not temporarily perform their profession, the Ministry of Culture and Tourism (MoCT) has signed a loan package agreement with the public banks and the application implementation principles announced online. A total of 2,464 valid applications were submitted to public banks within the scope of the support loan and guides were provided credit with favourable conditions. A *Circular on Controlled Normalization Process in Tourist Guide Services* was published to take the necessary measures and ensure the continuity of the tourist guide service safely.



UNITED KINGDOM

The tourism industry has been one of the hardest hit sectors by COVID-19. Data from the Office for National Statistics shows the largest economic contractions in the services sector over 2020 were all parts of the tourism industry – air, maritime, travel agents, accommodation, rail and entertainment – and tourism has been the sector most reliant on the government’s unprecedented package of support measures such as the furlough scheme. In this sense:

- Over GBP 35 billion have been provided to the tourism, leisure and hospitality sectors in grants, loans, and tax breaks.
- On top of the wider economic support package, the Government extended business rates relief and introduced restart grants of up to GBP 18,000 for many in the sector.
- The Government extended the VAT cut for tourism and hospitality activities to 12.5% until the end of March 2022, helping businesses manage the transition back to the standard rate.

Furthermore, the Tourism Recovery Plan, published in June 2021, also points to the significant activity already planned/gone underway to invest and grow the tourism sector. Large scale investments in tourism include:

- GBP 4.8 billion Levelling-up Fund (cultural and heritage attractions);
- GBP 3.6 billion Towns Fund (including castle restorations and new conference venues);
- GBP 900 million Getting Building Fund; and
- GBP 7 million to complete the England Coast Path and Coast-to-Coast National Trail.

Culture and heritage are also major drivers for domestic and international tourism. The Culture Recovery Board has been created to oversee the delivery of the Culture Recovery Fund, a GBP 2 billion fund to tackle the crisis facing the country’s most visited cultural organizations and heritage sites.



UNITED STATES OF AMERICA

President Biden signed the American Rescue Plan Act of 2021 (ARPA), which provided additional relief to address the continued impact of the pandemic on the economy. The USD 1.9 trillion COVID-19 relief package included federal support for the recovery of the travel and tourism industry, including:

- USD 350 billion to states and local governments, with the explicit authority given to allow funds to aid the travel and tourism industry;
- USD 8 billion in grants for airports with an USD 800 million set-aside for airport concessionaires; and
- USD 15 billion to airlines through the Payroll Support Program.

The Economic Development Administration (EDA) of the Department of Commerce is disbursing USD 750 million appropriated by Congress in the American Rescue Plan Act (ARPA) to assist communities that rely on the travel, tourism and outdoor recreation sectors. EDA has allocated these funds as follows:

- USD 510 million in non-competitive awards available to help states quickly invest in marketing, infrastructure, workforce and other projects to rejuvenate safe leisure, business and international travel; and
- USD 240 million in competitive grants to help communities that have been hardest hit by challenges facing the travel, tourism and outdoor recreation sectors to invest in infrastructure, workforce or other projects to support the recovery of the industry and economic resilience of the community in the future.

PILLAR 1

HUMAN CAPITAL: JOBS, SKILLS, ENTREPRENEURSHIP AND EDUCATION

GERMANY

In the transition from crisis mode to re-entry, flexible education and training is particularly important for many tourism professionals. Every so often, tourism practitioners do not have up-to-date formal (vocational) education certifications and frequently entered the job market informally. Many cannot readily provide employers with credible evidence within their CVs for employers for their apparent competencies and skills. Others find that the uncertain downtime during the crisis is an opportunity for personal upskilling in flexible self-study learning paths, instead of a commitment to a more demanding long-term education degree programme. The atingi eAcademy Tourism and Hospitality offers a solution considering such real-life situations. The learning platform atingi.org offers 45 free courses in English and French.

Knowledge acquired through self-study is certified by the tourism sector and thus facilitates the professional re-entry of the skilled workers and the search for suitable personnel for the companies. The platform, developed within the framework of the Global Project "Africa Cloud", is implemented by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH on behalf of the German Government. The Smart Africa Secretariat, an alliance of 29 African digital ministries, is the most important strategic partner for project implementation.

INDONESIA

According to the Ministry of Tourism and Creative Economy (MoTCE) there are 34 million workers in the tourism and creative economy sectors; around 1 million in the tourism sector were unemployed due to COVID-19 in 2020 as the number of tourism workers decreased by 6.7% from 14.96 million in 2019 to 13.96 million in 2020. Furthermore, approximately 97% of employment in Indonesia is in the MSME sector, and 70% of the tourism and creative economy actors are MSMEs.

The pandemic was an important opportunity to enhance capacity and skills for tourism human resources in communities through reskilling and upskilling, competency certification, mentoring and entrepreneurship. Moreover, stimulus programmes for tourism businesses have been set up to accelerate the recovery of tourism in Indonesia by providing incentives and access to capital. The MoTCE has also conducted various technical assistance and trainings for local small restaurants, culinary producers, craftsmen, homestay owners and



tour guides, among others, to improve their skills. Such programmes are conducted by the MoTCE and the Center for Tourism Planning and Development, the Bandung Technological Institute and the Central Bank of Indonesia. These include, but are not limited to, processing and packaging local crafts or other products, certification of diver communities, improving services standards of homestay owners and social media trainings.

In addition to hard skills, managerial skills are also an avenue to be improved. The programme to enhance managerial skills is conducted by the MoTCE in cooperation with local authorities in Gunung Kidul, Yogyakarta and South Kuta, Bali. Furthermore, one of the main enablers of skills for tourism communities is the collaboration between government, private sector, local authorities and the communities. During the pandemic, the MoTCE has collaborated with such parties, to finance the programme and to conduct monitoring and evaluation of programmes, as well as promotional activity related to these programmes.

ITALY

One of the pillars of the Strategic Tourism Plan 2023–2027 is a high-level training that, through a deepening of the existing courses of study and new schools of thematic specialization (mountain, marine and cultural offer) can offer a training of hospitality, attraction and high-level tourist organization. Training courses from the vocational school to the ITS (professional institutions on tourism), from universities to specialized masters will have to be clearly traced, ensuring continuity of the training path and a focus on new professionalism emerging from the new tourist demand. In this respect, strong coordination with the best international experience and specialization will be needed in order to bridge the remaining gaps in tourism specialization skills.



SAUDI ARABIA

Saudi Arabia authorized the use of its Unemployment Insurance Fund (SANED) to provide support for wage benefits, within certain limits, to private sector companies who retain their Saudi staff (SAR 6 billion, 0.2% of GDP in 2020). Restrictions on expatriate labour mobility and their contractual arrangements were also eased.

The Human Resource Development Fund (HRDF) has also provided a SAR 5.3 billion financial support, centered around four basic pillars:

1. Supporting employment;
2. Supporting training;
3. Supporting 100,000 new job-seekers with SAR 1.5 billion; and
4. Subsidizing wages of Saudis employed in the private sector since 1 July 2019, through a SAR 1 billion 'Employment Support'.

In 2021, the Saudi Tourism Authority (STA) launched the 'Tourism Shapers' programme, an initiative that aims to equip the local private sector with the support needed to navigate and manage the evolving tourism landscape. Furthermore, on 21 June 2020, Saudi Arabia announced the creation of a Tourism Development Fund (TDF) with initial capital of SAR 15 billion (approximately USD 4 billion). The TDF is in the process of signing many agreements for the development of tourism projects in Saudi Arabia.

Additionally, the Small and Medium Enterprises General Authority (Monshaat) launched an indirect lending initiative at USD 426.67 in capital for small and medium-sized enterprises (SMEs) in cooperation with the Social Development Bank, with the aim to:

1. Open up new horizons and channels for lending SMEs through approved financing companies in the Kingdom of Saudi Arabia;
2. Provide competitive financing solutions and tools for entrepreneurs and SMEs; and
3. Support the SMEs sector to ensure continuity and business development.

SPAIN

Spain has implemented a vocational training programme for the tourism sector totalling an investment of EUR 106 million. By end of September 2021, the programme had reached 218,400 workers from 39,000 companies. Spain is also deploying a 3-years Modernization and Competitiveness Plan for the tourism sector with total budget of EUR 3,400 million which aims to transform the sector through measures addressing sustainability, digitalization and competitiveness.





TÜRKIYE

To diversify Türkiye's tourism products and destinations and enhance competitiveness, vocational trainings are carried out to keep the tourism service quality and skills at high standards. The Ministry of Culture and Tourism (MoCT) organizes free on-the-job trainings to improve the professional qualifications and increase service quality in accommodation and catering facilities while strengthening human resources. In accordance with Bilateral and Multilateral Agreements the Ministry also organizes trainings prioritizing the exchange of experience and knowledge with international stakeholders. On the Job Training Course content includes Front Office, Food and Beverage Service, Housekeeping, Training Managers as Trainers, and Home Pension Management.

Furthermore, the MoCT and the Ministry of National Education (MoNE) have signed a "Protocol on Cooperation for Development of Vocational and Technical Education in Tourism" to contribute to employment by responding to the qualified labour force required in the sector. It is aimed to achieve following at vocational and technical high schools of Accommodation and Travel, Food and Beverage and Entertainment Services:



- Providing on-the-job internship and training opportunities in tourism enterprises;
- Graduates fluent in at least three foreign languages;
- Granting scholarships to the students;
- Providing employment opportunities to graduates; and
- Providing on-the-job trainings to the teachers, trainers and administrators.

The project involved 11 schools in 2018 and reached to 52 schools in 2022. Moreover, the two Ministries continued their cooperation with new projects on vocational education in tourism, aiming to increase both theoretical and practical qualifications of employees of the accommodation facilities and to contribute to their personal development through 4-year education, including foreign language in Vocational Education Centres of the MoNE.

UNITED KINGDOM

As stated by the United Kingdom in the survey conducted for the purpose of this publication, to “deliver the UK government’s Tourism Recovery Plan, the UK will need a committed, talented and diverse workforce that sees tourism and hospitality as sectors that offer good, well paid, year-round jobs, as well as careers.”

Coordinated by UK Hospitality and the British Beer and Pub Association, with the support of People 1st and Springboard, and working with a wide range of other organizations and employers, there are currently four industry-led strategic priorities:

1. Great jobs and careers;
2. Tackling long-term unemployment;
3. Vocational training and professional standards; and
4. Diversity and inclusion.

Led by employers at a senior level, via the Hospitality and Tourism Skills Board set up following the Tourism Sector Deal, the industry will develop programmes with ambitious targets to deliver on these priorities, including in areas such as apprenticeship starts, retention metrics, training goals and mentoring initiatives. The government will work closely with the Hospitality and Tourism Skills Board as this work progresses.

PILLAR 2

INNOVATION, DIGITALIZATION AND THE CREATIVE ECONOMY

CANADA

There is tremendous potential for enhanced digitalization in the tourism sector. Digitalization has the potential to support businesses' efforts to address their labour challenges, enhance efficiencies in their day-to-day activities and – through online marketing – increase their visibility in the marketplace. Presently, however, many smaller businesses are unaware or have not yet taken advantage of this potential – an issue that Canada is attempting to address, including through the Canada Digital Adoption Program (CDAP). The objective of CDAP is to help small and medium-sized enterprises (SMEs) adopt digital technologies and stay competitive by providing access to funding and expertise.

For more information on the Canada Digital Adoption Program, please consult: Canada.ca/digital-adoption

INDONESIA

During the pandemic, Banyuwangi Regency (East Java) collaborated with Grab to onboard its micro-economy sector to MSMEs digitalization and with Traveloka to increase its tourism market by:

- Streaming its traditional performances online;
- Certifying restaurants and hotels for their safety and health standards and tour guides for their 'new normal protocols'; and
- Providing an online app dedicated to tourism (destination, booking, etc.).

Prior to the pandemic, and supported by other people-centred regulations, Banyuwangi had up to 148% increase in income per capita (from IDR 20.86 million in 2010 to IDR 51.80 million in 2019); 979% increase in domestic tourists (from 491,000 in 2010 to 5.3 million in 2019); 712% increase in international tourists (from 12,505 in 2010 to 101,622 in 2019). Its poverty levels decreased to 7.52% in 2019 from 20.09% in 2010. In 2016, Banyuwangi received the UNWTO Award in the category of Public Policy and Governance Innovation in the Tourism Sector.



ITALY

A pillar of the Strategic Tourism Plan 2023–2027 concerns the digitization and innovation of the Tourism ecosystem, including important projects, such as the Tourism Digital Hub (TDH), in line with European guidelines. The TDH is a privileged opportunity to enable the diverse world of tourism, both public and private, exploiting the technological potential to offer innovative services to tourists, promoting a personalized, sustainable and long-term experience. However, digitalization covers the entire supply chain and the value chain of the tourism product and must be born from a process of product and service innovation through a process of sharing the best experiences of transition from “classic” tourism to “innovative” tourism, also through the incubation tools of SMEs made available at community level.

Italy has also earmarked EUR 6.6 billion (along with EUR 1.46 billion of National complementary funds) of investments on culture and tourism in its National Recovery and Resilience Plan (NRRP), developed under the Next Generation EU programme to support the recovery from the COVID-19 emergency.

Tourism and culture have been hit hard by the pandemic and are central to Italy’s social and economic recovery. The NRRP allocates to culture and tourism with synergic investments in heritage-led territorial regeneration, upskill and reskill, digitalization and accessibility, capacity building, increasing the competitiveness and resilience of the tourism ecosystem and the cultural and creative sectors, including by enhancing their digital and green transition. Each project develops innovative integrated cultural locally-based activities with a view to promoting sustainable use and cultural regeneration of these villages.



JAPAN

To maximize the results of the project to realize a new tourism model through the combined integration of digital technology and tourism resources, with the aim of expanding opportunities for consumption and increasing the unit consumption price, a demonstration project was budgeted at JPY 800 million for the financial year (FY) 2021.

The first step is to develop digital technology to create and realize unprecedented tourism content and area management. It is promoting the transformation of tourism services and the creation of new regional tourism models by utilizing digital technology such as high-precision location recognition technology that can be applied according to the location of use and biometric information, such as facial recognition. It is also promoting the development of a new regional tourism model. Specific examples of demonstration projects include a project to realize empty-handed tourism that combines face recognition and a tour e-ticket, and an outdoor tour-type extended reality (XR) theme park development project that uses XR technology.

Secondly, for the use of online technology to increase the interest to visit, it offers information for gathering and occasions to purchase contents of tourist attractions in a virtual space by integrating tourism resources and existing interactive online technology that enables communication. Specific examples of demonstrations that promote willingness to visit include an online hands-on event project to communicate and exchange information

on Aomori Prefecture, located in Northern Japan, about its diverse natural scenery of mountains, rivers and lakes, which change their expressions in each season, a traditional local festival called 'Nebuta' and the charm of local food culture, and a project of building a 'Nationwide Delicious Experiences in Japan' platform, where it is also possible to purchase local products. In addition, tourism businesses are working on adding value to tourism resources combined with online technology, and also on improving the capacity and environment for accepting foreign travellers, such as multilingual support. Also, from the perspective of creating new tourism contents, a good example of experience-based tourism content utilizing ICT shall be presented below:

Located in the mountainous region in Nagano Prefecture, in the Ina Valley area surrounded by two mountains, the Central Alps and the Southern Alps, a 'sky tour' by drone was demonstrated from 2019 to 2020. In order to attract more visitors during the off-season of winter, drone aerial photography of the spectacular views from the top of the mountain was developed as a hands-on travel product. The plan is designed to appeal not only to drone enthusiasts, but also to families who enjoy outdoor activities and those who are interested in drones, and includes drone photography experiences, mountain climbing in the Central Alps, live drone flight videos with virtual reality (VR) goggles, and get-togethers while enjoying local products. The plans are tailored to each target group. The travel products have been well received and are continuing to be sold.



NETHERLANDS

The National Tourism Data Alliance (LDA) is a network in which we share knowledge, insights, work on digitalization and, where desired, data about tourism from, to and in the Netherlands. The aim is to achieve more data-driven policy decisions and greater competitiveness for tourism entrepreneurs. Anyone who has an interest in better data and insights about tourism in the Netherlands can join. This varies from provinces, destination marketing organizations and industry associations to universities and knowledge centres. Within the National Data Alliance, the focus is on four themes:

1. Size and profile of visitors;
2. Customer journey and visitor flows;
3. The impact of tourism; and
4. Tourist offer.

SAUDI ARABIA

The Kingdom established targeted programmes for developing entrepreneurship and innovation, including to overcome the challenges put forward by the pandemic. These programmes focus on developing skills while building on tangible opportunities in the sector across more developed, as well as more rural regions. The programmes include massive open online education for the basics in tourism entrepreneurship (launched mid 2021), business accelerator programmes, entrepreneurship bootcamps, destination challenges, and more are in the pipeline. Given the general levels of innovation and entrepreneurship aspiration, the Kingdom was able to create substantial reach in these programmes and transfer some of them from a stimulus response into business as usual for the coming years

UNITED KINGDOM

The United Kingdom Government has made progress towards spreading opportunity around the country since 2019, alongside mitigating the worst effects of the pandemic, with among other measures:

- GBP 5 billion for Project Gigabit to bring gigabit-capable broadband to 85% of the United Kingdom by 2025; and
- GBP 1 billion for the Shared Rural Network deal with mobile operators delivering 4G coverage to 95% of the United Kingdom by the end of 2025.

PILLAR 3

WOMEN

AND YOUTH EMPOWERMENT

INDONESIA

PLASTIC WASTE REDUCTION IN BALI

A few years ago, Bali's reputation as a premier tourism destination with its marvellous natural landscape was tarnished with images of plastic waste on the beach and in the ocean. In 2019, the provincial government of Bali eventually enforced a ban on single-use plastics. However, the ban did not just happen overnight. Six years before the ban, a campaign was started to counter the high use of plastic bags in Bali that some believe contributed to the prohibition years later. What is perhaps even more striking from the campaign, aside from its eventual success, is how it began with a couple of local teenage girls, Melati and Isabel Wijsmen.

Before the campaign, Melati found that the problem of plastic waste was increasingly difficult to ignore. When she went to swim at her childhood beach, she would find her hand wrapped in a plastic bag. She thought enough was enough. So, in 2013, at the age of 13, she and her younger sister started the 'Bye Bye Plastic Bag' Movement. They went online and got 6,000 signatures for their petition

in just a day. They organized massive beach clean-up campaigns. Inspired by Gandhi, they also threaten to do a hunger strike unless there were policy changes on plastic bags. The governor of Bali eventually took notice and met with the girls. He signed a Memorandum of Understanding to help Bali get rid of plastic bags by 2018.

Their activism also attracted global limelight. They have given a TED talk, spoke at the UN in New York and at an IMF/World Bank Forum in Bali. Forbes, Time Magazine and CNN have also showered them with accolades as some of the most influential teenagers in the world.

Aside from the awards, Melati and Isabel Wijsmen are perhaps even prouder of the change they witness in Bali. Based on a study, after the ban on single-use plastics, the use of plastic bags in Bali fell by more than 50% and the use of plastic straws by more than 60%. While more needs to be done, the steady fall of plastic waste is a boon for tourism in Bali.



FOSTERING YOUTH-DRIVEN CULTURAL HERITAGE ATTRACTIONS AT SAUNG ANGKLUNG

With more than 1,300 ethnic groups, Indonesia is an incredibly diverse nation. The government believes that such diversity offers tremendous potential for tourism. However, there have been slow erosions of cultural identity, particularly among urban youths. Udjo Angklung Center in Bandung, West Java, bucks the trend.

Angklung is a traditional musical instrument from West Java which has also garnered UNESCO recognition as an intangible heritage of the world. Each angklung produces only one note or chord, so people often play angklung together in order to create musical melodies. This spirit of bringing people together through music is also epitomized by Udjo which prior to the pandemic attracted more than 700,000 tourists, both domestic and foreign, every year.

Supported by the government, Udjo provides rare opportunity for the children, youth and women in a densely populated urban area not only to learn more about their heritage but also to showcase their unique culture to tourists from all over the globe. Every afternoon, Udjo

offers daily cultural performance for tourists in which the youth, women, as well as little boys and girls who have finished schools share the stage. They do not treat tourists as mere spectators, but they lend their angklungs to them so that the visitors who do not know one another can play a song together with the bamboo instruments. Udjo also is keen to support local MSMEs, many of whom are owned by women. Udjo provides training and various empowerment programmes for the local MSMEs. Many of the souvenirs sold by Udjo are sourced from local MSMEs including women-owned MSMEs.

Due to the immersive nature of the Udjo cultural attraction, the cultural centre was hit hard by COVID-19. The government is committed to support Udjo through such difficult times. For instance, the Ministry of Tourism and Creative Economy (MoTCE) worked with Udjo in 2021 to create tourism promotion jingles with Angklung. State-owned banks, in collaboration with the private sector, provided IT equipment for Udjo to hold virtual performances during the pandemic.

For further information on the Udjo Angklung Center, please consult: <https://www.indonesia.travel/gb/en/destinations/java/bandung/saung-mang-udjo>



ITALY

Interventions included in the next Strategic Tourism Plan 2023–2027 'Tourism and Culture' component, are concentrated in two sectors that offer growth potential. The green transition and environmental sustainability in Italy can only be based on the protection and enhancement of cultural heritage, intrinsically ecological policies that involve the limitation of land consumption, minimize the use of natural and energy resources and ensure a low environmental impact. Tourism and culture are among the sectors most affected by the pandemic that need specific support to accompany its recovery and strengthen its resilience for the future. The design of the interventions will aim to enhance in particular the women, generational and territorial dimension of the cluster, designing the interventions in order to allocate a significant share of resources to the regions of the Mezzogiorno and to the areas of activity characterized by a relatively high

incidence of women and youth professionals. The Tourism Plan, in synergy with the other administrations, is divided into four lines of action:

1. Cultural heritage for the EU Next Generation;
2. Minor sites, rural areas and suburbs;
3. Support to the creative industry; and
4. Tourism 4.0.

These interventions provide for strong cooperation between public actors involved in the implementation of the programme in order to facilitate the grounding of the interventions in an area where different responsibilities at central (administrations) and local level (municipalities, metropolitan cities and regions) exist.



MEXICO

In reaction to the devastating effect of the COVID-19 pandemic, Mexico is participating in the UNWTO Centre Stage project which aims to strengthen, coordinate and focus work towards gender equality in tourism governmental institutions and businesses. As they recover from the pandemic it is currently being implemented with the kind support of the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, on behalf of the German Government, and UN Women,

The project brings together the public and private tourism sectors with civil society organizations to implement a one-year action plan for women's empowerment during the recovery. The national tourism administration (NTA) and its dedicated gender unit together with businesses, NGOs and women associations is implementing targeted training programmes, measures to boost female career

progression, improvements to the legal framework and the collection of sex-disaggregated tourism employment data.

The pilot phase of the project is taking place in three additional countries: Costa Rica, Dominican Republic and Jordan, facilitating the sharing of good practice across borders and creating cross-border networks of actors committed to putting women's empowerment and gender equality at the forefront of the reactivation of the tourism sector after the COVID-19 pandemic.

For further information on UNWTO Centre Stage, please consult: <https://www.unwto.org/gender-and-tourism>.

PILLAR 4

CLIMATE ACTION, BIODIVERSITY CONSERVATION AND CIRCULARITY

CANADA

Our Food Future is a Canadian initiative led by the cities of Guelph and Wellington County that seeks to create the first circular food economy in Canada by 2025. Launched in 2020, their goals are to increase access to affordable, nutritious food by 50%, create 50 new circular food businesses, collaborations and social enterprises, and increase economic benefits by 50% by unlocking the value of food waste. Based on their mid-term report, 181 businesses in the region have already established or expanded their circular practices, over 6,000 tonnes of food waste have been diverted, and 3,267 individuals have benefitted from increased access to affordable, nutritious food.

For further information on Food Future, please consult:
<https://foodfuture.ca/our-food-future>

GERMANY

In the German tourism sector, there are currently several initiatives to strengthen transparency regarding the sustainability of travel products at the point-of-sale.

The project 'Travelling climate-consciously' by Futouris e.V., supported by Deutscher Reiseverband - DRV (German Travel Association), will develop a common standard for carbon accounting of travel products to be supported throughout the tourism sector. Based on this standard, the CO₂ emissions will be calculated and displayed consistently for all travel products at the point-of-sale. This will allow customers to make an informed decision and choose a more climate-friendly trip.

Moreover, within the project 'Green Tourism' funded by the German Government and implemented by Leuphana University Lüneburg, Forum anders reisen e.V. and Travel Bridge, an assessment model that allows for a holistic rating, and subsequent labelling of travel packages, has been developed. The model combines multiple tourism services in a single assessment model with a uniform evaluation approach and generates a corresponding label to provide customers with orientation during their holiday booking. In addition, it is transferred into an online assessment tool that allows tour operators to enter their travel packages for sustainability assessment, driving the development of a more digitalized tourism industry.



INDONESIA

PROMOTING THE USE OF ELECTRIC VEHICLES IN BALI

The electric vehicle (EV) project is part of an effort to support the improvement of the ecotourism ecosystem in Indonesia. Bali is among one of the most progressive provincial governments in accelerating this policy. Bali has suffered traffic congestion that deteriorates air quality due to the considerable amount of mobility generated by tourist activities and low public transport use. With a substantial number of people opting for private mobility, the government has planned to extensively develop the EV ecosystem with the aim to attract its citizens and tourists to shift from internal combustion engine (ICE) to EVs. To implement this plan, the Bali government has issued an underlying regulation for the development of a governance scheme and general action plan.

As the first province in Indonesia to enact a sub-regional EV policy, Bali has started to expand its focus to the preservation of cultural heritage sites and the environment. This has been implemented by promoting efficient energy sources, phasing out transportation-related air pollution and boosting EV infrastructure installation. Under the supervision of the Transportation Agency of Bali, government institutions and state-owned enterprises operating in Bali are required to install an

EV charging facility in their property. In addition, the regulation aims to phase out ICE vehicles in Bali by gradually increasing EV adoption through fiscal and non-fiscal incentives. Fiscal incentives include annual vehicle tax and registration fee exemption, while non-fiscal incentives include the right to reduce parking fares, exclusive road access and other infrastructure development incentives. Bali's sub-regional programmes and strategic plan will be complemented by the action plan that is currently being developed.^a

Enhancing coordination between transport, tourism and other related policy areas, including a renewable energy programme, can improve visitor mobility to and within destinations, reduce bottlenecks, enhance visitor satisfaction and help to secure the economic viability of local transport systems by servicing both residents and tourists. Furthermore, by promoting the development of EV, transport policies can be used to attract, manage or direct visitor flows to particular destinations, and facilitate change to eco-friendly transport options, which can help consolidate a destination's reputation as sustainable.

Source: a) Rizki, M. et al., 2021.



LABUAN BAJO SUSTAINABLE MANAGEMENT

Labuan Bajo, one of Indonesia's Five Super Priority Destinations, is a model for archipelagic-nature-conservation-based tourism. Labuan Bajo, located in East Nusa Tenggara, is the home base to visit the Komodo National Park Area, the habitat of the endemic Komodo dragons. To preserve the ecosystem, the carrying capacity is defined to manage visitors' quota for tourist attraction points inside the park.

The tourism experience in Labuan Bajo is a combination of marine tourism sailing with traditional phinisi boats and land trekking tours for Komodo habitat safaris or scenic viewpoints. The visitor flow management is carried out through an online registration system coordinated between the Harbormaster, the Komodo National Park Authority, the Labuan Bajo Flores Tourism Authority and the local government.

The quality of tourism in the National Park area, including the quality of scouting and basic tourism infrastructure is key. In that sense, the training for local naturalist guides is conducted to improve the quality of the tourism

interpretation with scientific research content and knowledge of biodiversity to support educational and special interest tourism approaches.

Infrastructure renovation improves existing facilities into elevated tourist decks to reduce direct tourist interactions with wildlife and provide standard understanding and knowledge through displays in the tourist information center. The management of marine tourism is carried out by defining carrying capacity on diving and snorkeling points, establishing mooring buoys and a zoning system between tourism and fishing area for local villagers.

The marine waste management is carried out by collecting garbage and periodically bringing all waste from the islands to Labuan Bajo to be processed at the Labuan Bajo land waste management. The cleaning of the beach is carried out weekly by more than 30 volunteer groups of environmental activists in Labuan Bajo. Plastic waste is collected and used for derivative products, such as recycled diesel fuel for fishermen from plastic-bag waste pyrolysis, recycled plastic-made souvenirs, to other recycled creations such as the circular economy practices in tourist destinations.



ITALY

One of the pillars of the Strategic Tourism Plan 2023–2027 is sustainable and integrated tourism. This aims to promote sustainable growth in terms of cultural and environmental sustainability by changing the tourism model towards circularity and protection of biodiversity, taking into account the preference of European tourists of soft mobility (walks, historical railways, cycling routes, etc.) and sustainable transport, while responding to the objectives of decarbonizing of the Green Deal and contributing to the establishment of a more sustainable global economy. In this context, it is also intended to include local tourism:

- Promotion of sustainable tourist transport, intermodality and facilitation of access for tourists to local public transport;
- Exchange of experiences between different localities and territories on sustainable tourism models; and
- Support for the adoption of circular economy models and sustainable waste management systems in tourist resorts.

The certification of eco-sustainable tourism products will be promoted in line with what the European Commission is defining.

Tourism is a living the experience. It must however also be inclusive, overcoming the limits due to the impact of the pandemic, also promoting the accessibility of underserved territorial areas and, in any case, the usability of places without distinction of any kind (age, physical condition, etc.), encouraging the recovery and growth of the individual and the community. Tourism is a powerful tool for the development of a territory and the valorization of heritage and territorial specificities, as well as an important driver for retraining and attracting jobs and businesses even in marginal or degraded contexts. The quality must then be sought in the product offered at any level, with a particular focus on the high-end, in order to enhance – from the tourist point of view – the excellence of production, the traditions of making, the Made in Italy.



JAPAN

In order to build a management system in regions, the Japan Tourism Agency supports the formation of a model for sustainable tourism business management, the development and creation of local human resources who practice sustainable tourism, and the promotion of efforts by groups of local businesses that provide sustainable tourism services.

In addition, the Japan Tourism Agency has developed a guideline, *Japan Sustainable Tourism Standard for Destinations (JSTS-D)*, that includes tourism indicators in accordance with international standards to help regions manage sustainable tourism destinations and have implemented model projects to introduce the indicators in 20 regions in Japan so far. Some of these regions are taking specific actions to conserve and protect the natural environment.

The following are three specific examples of efforts:

1. One popular beach resort in the far west islands of Japan, Okinawa Prefecture, is seeking high value-added marine tourism under the restriction of entry to the area while conducting environmental impact studies of adverse effects on coral reefs. Based on the results of the verification, the Japan Tourism Agency is establishing a mechanism for the permanent implementation of entry restrictions, specifically: guidelines, operational methods, human resource development and methods for certifying excellent operators.
2. The Hakone DMO conducted a questionnaire survey of tourism businesses in Hakone (a famous destination that is two hours away from Tokyo by train and located near Mount Fuji) to determine how many eco-friendly measures are actually taken. The objective of this project is to improve the value of the Hakone brand with tourism, environmental conservation and volcano disaster preparedness at its core, and to promote the development of a sustainable community in Hakone by bringing together all residents, businesses and tourists, and establish its mechanism.
3. In the survey project on environmental and cultural cooperation funds on Amami Oshima Island of the south-west islands, registered as a natural heritage site in 2021, a survey was conducted to cultivate understanding and awareness of the conservation of the natural environment among visitors and to consider collecting cooperation funds, in order to implement initiatives for



sustainable tourism and to secure financial resources for the DMO under its jurisdiction. The goal is to promote the environmental and cultural values of Amami Oshima, minimize the negative impact on the environment caused by an increase in the number of visitors and create a system that will lead to the promotion of sustainable tourism by improving the well-being of the islanders and increasing the effects of tourism.

As for the promotion of plastic resource recycling, a law on this subject came into effect in April 2022, tightening regulations on the use of plastic. Accommodation facilities are required to reduce the use of certain disposable plastic products, such as toothbrushes, hairbrushes and drinking straws. The government will issue recommendations or orders to lodging facilities and other businesses emitting a certain level of plastic products if they do not take sufficient action. Moreover, penalties will be imposed if the order is violated. Regarding one-way (disposable) plastics, the target is a cumulative 25% reduction in emissions by 2030 throughout Japan, regardless of industry. In response, one of the major hotels expects to reduce its plastic use in the financial year (FY) 2022 by approximately 11 tonnes (equivalent to a 70.2% reduction) compared to FY2019.

NETHERLANDS

The Netherlands Board of Tourism and Conventions (NBTC) is one of the Launch Partners of the Glasgow Declaration. As a signee of this declaration, initiated (among others) by UNWTO, the Tourism Foundation and Tourism Declares, NBTC commits to unite all stakeholders in transforming tourism to deliver-effective climate action. The global commitment aims to halve emissions by 2030 and reach net zero as soon as possible before 2050. As all other signees, NBTC will work towards a Climate Action plan based upon the five main pathways of the Glasgow Declaration. In addition, NBTC aims to align the Dutch tourism sector in accelerating climate action, by developing a Roadmap for Climate Neutral Tourism in the Netherlands. This roadmap, which will be based upon the main pillars of the Glasgow Declaration, will bring together knowledge on the state of the destination regarding climate action, provide a shared framework and narrative on how to address climate action. It also seeks to identify both opportunities and challenges while working towards a net zero destination. With this roadmap in hand, Dutch stakeholders can collaborate more effectively and accelerate the transition of Dutch tourism towards climate neutrality.



TÜRKIYE

Taking sectoral measures against climate change and increasing the capacity to adapt, as well as determining the principles for reducing greenhouse gas emissions from tourism, travel activities and facilities can be listed among the current tourism policies in Türkiye.

The Turkish tourism sector has created a sustainable tourism roadmap in cooperation with the Global Sustainable Tourism Council (GSTC), one of the world's most important environment and sustainability platforms. The agreement, addressing the sustainable transformation of accommodation facilities, consists in the main headings of sustainable management, cultural, socioeconomic and environmental sustainability. Among these topics, actions on resource management, waste management, wastewater management and energy saving criteria under environmental sustainability, will contribute directly to the circular economy in the tourism sector and to the reduction of CO₂ emissions. The programme would also improve self-tracking and self-sustainability situation analyses for accommodation facilities via a digital system created within the scope of the programme.

UNITED ARAB EMIRATES

In the United Arab Emirates, four ministries led an effort to develop a policy for circular economy. The effort was supported by international organizations such as the World Wildlife Fund (WWF) and the World Economic Forum (WEF). In addition, there was a collaboration and input sourcing from key organizations of the private sector in the United Arab Emirates, as well as various government agencies.

The purpose of the policy is to outline ways in which the United Arab Emirates can transition toward a more circular economy where resources are used in a most efficient way to improve the quality of life. The policy aims to:

- Achieve sustainable management of the economy and efficient use of natural resources;
- Promote circular economy and sustainable practices that reduce environmental stress; and
- Encourage the private sector to shift to cleaner production methods and techniques.



The policy identifies four priority targets to adopt circular economy principles:

1. Sustainable manufacturing;
2. Green infrastructure;
3. Sustainable transportation; and
4. Sustainable food production and consumption.

The policy outlines core areas that would enable the transition:

- Set clear targets and directions;
- Technology, innovation and research and development (R&D);
- Building awareness;
- Partnerships and collaborations;
- Access to sustainable finance;
- Procurement policies; and
- Waste management.

The policy also outlines clear key performance indicators (KPIs) to measure the success of the policy and progress monitor.

PILLAR 5

POLICY, GOVERNANCE AND INVESTMENT FRAMEWORKS

EUROPEAN UNION – THE EUROPEAN GREEN DEAL AND THE COVID-19 RECOVERY, AND THE COHESION FUNDS

The recently adopted Recovery and Resilience Facility of the EU is rooted in the aim of achieving competitive sustainability and cohesion through the European Green Deal (EGD) and in line with the SDGs. It provides a large-scale financial support to EU Member States to mitigate the socioeconomic impacts of COVID-19 pandemic for a more sustainable, resilient and inclusive recovery, while ensuring adequate focus of required investments and reforms and promoting the green and digital transitions – key elements of a modern and diverse EU tourism ecosystem.

The EGD is a transformation strategy to make the EU economy more sustainable, by turning climate and environmental challenges into opportunities and making the transition just and inclusive for all. The success of the EGD requires a framework of regulation and legislation, setting clear overarching targets alongside financing mechanisms and incentives to encourage private sector investment (Sustainable Europe Investment Plan), with action plans for key sectors and goals.

The EU commitment to support the recovery of the tourism sector is reaffirmed in the European Commission communication on *Transport and tourism in 2020 and beyond* which puts tourism at the heart of the EGD. It recognizes sustainability as the guiding principle of the development of a modern and diverse EU tourism ecosystem and takes advantage of the wider green and digital transformation pursued by the EGD.

Many tourism sectors and tourism operators benefit from 15 different EU funding programmes. Together, they provide more comprehensive support at EU level than would be possible under a single specific funding programme for tourism. To help tourism stakeholders find funding under the available EU programmes, Directorate General (DG) GROW publishes a guide on EU funding for tourism providing examples of projects that have received funding under different programmes.

The Cohesion Policy Funds support the regions of the EU with the aim of supporting job creation and the competitiveness of businesses. This support shall be provided under the shared management method, where Member States and regional and local authorities are responsible for the implementation of the funds, setting



priorities based on identified needs and in accordance with the conditions set out. This allows national, regional and local authorities to set up schemes that meet the specific needs of the territory, with funding from the EU budget alongside national and private funding. In the 2021–2027 programming period, cohesion policy funds, in particular the European Regional Development Fund, will continue to provide broad funding under policy objectives to strengthen the foundations of more resilient and sustainable tourism. For example, the Fund promotes investments in digital solutions, in the optimal and sustainable use of environmental resources, in the diversification of tourism offer and in cross-border cooperation in the field of sustainable tourism. As a new feature, a new specific objective has been added under the European Regional Development Fund. The objective is to promote sustainable tourism to improve economic development and social inclusion, thereby recognizing the transformative potential of the tourism sector in addressing socioeconomic challenges and taking into account the needs of green and digital transformation, and resilience of the tourism value chain. Support for sustainable tourism is also available as part of integrated local development strategies based on the needs and potential of local areas.

FRANCE

The Tourism Sector Committee (TSC), a consultation tool for all players in the sector, has proven its usefulness. It is composed of more than 100 members (companies, professional federations/associations, trade unions, local authorities, institutions, the national operator Atout France and private players) and is chaired by the Minister Delegate for Tourism. During the crisis, the TSC brought together all the players in the sector on a weekly basis to work together.

The four commissions of the TSC (Employment/Training, Sustainable Tourism, Competitiveness/Simplification/Regulation and Digital/Innovation) have produced numerous proposals that have fed into the Destination France plan.

For further information on Destination France, please consult: <https://www.gouvernement.fr/destination-france-le-plan-de-reconquete-et-de-transformation-du-tourisme>



INDONESIA

SUSTAINABLE TOURISM VILLAGES

Among the tourism policies in Indonesia, Sustainable Tourism Village Development is one of the most prominent policies in rebuilding tourism. The development of tourism villages is also the mandate of the 2020–2024 National Medium-Term Development Plan as an effort towards quality tourism experience, a new paradigm for future tourism development. Currently there are 1,831 tourism villages in Indonesia. With the vast amount of tourism villages and ecosystems, it is undeniable that tourism villages and local MSMEs would have a key role in materializing people’s prosperity and rebuilding tourism. As a result, Tourism Village is estimated to impact the local economy. In 2019 it was estimated that 14% of domestic tourists and 23% of international tourists visit villages. The tourist expenditure is IDR 5.8 trillion and IRD 3.8 trillion, respectively. This expenditure stimulates the village economy. The stimulus from tourism activities in all tourism villages in Indonesia causes a multiplier value-added effect of almost IDR 9 trillion, equivalent to a contribution of around 0.06% of Indonesia’s GDP in 2019. Furthermore, the multiplier impact of the development of the Tourism Village programme could create 341,600 job opportunities or about 0.26% of total employment in Indonesia in 2019.

In order to help the recovery and resilience, especially for the local communities and MSMEs, collaboration between related financial institutions/authorities and the Ministry of Tourism and Creative Economy (MoTCE) have produced non-collateral loan financing products for tourism stakeholders, especially MSMEs, which are friendly to debtors, especially Sustainable Tourism Village actors.

THE SUSTAINABLE TOURISM STRATEGY

The Sustainable Tourism Development (ST-Dev) strategy consists of five flagship programmes:

1. Sustainable Tourism Destination (STD);
2. Sustainable Tourism Observatory (STO);
3. Sustainable Tourism Industry (STI);
4. Sustainable Tourism Marketing (STM); and
5. Sustainable Tourism Certification (STC).

In order to socialize ST-Dev strategy to Indonesian tourism stakeholders, various activities were conducted such as the Indonesia Sustainable Tourism Award (ISTA). The establishment of the national sustainable tourism management forum and the development of Sustainable



Tourism Observatories (under UNWTO International Network of Sustainable Tourism Observatories – INSTO) in Bali, Lombok, Borobudur, Pangandaran and Toba, in collaboration with universities functioning as Monitoring Center of Sustainable Tourism Observatories/MCSTO. These initiatives facilitate destinations to communicate and share their experience and knowledge, as well as problems in applying sustainable tourism. To make sure that the Sustainable Tourism concept is well implemented, the Indonesia Sustainable Tourism Council (ISTC) was established as co-partner that also undertakes Sustainable Tourism Certification to tourism destination and tourism villages. The latest initiative regarding sustainable tourism implementation in Indonesia is the commitment to apply carbon footprint calculation and offsetting in tourism destinations across Indonesia.

SUPER PRIORITY DESTINATION POLICY

The Five Super Priority Destination Policy of the Indonesian Government aims to accelerate economic transformation, from an economy based on natural resources to an economic sector based on added economic value or selling value.

The five locations are Toba Lake, Borobudur, Labuan Bajo, Mandalika and Likupang. The government wants to accelerate and increase the contribution of tourism to the

national economy up to 8% of total GDP. To achieve this, the government aims to create 13 million new jobs, and generate a turnover of up to IDR 240 trillion from tourism. Then the process of implementing policies in the field of development and pioneering of tourist attractions in the five super-priority tourist destinations was compiled.

To build the five super priority destinations, the multisector development is funded by the central government through the improvement of infrastructure, including public transportation, roads, public facilities, airports and information technology readiness. Infrastructure development to support the development of these destinations is also promoted through domestic and foreign investment.

The government also regulates special allocation funds for five super priority tourist destinations. Several policies need to be developed further: among others, the establishment of special economic zones, so that there is uniformity in design for the benefit of tourism. Potential tourist attractions that already exist should then be improved to reach the desired quality level. The government feels there is a need to speed up the communication process from the central and regional governments to do so. In the five destinations, the central government has formed an extension of its arm through the Tourism Authority Agency.



ITALY

One of the pillars of the Strategic Tourism Plan 2023–2027 concerns governance. Tourism is a matter of shared competence between the state and the regions: The state lays down the fundamental principles of the matter while regional action regulates the detail of the matter, hence, the need for a shared model of governance and monitoring that aims to achieve and consolidate a participatory and effective decision-making process, ensuring continuity of action, even in emergency situations due to the intervention of exogenous agents (such as pandemic, geopolitical instability, etc.). The experience of COVID-19 has led to strengthening this component which also includes monitoring aimed at controlling issues such as the abuse of economic operators, but also the ability to attract and spend tourism funds from international and national sources.

The Italian Budget Law for 2022 created the Unique National Tourism Fund (with a budget of EUR 120 million for 2022 and 2023 and EUR 40 million for 2024) with the aim of rationalizing measures aimed at attracting and promoting tourism in the national territory, supporting operators in the sector in the process of mitigating

the effects of the crisis and boosting production and employment in synergy with the measures provided for in the National Recovery and Resilience Plan. The fund is intended at:

- a) Adopting safeguard measures for economic operators in the sector favour of operators for which conditions limit the ordinary possibility of carrying out productive and working activities; and
- b) Promoting tourism development policies capable of producing positive economic and social impacts on the territories concerned, and for the productive and social categories involved.

The Law also established the Single National Fund for Capital Account Tourism (with a budget of EUR 50 million for 2022, EUR 100 million for 2023 and EUR 50 million for each of the years 2024 and 2025) for the realization of investments that increase the attractiveness of tourism in the country, including the organization of events (including sporting events), considered of relevant tourist importance, as well as positive social, economic and employment effects on the territories and for the categories concerned.



JAPAN

In the financial year (FY) 2021, with the aim of promoting and spreading tourism risk management in various regions, the Guidance for Preparing Tourism Crisis Management Plan was developed for local governments, DMOs and tourism businesses as an introductory tool. The government collected, analyzed and organized domestic and international good practices for crisis response in each of the four R-phases, which are considered the basic elements of tourism risk management:

1. Risk reduction;
2. Readiness;
3. Response; and
4. Recovery.

In addition, a webinar was held to introduce the use of the guidance documents. Furthermore, while utilizing past efforts, a Tourism Crisis Management Communication Plan will be developed as a part of the project of the APEC Tourism Working Group.

MEXICO

Mexico's governance model aims at providing for effective public/public coordination and consultation.

The Tourism Advisory Council: Consultative body of the Ministry of Tourism, aiming at proposing the formulation of strategies and actions for the coordination of the units and entities of the Federal Public Administration, in order to achieve an integral development of the national tourism activity, using among other mechanisms the forums of consultation and published memoirs. (Basis: article 12 of the General Tourism Law.)

The National Conference on Tourism: Coordinating body between the three levels of government, responsible for establishing the bases for the policy, planning and programming throughout the national territory of the Tourist Activity, referred to in Article 2, section II of the Law. (Basis: article 8 of the Regulation of the General Law on Tourism)

UNITED KINGDOM

The GBP 4.8 billion Levelling Up Fund will invest in infrastructure that improves everyday life across the United Kingdom up until 2024/25. The first round of the fund focusses on three themes, all of which are likely to have clear benefits for local visitor economies. These include:

1. Transport developments like developing cycle paths and accessibility features, enabling residents and visitors better access to and travel within destinations;
2. Town centre regeneration, making places more attractive to visitors; and finally
3. Maintaining and regenerating much-loved cultural and heritage institutions and visitor attractions, to protect and strengthen the local offer for visitors.



02 G20 AND GUEST COUNTRIES CASE STUDIES ON MSMEs AND COMMUNITIES

ARGENTINA



✂ MSMEs

PREVIAJE (PRETRIP) PROGRAMME, 2020 AND 2021 EDITIONS

✂ Description

PreViaje programme is a public policy to stimulate and encourage the demand for goods and services in the tourism sector designed and promoted by the Ministerio de Turismo y Deportes (Ministry of Tourism and Sports) of Argentina.

It was conceived and used as a palliative for the serious damage suffered by the sector because of the crisis caused by the COVID-19 pandemic; and continues to be used as a tool to direct and encourage tourism demand, to promote investments in the sector and stimulate job creation. Its innovative character denotes a singular modality of state intervention based on the principles of a present state in coordination with the private sector, with a view to generating an efficient use of public spending and mobilizing the savings available in households.

In general terms, the programme pursues four main objectives:

1. Stimulate the demand for domestic tourism;
2. Mobilize surplus savings in pesos (ARS) and retain it within the formal system;

3. Protect the tourism sector from the pandemic and the adverse effects of the international context; and

4. Contribute to increasing employment and formalizing the income of the tourism sector.

The PreViaje programme seeks to promote the purchase of national tourist services by recognizing those who purchase a national tourist service in advance (accommodation, excursions, transportation) – a sum of money equivalent to 50% of the expenses incurred. In terms of operation, the programme consists of two major stages: a first for generating the benefit, and a second for granting and using it.

In the first stage, advance purchases made from tourism providers enrolled in the programme must be accredited by means of their respective vouchers on the official PreTrip platform to verify their validity and recognition of the benefit. In the second stage, the benefit is granted, through a preloaded credit card to be used in other tourist goods and services from the date of the trip and throughout the Argentine territory.

PreViaje had two editions: The first encouraged advance purchases between 21 September and 31 December 2020 to travel throughout 2021, while the second promoted advance purchases between 12 August and 31 December 2021, to travel between November 2021 and December 2022.



Other relevant information

It is worth mentioning that according to an investigation carried out by the Argentine Tourism Observatory, the assessment of PreViaje is largely positive and its continuity generates great expectations in the community. This public policy is known by seven out of ten people interviewed and positively valued by 6 out of 10; and 7 out of 10 people agree with a new edition of PreViaje to encourage travel in medium and low seasons, and turn this programme into a state policy. In addition, the programme has been valued and distinguished both nationally and internationally, obtaining the Excellence Award at the International World Tourism Fair 2022 (FITUR) and the recognition by the UNWTO Secretary-General, Zurab Pololikashvili, who supported the initiative as a strategy to reactivate tourism. In turn, officials and representatives of the technical teams of the Ministry of Tourism and Sports have held meetings with their peers from Ecuador, Peru, Chile and Paraguay, who have shown interest in replicating the programme in their countries. Finally, it is worth noting that on 29 June 2022, the registration of providers to participate in the third edition of PreViaje was enabled. What used to be an emergency policy in a context of crisis is now a tourism promotion policy in a context of economic recovery and normalization of activity, the specific objective of which is to promote tourism in the low season and contribute to de-seasonalizing tourist activity.





✂ Relevant features

There are four aspects of the PreTrip programme to highlight:

1. **Optimization of public investment:** Public investment to finance the programme is relatively low, since the state collects taxes in two instances: when the tourist buys his vacation in advance and, later, when he uses the credit. This, in addition to reducing its fiscal cost, promotes the circuit of the formal economy.
2. **Role of the private sector:** PreViaje differs from most public policies of subsidies or direct transfers of resources since the credit is granted from purchases that the beneficiaries make to the private sector, the latter assuming a leading role in both generation and use of the profit.
3. **Universality:** There are no restrictions to participate in the programme other than having reached the age of 18. Regarding tourism providers, all those who belong to the tourism chain and are duly registered with the Federal Administration of Public Revenues (Administración Federal de Ingresos Públicos – AFIP) can participate as credit generators. These include:

- Travel agency services;
 - Accommodation services;
 - Air transport services;
 - Long-distance transportation services;
 - Car rental services;
 - Tickets to museums and recreational parks;
 - Excursion services; and
 - Others
4. **Improved social mood:** It helps guarantee the right to vacation, allowing citizens moments of leisure and recreation after the restrictions on movement in the context of the COVID-19 pandemic. Below are the main results of the first two editions of the PreTrip programme:
 - More than ARS 165,000 million (USD 1.5 billion) mobilized within the tourism sector;
 - More than 5 million tourists;



- More than 400,000 elderly people differentially benefited (70%);
- More than 14,000 tourism providers and establishments in the country benefited (since most of them are MSMEs); and
- More than 90% occupancy in all tourist destinations in the country in the 2021/22 summer season.

In short, PreViaje has contributed to the fact that the last summer season 2021/22 has been considered a record in the last two decades, both by public and private measurements, and has meant that more than 32 million tourists have vacationed in Argentine territory.

Weblinks:

PreViaje programme:
www.previaje.gob.ar
www.previaje2020.gob.ar
www.previaje2021.gob.ar

✘ **COMMUNITY**

**PLAN NACIONAL DE FORTALECIMIENTO DEL
 TURISMO SOCIAL (PNFTS)
 (NATIONAL PLAN FOR STRENGTHENING OF
 SOCIAL TOURISM)**

✘ **Description**

The main purpose of the National Plan for Strengthening of Social Tourism is to promote community access to tourism and recreational practices, facilitating the participation of social sectors with less availability or resources to access the right to tourism.

The programme comprises three intervention programmes and a transversal line of action:

1. Tourist Units programme: The Tourist Units are two hotel and recreational complexes belonging to the national state, located near two tourist destinations in



Argentina in the Province of Buenos Aires and in the Province of Mendoza. They were built in 1945 with the aim of developing the so-called *social tourism*, aimed at workers and retirees in the country. In the last two years, its development was prioritized and a specific programme was created, managed by the Ministry of Tourism and Sports, for the recovery of the Tourist Units of Chapadmalal and Embalse as symbols of social tourism in Argentina under the criteria of security, accessibility and well-being.

The Embalse Tourist Unit is located in the Calamuchita Valley, in an area of 700 ha. It has seven hotels and 50 houses (with a capacity of nearly 3,000 hotel beds) and additional buildings for administration, medical service, general services and pavilions for service personnel.

The Chapadmalal Tourist Unit is located on the Atlantic coast in an area of 75 ha, with nine hotels and a capacity of 4,000 hotel beds, and additional buildings for administration, medical service, general services and pavilions for staff.

2. National Social Tourism Network Programme; It includes the expansion of the public offer of social tourism throughout the country with agreements between the provincial governments. This is proposed through the improvement of tourist and recreational establishments throughout the territory.

3. Federal Social Tourism Programme: It involves the incorporation of social, recreational and sports proposals as an alternative or complement to the current tourist services at affordable rates for tourists (programmes of 5 to 7 nights with half board). Likewise, the participation of organizations of the social and popular economy is proposed, along with micro-, small and medium-sized enterprises in the value chain.

4. Social Tourism Observatory: Created out of a participatory, intersectoral and federal nature, it aims at monitoring and evaluating the Social Tourism Programmes ensuring they can be carried out based on the creation and application of a system of indicators.



✘ Relevant features

In December 2019, under the purview of the Ministry of Tourism and Sports of Argentina (MTYD), a new National Directorate of Social Tourism was created, with the main management objectives to promote social tourism and the enhancement of the Tourist Units.

In 2015, social tourism represented 28% of the budget of the Ministry of Tourism and Sports, falling progressively until it reached 8% in 2019. Between 2015 and 2019, visitors fell by 72%. In 2015 there were 6,670 places and in 2019 there were 1,080.

Chapadmalal Tourist Unit had nine hotels, of which seven were open to social tourism. By 2019 there were only three open ceded to different organizations. The Reservoir Tourist Unit had six open hotels and around 50 cabins in operation. As of 2019, there were three hotels open and all the cabins closed.

Regarding the previous diagnosis, new lines of action began to be outlined. Social tourism has been prioritized as a strategic axis, recognized as a means to guaranteeing

access to the entire population (above all to the most neglected), in the best possible conditions. The first actions in 2020 focussed on improving the quality of benefits and services, improving the hotel infrastructure and thereby increasing the capacity and availability of places, recovering the historical value of the tourist complexes, encouraging those who, with great effort, sustained actions during the years of neglect and redouble efforts to gradually improve the conditions of infrastructure and services. In 2022, 13 percentage points of the budget of the Ministry of Tourism and Sports were recovered. And of this, 50% is allocated to improvements in infrastructure works.

Visitors to Tourist Units

With the start-up of the first works, in 2020 tourists increased by 77% compared to 2019. On the other hand, the participation of visitors from social organizations and educational institutions increased by 300%.

Recovery of transferred hotels

In 2019, the programme recovers in the Tourist Unit of Chapadmalal and hotels 7 and 8 are conceded to the National Gendarmerie.



COVID-19 health emergency

Faced with the emergency imposed by the pandemic, the Tourist Units had to close for tourism purposes but accompanied the health emergency process, first as extra-hospital isolation centers, and second as direct care for the local health system. One of the hotels accommodated more than 100 homeless people in the context of the pandemic. In the case of the Embalse Tourist Unit, beds and 24-hour medical guards were made available. One of the hotels functioned as an Outpatient Unit for isolation. This, in turn, required rapid infrastructure improvements, which was accompanied by a corresponding budget increase. In the course of 2020, having quadrupled the credit to give effect to the investment, the social tourism area focussed on carrying out bidding processes for the comprehensive improvement of both units.

Infrastructure improvement

During 2020, infrastructure improvement processes were carried out on four hotels in Chapadmalal and three in Embalse. Carpentry, equipment for medical services, plumbing, electrical installations and installation of elevators for people with reduced mobility were carried out. At the same time, a medium- and long-term planning

process was started to allow the implementation of an approach for all hotels. In this sense, with the Ministry of Public Works of Argentina, the development of works for ARS 1,500 million for the integral re-functionalization of the Hotels was agreed. An agreement is in process with the Fondo Financiero para el Desarrollo de la Cuenca del Plata (FONPLATA) for international financing that allows the integral re-functionalization of more hotels. The project includes interventions in the sports complexes, in the squares and games sector, in the pools and in the tea houses of both Units.

Weblinks:

Functions of the Ministry of Tourism and Sports linked to social tourism:

<https://www.argentina.gob.ar/turismoydeportes/social>

Plan Creation Resolution:

<https://www.argentina.gob.ar/normativa/nacional/resolucion-%20642-2021-359003/text>

Detail of the works hotel by hotel and status of the Tourist Unit of Embalse:

<https://www.argentina.gob.ar/turismoydeportes/tur-social/obras-en-marcha-en-la-unidad-turistica-embalse>

Detail of the works hotel by hotel and status of the Chapadmalal Tourist Unit:

<https://www.argentina.gob.ar/turismoydeportes/tur-social/obras-en-marcha-en-la-unidad-turistica-chapadmalal>

AUSTRALIA



✂ MSMEs

KANGAROO ISLAND SMES LOOK TOWARD SUSTAINABLE TOURISM DEVELOPMENT

✂ Description

Kangaroo Island, located off the South Australian coast near Adelaide, is an iconic high-yield Australian tourism destination for both domestic and international visitors. It was severely impacted by the 2019/20 bush fires and subsequently by COVID-19.

The Kangaroo Island Tourism Alliance (a not-for-profit SME marketing organization) and the South Australian Tourism Commission have together created a tourism development strategy to maintain the reputation of the island as a world leading tourism destination. The strategy includes employment and skills planning and infrastructure investment to modernize facilities and services.

✂ Relevant features

- MSME networking;
- Collaboration between all levels of government and businesses; and
- Focus on resilience and the effective management of risks associated with over-tourism

Weblink:

Kangaroo Island Tourism Alliance:
www.tourkangarooisland.com.au/about-kangaroo-island-tourism-alliance



✘ COMMUNITY

CAMPING WITH CUSTODIANS

✘ Description

The Camping with Custodians programme, an initiative from Tourism Western Australia, builds community-operated campgrounds on Aboriginal and Torres Strait Islander land where visitors have the chance to stay with traditional owners and experience local Aboriginal culture. Camping with Custodians also provides economic and job security for Indigenous communities by seed funding and developing small scale resilient and sustainable tourism enterprises, that are then transitioned back to traditional owners to manage, grow and evolve.

✘ Relevant features

- This investment creates a sense of pride for the landowner groups and acts as an incubator for other Aboriginal-owned businesses.
- It also builds business capacity within Aboriginal and Torres Strait Islander communities in Western Australia.

Weblinks

Camping with Custodians:

www.tourism.wa.gov.au/industry-support-and-events/tourism-development/Aboriginal-tourism/Pages/Camping-with-Custodians.aspx#/

CANADA



✂ MSMEs

THE ROLE OF ASSOCIATIONS AND RECOVERY PLANS TO BETTER SUPPORT THEIR MEMBERS.

✂ Description

- Tourism HR Canada (THRC) has put together a series of resources to assist tourism stakeholders, including a 10-Point Recovery Plan that includes recommendations to help the tourism sector recover by ensuring it has a post-COVID-ready workforce. THRC also launched an online toolkit that includes tools and downloadable content on the five modules (workforce, communications, marketing, strategic planning, and budget and finance), all designed to give tourism operators the knowledge and resources they need to rebound and succeed.
- Restaurants Canada (RC) has drafted guidance for food service operators to implement as they re-open. The guidance outlines enhanced cleaning practices, food safety practices, workplace protocols, as well as recommendations for marketing, financial planning and training, all in light of COVID-19. The guidance also provides signage that can be used (i.e., regarding hand washing or sanitizing areas) and templates to be completed indicating steps taken on

enhanced protocols (e.g., social distancing, cleaning and disinfecting). In addition, RC has developed a crisis preparedness and business continuity guide for foodservice operators, and also offers webinars to better understand how to navigate the 'new normal'.

- The Hotel Association of Canada (HAC), in partnership with the American Hotel and Lodging Association (AHLA), has launched industry-wide guidelines/standards to ensure guests and hotel employees have confidence in the cleanliness and safety of hotels when travel resumes. This initiative aims to improve hotel cleaning practices, social interactions and workplace protocols, while maintaining transparency for guests during their stay.

✂ Relevant features

Canada's industry associations have adapted their work to better assist their members in the tourism sector to deal with the crisis, including informing them of the measures and programmes available to them. Some associations have also shared reports, recommendations, guidelines

Web links:

Restaurants Canada: <https://www.restaurantscanada.org/>

Tourism HR Canada: <https://tourismhr.ca/>

Hotel Association of Canada: <http://www.hotelassociation.ca/>



✘ COMMUNITY

THE TOURISM RELIEF FUND

✘ Description

Although the promotion of inclusive community development is not explicitly set out as one of the goals of the Tourism Relief Fund (TRF), it can be one of the indirect benefits of TRF. The regional component of TRF (which comprises CAD 485 million of the Fund's total CAD 500 million envelop) is meant to support tourism entities in strategically adapting their products and services to adjust to public health requirements, while planning for, and investing in, recovery efforts for future growth. The TRF focusses on empowering tourism entities to seize opportunities in domestic markets and on helping the sector reposition itself for international visitors. In administering the TRF, priority consideration is given to projects.

Thus, the priorities of TRF focus largely on the benefits that the tourism business or organization brings to its community and region:

- That support the indigenous tourism sector;
- Where the recipient business/organization is of strategic importance to the tourism sector in the region;
- That contribute to the economic development of a region;
- That contribute to job creation in the region; or
- That take place in a tourism-dependent community/region, including projects supporting downtown cores.

CHINA




✂ MSMEs

HiCHINA TRAVEL

✂ Description

HiChina Travel is an online travel community founded in 2017 in Beijing. It is a platform committed to offer travel guides, tips, blogs and discussions concerning travel in more than 200 destination cities in China. This travel intelligence has greatly encouraged fully individual travellers (FIT) visiting China. HiChina Travel also provides package tours and events featured with unique local culture. Through the content production by paid generated content (PGC) and UGC, it is dedicated to narrow the information gap between the *real* China and the *imagined* China in foreigner's mind. Based on this, it is also a matching and trading platform for tour providers and international tourists.

Usage of digital tools: practice, benefits and future plan

Since HiChina Travel itself is an online platform and its business model is based on information sharing, the usage of digital tools (website) is from the very moment it was founded. It has accounts on popular social media, not only the mainstream ones, like Facebook, Twitter and Instagram, but also specific ones like Vkontakt in the Russian Federation and Naver for Korean markets. These social media contribute a lot in customer capture and positive brand image exposure.

It is estimated by public reports that expats in China decreased around 90% after 2020, but still there are about 800,000 to 900,000 foreigners living in China. After the pandemic, with the target market shift, to localize the social media platforms will be an essential choice for HiChina Travel. It has attached more importance to the domestic social media, mainly WeChat and its Official Fan Page, Video Channels and Mini Programme which are the mostly used social media in China both by enterprises and individuals including the expats. HiChina Travel has witnessed a 80% increase of sales on WeChat platform during the past two years. Meanwhile, they keep posting texts, pictures and videos on the international social media, such as Facebook, in which HiChina Travel has over 2.6 million followers and the number is still growing. The numbers of followers in Instagram and VKontakt are growing fast by locals who are willing to work, study or doing business in/with China.

The benefits of digital tools (mainly social media and the website) include:

- Customer interest capture even during the pandemic;
- A bigger potential customer pool brought by followers in the social media – the total number of followers has increased by 20% during the past two years;
- Timely customer service through digital tools, mostly the instant messaging tools, include Wechat, as



well as the automatic chat box on the website and Facebook; and

- Instant reactions from followers online, to test their satisfaction about a destination itself or travelling stays, transportation and food services of the destination. Also, comments and feedback on Wechat fan pages will show how good a company has done.

As to the future plan of digital tool usage, to improve its ability in customer capture and promotion online, HiChina Travel will put more efforts in the video-dominated platforms, like YouTube, Instagram, DouYin (Tik Tok), etc. With the reopening of the inbound tourism market in China in the future, overseas offices are probably set up with local employees who are much more familiar with their specific social media, like Kakao Talk in the Republic of Korea.

Difficulties and challenges in using digital tools

In the usage of digital tools, HiChina Travel faces certain technical difficulties. For example, they agree that short videos are the trend of digital marketing, and plan to register in DouYin and its overseas version Tik Tok. However, because the difference of domestic and overseas version of this short video platform, and different functions in different countries, it takes them more time and hands to be familiarized with these platforms.

Expectations and suggestions on government's measures and policies

As for the usage of social media, especially the international platforms, government restrictions are expected to be relaxed gradually. With more ease in their usage and less operational cost, it will be easier for Chinese travel operators to promote travel products, as well as Chinese tourism destinations towards customers overseas.

✘ Relevant features

After the COVID-19 pandemic, HiChina Travel has shifted their target market from inbound to domestic. Thanks to the fact that a large portion of their clients and social media followers are expats living in China, especially those studying and working in China, they are also important contributors of user generated content (UGC). After the outbreak of COVID-19, most of them stayed in China and became the main customers of HiChina Travel. Besides the tour services, HiChina Travel provides concierge services related to work visa application, PCR tests, etc. They also sell some specialty products from the rural areas.



✘ COMMUNITY

SOLVING RURAL ACTIVATION PROBLEMS THROUGH A NEW PATH OF "SITUATIONAL VILLAGE" CONSTRUCTION

✘ Description

Chayuan Natural Village, Xitan Village and Longyang Town are located at the southern part of the national natural reserve of Jiulong Mountain and the junction of Suichang, Longquan and Pucheng in Zhejiang and Fujian Provinces. With a population of 155 from 42 households, it has only 103 mu (approx. 6.7 ha) paddy fields, with 0.66 mu (approx. 440 m²) per capita, which is far lower than the county's average level. Most of the paddy fields are terraced fields that are difficult to cultivate. There is a small amount of per capita farmland in the village. Besides, scattered plots and undulating terrain resulted in low efficiency of the agricultural industry, which can only meet basic food and clothing needs for the villagers. As there is no pillar industry in the village, the villagers have to go out as migrant workers for a living.

Measures

1. Take 'culture' as the soul to promote the original transformation and build beautiful appearance of the village. In the process of village construction and building renovation, full use of the two golden signboards of Chayuan Village was made, namely, the intangible cultural heritages of Zhejiang Province, including Tea Garden Martial Arts, and National Ecological Cultural Village. The original style of Chayuan Village was transformed and upgraded, and an ecological village for 'Yearning countryside and seeking homesickness' was created by first, defining the inheritance path, second, preserving the homesickness culture and third, integrating the martial arts culture.
2. Stick to 'people' orientation, promote the integration of agriculture and tourism, and develop the rural industry by first, invigorating idle assets to increase income, second, promoting ecological products to increase income and third, creating more jobs to increase income.



3. Promote the 'integration of old and new villagers' in a 'harmonious' way and address the gaps of the village by first, jointly exploring the path of rural revitalization, second, promoting lifestyle sharing and third, promoting co-governance of beautiful villages.

✘ Experience and inspirations

Next step and overall objectives

Create a national model of rural activation and a key village for rural tourism nationwide; and build a research and study travel camp at the provincial level.

Recent objectives

Put recent focus on the construction of the village renovation project and build the intangible cultural heritage hall of martial arts, public facilities of cultural and tourism among others. Strengthen the operation and management of the project and play a greater role in increasing the income of the village collective and helping villagers to get rich. Provide more guidance and trainings for indigenous people of the villages, attract more

villagers to work in the enterprise, and further achieve employment at the doorstep.

✘ Relevant features

- The increase in income of the village collective and villagers. Before 2016, the per capita income of Chayuan Village was about CNY 9,000. Now, the per capita income of a villager family with labour force exceeds CNY 30,000.
- Share rural elements with urban customers and take it as a means for rural activation. Attract urban residents to live in the villages and interact with the folklore, culture, public welfare, education, tourism and other aspects across Suichang County.

FRANCE



✂ MSMEs

THE SUSTAINABLE TOURISM FUND

✂ Description

Set up within the framework of the national plan 'France Relance', the Sustainable Tourism Fund aims to support, through financial aid, tourism MSMEs (according to the European definition) located in rural areas, in their transition towards sustainable tourism. This fund was initially endowed with EUR 50 million and its allocation in public funds will be increased within the framework of the 'Destination France' plan. The Sustainable Tourism Fund is managed directly by the French agency for ecological transition (Agence de la transition écologique - ADEME) and pursues the following objectives:

1. To make sustainable development the priority for the recovery of tourism;
2. To recover from the crisis with an attractive ecological transition project; and
3. To develop the attractiveness of rural areas and the quality of offer.

✂ Relevant features

The objective of the Sustainable Tourism Fund is to financially support projects by covering costs related to the transition, emergence and maturation of sustainable tourism projects. The aim is to contribute to the recovery of the tourism sector and to the emergence of a quality offer, able to meet the new expectations of visitors in terms of respect for the environment and populations. The fund aims to finance, in the form of flat-rate subsidies, investments and/or studies carried out by the MSMEs from a pre-defined list of nearly 70 possible operations.

Weblink:

Agence de la transition écologique:

<https://agirpoulatransition.ademe.fr/entreprises/aides-financieres/2022/fonds-tourisme-durable-restaurateurs-hebergeurs-accelerez-transition>



✂ MSMEs

THE SLOW TOURISME LAB

✂ Description

In addition to the Fund, an incubator dedicated to slow tourism, the Slow Tourisme Lab, aims to support innovation and encourage the emergence of sustainable projects for the benefit of rural areas. This incubator, created in 2017, is part of the 'France Tourisme Lab' network, composed of nine tourism incubators located throughout France.

✂ Relevant features

The objectives of the Slow Tourisme Lab are

- To promote a more sustainable, human way of travelling as opposed to mass tourism; and
- To create innovative tourism technologies and services applicable in rural areas for leisure and business tourism.

The Slow Tourisme Lab offers startups a set of support and shared tools to develop their projects:

- Connecting with local producers and partners;
- Theme days and discovery days;
- Open data;
- Development and promotion of the activities; and
- An accelerated access to the market of the Région Grand Est thanks to the network of tourism institutions (tourist offices, departmental tourist committees/agencies, regional tourist committee).

Weblink:

Slow Tourisme Lab: <https://www.slow-tourisme-lab.fr/fr/>



✘ COMMUNITY

AVENIR MONTAGNES PLAN

✘ Description

The *Lois Montagne* (Mountain Laws) of 1985 and 2016 have recognized both the amenities (water resources, biodiversity, unique landscapes, etc.), the assets in terms of quality of life, employment and leisure activities, as well as the hindrances (relief, climate, isolation) of the French massifs. On this basis, these laws have established the commitment of the national community to support these territories. The fragility of mountain areas and their vulnerability to climate change, make it necessary to strengthen the support to accelerate their adaptation to the major transitions underway, notably demographic, ecological and digital transitions.

Since the beginning of the crisis, more than EUR 5.4 billion have been allocated to support mountain territories and their activities. After a consultation with local stakeholders (local authorities, private sector, National Mountain Council and Massif Committees) and ministerial visits to the field, the French Government decided on a plan in May 2021 to support the mountain economy towards a more sustainable tourism. Called *Avenir Montagnes*, this plan includes an investment aid component and an engineering support system.

✘ Relevant features

The plan is structured around two cross-cutting measures and three thematic areas of intervention:

- Promote the diversification of the offer and attract new customers;
- Accelerate the ecological transition of tourism activities; and
- Boosting leisure real estate.

Nearly EU 650 million in new public funds will be mobilized and should generate investments of up to EUR 1.8 billion.

Weblink:

Government of France (2021), *Avenir Montagnes – Accompagner les territoires de montagne vers une offre touristique résiliente et durable, adaptée aux spécificités de chaque massif*, online available at: https://www.gouvernement.fr/sites/default/files/document/document/2021/05/dossier_de_presse_-_presentation_du_plan_avenir_montagnes.pdf [17-08-2022].

GERMANY



✂ MSMEs

DESTINATURE® DORF – DESTINATURE VILLAGE

✂ Description

Opened in May 2020, destinature is a cottage area on the edge of the Lower Saxony Elbe Valley Biosphere Reserve. In a personal project the founders of WERKHAUS (manufacturer of sustainable home and office accessories, furniture and product displays), build up the destinature village on stilts with environmentally friendly building materials and organic quality textiles. The entire cottage area is consistently made of sustainable materials and can be dismantled residue-free. The aim of this project is to strengthen the growing ecological awareness in tourism.

The project received the German Tourism Award 2021: First Prize and ADAC People's Choice Award

✂ Relevant features

- The destinature village shows that a vision of a responsible approach to the environment can be realized with a high-quality and economically successful tourism project. The sustainable and hip concept meets the spirit of the times, is comprehensively thought and excellently implemented.
- High demand and commercially successful.
- Close collaboration with local stakeholders and partners.

Weblinks:

Destinature Dorf:

<https://www.werkhaus.de/destinature/en/home/>

Deutscher Tourismuspreis:

<https://www.deutscher-tourismuspreis.de/innovationsfinder/werkhaus-destinature-dorf.html>



✂ MSMEs

THE PUBLIC TICKET SOLUTION

✂ Description

Visit Berlin and the Berlin Tourism and Congress Association launched a booking and visitor management system, which allows touristic and cultural service providers to allow customer access across different booking systems. The heart of the Public Ticket Solution is the Ticket Gateway module. The access management system ensures that tickets entitle the holder to immediate admission, regardless of the sales channel through which they were purchased. The Ticket Gateway is connected to the existing sales and access system of the respective providers. The dashboard provides comprehensive statistics and marketing data on ticket usage and the current volume of visitors. In addition to the Ticket Gateway, the Public Ticket Solution also includes a booking system with online booking and a channel management module.

The service was awarded with the second prize of the German Tourism Award 2021 for:

- Its solutions that works for different sales systems;
- Providing data on utilization and market research;
- Increasing sales reach, especially for smaller suppliers.

✂ Relevant features

The Public Ticket Solution, addressed to touristic and cultural service providers, offers a convincing solution for two current challenges at the same time: the harmonization of ticket systems and the increase of the sales reach, especially for small experience modules. A well-thought-out concept with great added value, which is also convincing due to its transferability to other formats and regions.

Minimizes cuing and reduces the workload of personnel reaching of over 400 million potential customers

Weblinks:

Public Ticket Solution:

<https://about.visitberlin.de/en/node/2060>

Deutscher Tourismuspreis:

<https://www.deutscher-tourismuspreis.de/innovationsfinder/berlin-public-ticket-solution.html>



✘ COMMUNITY

DAS KEHRWIEDER PAKET (THE RECURRENCE PACKAGE)

✘ Description

In order to support hospitality in Hamburg during the lockdown, two cooks, Tim Mälzer and Fabio Haebel, and Hamburg Tourism initiated the Kehrwieder-Paket campaign.

25 stakeholders, including restaurants, micro-beverage producers and food manufactures, took part in the campaign. The packages were packed with high-quality products like spice pastes, preserved vegetables, jams, coffee from small roasters, beer from craft breweries, alcoholic beverages from micro-distilleries and a discount coupon for a visit to Hamburg. The initiative offered Hamburg fans the chance to take home handpicked delicacies from local businesses.

The campaign was awarded with the third prize of the German Tourism Award 2021 for its:

- Creative solidarity campaign that generated sales in difficult times;
- High-quality, regionally typical products and appropriate design; and
- High reach.

✘ Relevant features

- The Kehrwieder (recurrence) campaign was well received: The packages (EUR 119 each) were sold out within a few days, and the response in social media was enormous. More than 3,100 packages in the typical port container look were sent. EUR 300,000 were distributed to the participating businesses, with the net proceeds of EUR 18,000 going entirely to the aid fund for Hamburg restaurateurs.
- The campaign shows a creative approach to increase the solidarity among the local communities and tourism businesses (in this case gastronomy), while assuring revenue during the lockdown.

Weblinks:

Kehrwieder Paket:

<https://marketing.hamburg.de/aktuelle-presse-meldungen-detailansicht/erfolgreiche-solidaritaetsaktion-fuer-die-hamburger-gastronomie-3-100-kehrwieder-pakete-werden-jetzt-versendet-2.html>

Deutscher Tourismuspreis:

<https://www.deutschertourismuspreis.de/innovationsfinder/haebel-maelzer-hamburg-tourismus-kehrwieder-paket.html>



✂ MSMEs

MSMEs IN TOURISM

✂ Description

The tourism sector is one of the worst affected due to the COVID-19 pandemic. The strict lock downs, interrupted air travel, closed-down hotels and other such travel restrictions were imposed to prevent the spread of the pandemic. The MSME-dominated tourism sector also witnessed a decline in its share in the Indian GDP by 120 basis points to 4.7% in 2020, from 6.9% in 2019, State Bank of India Research noted in a report in June 2021.

To address the impact on MSMEs and other businesses in hospitality, travel and tourism, leisure and sporting sectors, the government extended in March 2021 the scope of the Emergency Credit Line Guarantee Scheme (ECLGS) through the introduction of ECLGS 3.0.

31 MSMEs units sanctioned INR 234.7 crore during 2021 as ECLGS by Tourism Finance Corporation India Limited (TFCI). Under the Atmanirbhar Bharat Package, various steps were taken to attract foreign tourists:

- Extended e-visa facility;
- 24/7 toll free multilingual tourist helpline; and
- Free tourist visa for first five *lakhs* tourist till 31 March 2022 to name a few.

Weblinks:

Atmanirbhar Bharat Package, press release:

<https://pib.gov.in/PressReleaseDetailm.aspx?PRID=1741926>

Emergency Credit Line Guarantee Scheme:

<https://pib.gov.in/PressReleasePage.aspx?PRID=1759251>

Government of India (n.d.), *Schemes for MSMEs 2022-23*,

online available at: <https://msme.gov.in/sites/default/files/FlipbookEnglishSchemeBooklet.pdf> [19-08-2022].



✘ COMMUNITY

ROJGAR YUKT GAON SCHEME

✘ Description

This scheme aims towards development of Khadi and creation of sustainable employment opportunities. It will be rolled out in 50 Villages by providing 10,000 Charkhas, 2000 looms and 100 warping units to Khadi artisans, and would create direct employment for 250 artisans per village. It will transform socioeconomically distressed villages into sustainable and self-reliant Khadi based enterprises. This programme will provide opportunities, generate income and build sustainable self-reliance to communities.

✘ Relevant features

- The scheme aims to promote new enterprises and enable and facilitate capacity building of the existing MSMEs and sustainable Tourism.
- It aims to expand the base of entrepreneurship to different sections of the society through skill development, achievement and providing motivation for self-employment and entrepreneurial skill.

Weblinks:

Entrepreneurship and Skill Development Programme (ESDP)

Scheme:

<https://www.investindia.gov.in/schemes-mSMEs-india/entrepreneurship-and-skill-development-programme-esdp-scheme>

Government of India (n.d.), *Schemes for MSMEs 2022-23*, online available at: <https://msme.gov.in/sites/default/files/FlipbookEnglishSchemeBooklet.pdf> [19-08-2022].

INDONESIA



✂ MSMEs

RUMAH ATSIRI INDONESIA (RAI)

✂ Description

Rumah Atsiri Indonesia, as an aromatic wellness destination, has regularly shared the knowledge and information about holistic health for visitors and general audience through media channel. Rumah Atsiri Indonesia is committed to growing together with the locals of Plumbon. Until now, it has collaborated with the local community by hiring locals that occupy 80% of the employment in the company. The leading partner is the local Plumbon and the government.

✂ Relevant features

The Plumbon Village, Tawangmangu, is rich in natural resources with a high potential. Through the Local Champion Programme, Rumah Atsiri Indonesia has fostered several MSMEs in Plumbon, Tawangmangu. With RAI's solid and firm willingness, they manage to get the food license in a home-scaled enterprise. Products made by these MSMEs are well-curated and undoubtedly of high quality. RAI also facilitated the MSMEs to showcase their

products in Rumah Atsiri as a pacesetter for the broader market. RAI prioritized inclusivity, as more than 50% of the employees in Rumah Atsiri Indonesia are women, with around 80% of them sitting in the middle to top position inside the company.

For the locals of Plumbon, RAI created the Sekolah Lurah (School for the Head of the Village) in collaboration with Indonesia Islamic University (UII). This programme aims to assist in mapping the village's potential and guide on framing the village rules. They also implemented Lembaga Pelatihan Kerja Perusahaan (LPKP) or Job Training Institute listed on the Department of Trade, Manpower, Cooperatives, Small and Medium Enterprises with the locals of Tawangmangu as the main target to be trained as the museum and tour educators.

Weblink:

Rumah Atsiri Indonesia (RAI) Instagram presentation:
<https://www.instagram.com/rumahatsiri/>



✘ COMMUNITY

INDONESIA TOURISM VILLAGE AWARD

✘ Description

The 2021 Indonesian Tourism Village Award is an event for recognizing tourism villages that have achievements based on a set of criteria from the Ministry of Tourism and Creative Economy.

Economy

This event aims to make Indonesian tourism villages world-class and highly competitive tourism destinations.

The 2021 Indonesian Tourism Village Award has as theme 'Indonesia rises'. This theme aimed to encourage the spirit of tourism and creative economy actors in tourism villages to bounce back after the COVID-19 pandemic.

The 2021 Indonesian Tourism Village Award has seven categories. The application of:

- CHSE (Cleanliness, Health, Safety and Environmental Sustainability);
- Digital Villages;

- Souvenirs (Culinary, Fashion, Crafts);
- Tourist Attractions (Nature, Culture, Artificial);
- Creative Content;
- Homestay; and
- Sanitary.

✘ Relevant features

Tourism villages not only attract tourists but also open up new job opportunities and business opportunities for creative economy actors in Indonesia.

Weblinks:

Indonesia's five priority destinations: <https://kemenparekraf.go.id/ragam-pariwisata/Anugerah-Desa-Wisata-Indonesia>

Good News from Indonesia (2021), 'Daftar Lengkap Para Pemenang Anugerah Desa Wisata Indonesia 2021', online available at: <https://www.goodnewsfromindonesia.id/2021/12/08/daftar-lengkap-para-pemenang-anugerah-desa-wisata-indonesia-2021> [19-08-2022].

Halman Utama VOI (2021), 'Apar Tourism Village Is In The Top 50 Of The ADWI 2021 Indonesian Tourism Village Award', online available at: <https://voi.id/en/news/111709/apar-tourism-village-is-in-the-top-50-of-the-adwi-2021-indonesian-tourism-village-award> [19-08-2022].

ITALY




✘ COMMUNITY

CAPUT MUNDI

✘ Description

The project intends to enhance the archaeological and cultural heritage of Rome in order to reactivate virtuous tourist routes starting from minor places or monuments that are not always involved in the large tourist flows. The Caput Mundi project is structured around six broad investments totalling EUR 500 million.

A synergistic action is expected with the great Jubilee event of 2025 that will involve the City of Rome, and which will be an opportunity to relaunch the cultural heritage and the economy of the city. Once the tourist sector has been normalized, the aim is to relieve congestion away from the great cultural attractions, the main archaeological sites and museums, but also the churches of the historic centre. The goal is to relaunch small complexes, often closed or occasionally open, in order to disseminate the knowledge of the history of the pagan and the Christian Rome. Through restoration and/or enhancement of an important

number of cultural sites, often located in peripheral areas – or in any case unknown because they lack a historical narrative that reveals their importance in history –, the aim is to relaunch the attractiveness of Rome so that the city may present itself in a renewed guise when tourism returns.

Closely connected and particularly important is the activation of a virtuous chain of training and staffing for the management of these areas and support to the users of the restored complexes. This is to be considered ancillary to the main project. The actions of restoration and enhancement of the archaeological heritage are completed with more targeted projects aimed at cultural heritage not always affected by public action. This includes parks and public gardens and cultural sites in the suburbs.

As parallel actions, the creation of a joint ticketing and the possibility of combining tour routes that alternate the main sites and the new peripheral complexes is envisaged. In addition, explanatory posters and road signs dedicated to the project will be created. Where possible, virtual reproductions of the historical phases of the monuments will be made and informative material in digital format will



be prepared. A dedicated application will constitute the container of cultural and logistical information. Finally, a substantial number of actions will support through culture the weakest part of the population and the young persons with projects of inclusion and active participation.

The project is therefore not only a list of interventions, but also a model of cultural use, as well as a model of enhancement for Rome, in which the digital component is an enabling factor for most of the projects and a tool for structural change for the city.

✘ Relevant features

The main objectives are:

- Significantly increase the number of cultural complexes restored and made accessible;
- Create valid and qualified tourist and cultural alternatives with respect to the crowded central areas; and
- Allow the training and entry into service of qualified staff for the management of the restored complexes.

The expected transformations are:

- Increased and diversified touristic offer, through new paths and new cultural themes within the city;
- Recovery of an important number of cultural complexes, through restoration actions aimed at reopening the sites;
- Relaunching of the tourist economy of Rome, through the substantial increase of the cultural offer especially in the peripheries and degraded areas; and
- Creation of new jobs in the tourism sector, through ancillary actions to this project aimed at involving personnel for the management and opening of sites.

JAPAN




✂ MSMEs

BESPOKE. INC – JAPAN AND OVERSEAS

✂ Description

Bespoke. Inc provides sightseeing and transportation information to tourists in multiple languages using artificial intelligence (AI) chatbots. Also, by developing guidance content and algorithms, they are giving guidance related to promoting excursions in the city while avoiding crowds.

In the event of an emergency, disaster-related information, including evacuation, information will be sent out in real time (a chatbot has also been developed that provides tourist information during normal times, but changes its function to provide disaster-related information when a disaster occurs). In light of the outbreak of the COVID-19,

they also provide guidance on what to do in the case of a suspected infection and on sightseeing spots where you can avoid crowds and close contact.

✂ Relevant features

Besides alleviating crowding in tourist spots and promoting regional trips, it will contribute to creating an environment which allows tourists to sightsee with peace of mind.

The service has already been introduced in about 40 locations (as of January 2022), including government agencies, municipalities and tourism businesses in

Weblink:

BeBot: <https://www.be-spoke.io/>



✂ MSMEs

WATAYA BESSO (SAGA PREFECTURE)

✂ Description

The guest rooms of a long-established hot spring inn, that had been out of operation due to the COVID-19, were renovated and turned into offices and meeting rooms to attract companies from Tokyo and other areas. Not only individual workcation workers, but also companies have actually moved in as satellite offices. They have prepared programmes which include experiencing the cultural history and food of the area and being able to take a rest in the hot springs whenever visitors want.

Weblink:

Onsen Workstation:
https://onsen-workation.jp/ureshino_watayabesso/



✘ COMMUNITY

SECOND HOMETOWN PROJECT - JAPAN TOURISM AGENCY

✘ Description

Since it will take some time for inbound tourism to fully recover, it will be necessary to continue stimulating demand for domestic tourism. Due to COVID-19 and the diversification of work and housing styles, there is an emerging trend of people wanting to avoid the crowded and close contact places and be in contact with nature, as well as having a connection with the countryside.

In light of these new trends, the Second Hometown Project was launched, aiming to:

1. Create a *second hometown* so to speak, promoting and establishing a new style of "travelling to the region over and over, as if to return to your hometown"; and
2. Make a region more profitable for its revitalization in collaboration of the whole community.

✘ Relevant features

Workshops, plan development, surveys and some demonstration projects will be conducted under public-private partnership.

Weblink:

Japan Tourism Agency, press releases:
<https://www.mlit.go.jp/kankocho/dai2nofurusato.html>



✘ COMMUNITY

HOT SPRING CERTIFICATION (TOYOOKA CITY, HYOGO)

✘ Description

Toyooka City, Hyogo Prefecture and Toyooka Tourism Innovation, a regional DMO, have created guidelines that include items specific to hot springs as measures against infectious diseases, and started a certification system. They are also working on a system that allows tourists to find out how crowded hot springs are.

✘ Relevant features

Certified facilities: 1,057 (as of January 2022)

Weblinks:

VisitKinosaki:
<https://visitkinosaki.com/travel-professionals/topics/17297/>
<https://visitkinosaki.com/news/covid-19-new-2/>

MEXICO



✂ MSMEs

THE EMPOWERING ENTREPRENEURSHIP INITIATIVE

✂ Description

The Entrepreneurship Empowerment Project was established to recover from the negative impacts caused by COVID-19. It is financially supported by ENPACT organization with an amount of EUR 9,000 allocated to companies, SMEs, cooperatives, social enterprises and indigenous enterprises in the tourism sector in Mexico. Support was provided in coordination with the ENPACT organization and funded by the Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, on behalf of the German Government.

✂ Relevant features

- Two editions of this initiative were carried out, helping a total of 165 Mexican companies with EUR 9,000 each, workshops and mentoring to adapt their business to the new normality.
- During the first edition, of the six participating countries, Mexico generated almost 60% of the qualified applications.
- Various promotional videos were made for the participating companies.

Weblink:

enpact: <https://enpact.org/overview/>

enpact YouTube channel:

<https://www.youtube.com/playlist?list=PLOcGe5kPwC3PqjUkDbri0B4iO-YIzTWm>

Ministry of Tourism (2020), *COVID-19 Relief Program for Tourism 2020–2021 – Covid-19 Welcome Package*, online available at: <http://sistemas.sectur.gob.mx/dgots/05-seleccionados-proyecto-enpact.pdf> [19-08-2022].



✘ COMMUNITY

COMMUNITY AND SUSTAINABLE TOURISM STRATEGY OF THE ISTHMUS OF TEHUANTEPEC

✘ Description

As one of the main strategies of the Isthmus programme, the strategy seeks to consolidate tourism activity so that it becomes one of the main economic activities and thereby contributes to compensating for the conditions of poverty and social backwardness in which the communities of the Isthmus of Tehuantepec find themselves.

✘ Relevant features

- The indigenous consultation for the Tehuantepec Isthmus development project was successfully carried out on behalf of the Ministry of Tourism (Secretaría de Turismo –SECTUR).
- 5 plenary sessions and 22 internal work sessions were held to prepare the strategy.
- Scouting was carried out for the integration of the tourist product and the identification of tourist sites and destinations, and potential services in the corridor.
- A Memorandum of Understanding is being negotiated with the Turkish Cooperation and Coordination Agency TIKA Mexico, to finance community and indigenous tourism projects in the region.
- The call for the design and strategic planning of a pilot circuit for the integration of biodiversity, conservation, richness and importance of the biodiversity of the Oaxacan coastal region has been published.

NETHERLANDS



✂ MSMEs

HOSPITALITY TOOL FOR ENTREPRENEURS

✂ Description

The entire hospitality sector in the Netherlands can use the hospitality tool for entrepreneurs. This tool was developed by Koninklijke Horeca Nederland (KHN) and NBTC (Netherlands board of tourism and conventions). It aims to provide entrepreneurs from the hospitality and tourism sector with knowledge and insights about ways to better serve regular and new visitors. Now and in the future.

The hospitality tool consists of knowledge and data that provides answers to many issues that entrepreneurs are currently dealing with. Based on seven themes such as determining target groups, market insights about foreign tourists, focussing on positioning and promotion, this tool gives entrepreneurs and managers insight into opportunities for attracting both regular guests and new visitors.

The aim is a hospitable welcome like never before and profitable business operations in tourism and catering.

Weblink:

Nederlands Bureau voor Toerisme & Congressen (2022), *Een gastvrij onthaal als nooit tevoren – Vaste én nieuwe bezoekers nóg beter bedienen*, online available at: <https://nbtcmagazine.maglr.com/visitor-readiness-tool/cover> [19-08-2022].



✂ MSMEs

ROADMAP – GETTING STARTED WITH DIGITAL EXPERIENCES

✂ Description

There are countless possibilities when it comes to digital experiences, from augmented reality apps and virtual reality experiences to artificial intelligence and virtual images. These digital experiences can improve the current product developments, help develop new products and put unknown areas on the spotlight. This development task contributes to Perspective 2030 (the national tourism vision of the Netherlands), making the Netherlands attractive everywhere.

Some parties are sometimes starting immediately with realizing a digital experience before answering a number of questions:

- What is your motivation for a digital experience?
- Which digital technique can you use?
- Which target group(s) are you targeting as a destination?

- In which phase of the customer journey are you?
- Are you, as an organization, ready for it internally?
- Do you already use a digital experience and what is the best way to evaluate it?

To help destinations with this, the Netherlands Board of Tourism and Conventions (NBTC) has developed a step-by-step plan in collaboration with Breda University of Applied Sciences (BUAS).

Weblink:

Nederlands Bureau voor Toerisme & Congressen, 'Aan de slag met digitale belevingen', online available at: <https://www.nbtc.nl/nl/site/kennisbank/bestemmingsontwikkeling/aan-de-slag-met-digitale-belevingen-1.htm> [19-08-2022].



✘ COMMUNITY

AGENDA CONSCIOUS DESTINATIONS

✘ Description

The Center of Expertise on Leisure Tourism and Hospitality (CELTH) has put together a multi-year knowledge agenda for the hospitality domain. Knowledge on five urgent themes is being developed around this Conscious Destination Agenda. (Knowledge) Partners are challenged to coinvest and thereby strengthen the much-needed knowledge foundation under the hospitality domain. CELTH expressly opts for the destination level because that is where all the different subsectors and actors come together. At the destination, hospitality and value is created for tourists, residents and companies. In a Conscious Destination, the social value of the hospitality domain is put first. All actors work together towards the most positive possible impact (economic, social and ecological) for residents (quality of life), visitors (quality of experiences) and professionals (quality of work).

Weblink:

Centre of Expertise Leisure, Tourism & Hospitality – CELTH (2022), *Agenda Conscious Destinations*, online available at: <https://www.celth.nl/sites/default/files/2022-04/Agenda%20Conscious%20Destinations%20april%202022.pdf> [19-08-2022].

✘ COMMUNITY

CHEESE VALLEY – FROM GRASS TO CHEESE

✘ Description

Cheese Valley is a unique area in the middle of the Groene Hart region. It is made up of four municipalities with special stories and experiences and, above all, it is the heart and origin of real cheese, the Netherlands' yellow gold. Traditional craftsmanship and entrepreneurship come together in the middle of the Groene Hart of the Netherlands. This is where visitors find the taste of the low countries: cheese, in its purest form. Grass, cows and milk: real cheese. As it is only made, matured and eaten here.

30 million kg or 66 million pounds of yellow gold are ripened here. From young to mature, in all shapes and sizes. The doors of the cheesemakers and cheese warehouses are open to everyone. Farm life and hospitality are tangible and sincere attention to the environment, animals and sustainability are visible.

Weblink:

Cheese Valley: <https://www.cheesevalleyholland.com/en>

SAUDI ARABIA



✘ COMMUNITY

PREPARING A MODEL AND FRAMEWORK FOR COMMUNITY PARTICIPATION

✘ Description

This project aims to prepare a model and framework for community participation in the development of tourism, including:

- Mapping local stakeholders who traditionally associated with tourism employment (e.g., taxi drivers, hoteliers and tour guides) and groups traditionally not associated (e.g., elders, journalists, activists, environmental groups, women groups and Bedouins);
- Analyzing the cultural and social environment of the local communities for the destinations of Hail, Al Baha and Taif;

- Preparing a governance framework, including communication methods that connect various stakeholders; and
- Policies that govern the relationship among locals and other stakeholders; etc.

✘ Relevant features

- Mapping all local partners;
- Analysis for the locals' cultural and social environment;
- A governance framework;
- Activating the governance model in the three destinations; and
- Transferring knowledge



✘ COMMUNITY

ROYAL RESERVES ACTIVATION ENABLEMENT

✘ Description

The Ministry of Tourism and the Saudi Tourism Authority signed agreements with three different Royal Reserves to activate the touristic components of the Royal Reserves and to initiate cooperation between the signatories in achieving strategic alignment, destination development, investment attraction and marketing and promotion.

✘ Relevant features

- Assure the sustainability of development efforts in the Royal Reserves;
- Raise environmental awareness across the stakeholder ecosystem; and
- Engage the local community in developing and sustaining the Royal Reserves.

✘ COMMUNITY

AUTHENTIC SAUDI TOURIST VILLAGES

✘ Description

An initiative led by the Ministry of Tourism, in conjunction with the Heritage Authority, a number of government bodies, and the private sector, with the support of local communities, to build and promote the 'Authentic Saudi tourist villages'. The initiative aims to provide a distinctive experience for the visitor to get to know the local and rural communities with their unique characteristics, in addition to their rich history, traditions, hospitality and generosity, cultural diversity, folklore, authentic cuisines, and traditional handicrafts and the enjoyable daily life.

✘ Relevant features

- Sustain the tourism integration of tourist attractions within the destinations in the Kingdom to provide a mix of diverse products and experiences;
- Motivate and engage the locals in the rehabilitation and employment of heritage villages;
- Develop local communities and achieve a development balance;
- Provide the necessary basic services within the heritage villages;
- Encourage the establishment of SMEs to create new job opportunities; and
- Develop a model of tourism investment in villages with economic benefits and returns.

Weblink:

AlArabiya, Tablet Hotels, YouTube video:
https://youtu.be/7wy1_Z0jcPg [19-08-2022].



✘ COMMUNITY

TOURISM MULTI DONOR TRUST FUND (MDTF)

✘ Description

This Multi Donor Trust Fund (MDTF) by the World Bank aims to support developing countries by providing access to knowledge, technical assistance, and financing to enable timely and innovative activities to address the financing and knowledge gaps in Tourism. In alignment with the frameworks endorsed by G20 and global development partners, the MDTF will be based on the World Bank's integrated approach to Tourism which encompasses three thematic areas:

1. People: Inclusive jobs, productive firms and community development;
2. Places: Green, resilient and inclusive destinations and assets; and
3. Policies and markets: Policies, institutions and partnerships for competitive markets.

The MDTF is currently capitalized at USD 100 million due to a funding contribution by the Kingdom of Saudi Arabia, with a target of at least USD 200 million.

✘ Relevant features

Revitalization of small heritage towns and villages through leveraging local culture, promoting rural-urban integration and developing community-based tourism has been shown to economically benefit local communities through improved livelihoods, promote and safeguard heritage, and improve the livability. Tourism also acts as a vehicle for conservation of natural assets, including protected areas, in a manner that is inclusive for communities and helps alleviate poverty.



✘ COMMUNITY

HUMANIZATION OF CITIES, MEDINA AS AN EXAMPLE

✘ Description

The spirit of the place of Medina is a combination of the presence of the Prophet's Mosque, traditional heritage, monuments, spaces, roads and landscapes, as well as various intangible elements. Place memories, colors, smells, and many others.

Public spaces are engines of a unique sense of place, the connections between visible and invisible, tangible and intangible, and temporary and non-temporary. The diversity of identities of multicultural visitors interacting with residents, as cultures interact and fade, and people learn and share knowledge with each other. Major heritage sites include historic mosques, remnants of traditional fabrics, sites associated with important events, and landscapes such as mountains and valleys.

Contemporary civilization lacks the appropriate human scale, the building of a harmonious society, cultural identity, and an adequate public sphere. Social exclusion and unsustainable social stratification are also major concerns.

Therefore, the programme aims to achieve sustainable and balanced development between human dimensions,

social needs and urban development requirements, with a focus on aesthetic aspects and the provision of green areas and recreational spaces for all residents and visitors.

✘ Relevant features

- Participate, by encouraging communication between the programme and stakeholders;
- Identity, by enhancing the cultural identity of the places and contributing to creating an interactive environment;
- Livability, by providing vibrant environments through cultural initiatives and activities;
- Place making, by providing healthy places for all, through integrated networks of public places and pedestrian areas;
- Services upgrade, by enhancing public facilities and services, public squares and recreational activities; and
- Planning, integrated planning for all environmental, economic, social and cultural aspects.

Weblink:

Tablet Hotels, YouTube video:
<https://youtu.be/XPxhUc6h88I> [19-08-2022].



✘ COMMUNITY

ALULA FRAMEWORK FOR INCLUSIVE COMMUNITY DEVELOPMENT THROUGH TOURISM

✘ Description

The ALUla Framework for Inclusive Community Development through Tourism was developed by the World Tourism Organization (UNWTO) and the G20 Tourism Working Group on the occasion of the 2020 G20 Presidency. The Framework outlines how integrating inclusivity and sustainability into tourism models can benefit local communities while preserving the rich natural and cultural heritage of destinations around the world.

The Framework covers five dimensions:

1. For whom: What are the communities that should benefit from the Framework according to their potential, commitment and level of development?
2. By whom: Who are the most appropriate stakeholders to implement these programmes?
3. How (pillars of action): What type of programmes and interventions for each of the four pillars – a) Empower; b) Safeguard; c) Prosper and d) Collaborate can be implemented?
4. How to measure and quantify the impact of the Framework?
5. How to shape new frontiers through innovation and digital transformation?



✘ Relevant features

The Framework provides guidance and inspiration to all governments, as well as all other key stakeholders in the tourism sector – including regional and local governments, the private sector, industry associations, civil society, communities and tourists – with the aim of fostering a truly holistic and integrated approach to inclusive community development through tourism. Placing inclusive community development at the heart of tourism policies through education, investment, innovation and technology can transform the livelihoods of many millions, while also preserving our environment and culture and drive a more inclusive and sustainable recovery of tourism.

Weblink:

World Tourism Organization (2020), *AIUla Framework for Inclusive Community Development through Tourism*, UNWTO, Madrid, DOI: <https://doi.org/10.18111/9789284422159>.

SINGAPORE



✂ MSMEs

TOURS – TRIBE TOURS

✂ Description

Tribe Tours used new and engaging formats to attract the local audience. The format of a gamified tour was new and unexplored within Singapore's landscape. Tribe took the existing form of a gamified tour and worked with Escape Room designers (Ransack), to introduce an additional element of fun and intrigue into a typical Chinatown walk. Having a group-based competition format made it widely attractive to various audiences, from team building/bonding event for corporates/friends, to families with young children.

✂ MSMEs

FOOD AND BEVERAGE – JIGGER & PONY

✂ Description

Despite their closure for 166 days, Jigger & Pony reopened in September 2020 with enhanced product offerings, introducing "On the High Rice", a special pop-up where they featured rice boxes inspired by local flavours. To cater to consumer demands for cocktails at home, Jigger & Pony introduced doorstep delivery for their cocktails and accelerated the launch of their in-house cocktail brand, PONY. To ensure that both local and overseas audiences continue to keep up to date, Jigger & Pony conducted trained bartenders to conduct cocktail classes virtually to reach out to a range of different audiences. Through Havana Club, they released "how-to" videos to engage audiences and allow them to create their own drinks at home. Jigger & Pony also formed cross sector collaborations to enhance their product offering, collaborating with Janice Wong and local artist @samantha.staygogh to design bottle labels along with signature chocolates.



✂ MSMEs

ENTERTAINMENT - ZOUK

✂ Description

Since the pandemic hit in March 2020, Zouk Singapore adapted and adopted several resourceful initiatives, including the expansion of its food and beverage (F&B) programme with Capital Kitchen, and pop-up partnerships that included spin classes, cinema clubs and online retail.

✂ COMMUNITY

SINGAPORE DISCOVERS CAMPAIGN

✂ Description

Singapore may be a small country, but the city is filled with hidden gems and great experiences in every precinct, waiting to be discovered. With borders close during the height of the pandemic, the country rallied behind the tourism sector through the SingapoRediscovers Campaign, which supports local lifestyle and tourism business, and encourages Singaporeans and residents to venture out and explore different sides and hidden gems of Singapore.

The Campaign focusses on three broad areas:-

1. Partnering local communities to help locals discover hidden gems;
2. Curating precinct itineraries to create authentic experiences for locals; and
3. Collaborating with hotels, tour operators, attractions and precincts to develop quality experiences and attractive promotions. Precincts will be packaged as mini-holiday destinations, where locals can embark on a Singapoliday to enjoy the many experiences and promotions within.

This Campaign helped spur local businesses to think beyond traditional offerings and review business models, so that these tourism product developments for the locals can also serve as pilots, which can then be offered to international visitors when the borders reopen.

SPAIN




✘ COMMUNITY

SOMIEDO TOURISM SUSTAINABILITY PLAN

✘ Description

Somiedo is located in the south-west of Asturias, in the north of Spain, and all its territory is protected as a Natural Park since 1988, being also recognized as a Biosphere Reserve. The territory has 1,153 inhabitants (37% over 65 years old); the village has lost near 20% of its population in the last decade. Livestock remains today the main economic activity, although Somiedo has consolidated itself as tourism destination since its declaration as a Natural Park. Tourism activities mean about 16% of total employment. It has a rich cultural heritage which highlights on the biggest concentrations in Europe of ancient cottages of transhumant cattle rancher (teitos), also archeological remains, churches and monasteries from the 17th and 18th centuries, museums, popular festivals, etc. Nowadays, Somiedo is the best European destination to watch brown bear in freedom.

The Tourism Sustainability Plan aims to:

- Protect the natural and patrimonial resources of Somiedo;
- Consolidate the sustainable tourism model and offer the best ecotourism experience to be profitable; and
- Reinforce the local management and participation of the destination.

✘ Relevant features

Main actions in place:

- Establishment of a monitoring model to track the evolution of the destination;
- Creation of a public-private management team of the Plan;
- Reorganization of tourist flows through a plan of rearrangement of accesses;
- Installation of information systems on car park occupancy, access restrictions complemented with shuttle systems;
- Restoration of cultural and ethnographic heritage for tourism;
- Improvement of infrastructures for nature tourism (cycling, hiking, climbing, etc.); and
- Marketing plan for the destination.

The Plan represents an opportunity to improve the sustainability of Somiedo as specialized tourism destination and to increase the profitability of tourist experiences in the destination.



TÜRKIYE




✂ MSMEs

RAPID SUPPORT FOR MICRO AND SMALL ENTERPRISES PROJECT

✂ Description

MSMEs in Türkiye, as in other countries, faced the major brunt of COVID-19-related impacts. Taking into consideration the devastating effects of the pandemic, KOSGEB aims to help MSMEs in most affected sectors by means of a rapid and simple liquidity-based support programme under this 'Rapid Support for Micro and Small Enterprises Project'.

✂ Relevant features

The project addressed the enterprises that have been most affected by the COVID-19 crisis based on relevant

eligibility criteria for the use of funds to respond to the urgent liquidity needs of enterprises and the need to make World Bank (WB) and Japan International Cooperation Agency (JICA) financing available to these firms.

The budget of the project is USD 300 million from WB and USD 300 million from JICA where The Turkish Small and Medium Enterprises Development and Support Administration (KOSGEB) is the borrower under the Treasury Repayment Guarantee.

Weblink:

Japan International Cooperation Agency, press release: https://www.jica.go.jp/english/news/press/2021/20210421_41_en.html [19-08-2022].

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✘ COMMUNITY

THE FUTURE LIES IN TOURISM SUPPORT FUND

✘ Description

The Future Lies in Tourism Support Fund aims to strengthen capacity of local tourism actors and NGOs to contribute to the sustainable tourism development through partnerships with public and private institutions. The project conducts its activities through a grant scheme and training programmes, with a view to develop best practice examples and contribute to knowledge sharing in sustainable tourism implementation.

The United Nations Development Programme (UNDP) and the Ministry of Culture and Tourism have a longstanding partnership since 2007, focussing on various segments of tourism for local economic development, like rural tourism, cultural tourism and winter tourism in three different project partnerships. The Future Lies in Tourism Support Fund is established on the achievements and lessons learned in order to create mechanisms to support local tourism initiatives.

This fund is established to provide local tourism actors and NGOs with necessary guidance, tools and resources to strengthen their capacities in order to contribute to the sustainable tourism development through partnerships with public and private institutions in the following ways:

- Encouraging the development of awareness-raising, capacity development and research projects for sustainable tourism;
- Supporting innovative, creative, participatory, sustainable, society-sensitive and gender-balanced projects of local tourism actors and NGOs that provide best practices for sustainable tourism implemented in partnership with public and private institutions; and
- Strengthening the project development and implementation skills of local tourism actors and NGOs via implementation support, structured trainings, networking platforms (via regular meetings, conference and web portal).

✘ Relevant features

Some of the micro projects that were funded by the Future Lies in Tourism Support Fund:

- Kars Cheese Route;
- Journey of Linen in Ayancık; and
- Troy Culture Route.

Weblinks:

United Nations Development Programme (n.d.), Türkiye, Future is in Tourism: <https://www.tr.undp.org/content/turkey/en/home/projects/future-is-in-tourism.html> [19-08-2022].

UNITED ARAB EMIRATES



✂ MSMEs

THE ENTREPRENEURIAL NATION

✂ Description

The United Arab Emirates has taken long steps in advancing MSME and supporting them – in fact the United Arab Emirates ranks among the top nations in entrepreneurship and SMEs. In 2020, and in midst of the global pandemic and changing priorities, Leadership reshuffled the cabinet appointing the first Minister focussed on SMEs and entrepreneurship. Part of the ministry mandate was to develop programmes and initiatives to enhance the SME environment within the country such as the Entrepreneurial Nation. This initiative was launched in 2021 focussing on the following key pillars:

- SkillUp academy providing training and education to foster entrepreneurship, especially among the younger talent. Programmes are targeted to K12 all the way to university students, as well as unemployed and government employees;

- StartUp programme focussed on improving overall business environment in the country to ensure the attractiveness of the ecosystem;
- ScaleUp programme focussed on existing SMEs and looking into enabling their growth by connecting them to global leaders and enablers.

✂ Relevant features

- Increase number of home-grown unicorns;
- Increase funds and venture capital (VC) financing by enabling the systems and legislations;
- Increase local community interest in SMEs and entrepreneurship;
- Enhance United Arab Emirates position as a global entrepreneurship hub.

Weblink:

The Entrepreneurial Nation:

<https://theentrepreneurialnation.com/?lang=en>



✘ COMMUNITY

HATTA VILLAGE DEVELOPMENT PLAN

✘ Description

For years the village of Hatta has emerged as an adventure and mountainous getaway in the United Arab Emirates that attracts domestic tourists, as well as international tourists. The area hosts a wide array of activities such as hiking and kayaking. In 2021, the Dubai Government launched an ambitious plan to enhance Hatta as a sustainable tourism destination.

The new plan includes various initiatives to ensure development of a sustainable destination such as:

- Expansion of a hydroelectric dam to provide sustainable energy;
- Development of infrastructure such as hotels, and improvement of road infrastructure to maximize connectivity; and

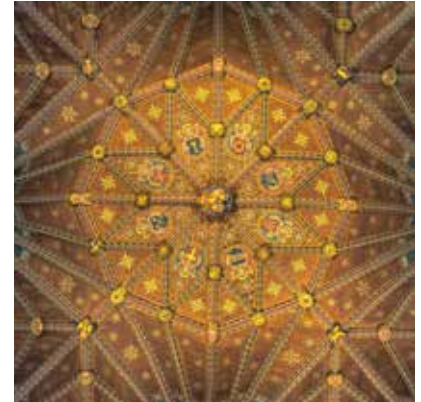
- Development of new attractions such as inland beach, cable rail and mountain terrains.

The plan targets to involve the local community of Hatta in the development by supporting them in taking part in the new activities and initiatives, as well as in promoting them to engage in economic activities, and establish SMEs catering for tourism.

✘ Relevant features

- Focussed on local community participation the plan includes incentives for local community to participate in such developments;
- The plan calls for the community to engage in advancing ideas that will lead to development of sustainable SME ecosystem in the village.

UNITED KINGDOM



✂ MSMEs

BUSINESS EVENTS GROWTH PROGRAMME – EUROANAESTHESIA 2023

✂ Description

Helping destinations successfully bid for international conferences, events and trade fairs Euroanaesthesia gives a platform for British businesses, products and destinations – showcasing Britain as a global knowledge hub, a world leader in innovation and academic excellence, and delivering the government’s vision for the United Kingdom to be a Science and Technology Superpower. Euroanaesthesia 2023, VisitBritain’s Business Events Growth Programme, supported Glasgow’s successful bid to host Euroanaesthesia 2023. This annual event brings together some 6,000+ international delegates who will spend an estimated GBP 6 million. Funding support enabled the Glasgow bidding team to attend the European Society of Anaesthesiology (ESA) Board Meeting, to present Glasgow’s bid to be host city for the annual congress in 2023. This included an oral presentation to the ESA Board and showcasing a bespoke video of Glasgow, followed by a detailed Q&A session. As a result, Glasgow received 9 out of the 10 ESA Board votes in favour of the congress being held in Glasgow in 2023.

✂ COMMUNITY

PETERBOROUGH TOWN FUNDS

✂ Description

Peterborough is receiving GBP 22.9 million from the Towns Fund which will be used to boost the city with a wealth of cultural, health and well-being and tourism improvements including:

- The Vine Culture Hub: a new library, culture and community hub;
- An extension to the Flag Fen and Whittlesey Heritage Centre new Bronze Age to house the globally significant Must Farm boats which were discovered at nearby Flag Fen. The long-term aim of this project will be to market the museum as a ‘must see’ United Kingdom and international tourist trail, boosting the local economy;
- Creating a welcoming entrance to Peterborough for visitors by developing the Station Quarter that leads people on foot easily towards the city centre; and
- Improvements to Peterborough’s river frontage onto the River Nene, making it an attractive place for residents, workers and visitors to spend time throughout the seasons. This will include lighting, seating and footpaths designed to maximize the view of the river.



UNITED STATES OF AMERICA



✂ MSMEs

SMALL BUSINESS ASSOCIATION (SBA) COMMUNITY NAVIGATOR PROGRAMME

✂ Description

The Biden-Harris Administration is committed to ensuring that the nation's small businesses receive the support they need to access federal relief programmes that can help them weather economic difficulties caused by the COVID-19 pandemic. This technical assistance is critical, as small businesses have been hit hard over the course of the pandemic, impacting at least 400,000 businesses. Previous rounds of economic relief helped millions of small businesses stay afloat and keep employees on the payroll, yet too many minority-owned businesses and MSMEs were unable to access these programmes. To better reach these small businesses, the Small Business Association (SBA) launched the Community Navigator Pilot Programme to strengthen outreach to underserved businesses by partnering with organizations with deep roots in their communities.

Through the Community Navigator Pilot Programme, SBA is engaging with states, local governments and other organizations to broaden and intensify outreach to every corner of the small business community, particularly to better reach small businesses in minority, rural and other under-engaged communities. The Community Navigator Pilot Programme uses a "hub and spoke" model to partner with specialized community organizations and chambers of commerce. These organizations enlist trusted, culturally knowledgeable partners to conduct targeted outreach to specific sectors of the entrepreneurial community, such as travel and tourism businesses,

to provide assistance during economic recovery. The programme that began on 1 December 2021 and will run through on 30 November 2023, may include:

- Financial assistance and access to capital;
- Contracting and procurement;
- Marketing, operations, business development and exporting; and
- Industry-specific training.

Weblink:

Community Navigator Pilot Programme:
<https://www.sba.gov/partners/counselors/community-navigator-pilot-program>





✘ COMMUNITY

AMERICAN RESCUE PLAN ACT

✘ Description

As part of the American Rescue Plan Act, USD 510 million was made available to states through the U.S. Department of Commerce's Economic Development Administration's Travel, Tourism & Outdoor Recreation programme, which is focussed on accelerating the recovery of communities that rely on the travel, tourism and outdoor recreation sectors. Pennsylvania, for example, was awarded USD 17 million to invest in marketing, infrastructure, workforce and other projects to rejuvenate safe leisure, business and international travel.

The Pennsylvania Tourism Office at the Department of Community and Economic Development will invest the USD 17 million in the following ways:

- USD 10 million to dramatically increase the Pennsylvania Tourism Cooperative Marketing Advertising Programme in 2022 and 2023 to create advertising opportunities for destination marketing organizations and industry associations by matching or possibly doubling their investment;
- To attract new visitors and residents to Pennsylvania, the office will invest USD 6.8 million in new initiatives to promote diversity, equity and inclusion (DEI) in marketing, messaging and product development to capture greater market share and, most importantly, in their approach to how they welcome travellers to the Commonwealth leaving a positive impact on the industry for decades to come; and

- To protect their outdoor recreation assets that have historically experienced overcrowding, USD 250,000 will support the Outdoor Recreation Concierge Programme via the Department of Conservation and Natural Resources to train front-line workers and volunteers aimed at promoting the outdoor experiences of a region, with an emphasis on underutilized, hidden natural gems.

The diversity, equity and inclusion (DEI) investment will include:

- USD 1 million to create a groundbreaking industry training programme for frontline workers and tourism industry leadership that ensures every traveller, regardless of race, gender, age, ability and background, feels welcome, respected and included when visiting Pennsylvania;
- USD 500,000 to develop a new statewide tourism product to provide more diverse and inclusive experiences to travellers;
- USD 1.5 million for tourism partner product development grants; and
- USD 3.8 million to develop new marketing campaigns to reach a more diverse and inclusive travel consumer. This would be done through contracting with agencies owned or led by those from various diverse communities.

Weblink:

Pennsylvania Government:

<https://www.governor.pa.gov/newsroom/governor-wolf-announces-unprecedented-investment-to-boost-the-tourism-industry/>

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Chair's Summary
G20 Agriculture Ministers' Meeting
"Balancing Food Production and Trade to Fulfil Food for All"

1. The G20 Agriculture Ministers, met in Denpasar, Bali on 28 September 2022, and committed to step up efforts to enhance sustainable agriculture and food systems as well as to strengthen global food security and nutrition against current and future shocks.

PART I

2. The world is in the midst of an unprecedented global food security and nutrition crisis in the aftermath of Covid-19 pandemic, threatening the achievement of the 2030 Agenda for Sustainable Development. The World Bank reported that between 75 million and 95 million additional people could be living in extreme poverty in 2022 and 255 million people lost their job because of the Covid-19 pandemic. The State of Food Security and Nutrition in the World Report 2022 estimates the Covid-19 pandemic has increased chronic undernourishment by 150 million people since 2019, and between 702 and 828 million people in the world were affected by hunger in 2021 and around 670 million people may still face hunger in 2030. The crisis is further exacerbated by the ongoing conflicts in many parts of the world, including the war in Ukraine. Many members expressed condemnation on Russia's war in Ukraine, while others viewed that the Agriculture Working Group (AWG) is not the proper forum to discuss geopolitical issues. Members further called for peace and an immediate end of the war. In this connection, members welcome the Türkiye and UN-brokered launch of the Black Sea Grain Initiative, a humanitarian maritime corridor to allow ships to export grain, other foodstuffs, and fertilizers as well as the Joint Coordination Centre in Istanbul to monitor the implementation as an important contribution to global food security.

PART II

The Agriculture Ministers have successfully reached a consensus on the following paragraphs:

3. We commend the consistent focus on enhancing food security and nutrition, and sustainable agriculture and food systems in the past G20 Presidencies. It is therefore vital that we continue to support the agriculture sector and rural population in managing agriculture and food systems sustainably. We underscore the importance of addressing the food crisis sustainably and to decisively address all existing crises with equal intensity. We commit to step up cooperation and coordination among G20 members to work closely with international organizations, the private sectors, civil society, and other

partners, for poverty alleviation and improvement of food security and nutrition, and work toward inclusive and sustainable development, leaving no one behind. Thus, we will promote: (i) resilient and sustainable agriculture and food systems, (ii) open, fair, predictable, transparent, and non-discriminatory agricultural trade to expand food availability and affordability for all, and (iii) innovative agri-preneurship through digital agriculture to improve farmers livelihood in rural areas.

I. Promoting Resilient and Sustainable Agriculture and Food Systems

4. We highlight the urgency to accelerate the transformation to more resilient and sustainable agriculture and food systems that have the ability to withstand shocks and stresses, striving to ensure food availability and accessibility in a manner consistent with our continued effort to achieve the Sustainable Development Goals (SDGs). This calls for a better understanding of the relationship of agricultural policies and sustainability and take concrete action to achieve nature-positive outcomes. We are aware that agriculture and biodiversity are strongly interrelated and recognize the importance to halt and reverse biodiversity loss. The sustainability of agriculture is essential for improving food security and nutrition, eradicating hunger, and ensuring resilience as well as environmental, social and economic viability. The transformation demands leadership, innovation in all its forms, adequate finance, regional and international cooperation, and adaptation to local and indigenous capacities and necessities to sustainably increase productivity, promote resilient and sustainable agriculture and food systems and supply chains, and increase accessibility of safe, affordable, diverse, and nutritious food for all. While recalling the importance of international trade, we highlight that diversifying food production and consumption in part based on local food sources is one of the means to strengthen the sustainability and resilience of local, regional, and global agriculture and food systems. This is in line with the principle of there is no one-size-fits all approach to agriculture and food systems transformation.
5. While sustainable increases of food production contribute to food security and nutrition, unsustainable agricultural practices contribute to land degradation and deforestation, as well as detrimental competition for land and water resources. Sustained funding, targeted and responsible investments are urgently needed to improve long-term food security and nutrition, including the progressive realization of the right to adequate food in the context of national food security. We call on the G20 Meeting of Agricultural Chief Scientist (MACS), the Food and Agriculture Organisation (FAO), the Organisation for Economic Co-operation Development (OECD), and other institutions to increase their efforts to share information, technical guidance, and initiatives that can help farmers sustainably increase their agricultural production and productivity. We recall the Global Agriculture and Food Security Program (GAFSP), which was established pursuant to a call by the G20. We welcome other global initiatives and efforts to accelerate achieving of food security in the context of the current global food crisis.

6. We reaffirm our commitment to reduce global food waste by half per capita at the retail and consumer levels by 2030 and to reduce food losses along production and supply chains. However, we acknowledge that there is a persistent lack of data on food loss and waste at the country level and guidelines used have not been harmonized. In this regard, we commit to intensifying efforts to collect relevant data to support evidence-based policies, including to further share best practices through the Technical Platform on the Measurement and Reduction of Food Loss and Waste (FLW). We recognize that reducing FLW calls for concerted actions and requires decision-making solutions. Therefore, we support the works of the FAO and the United Nations Environment Programme (UNEP), as well as other relevant international organizations, such as the OECD, the Consultative Group on International Agricultural Research (CGIAR), the private sectors, and Civil Society Organizations (CSOs), including the implementation of the FAO Voluntary Code of Conduct for FLW Reduction and relevant initiatives that sprung from the UN Food Systems Summit (UNFSS).
7. We emphasize the essential role of women, youth, Indigenous Peoples, rural and local communities in contributing to resilient and sustainable agriculture and food systems. We also recognize the important role of family and small-scale farming in achieving sustainable agriculture and food systems. We commit to promote diversified economic opportunities along the food value chains for these groups to help them improve their livelihoods through sustainable income-generating activities, among others through specialized training and capacity building programs. In this regard, we welcome the collaborative work to strengthen the role of these groups through an inclusive multi-stakeholder approach at the Committee on World Food Security (CFS).
8. We acknowledge the crucial and diverse contributions of agriculture and food-related micro, small and medium enterprises (MSMEs) to resilient, sustainable, and inclusive growth, particularly in the context of post Covid-19 pandemic economic recovery. There is a significant need for catalytic investments in line with the CFS Principles for Responsible Investment in Agriculture and Food Systems (CFS-RAI) to support the availability and accessibility to finance, for small-scale farmers, fishers, ranchers/herders, and MSMEs. The public sector, working alongside agriculture and food related MSMEs, can support business hedging against risk and encourage investments throughout agriculture and food systems. We promote efforts to improve the accessibility of a diverse range of financing instruments, including blended finance model, especially those in rural areas.
9. Integrating and implementing the One Health approach to safeguarding human, animal, plant, and environmental health is essential. We reaffirm our commitment to implement the One Health approach to accelerate the global fight against Antimicrobial Resistance (AMR) in agriculture and food systems and to prevent, reduce, and manage biological threats and risks to agriculture and food security. The One Health approach recognizes the complexity as well as interlinkages between these systems and calls for improved cross-sector collaboration in designing and implementing programs, policies, legislation, and research. We recognize and encourage the work of the Quadripartite organizations to strengthen the implementation of the One Health approach to combat

AMR to reduce the risks from emerging and re-emerging zoonotic diseases with pandemic potential and other threats to global public health security and welcome the One Health High-Level Expert Panel established by FAO, the World Organisation for Animal Health (WOAH), UNEP, and the World Health Organization (WHO), and encourage the Quadripartite organizations to finalize their first One Health Joint Action Plan. We welcome the adoption of the Codex Alimentarius "Guidelines on Integrated Monitoring and Surveillance of Foodborne AMR" and the "Code of Practice to Minimize and Contain Foodborne AMR" as important tools to address AMR in line with the One Health Approach and our commitment to the responsible and prudent use of antimicrobial agents. In this respect, we are implementing the amended "Code of Practice to Minimize and Contain Foodborne AMR".

10. Resilient and sustainable animal and plant health systems are important parts of the One Health approach and essential to reducing the risk and spread of AMR, emerging and re-emerging infectious diseases (EIDs), and zoonoses supporting ecosystem resilience. We, therefore, strive to build the resilience in the agriculture sector by preventing, as far as possible limiting the spread of AMR, acting with determination against the threats of AMR, and reducing the threats of EIDs and zoonoses. We call on the Quadripartite organizations for ambitious and sustained implementation of the 2015 Global Action Plan while consulting with Member States and incorporating Member States comments into the One Health Joint Plan of Action (2022-2026) and consulting with Member States on its implementation plan. In this regard, we encourage the International Plant Protection Convention (IPPC) to continue monitoring and participating in the FAO One Health discussions and to evaluate information on the use of antimicrobials on plants or crops for phytosanitary purposes within the scope of the Convention. Moreover, we encourage to strengthen regional and international collaboration to find solutions necessary for ensuring plant health in collaboration with the IPPC. We commit to strengthening the One Health approach to address human, animal, and environmental threats by supporting science, risk-based interventions, sharing research and knowledge, encouraging the work of the Quadripartite organizations as well as networking amongst countries to bring agriculture and food systems more consistent with the principles of the One Health approach.
11. Considering the vulnerability of agriculture and food systems to climate change and recalling the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, and the relevant outcomes and the conclusion of the UNFCCC Conference of the Parties (COP) the Koronivia Joint Work on Agriculture (KJWA), we highlight the fundamental priority of safeguarding food security and the importance of both adaptation and mitigation for climate resilient agriculture. We recall the tangible progress of the initiatives launched at COP26 and the previous COP. We note the importance of mutually beneficial cooperation on technology, capacity building, investing more in research and development of climate-resilient technologies and practices, and the identification of existing funding opportunities as well as incentive schemes, tools, and knowledge sharing on mutually agreed terms for the implementation of such actions, among others through active engagement with existing workstreams under the UNFCCC and other relevant initiatives. We recognize that

carrying forward and building on the heritage of good farming practices involving indigenous populations and local communities is critical to the agricultural systems' climate adaptation, mitigation, and sustainable development.

II. Promoting an Open, Fair, Predictable, Transparent, and Non-Discriminatory Agricultural Trade to Ensure Food Availability and Affordability for All

12. We acknowledge that international food trade along with domestic production and food security programs are critical for global food security and nutrition contributing to achieving the SDGs. We underscore the importance of strengthening the rule-based, open, fair, predictable, transparent, non-discriminatory, inclusive, equitable, and sustainable multilateral trading system with the World Trade Organization (WTO) at its core. This will enhance market predictability, minimize distortions, increase business confidence, and allow agriculture and food trade to flow smoothly. We highlight the need to update global agriculture and food trade rules to better reflect market and policy shifts and to address contemporary agricultural, food security and sustainability challenges, consistent with WTO mandates. We welcome the progress made by WTO Members at the 12th Ministerial Conference on the issue of food security. We reiterate the WTO Ministerial Declaration on Emergency Response to Food Insecurity, which emphasizes the need to take concrete steps to facilitate trade and improve the functioning and long-term resilience of global markets for food and agriculture, and underline, among other things, the importance of not imposing export prohibitions or restrictions in a manner inconsistent with relevant WTO provisions. We also recall the WTO Ministers' Decision which establishes that Member shall not impose export prohibitions or restrictions on foodstuffs purchased for non-commercial humanitarian purposes by the World Food Programme (WFP).
13. We reaffirm our commitments to cooperate closely and take concrete actions to support global food security and nutrition. We commit to work constructively with other WTO Members and lead by example to strengthen global food trade and fulfill our WTO obligations. We acknowledge the efforts made by the international community to keep food supply chains functioning under challenging circumstances. We will continue to avoid any unjustified restrictive or distortive measures that lead to food and fertilizer price volatility in international markets which threaten the recovery of the global food supply chains and, more broadly, food security and nutrition, particularly for the most vulnerable.
14. Systemic shocks continue to impact the whole process of food production, processing, and global distribution along supply chains, including movement restrictions. We underscore that emergency measures such as those designed to tackle the Covid-19 pandemic should be targeted, proportionate, transparent, and temporary; that they should not create unnecessary barriers to trade or disruption to global food supply chains; and be consistent with WTO rules. We acknowledge and appreciate the role of governments' responses to avoiding unjustified trade restrictive measures.

15. We acknowledge the important contributions of the Agriculture Market Information System (AMIS) initiative and the Group on Earth Observations Global Agricultural Monitoring (GEOGLAM) to enhance food market transparency and support coordinated policy responses for food security and nutrition through detailed monitoring of prices and availability of selected crops and fertilizers/inputs in strong conjunction with relevant international organizations which provide neutral, objective, and transparent data, including the International Grains Council. We will strengthen the work of AMIS in reducing global food, cereals, vegetable oils, and fertilizers/inputs market uncertainties by sharing market and trade information, including on policies, and supporting the Rapid Response Forum to coordinate policy in times of crisis and acting as an early warning mechanism to monitor market risk. We reconfirm our commitment to actively support the initiative by providing the necessary data and resources as well as broadening the donor-base. We recognize the contributions of the Platform for Agricultural Risk Management (PARM) to improve the resilience of the agriculture sector and supply chains through an innovative methodology to assess and manage agricultural risks. We appreciate the results of the Wheat Initiative and the Tropical Agriculture Platform (TAP).

III. Innovative Agri-preneurship through Digital Agriculture to Improve Farmers' Livelihood in Rural Areas

16. We recognize that research, innovation, technical progress, and the use of digital technology in agriculture carry the potential to further revolutionize food systems by contributing to improve resilient and sustainable food production. We acknowledge the gaps in respect of technology viability, accessibility, and affordability. We highlight the importance of collaboration among national and international research institutions and adequate funding to develop and scale innovations, including digital agriculture technology, through private and public pathways to give farmers around the world the widest range of options to achieve their aspirations. We emphasize the importance of digital transformation in agriculture alongside other innovations to improve farmers' livelihoods through enhanced productivity and production in a sustainable manner, and broadening market access and opportunities. We support the use of sustainable and innovative practices and technologies with appropriate protection of intellectual property and underline the importance of adequate privacy and data security.
17. We recognize that the agricultural sector needs to embrace more innovative technologies and good agricultural practices for sustainable growth and to improve sustainability of agriculture and food systems. We note that opportunities to improve productivity in a sustainable manner lie in increased responsible investment in agriculture and supporting innovative finance for agricultural technologies which increase efficiency in the use of natural resources and inputs, reuse of agricultural waste, improves resilience and yields, and strengthen agriculture value chains. In this context, we encourage more utilization of digital technologies that complement and amplify the positive effects of other agricultural innovations and sustainable production methods to address the challenges of food security and climate change.

18. We acknowledge that implementing digitalization in agriculture requires improved policies, infrastructure, and institutional support, to enhance connectivity and affordability, and to improve farmers and other relevant stakeholders' capacity. We encourage a focus on technological upskilling of farmers, in particular smallholders and family farmers, and capacity building, to broaden opportunities in the adoption of sustainable agricultural practices on farm level, and to increase access to finance and participation of youth, women, and new farmers to become innovative agripreneurs. We note the importance of effective collaboration among related stakeholders to promote public private partnership, including responsible investment, developing capacities, and promoting innovative sustainable solutions.

Closing

19. We acknowledge Indonesia's initiative to exhibit G20's concrete deliverables in strengthening more resilient and sustainable agriculture and food systems in the Small Island Developing States (SIDS) of the Pacific. We further note that this initiative will be carried out through the Project of Development of Regional Agriculture Training Center and Demfarm in Fiji Under South-South and Triangular Cooperation (SSTC) Framework.
20. We welcome the outcomes from the G20 members' engagement in: (i) the Workshop on FLW, including data sharing; (ii) the Joint Webinar between the G20 Agricultural Working Group and the G20 Development Working Group on Enhancing Digital Agriculture and Rural Finance for Food Security; (iii) the 11th G20 MACS, Technical Workshop on Climate Change, Joint Workshop on FLW; and (iv) the Report on Knowledge-Sharing on Digital Agriculture: the Most Common Practices.
21. We welcome the momentum created by the range of successful meetings in 2021, including the 2021 UNFSS, for accelerating food systems transformation to achieve the SDGs by 2030 and note the Coalitions of Action and acknowledge the UN Food Systems Coordination Hub, as an important means to follow-up on the UNFSS. We also welcome the Tokyo Nutrition for Growth (N4G) Summit 2021 last December, which ambitiously demonstrated the commitments from governments and private sectors with pledges of more than US\$27 billion to address the global challenges of hunger and all forms of malnutrition. Moreover, the G7 has committed an additional USD 4.5 billion to protect the most vulnerable from hunger and malnutrition.
22. We express our deep gratitude to the Indonesian Presidency for their leadership and excellent work in 2022. We look forward to the India G20 Presidency in 2023.



G20
INDONESIA
2022

G20 High-Level Principles on
Enhancing the Role of Auditing
in Tackling Corruption

G20 Anti-Corruption Working Group



G20 High-Level Principles on Enhancing the Role of Auditing in Tackling Corruption

Auditing assists institutions in better ensuring integrity, accountability and transparency, particularly in sound financial management of public affairs and public property as well as the efficient use of public resources. As such, auditing plays an important role in contributing to the prevention of and fight against corruption. In this regard, it is important to protect, safeguard and enhance the independence and accountability of audit institutions.

The United Nations Convention against Corruption (UNCAC) includes audit requirements as key elements in corruption prevention, of both the public sector (article 9) and the private sector (article 12). Other parts of the Convention, such as the requirements to preserve the integrity of books, records and other financial documents, make it clear that functions fulfilled by auditors are important in the prevention, detection, investigation and prosecution of corruption. The political declaration of the United Nations General Assembly Special Session (UNGASS)¹ against corruption also stressed the role played by the Supreme Audit Institutions (SAIs) and other oversight bodies in preventing and combating corruption, in particular with regard to promoting integrity, accountability, transparency and the proper management of public affairs and public property, as well as the efficient use of public resources. Relevant resolutions of the Conference of the States Parties (CoSP) to the UNCAC also highlighted this role. Therefore, the functioning of the SAIs and internal auditors in assessing regulatory compliance and better ensuring the highest standards of financial integrity, clearly illustrate their strategic position to contribute to anti-corruption efforts. In particular, this also has been emphasized by UNCAC CoSP resolution 8/13 entitled “Abu Dhabi declaration on enhancing collaboration between the supreme audit institutions and anti-corruption bodies to more effectively prevent and fight corruption”.

We recall our commitment in the first G20 Anti-Corruption Ministerial Communiqué, under the Saudi G20 Presidency, as elaborated in paragraph 13 of the Communiqué. In its Anti-Corruption Action Plan 2022-2024², the G20 Anti-Corruption Working Group (ACWG) recognizes the importance of promoting “good practices in business integrity and anti-corruption ethics and compliance programmes, covering issues such as maintenance of books and records, financial statement disclosures, accounting and auditing and taking appropriate remedial steps to address wrongdoing” as well as promoting “the role of audit institutions and, where allowed under domestic frameworks, the importance of collaboration with anti-corruption bodies, to increase transparency, accountability, regulatory adherence, and efficiency in the management of public finances”. Given the diversity of SAIs and the differences in their mandates, roles, and division of work with other relevant bodies as well as the task allocated to the SAIs by the national legal framework, their contribution to anti-corruption efforts may be very different. It may consist of the prevention of corruption, the

¹ <https://documents-dds-ny.un.org/doc/UNDOC/GEN/V21/025/88/PDF/V2102588.pdf?OpenElement>

² https://www.unodc.org/documents/corruption/G20-Anti-Corruption-Resources/Action-Plans-and-Implementation-Plans/2021_G20_Anti-Corruption_Action_Plan_2022-2024.pdf

investigation of corruption or even the prosecution of corruption. But this depends on the given framework in the respective state.

Based on those commitments, the Indonesian Presidency has promoted a more prominent role for auditing in the fight against corruption. The G20 High-Level Principles on Enhancing the Role of Auditing in Tackling Corruption highlight the importance of auditing to detect corruption and the role of auditors and SAIs in preventing corruption. These principles are not intended to undermine the functional and organizational independence required by SAIs to carry out their mandates³, as comprehensively set out in the International Organization of Supreme Audit Institutions (INTOSAI) Framework of Professional Pronouncements (IFPP), among others, the INTOSAI-P 1 Lima Declaration⁴ of Guidelines on Auditing Precepts and the INTOSAI-P 10 Mexico Declaration⁵ on SAI Independence. Rather, we build on the significant role of auditors, including SAIs, in the fight against corruption. They can assist in identifying corruption risks as well as building robust and effective internal controls that contribute to the prevention of corruption.

Furthermore, the principles build on existing international standards, instruments and good practices, which are complemented by the 2015 G20 High-Level Principles on Private Sector Transparency and Integrity⁶ and the 2017 G20 High-Level Principles on Organizing Against Corruption⁷. These principles reaffirm the importance of audit in the fight against corruption. Leading by example, G20 countries, while respecting the independence of audit institutions, can apply these principles in accordance with the fundamental principles of domestic frameworks and legal systems and as guidance to enhance and complement existing anti-corruption commitments. These principles do not aim to undermine the existing division of labour between law enforcement agencies and SAIs and the corresponding legal and institutional frameworks.

³ SAIs may be classified into the following three different models: (i) Westminster or Parliamentary model; (ii) Board or Collegiate model; (iii) Judicial or Napoleonic model. In addition, a fourth unofficial model exists, which combines different structures and elements from across all three recognized models. https://www.unodc.org/documents/corruption/G20-Anti-Corruption-Resources/Thematic-Areas/Public-Sector-Integrity-and-Transparency/Overview_of_Supreme_Audit_Institution_SAI_Models_2022.pdf

⁴

https://www.intosai.org/fileadmin/downloads/documents/open_access/INT_P_1_u_P_10/INTOSAI_P_1_en_2019.pdf

⁵

https://www.intosai.org/fileadmin/downloads/documents/open_access/INT_P_1_u_P_10/INTOSAI_P_10_en_2019.pdf

⁶ https://www.unodc.org/documents/corruption/G20-Anti-Corruption-Resources/Thematic-Areas/Private-Sector-Integrity-and-Transparency/G20_High_Level_Principles_on_Private_Sector_Transparency_and_Integrity_2015.pdf

⁷ https://www.unodc.org/documents/corruption/G20-Anti-Corruption-Resources/Thematic-Areas/Public-Sector-Integrity-and-Transparency/G20_High_Level_Principles_on_Organizing_Against_Corruption_2017.pdf

Principle 1: Support the role of auditing bodies in contributing to preventing and countering corruption

G20 countries should consider, where necessary, building or amending and promoting legal frameworks and strengthening institutional frameworks that guide and support public sector auditors in contributing to countering corruption and promoting integrity, to the extent that public sector auditors have such a role under domestic legal systems, including through a system of accounting and auditing standards, and providing the appropriate level of independence. They should also engage with relevant stakeholders to strengthen frameworks that support private sector auditors in contributing to countering corruption.

G20 countries will endeavour to apply this principle by:

- Establishing and effectively implementing a strong and coherent legal, administrative, and regulatory framework, in accordance with the fundamental principles of domestic frameworks and legal systems, on the system of accounting, auditing standards and related oversight of public finance and public property, including provisions for access to data, information and records that facilitate the work of auditors in contributing to preventing and countering corruption.
- Promoting laws and regulations – taking into consideration internationally accepted standards – that contribute to the role of auditing in promoting transparency and accountability of public finances.
- Establishing a clear legal basis and framework of ethics, integrity, and codes of conduct for auditors, and ensuring its effective implementation, in accordance with the fundamental principles of domestic frameworks and legal systems.
- Promoting integrity and honesty through the application of codes of conduct in the auditing entity and considering aligning the codes of conduct of SAIs with the Code of Ethics promulgated by INTOSAI⁸, to promote compliance with the highest standards of professional ethics and to prevent conflicts of interest, in accordance with the fundamental principles of domestic frameworks and legal systems.
- Taking measures to ensure a clear legal basis and framework that requires the private sector to maintain books and records, providing for financial statements in accordance with accounting standards and auditing, and ensure its effective implementation, consistent with UNCAC article 12.
- Enhancing integrity, transparency, independence, accountability and good governance of public and private sector auditors, in accordance with the fundamental

⁸ISSAI 130

https://www.intosai.org/fileadmin/downloads/documents/open_access/ISSAI_100_to_400/issai_130/ISSAI_130_en.pdf

principles of domestic frameworks and legal systems and, where applicable, with international good practices.

- Ensuring that auditees are aware of the relevant accounting and auditing rules and standards that should be followed with regard to corruption and details of related oversight systems.
- Enhancing citizen and stakeholders' awareness of SAI's and internal audit functions (IAF)'s role, responsibilities, and audit works in contributing to preventing and countering corruption.

Principle 2: Strengthen the role and capacity of SAIs and public sector internal auditors to identify, prevent and counter corruption in accordance with their mandates

Recognizing that SAIs and IAFs may play a role in identifying, preventing and countering corruption, G20 countries should take measures to ensure that these entities have the capacity to follow INTOSAI and other relevant standards, in accordance with the fundamental principles of domestic frameworks and legal systems.

G20 countries will endeavour to apply this principle, in accordance with the fundamental principles of domestic frameworks and legal systems, by:

- Protecting the independence of SAIs and, as applicable, other oversight bodies, to enable them to carry out their functions effectively and free from any undue influence, consistent with the INTOSAI Lima and Mexico Declarations.
- Adopting systems for recruitment, hiring, retention, promotion, and retirement of public officials of the SAI and IAF, based on the principles of efficiency, merit and transparency.
- Taking measures to ensure that all SAI and public IAF staff are aware of and receive training or certification on their roles in identifying, preventing, investigating, and reporting corruption, in accordance with their mandates.
- Considering the adoption of risk-based and data-driven approaches to audit selection to enable SAIs and IAFs to allocate resources effectively to identify, prevent and counter corruption.
- Ensuring that SAIs and IAFs have sufficient resources and the capacity to plan, conduct and review audit programmes to assess institutional frameworks, including risk management frameworks, for countering corruption.
- Taking measures to ensure SAI and internal audit staff enjoy protection from retaliation when they report corruption, as contemplated in UNCAC article 33.

Principle 3: Develop robust national frameworks to promote the follow-up of the audit findings related to corruption.

Recognizing the role that internal and external auditors may play in contributing to preventing and countering corruption, G20 countries should take steps to develop robust national frameworks to help ensure that suspected corruption identified by auditors is followed up by the audited entity and, where appropriate, relevant authorities.

G20 countries will endeavour to apply this principle, in accordance with the fundamental principles of domestic frameworks and legal systems, by:

- Taking measures to ensure a clear procedure and allocation of responsibilities, where applicable, for follow-up actions undertaken by the audited entity in response to reports and, where applicable, other recommendations made by auditors.
- Consider requiring the audited entity to clearly identify the functions of individuals who are responsible for responding to such reports, and where applicable, implementing recommendations linked to corruption made by auditors.
- Strengthening the role of oversight bodies, such as Parliaments, internal control bodies, Committees, Boards of Directors or other governing bodies to ensure the appropriate follow-up of the findings by auditors linked to potential corruption.
- Establishing appropriate measures for situations where organizations and individuals fail to act on or respond to audit findings or, where applicable, recommendations linked to potential corruption.

Principle 4: Strengthen efforts to build and enhance cooperation among SAIs, IAFs, anti-corruption agencies, law enforcement and other relevant institutions in countering corruption

Efforts to counter corruption and promote integrity should not be undertaken in silos. G20 countries should develop a holistic system of accountability and integrity, that involves multiple sectors and a collaborative and coordinated response, while also respecting the separation of powers and tasks under national legal systems and the ensuing limitations to cooperation.

G20 countries will endeavour to apply this principle, in accordance with the fundamental principles of domestic frameworks and legal systems, by:

- Building and strengthening, where appropriate, relations among SAIs, IAFs, anti-corruption agencies, financial intelligence units (FIUs), regulators, law enforcement,

and other relevant agencies/institutions in the prevention, detection, investigation, or prosecution of corruption offences, and asset recovery.

- Promoting, where SAIs and IAFs have jurisdictional functions, cooperation with judicial authorities in order to coordinate investigations and penalties for corruption offences.
- Improving the exchange of information and data among anti-corruption bodies, SAIs, IAFs, and other government bodies with anti-corruption mandates, including for consultative purposes, and considering publishing periodic reports by relevant agencies on the risks of corruption identified in public administration.
- Exploring ways to support cooperation relating to identifying, preventing and countering corruption, including through establishing secure and effective channels to facilitate timely communication between public sector audit authorities and other competent authorities.
- Considering promoting partnerships with relevant international, regional, and national expert groups/initiatives that support information exchange, cooperation and good practices on supporting the role of audit in preventing and countering corruption.
- Considering exploring ways to enhance timely sharing of audit information related to cross border transfer of proceeds of corruption by relevant authorities, and to make full use of audit in addressing transnational corruption.
- Fostering cooperation, between SAIs, IAFs in the public sector, and where appropriate, the private sector, law enforcement agencies, FIUs, criminal or administrative justice and corruption prevention authorities, to 1) collect and share data to enhance risk detection and audit; 2) share the themes, trends, and learning of audits and investigations to improve preventive mechanisms; and 3) build capacity and raise awareness about existing and emerging corruption risks.
- Encouraging the establishment of communication channels to enable civil society to share information on possible cases of corruption to audit and/or anti-corruption authorities.

Principle 5: Promote the use of information and communications technologies (ICTs) to support the role of auditing in countering corruption

The use of ICTs⁹ including innovative technologies can significantly improve the detection and prevention of corruption. G20 countries should utilize ICTs to enhance the effectiveness of auditing function, in order to promote transparency and facilitate the reporting and detection of acts of corruption where this is part of the role of private and public sector auditors under domestic frameworks.

⁹ In line with the High-Level Principles for Promoting Public Sector Integrity Through the Use of Information and Communications Technologies (ICTs).

G20 countries will endeavour to apply this principle, in accordance with the fundamental principles of domestic frameworks and legal systems, by:

- Encouraging the use of ICT platforms to improve access to legal requirements in relation to accounting and auditing, and make the results of audits of public finances available and understandable to the public.
- Encouraging the use of ICT to monitor the use of public finances through appropriate domestic record-keeping obligations in particular by considering the adoption of an open data policy to support the audit process.
- Considering establishing secure electronic platforms to facilitate reporting possible cases of corruption, bearing in mind relevant articles of the UNCAC, in particular article 32 and 33.
- Taking measures to ensure ICT support for SAIs and IAFs and enhance their capacity to perform the audit function, and conduct corruption risk assessments in detecting and preventing corruption
- Exploring the possibility of using ICTs to facilitate knowledge exchange between public and private sector auditors in detecting and preventing corruption.
- Exploring innovative use of ICTs for data analytics to support auditors in contributing to preventing and countering corruption, such as through the use of artificial intelligence tools and advanced qualitative methods¹⁰.
- Promoting digitalization in the management of public finances, maintenance of books and records, financial statement disclosures, accounting and auditing to better identify, prevent, and counter corruption.

Principle 6: Encourage the private sector audit profession to take a role in identifying and reporting corruption

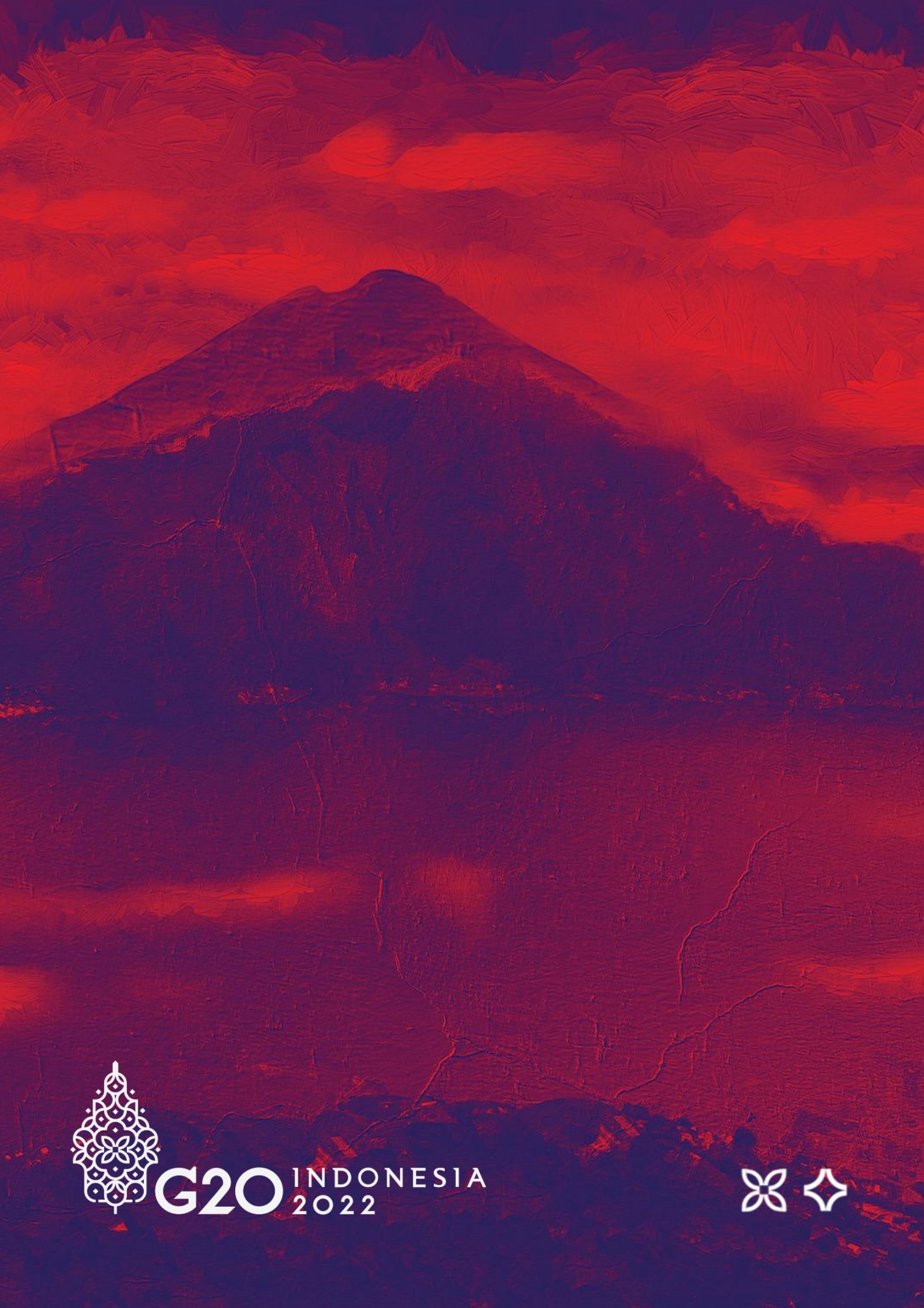
G20 countries should encourage active engagement among the private sector audit profession, appropriate authorities, and other relevant stakeholders to better support the countering of corruption. This could include considering ways to support capacity building and governance in the private sector audit profession.

G20 countries will endeavour to apply this principle, in accordance with the fundamental principles of domestic frameworks and legal systems, by:

- Working with professional associations and oversight authorities or other relevant bodies that regulate the private sector audit profession to ensure that auditors are aware of indicators of corruption.

¹⁰ In line with para. 8 of the Annex “Elaborations on the Future Directions of Public Auditing” of the Moscow Declaration, adopted during the XXIII INCOSAI, 25-27 September 2019.

- In cooperation with professional associations and the private sector, raising awareness and, where appropriate and in accordance with their mandate, providing training for audit profession including internal audit functions on identifying, reporting, and preventing corruption, including the audit of the adequacy of internal control and risk management systems.
- Considering requiring the private sector audit profession to report suspected acts of corruption to management, corporate monitoring and governance bodies, or where appropriate to relevant authorities, and that those who report corruption enjoy protection from retaliation, as contemplated in UNCAC article 33.
- Working with professional associations in maintaining adequate standards to ensure the independence of external auditors which permits them to provide an objective assessment of entities' financial statements and internal controls.



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Background Note on
Mitigating Corruption Risks
in Renewable Energy

G20 Anti-Corruption Working Group



Background Note on Mitigating Corruption Risks in Renewable Energy

(as a reference document for G20 ACWG)

Introduction

The Indonesian G20 Presidency put forward the topic of mitigating corruption risks in the renewable energy sector through the Anti-Corruption Working Group (ACWG), which aimed to highlight the potential corruption risks in the sector, and actions to mitigate them, as well as good practices from member countries.

The Presidency prepared a questionnaire to collect information from G20 member and invited countries to share their corruption strategies in the renewable energy sector, as well as to determine whether and how countries are identifying corruption risks and measures to mitigate corruption risks in the renewable energy sector. In addition to the questionnaire, the Indonesian G20 Presidency also held a panel discussion on corruption risks management in the renewable energy sector during the second ACWG meeting in July 2022.

Information extracted from the questionnaire responses and the discussion were synthesised into a Background Note on Mitigating Corruption Risks in Renewable Energy. This background note serves as a reference document for G20 ACWG, which brings forward the relevance of corruption risks in the renewable energy sector, most importantly, considerations by G20 countries in tackling the risks.

Energy transitions have been highlighted as one of the essential actions to mitigate and adapt to climate change. It is expected that investments in clean and sustainable energy systems or technologies will increase significantly in the coming years to support sustainable development, and achievement of international climate objectives. According to the International Energy Agency (IEA), in order to achieve net zero emissions by 2050, global clean energy investment will increase by more than triple compared to 2020 levels, to around USD 4 trillion per year¹.

G20 member countries have shown their commitment to energy transitions. In the Joint G20 Energy-Climate Ministerial Communiqué agreed in July 2021, G20 countries worked together to accelerate clean energy transitions to tackle climate change and achieve Sustainable Development Goal (SDG) 7. In the Rome G20 Leaders' Declaration², the G20 agreed to cooperate on deployment and dissemination of zero or low carbon emission and renewable technologies, including sustainable bioenergy, to enable a transition towards low-emission power systems and committed to mobilize international public and private finance to support green, inclusive, and sustainable energy development.

The commitment to energy transitions also has been brought to the countries' attention in the G20 Energy Transitions Ministers' Meeting in 2022 under the G20 Indonesian Presidency. The Bali COMPACT stated that the G20 intends to work on a voluntary basis towards

¹ IEA (2021), [Net Zero by 2050](#)

² G20 (2021), [G20 Rome Leaders' Declaration](#)

enhanced ambitions towards clean, sustainable, just, affordable, and inclusive energy transitions that leave no one behind and promote social and economic development, while ensuring energy security, stability, accessibility, affordability, and sustainability as well as eradicating energy poverty³.

The G20 has also acknowledged that members can significantly contribute to the reduction of global greenhouse gas (GHG) emissions⁴. As a group, G20 countries have led world markets in renewable energy investments. According to the International Renewable Energy Agency (IRENA), as of 2015, the G20 members provided 87% of the world's total renewable electricity capacity additions⁵. Not only do they dominate renewable power generation, but G20 countries are also big players in renewable energy investments, with overall investment in conditional clean energy⁶ totaling at least USD 326.12 billion from January 2020 to December 2021⁷. With the large amount of investment needed, G20 countries can play a pivotal role in mobilizing capital and financing among themselves and into other emerging and less developed economies.

The urgent need to move rapidly towards net-zero targets combined with the significant scale and pace of funding and capital investments involving large corporations and governments, may create a potential risk of corruption, including domestic and foreign bribery related to renewable energy projects. As new infrastructure is built, there are also risks associated with rent-seeking behavior. The complexity grows as long-standing, vested interests in the fossil fuel sector may perceive the emerging focus on the renewable energy sector as a threat, which could foster efforts to block this transition, which would, in turn, raise its costs⁸. Therefore, it is important to strengthen the current anti-corruption frameworks and policies, including building safeguards against foreseeable corruption risks.

Private sector actors also play an important role in addressing corruption risks in their operations and supply chains of minerals. Failure to consider corruption risks may also limit or otherwise disrupt the supply of the minerals that are critical to energy transitions. Without reliable supply chains for key minerals and metals, many of which come from high-risk areas, it will not be possible to scale up clean energy technologies quickly enough to meet global climate ambitions. There are several corruption-related failings that can impact clean energy transitions. For example, potential liabilities associated with corruption can deter investment, particularly for projects in high-risk areas. Meanwhile, specific incidents, for example natural disasters, may also give rise to short-term supply disruptions with implications to the supply chains and prices which are relevant for the procurement process of renewable energy projects or critical mineral extraction. Safety and environmental failures linked to corruption could also harm workers and lead to long-term interruptions to operations. In addition,

³ G20 (2022), [The Bali COMPACT](#)

⁴ G20 (2021), [G20 Rome Leaders' Declaration](#)

⁵ IRENA (2016), [G20 Toolkit for Renewable Energy Deployment: Country Options for Sustainable Growth Based on REmap](#), page 9.

⁶ Energy Policy Tracker classifies policies as 'clean conditional' if they are stated to support the transition away from fossil fuels, but unspecific about the implementation of appropriate environmental safeguards (see <https://www.energypolicytracker.org/methodology/>).

⁷ Energy Policy Tracker (2021), [G20 Countries](#).

⁸ U4 (2020), [Anti-corruption in the renewable energy sector](#), page 2

corruption in the mining industry and a volatile business climate appear to be associated with periodic shut-downs – and shake-downs – of mine sites producing energy transition minerals⁹.

It is critical that governments ensure transparency and good governance in the renewable energy sector, and strengthen their efforts in this respect, including, if necessary, creating or strengthening supervisory functions and taking measures to mitigate corruption risks. Therefore, G20 countries, in line with their climate agenda commitments, could lead global efforts towards ensuring that the transition to renewable energy is conducted in a corruption-free manner. The G20 Anti-Corruption Working Group can assist these efforts by, among other things, exploring the potential risk of corruption in the renewable energy sector and how to mitigate it.

Corruption in the Energy Sector, Lessons Learned from the Extractives Sector and Critical Mineral Relevance

Many studies have shown how the conventional energy market is prone to corruption and other illegalities¹⁰. The 2014 OECD Foreign Bribery Report shows that one in five cases of transnational bribery occurs in the extractives sector¹¹. The possibilities of generating considerable economic rents from energy extraction, transformation, and use, as well as the need for large capital investments, make the energy sector one of the main targets for corruption.

A robust evidence base exists which identify corruption risks in the conventional energy market along with a range of toolkits to help design out these risks at each stage of the value chain. For example, undue political influence throughout project implementation phases in the energy sector can result in the selection of unnecessary projects, over-or under designed projects, wasted resources or increased costs¹² and can deprive host countries of much-needed revenue. Many of these risks will be relevant to consider in the emerging renewables market. As a result, corruption can lead to inefficient allocation and distribution of resources.

The extractives sector, including the critical minerals industry, plays an important role in the development of renewable energy. Low-carbon technologies are more mineral intensive relative to fossil fuel technologies¹³. The increased deployment of modern renewable energy technologies increase the demand for rare earth elements and other extractive input¹⁴. For instance, it is estimated that the demand for copper, iron, lead, neodymium and zinc, could

⁹ IEA Commentaries (9 September 2022), [Why is ESG so important to critical mineral supplies, and what can we do about it?](#)

¹⁰ U4 (2020), Overview of anti-corruption in the renewable energy sector; OECD (2016), [Corruption in the Extractive Value Chain: Typology of Risks, Mitigation Measures and Incentives](#), OECD Development Policy Tools; OECD (2014), [OECD Foreign Bribery Report: An Analysis of the Crime of Bribery of Foreign Bribery Officials](#)

¹¹ OECD (2014), [OECD Foreign Bribery Report: An Analysis of the Crime of Bribery of Foreign Bribery Officials](#)

¹² Lu, J., Ren, L., Qiao, J., Yao, S., Strielkowski, W., & Streimikis, J., 2019, [Corporate social responsibility and corruption: Implications for the sustainable energy sector](#), page 7. Sustainability, 2019

¹³ World Bank (2020), [Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition](#), Climate Smart Mining Facility, page 11.

¹⁴ Shi, Xunpeng, 2022, [Background Paper: The Energy Transition and Extractive Industries Development in the Asia-Pacific Region](#), page 3, United Nations Roundtable.

increase by more than 200% by 2050¹⁵ in order to limit the rise in global average temperature to well below 2 °C above pre-industrial levels by 2100¹⁶. In addition, the production of graphite, lithium, and cobalt will need to increase by more than 450% by 2050 to meet demand from energy storage technologies in a scenario with at least a 50% chance of limiting the average global temperature increase to 2°C by 2100¹⁷.

Corruption risks, such as domestic and foreign bribery, embezzlement, and trading in influence between public and private sectors, can arise at any point along the extractive value chain. Corruption can also involve manipulation to the policy framework to benefit interested parties, misappropriation of funds, or domestic and foreign bribery of public officials to obtain contracts and licenses, evade royalties or other payments, or influence the terms of agreements and regulations. Inadequate legal systems, such as a failure to effectively criminalize and prosecute foreign bribery, as well as a lack of transparency in decision-making processes, can lead to abuse of power by public officials¹⁸.

The lessons learned in tackling corruption in the extractives sector can be applied to the renewable energy sector, including the development of anti-corruption measures in the critical minerals industry, which should be prioritized as the clean energy transition is mineral intensive. As corruption can occur at every step of the value chain in the extractives sector, countries with abundant critical mineral deposits may be more exposed to corruption. However, corruption risks exist in mining approvals regimes of countries across the globe, irrespective of the country's stage of economic development, political context, geographic region, or the size and maturity of their mining sectors.¹⁹

In 2015, the G20 ACWG acknowledged the vulnerability of the extractives sector to corruption²⁰. The G20 Targeted Approaches to Addressing Corruption in the Extractives Sector identifies the complexity of resource extraction, including the need for effective governance measures on actors involved in the extractives sector as some of the factors that contribute to corruption risks across the value chain. It also recognizes the corruption risks associated with the issuance of exploration and exploitation licenses, as well as the collection of royalties, fees and taxes.

Corruption Risks in Renewable Energy

In some sectors, risk-based assessments can be used to design strategies for promoting transparency and integrity as well as mitigating corruption risks. This assessment may also be applied to the renewable energy sector. However, based on responses to the questionnaire, many countries do not appear to have conducted extensive research or analysis to identify or assess specific corruption risks in the renewable energy sector and the critical minerals industry. Key points included:

¹⁵ World Bank (2020), [Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition](#), Climate Smart Mining Facility, page 72.

¹⁶ World Bank (2020), [Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition](#), Climate Smart Mining Facility, page 32.

¹⁷ World Bank (2020), [Minerals for Climate Action: The Mineral Intensity of the Clean Energy Transition](#), Climate Smart Mining Facility, page 11.

¹⁸ OECD (2016), [Corruption in the Extractive Value Chain: Typology of Risks, Mitigation Measures and Incentives](#), page 15

¹⁹ Transparency International, 2017. [Combating Corruption in Mining Approvals](#), page 16.

²⁰ G20 ACWG (2015), [G20 Targeted Approaches to Addressing Corruption in the Extractives Sector](#).

- Few countries identified corruption risks at different levels of the renewable energy value chain.
- Countries identified that corruption risks were mostly present at the tendering and regulation level, the construction level, and the critical mineral extraction and trade level.
- Bribery was identified as the greatest risk in the renewable energy sector.
- Some countries identified that civil society organisations in their countries have published a number of documents relating to accountable practices in the extractives sector which may be applied to the renewable energy sector.
- Public procurement, including the tendering process, was also considered a high-risk area for corruption.

The combination of tendering and bribery risk conforms to the OECD report on corruption in public procurement which stated that public procurement is one of the government activities most vulnerable to corruption, with 57% of bribery taking place in public procurement. Sector-wise, 19% of foreign bribery cases occurred in the extractive sector²¹.

Another notable mention from the questionnaire responses was the granting of incentives to renewable energy projects to create a level-playing field between renewable energy and conventional energy sources. While the numbers and the methods may vary, many G20 countries agreed that the dispersion of incentives or subsidies should meet rigorous standards, and had adequate contracting laws, and regulations and safeguards such as proof of inspections and commissioning. In this regard, some members also highlighted the importance of civil society and media engagement in the active promotion of accountability, good governance and transparency.

Questionnaire responses also indicated that broadly, critical minerals strategies currently in place in G20 countries have common aims to securing supply chains that meet Environmental, Social, and Governance (ESG) standards which includes good governance aspect. As a result, measures and safeguards to mitigate corruption risks can be fundamentally linked to ESG standards. The questionnaire results demonstrated that most of the early adopters of critical mineral strategies are those with significant renewable energy penetration in their market. There was no common definition of a “critical mineral”, and each country used different classifications and indicators to classify critical minerals. Depending on the country, a critical mineral strategy may include the following elements: a list of critical minerals, objectives, a priority area, a mechanism of transparency and traceability of the origin of mineral raw materials, revised mining-industrial regulations, a funding mechanism, and ESG safeguards. Compliance with ESG safeguards is often inextricably linked to anti-corruption compliance.

Anti-corruption measures are thus important both to mitigate corruption and to meet ESG standards. According to the questionnaire responses, no G20 country has anti-corruption measures specifically designed for the renewable energy sector; rather, these measures are attached to each country's anti-corruption measures in general. One area where measures are being implemented is procurement, which corresponds with questionnaire results that

²¹ OECD (2014), [OECD Foreign Bribery Report: An Analysis of the Crime of Bribery of Foreign Public Officials](#) page 8

identified procurement was more likely than other activities to be vulnerable to corruption risk. In each country, measures are carried out by appointed bodies.

International anti-corruption cooperation was highlighted by G20 countries as a relevant mechanism to better understand corruption risks in the renewable energy sector. International cooperation can act as an informal watchdog and as a platform for knowledge sharing to provide countries with information and lessons learned. For example, international cooperation could assist countries in sharing information and best practices on transparency and good governance in the renewable energy sector and the critical minerals industry.

Several countries cite the Extractives Industries Transparency Initiative (EITI) as an illustration of how they are participating in international cooperation on this issue. It promotes financial transparency and accountability by identifying common standards for transparency in the extractive sector.

According to the questionnaire's findings, the majority of stakeholder engagement in G20 countries focuses on raising awareness across various social groups including government, academia, public, civil society organizations, and the private sector. Various forms of dialogues, consultation, and study groups are used to enhance people's understanding of the importance of corruption mitigation and actively contribute to its implementation strategy. In addition, raising public awareness of corruption risks in general by among others publicizing corruption risks and mitigating measures including with media participation may be of benefit and will have a positive impact on anti-corruption efforts. Similarly, it is necessary to note the important role that whistleblowers play in efforts to prevent, detect and investigate corruption in the renewable energy sector, as well as the energy and extractives sectors more broadly, and to protect persons who report corruption in this sector.

The responses to the questionnaire also indicated that there were few case studies of corruption in renewable energy. Some of the cases are currently ongoing and considered confidential. The remaining cases included cases involving bribery.

In conclusion, the renewable energy sector, similar to the fossil fuel industry, is exposed to corruption risks, given the vast financing pouring into it and projected to increase in the future. Corruption risks in the renewable energy sector may be similar to corruption risks in other sectors. Building on experiences and lessons learned from corruption risks in the broader energy sector or extractives sector, focus should be placed on identifying needs for prevention measures and safeguards, given that the renewable energy sector is relatively new in many countries, and as a result, relevant regulation might be absent or inadequate.

Way Forward

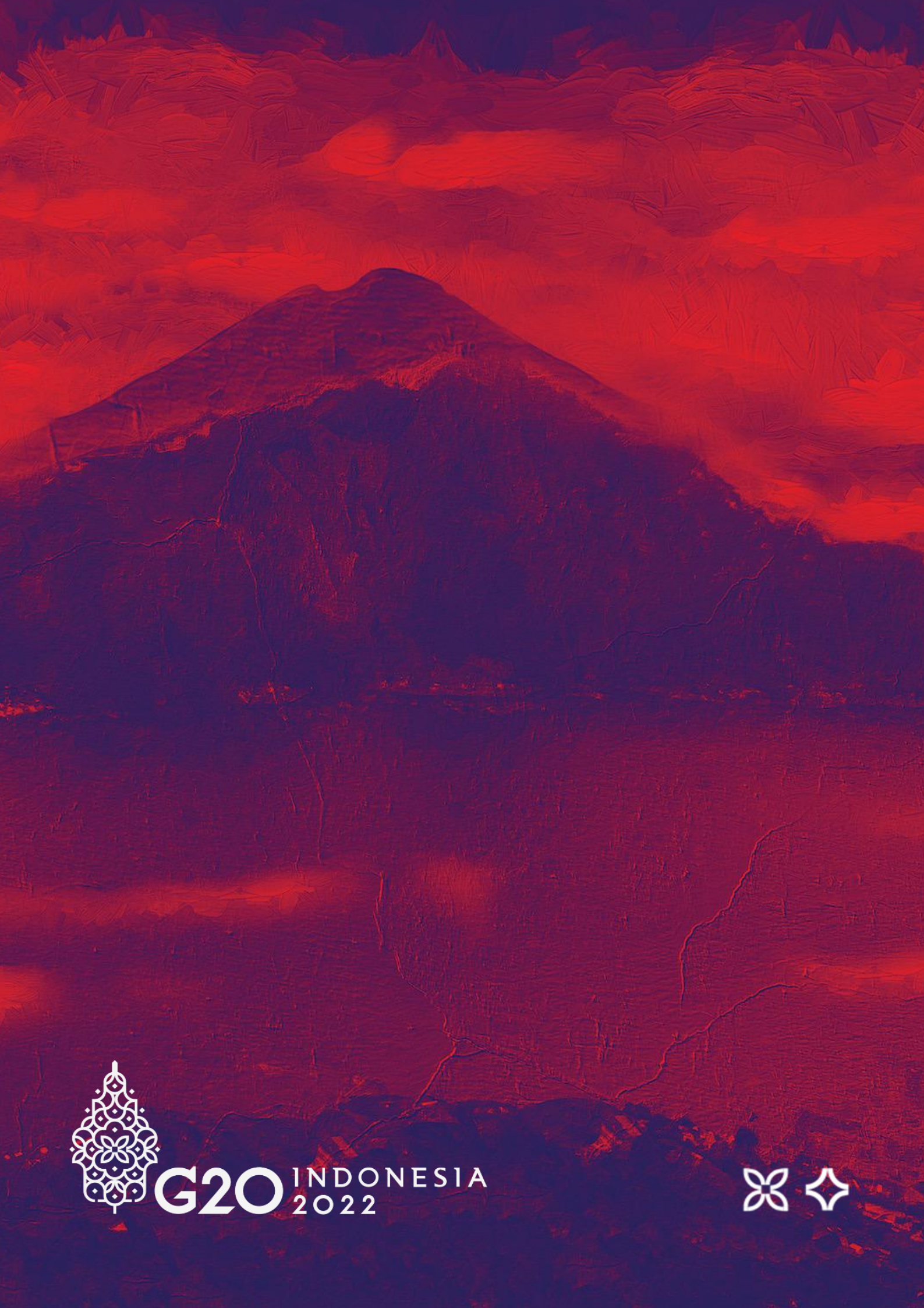
The Indonesian G20 Presidency recognized the importance of raising awareness and developing a better understanding of corruption risks in the renewable energy sector and energy transitions. As many multinational corporations are involved in renewable energy projects in G20 economies, the potential risks of corruption, including foreign bribery, in the renewable energy sector must be well understood by G20 countries. While it is not implied that multinational corporations are more prone to corruption risks, there were several corruption cases which involved multinational corporations.

The Presidency will step up efforts in this area, and this background note on mitigating corruption risks in the renewable energy sector aims to help frame the ACWG's future discussions and potential actions on the subject. To begin, creating synergies between working groups in the renewable energy sector will be beneficial to gain a better understanding of the issue, including through collaboration between the ACWG with the Energy Transition Working Group (ETWG) and the Environment and Climate Sustainability Working Group (ECSWG).

Collectively, the G20 countries could:

- Continue discussing mitigating corruption risks in the renewable energy sector within the ACWG, where appropriate.
- Collect more information and knowledge from other relevant working tracks and international fora.
- Continue to gather knowledge and evidence-based cases of corruption in the renewable energy sector, including exploring thematic dialogues on peer learning and knowledge sharing on corruption risks in renewable energy, including with experts and those conducting research in this field.
- Promote good practices in strengthening compliance with anti-corruption measures, transparency in public procurement, as well as criminalisation and effective enforcement of domestic and foreign bribery, which could improve individual and collective action to mitigate risks in the renewable energy sector taking into account national circumstances, needs, and priorities.
- Support good governance practices in countries in the entire value chain of the renewable energy sector.
- Strengthen and promote capacity building and technical assistance to enable the development, holistic integration, implementation and enforcement of ESG standards and reporting frameworks at all levels that takes national and regional contexts into consideration.

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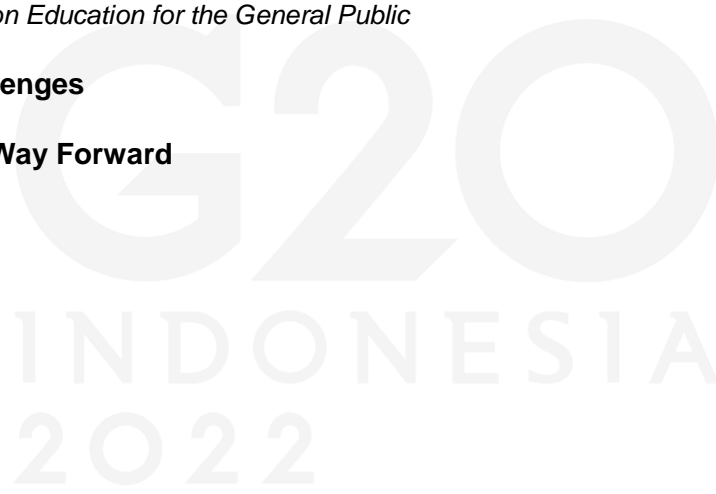
Compendium of Good Practices
on Public Participation and
Anti-Corruption Education

G20 Anti-Corruption Working Group



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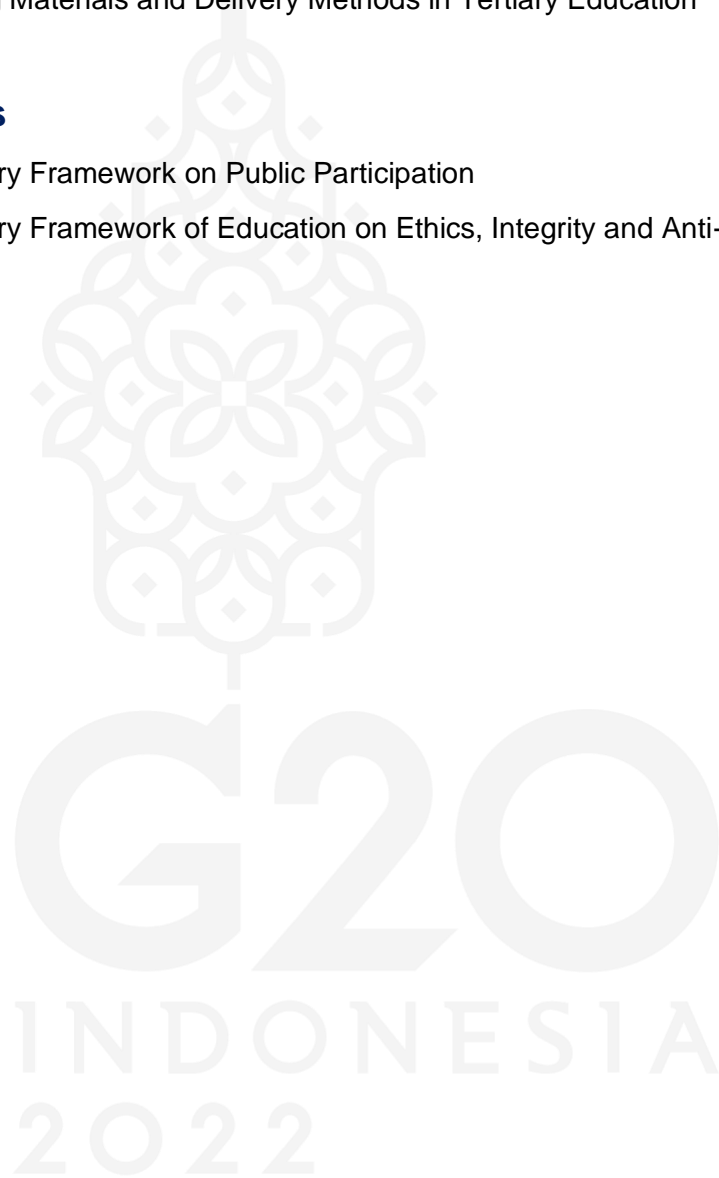


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Acronyms and Abbreviations

ACLC	: Anti-Corruption Learning Center
ACLEI	: Australian Commission for Law Enforcement Integrity
ACPN	: Anti-Corruption Partnership Network
ACRC	: Anti-Corruption and Civil Rights Commission, Republic of Korea
ACTI	: Anti-Corruption Training Institute
ACWG	: Anti-Corruption Working Group
AFA	: Agence Française Anticorruption (French Anti-Corruption Agency)
AJLK	: Akademi Jurnalistik Lawan Korupsi (Journalists Against Corruption Academy)
APEC	: Asia-Pacific Economic Cooperation
APS Academy	: Australian Public Service Academy
BoE	: Board of Ethics, Türkiye
BPN	: Bribery Prevention Network
CGU	: Controladoria-Geral da União (Comptroller General of the Union), Brazil
CIMER	: Cumhurbaşkanlığı İletişim Merkezi (Presidency's Communication Centre), Türkiye
CPAs	: Communal Property Associations
CPC	: Communist Party of China
CPIB	: Corrupt Practices Investigation Bureau, Singapore
ENI	: Estrategia Nacional de Integridad (National Integrity Strategy)
FCPA	: Foreign Corrupt Practices Act
FOIA	: Freedom of Information Act
GAO	: Government Accountability Office, The United States
GRACE Initiative	: Global Research for Education and Youth Empowerment
G-FAR	: Global Forum on Asset Recovery
HATVP	: Haute Autorité pour la Transparence de la Vie Publique
ICT	: Information and Communication Technology
ICW	: Indonesian Corruption Watch
IG	: Inspector General
IHL	: Institute of Higher Learning
IPTV	: Internet Protocol Television
IRM	: Independent Review Mechanism
JACU	: Joint Anti-Corruption unit
JAGA	: Jaringan Pencegahan Korupsi (Corruption Prevention Network)

KPK	: Komisi Pemberantasan Korupsi (Corruption Eradication Commission), Indonesia
LEN	: National Education Law, Argentina
LKPP	: Lembaga Kebijakan Pengadaan Barang Jasa (National Public Procurement Agency), Indonesia
LOMLOE	: Ley Orgánica de Modificación de la Ley Orgánica de Educación (Spain Education Law)
LSP-KPK	: Lembaga Sertifikasi Profesi – KPK (Professional Certification Body of the Corruption Eradication Commission, Indonesia)
MMGyD	: Ministerio de las Mujeres, Géneros y Diversidad (Ministry of Women Gender and Diversity), Argentina
MOOC	: Massive Open Online Course
K-MOOC	: Korea MOOC
MSP	: Multi-stakeholder partnership
MyGov	: Government portal, India
NAP	: National Anti-Corruption Policy
NAZAHA	: Oversight and Anti-corruption Authority, Saudi Arabia
NTICAC	: Northern Territory Independent Commission Against Corruption, Australia
OGP	: Open Government Partnership
PAKU Integritas	: Anti-corruption and Integrity Training
PELOPOR	: Training for Anti-Corruption Instructors
PRAC	: Pandemic Response Accountability Committee
SNA	: Scuola Nazionale of dell'Amministrazione (National School of Administration), Italy
SPAK	: Women's Anti-Corruption Movement
SPF	: Servicio Público Federal (Ministry of Public Administration), Mexico
SICAVISIP	: Sistema de Capacitación Virtual para los Servidores Públicos (Virtual Training System for Public Officials), Mexico
SIU	: Special Investigating Unit, South Africa
UK	: United Kingdom
UNCAC	: United Nations Convention against Corruption
UNGASS	: United Nations General Assembly Special Session
UNODC	: United Nations Office on Drugs and Crime
US	: United States
USRs	: Director-General of Regional School Offices
UTN	: Universidad Tecnológica Nacional
WILES	: Women in Law Enforcement Strategy
WPA	: Whistleblower Protection Act

Executive Summary

By virtue of the Political Declaration that was adopted at the United Nations General Assembly Special Session (UNGASS) Against Corruption in June 2021, United Nations members acknowledged the importance of public awareness on the existence, causes, gravity and negative consequences of corruption, and the appropriate tools available to prevent and combat it. This included undertaking public information activities that contribute to non-tolerance of corruption, and through education and training programmes.¹ This commitment is also relevant to the obligations contained in article 13 of the United Nations Convention against Corruption (UNCAC).

In a research paper published in November 2021, the U4 Anti-Corruption Resource Center emphasized the importance of encouraging multi-stakeholder partnerships (MSPs), involving the public sector, private sector and civil society, to work together in preventing and addressing corruption.² This can include monitoring the implementation of anti-corruption efforts. Raising awareness and providing opportunities for training and education are vital to enable these stakeholders to actively participate in preventing and fighting corruption. Both formal and informal methods through which individuals engage to hold state officials or service providers accountable afford significant potential to combat corruption. This is especially true in the provision of public services, where corruption can generate substantial societal costs for service recipients. Social accountability equips individuals with the appropriate information and institutional tools to denounce and resist abuses of power, hence facilitating grassroots actions against corruption.³

Recognizing the important role of public participation and anti-corruption education, the G20 Anti-Corruption Working Group (ACWG) Action Plan 2022-2024 states that G20 countries will explore ways to raise awareness of corruption among youth and foster a culture of integrity, including, as appropriate and to the extent possible, anti-corruption education and research, training and awareness-raising activities.

This Compendium of Good Practices on Public Participation and Anti-Corruption Education was prepared for the G20 ACWG. It mainly draws upon the information provided by G20 countries through a survey that was circulated to members and observers of the G20 ACWG. The compendium features good practices and measures that have been implemented by countries to promote public participation in anti-corruption and to foster ethical behaviour among government and non-governmental actors.

The compendium consists of five chapters. Chapter 1 discusses the regulatory framework on public participation and education on ethics, integrity and anti-corruption. Chapter 2 describes public participation programmes, initiatives to involve stakeholders, and the use of Information and Communication Technology (ICT) to promote public participation. Chapter 3 covers how

¹ Paragraph 20, Political Declaration: Our common commitment to effectively addressing challenges and implementing measures to prevent and combat corruption and strengthen international cooperation, adopted in June 2021

² U4 Anti-Corruption Research, Partnership against Corruption: How Multi Stakeholder Partnership can Act as Agents for Integrity, page 1, 24 November 2021, <https://www.u4.no/blog/partnerships-against-corruption>, accessed 16 August 2022.

³ U4, Publication: Harnessing the Power of Communities Against Corruption, page 1, *U4 Anti-Corruption*, <https://www.u4.no/publications/harnessing-the-power-of-communities-against-corruption>

countries integrate ethics, integrity and anti-corruption values into learning and education programmes for students, public officials and professionals, young people (youth), lecturers, teachers and the general public. This chapter also describes anti-corruption education tools, including knowledge hubs. Chapter 4 underlines the challenges faced by G20 countries in implementing anti-corruption education and encouraging public participation. Lastly, Chapter 5 outlines recommendations for G20 countries to further strengthen public participation in anti-corruption efforts and to improve integrity, ethics, and anti-corruption education.

Some key findings include:

Public Participation

- Regulatory frameworks can be used to help foster public participation and support the implementation of ethics, integrity and anti-corruption education programs. Such frameworks may consist of stand-alone regulations or form part of a national anti-corruption strategy or anti-corruption policies.
- Public participation in anti-corruption efforts is crucial for enhancing government transparency and accountability. This includes direct and indirect participation in the policy making process, and monitoring the implementation of action plans.
- The effectiveness of anti-corruption programmes should be evaluated using a variety of methods, including survey-based assessments/reviews and assessments conducted by public officials.
- Countering corruption should involve the participation of all stakeholders. This may include the development of platforms or communication channels that allow society and public officials to communicate and exchange information, and provide feedback and support on anti-corruption research.

Education on Ethics, Integrity and Anti-Corruption

- There are three common methods by which ethics, integrity and anti-corruption values are imparted in schools:
 - integrating the values of ethics, integrity and anti-corruption into relevant subjects, such as civic education.
 - teaching anti-corruption, ethics, and integrity as extracurricular or after-school programmes.
 - developing specific anti-corruption subjects, especially in curricula and teaching materials.
- Enhancing the capacity of educators (lecturers and teachers) to teach these issues is helpful to bolstering the efficacy of ethics, integrity and anti-corruption education. Guidelines and handbooks on these topics are provided in some G20 countries.
- The use of ICT is relevant for enhancing public participation and promoting integrity and anti-corruption education. This technology-based approach is mostly used to increase social participation, and to monitor and assess decision-making processes, so as to facilitate the public in making complaints and participating in campaigns and consultations.

Chapter 1: Regulatory Frameworks on Public Participation and Education on Ethics, Integrity and Anti-Corruption

1.1 Public Participation

The level of public participation in anti-corruption efforts varies from country to country. Participating in campaigns, educational initiatives or capacity building related to ethics, integrity and anti-corruption, or reporting corrupt practices, are among the many ways in which the public can contribute to efforts to combat corruption. Consequently, it is critical to ensure that the public can identify corruption and are empowered to participate in anti-corruption efforts. Regulatory frameworks, for the purpose of this compendium, are defined as national or international legal mechanisms. They may be mandatory or voluntary in nature, and can include national laws, regulations, policies, guidelines and codes of conduct. The forms of regulatory framework for education and public participation vary from country to country based on their legal frameworks, the availability of resources, and corruption risks and vulnerabilities. These frameworks are useful in increasing public participation in anti-corruption efforts.

Regulatory frameworks on anti-corruption, good governance, and transparency and accountability of the public sector vary across G20 countries. Drawing from the responses to the questionnaire, these frameworks may be divided into the following types: 1) dedicated regulations, 2) guidelines, 3) national action plans or strategies, and 4) other frameworks. These frameworks all incorporate at least some provision for public participation in anti-corruption efforts.

The majority of G20 countries have enacted dedicated regulations on public participation in anti-corruption efforts, particularly relating to participation in public consultations and the reporting of corruption. In Argentina, for instance, Decree 1172/2003 stipulates that all entitled or interested persons, companies and associations, whether public or private, may participate in the drafting of administrative regulations and bills prior to their submission to Parliament. In addition, the Government of Indonesia has adopted Regulation No. 43 of 2018 (on Procedures for Public Participation and Rewards in the Prevention and Eradication of Corruption) to encourage public participation in anti-corruption programmes and the reporting of corrupt practices. Under this regulation, members of the public in Indonesia who actively participate in anti-corruption programmes are entitled to receive a certificate of appreciation from the Government, and those who report corruption are entitled to 0.2% of recovered state financial losses, up to a maximum of IDR 200 million (approx. USD 13,453), or 0.2% of the amount of the bribe in a bribery case, up to a maximum of IDR 10 million (approx. USD 673).

Guidelines and National Action Plans or strategies are also often used to support public participation in anti-corruption programmes. Most of the G20 countries, including Argentina, Australia, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Singapore, Spain, Türkiye and the United Kingdom (UK), have developed guidelines to support the implementation of anti-corruption policies, enhance integrity and increase public participation. Additionally, countries such as Brazil, France, Indonesia, Italy, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa and the UK promote integrity, public participation and anti-corruption through their dedicated national action plans or strategies.

Furthermore, G20 countries also enhance public participation through other types of frameworks, such as OGP Commitments⁴ and embedding public consultation requirements into other regulations. In this regard, G20 countries that are also members of the OGP have adopted national action plans on anti-corruption in line with their OGP commitments, such as enhancing public participation. Building on commitments given during the UK's G7 presidency, the Government of the UK developed a commitment on anti-corruption and international illicit finance as part of the Fifth National Action Plan for Open Government 2021-2023 (NAP5). This commitment intends to enhance transparency and collaboration in order to detect and tackle corruption and illicit finance. [Commitment 5](#) of the NAP includes:

1. working with partners to promote civil society engagement in achieving the objectives of the UN Convention against Corruption (UNCAC).
2. actively collaborating with civil society through the United States (US) Summit for Democracy process and 2022 Year of Action.
3. publishing annual data covering international asset returns and recovered assets stemming from proceeds of crime, as well as bilateral agreements outlining the use of returned assets in accordance with the Global Forum on Asset Recovery (G-FAR) Principles.
4. continuing to promote private sector and civil society participation in anti-corruption activities, focusing engagement on the successor to the UK's Anti-Corruption Strategy and an updated Economic Crime Plan.
5. use the UK's [membership](#) of the [Beneficial Ownership Leadership Group](#) to continue to champion the adoption of public registers of company beneficial ownership, attend biannual meetings at both political and technical levels of the Beneficial Ownership Leadership Group, and engage other partners, including governments and international institutions, to advance the objective of making beneficial ownership transparency a global norm.

Countries including Argentina, Australia, Brazil, France, Germany, Indonesia, Italy, Mexico, Republic of Korea, UK and the US have developed their own OGP national action plans (NAP). Moreover, civil society also participated in the development of these action plans. In Brazil, the Comptroller General (CGU) involved all stakeholders, such as citizens, academia, the private sector and the media, in the drafting of the national action plan on open government initiatives. Furthermore, to encourage the implementation of the OGP action plan, Spain has established the Open Government Forum, a multi-stakeholder conclave with representatives drawn from the public administration and civil society in equal numbers. The forum has four dedicated working groups, one of which is centered on transparency and accountability and one on public integrity, as well as a practice community. These working groups discuss key issues and assess initiatives on transparency and anti-corruption programmes.

Moreover, in the US, public participation and supervision are key tenets of US governance and play an important role in ensuring transparency, accountability and integrity in the public sector. The US has a number of laws and regulations that supplement the fundamental freedoms guaranteed by the US Constitution, including the Administrative Procedure Act, which is one of the primary mechanisms for requesting consultation in the executive branch of the federal government. The Act mandates (with limited exceptions) that all proposed rules and regulations of federal agencies must be published in the Federal Register for public review

⁴ Open Government Partnership, <https://www.opengovpartnership.org/our-members/> (16 August 2022)

and comment. The agency must also issue responses to the comments. The Freedom of Information Act (FOIA) provides that every person has the right to access federal agency records. The right is enforceable in court, and that agencies must respond to requests within ten days.

To sum up, the regulatory frameworks relating to public participation are as follows:

Table 1. Regulatory Framework on Public Participation

No	Country	Dedicated Regulations	Guidelines	National Action Plan/ Strategy	Other Frameworks
1	Argentina	√	√	N/A	√
2	Australia	√	√	N/A	√
3	Brazil	√	N/A	√	√
4	China	√	√	N/A	N/A
5	France	√	√	√	√
6	Germany	√	√	N/A	√
7	India	√	√	N/A	N/A
8	Indonesia	√	√	√	√
9	Italy	N/A	√	√	√
10	Japan	√	√	N/A	√
11	Mexico	√	√	√	√
12	Republic of Korea	√	√	√	√
13	Russia	√	√	√	N/A
14	Saudi Arabia	N/A	N/A	√	N/A
15	Singapore	N/A	√	N/A	N/A
16	South Africa	N/A	√	√	N/A
17	Spain	√	√	N/A	√
18	Türkiye	√	N/A	N/A	N/A
19	United Kingdom	N/A	√	√	√
20	United States	√	N/A	N/A	√

√ : Published regulation

N/A : No information provided

The above table illustrates various approaches to regulatory frameworks to foster public participation. Depending on the national context and policy priorities, participation could be gradually incorporated as a component of national anti-corruption strategies, anti-corruption policies and other public-sector regulations, such as open-government initiatives, regulations that ensure freedom of speech, public-private and civil-society collective action; or it could be enshrined in a dedicated regulation.

1.2 Education on Ethics, Integrity and Anti-Corruption

Education on ethics, integrity and anti-corruption is a crucial instrument for strengthening the culture of integrity. Several factors contribute to the important role of education as a key prevention tool in anti-corruption efforts. Among those factors are the following:

1. Numerous countries employ education as a tool to promote a culture of integrity, ethics or anti-corruption. This is often carried out through education institutions at the primary, secondary and tertiary levels.
2. Quality education plays an important role in building character, knowledge, and upscaling skills to respond in an ethical way when confronted with an ethical dilemma, and can be instrumental in mitigating potential corruption risks.
3. Education is a human right and a major driver of personal and social development. The achievement of education is a precondition for a person's ability to claim and enjoy many other rights.

Drawing from the responses to the questionnaire, some G20 countries have included provisions in regulations issued by the central government (federal or state government/anti-corruption agency/ministry of education), while other G20 countries have developed dedicated regulations on anti-corruption education. The table below shows the different approaches to regulatory frameworks on education on ethics, integrity and anti-corruption, which, based on country responses, can depend on the education system of each country.

Table 2. Regulatory Framework of Education on Ethics, Integrity and Anti-Corruption

No	Country	Embedded in Other Regulations	Dedicated Regulation
1	Argentina	√	N/A
2	Australia	√	N/A
3	Brazil	√	√
4	China	√	√

No	Country	Embedded in Other Regulations	Dedicated Regulation
5	France	√	√
6	Germany	N/A	N/A
7	India	√	N/A
8	Indonesia	√	√
9	Italy	√	N/A
10	Japan	√	N/A
11	Mexico	N/A	N/A
12	Republic of Korea	√	√
13	Russia	√	N/A
14	Saudi Arabia	√	√
15	Singapore	√	√
16	South Africa	√	N/A
17	Spain	√	N/A
18	Türkiye	√	N/A
19	United Kingdom	√	N/A
20	United States	√	N/A

√ : Published Regulation

N/A : No information provided

The above table illustrates that the majority of G20 Countries embed provisions on ethics, integrity and anti-corruption in other regulations. For instance, in Spain, the central government has enacted the Education Law (LOMLOE), which provides a framework for developing a new competence-based curriculum in which certain aspects of the fight against corruption are addressed in a cross-cutting manner through the promotion of responsible citizenship characteristics and the curricular syllabus of the “Education in Civic and Ethical Values” subject.

Similarly, in Argentina, the National Education Law (LEN), which was enacted in 2006, governs the educational system. LEN highlights the relevance of civic and ethical education in an interdisciplinary manner. Beyond this characteristic, the “Priority Learning Nuclei” for early, primary and secondary education have been approved and developed in successive

stages. These nuclei reflect the knowledge that society deems essential, relevant and significant for children, adolescents and youth in order for them to develop, study, live and participate in a democratic and equitable country. The nuclei for the “Ethical and Citizenship Training” subject, which is mandatory at all educational levels, are specifically designed to educate on public integrity, as they provide a space to address issues related to ethical reflection, and the historical construction of reality, citizenship, rights and social participation.

A number of G20 countries, such as Brazil, China, France, Indonesia, Republic of Korea, Singapore and Saudi Arabia, have developed dedicated regulations on ethics, integrity and anti-corruption education. For example, in Indonesia, Article 13(c) of Law No. 30 of 2002 on the Corruption Eradication Commission states that the Corruption Eradication Commission (KPK), as the leading institution for combating corruption, has a mandate to provide anti-corruption education. In South Africa, the Public Service Code of Conduct (regulation 14(i)) requires that employees must avail themselves of training and development that includes anti-corruption and ethics training. Although the approaches taken by G20 countries are varied, according to the national practices mentioned above, most G20 countries consider regulatory frameworks to be important for supporting the implementation of such programmes. In addition, regulatory frameworks help government carry out public policy, and determine the authorities responsible for their implementation.

1.3 Measures to Assess the Effectiveness of Anti-Corruption Programmes

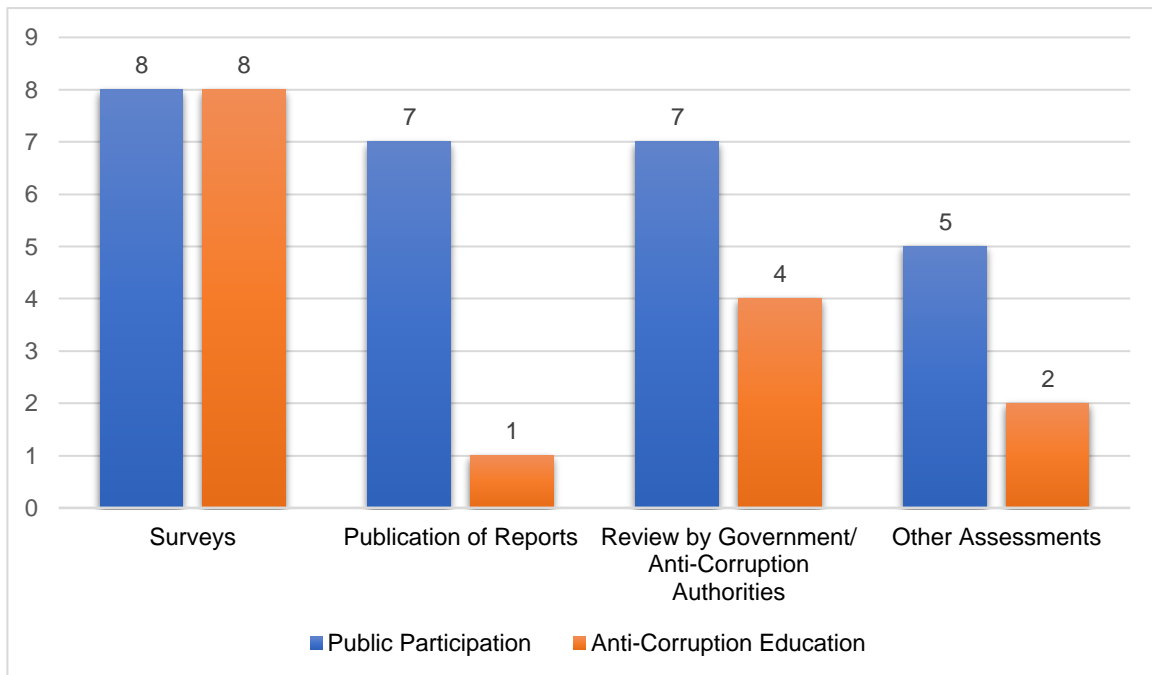
To prevent corruption, many countries have developed extensive anti-corruption programmes and cooperate with other stakeholders in carrying out their anti-corruption efforts. To measure the effectiveness of such programmes in achieving their goals, it is important to carry out evaluations and identify areas for improvement.⁵ However, it can be difficult to measure the effectiveness of anti-corruption interventions and programmes due to challenges in accurately measuring corruption and changes in corruption; the time it may take to achieve an impact; proving causation and contribution; and the likelihood of unintended consequences and backlashes.⁶

Evaluating the effectiveness of anti-corruption programmes is not a new concept for G20 countries. Drawing from the responses to the questionnaire, the graph below illustrates the principal approaches taken by G20 countries to evaluate the effectiveness of anti-corruption education programmes and public participation in the anti-corruption effort.

⁵ Transparency International, Methods and Approaches for Measuring Effectiveness, page 10, *Transparency International-UK*, <https://www.transparency.org.uk/sites/default/files/pdf/publications/Make%20it%20Count%20-%20Transparency%20International%20UK%20%28web%29.pdf> (17 August 2022)

⁶ Wathne, Cecilie, Effectively evaluating anti-corruption interventions: Tailoring the Approach to the Challenge, page 1, U4 Anti-Corruption Resource, 2022, <https://www.u4.no/publications/effectively-evaluating-anti-corruption-interventions>, (28 August 2022)

Graph 1. Evaluation Approaches



The graph shows that some G20 countries apply a variety of approaches to evaluation, such as assessment through surveys, publication of reports, reviews by government/anti-corruption authorities, and other assessments, such as independent review mechanisms. These approaches support the effective implementation of programmes by providing recommendations for improvements. The graph also shows that surveys are the most common tools used by G20 countries for evaluation purposes. They are used to collect information and/or to assess perceptions of corruption, or knowledge of anti-corruption programmes. A survey also usually incorporates feedback from the respondent to improve programmes in the future. Several G20 countries, such as Argentina, Australia, Indonesia, Republic of Korea, Russia, Saudi Arabia, Singapore and the UK, highlight that they conduct regular surveys to assess the effectiveness of their anti-corruption or integrity programmes. For example, Indonesia conducts an annual integrity assessment survey to identify corruption risks and progress in corruption prevention, as well as awareness of corruption risks. Similarly, the Republic of Korea, Brazil and Singapore have initiated citizen or public-perception surveys. The citizen survey in the Republic of Korea employs objective examination and statistical verification from a reliable social survey institution.

In Singapore, the Corrupt Practices Investigation Bureau (CPIB) periodically engages an independent market research agency to conduct public-perception surveys to measure the general public's understanding of corruption, perceptions of the level of corruption in Singapore, and awareness of CPIB's anti-corruption work. The recent surveys have prompted greater emphasis on youth and private sector engagement efforts. In addition, Brazil, China, Indonesia, Italy, Mexico, Saudi Arabia and, Singapore also use surveys to measure the effectiveness of anti-corruption education programmes. In Italy, the National School of Administration (SNA) has also been consistently measuring the effectiveness of training activities for public servants by obtaining feedback on the extent to which the perceptions of participants on corruption have changed and the level of improvement in their knowledge and skills in preventing corruption.

Several G20 countries, including Argentina, Australia, China, Germany, India, Spain and the US, regularly publish reports that gauge the effectiveness of anti-corruption programmes, including public-participation initiatives. Meanwhile, Mexico publishes reports that cover anti-corruption education programmes. These reporting mechanisms can help governments effectively achieve the goals set out in the relevant plans.

In some G20 countries, such as Australia, China, France, India, Japan, South Africa, the UK and the US, the government/anti-corruption authorities conduct reviews or assessments of anti-corruption and integrity programmes. For instance, the Government of Japan conducts reviews on the state of enforcement of the Whistleblower Protection Act (WPA), and takes necessary corrective measures based upon the findings of such reviews. In Russia, the public institutions that are involved in the implementation of the National Anti-Corruption Plan also conduct assessments to evaluate the effectiveness of participation on the part of citizens, civil society organisations and other non-profit entities in countering corruption and formulating recommendations for improvement. In India, ministries/departments monitor and provide feedback or reports on the implementation of awareness activities.

In relation to the provision of education on ethics, integrity and anti-corruption, several G20 countries, such as in Argentina, Italy, Russia and the US, have assigned the relevant ministries/authorities to conduct reviews and monitoring activities. In Italy, the Ministry of Education, through the Head of Transparency and Anti-Corruption, centrally monitors the three-year plans drawn up by the Directorate General of Regional School Offices (USRs), which, in turn, through field managers at the regional level, supervises the organizational anti-corruption and transparency measures adopted in the individual educational institutions. Furthermore, some countries (Brazil, Spain and the UK) state that evaluation through independent parties, such as the Independent Review Mechanism (IRM) as part of the Open Government Initiative, is also effective for monitoring the progress of public participation in anti-corruption programmes. The IRM is an independent body guided by, but not directly accountable to, the Steering Committee of the Open Government Partnership. It provides independent, evidence-based and objective reporting to hold OGP members accountable and support their open government efforts.⁷

⁷ OGP, The Independent Reporting Mechanisms (IRM), <https://www.opengovpartnership.org/process/accountability/>

Chapter 2: Public Participation in Anti-Corruption Programmes

2.1 Initiatives to Engage with Stakeholders

Article 13(1) of UNCAC provides the foundation for public participation in the fight against corruption. It requires all States parties to: “take appropriate measures, within its means and in accordance with fundamental principles of its domestic law, to promote the active participation of individuals and groups outside the public sector, such as civil society, non-governmental organizations and community-based organizations, in the prevention of and the fight against corruption and to raise public awareness regarding the existence, causes and gravity of the threat posed by corruption.” Governments should provide individuals, civil society and other groups outside the public sector with the information needed to combat corruption and contribute to decision-making processes.

This section presents examples of multi-stakeholder engagement in fighting corruption, as well as initiatives and good practices on public participation, including in measuring the effectiveness of such initiatives.

Individuals and Civil Society

G20 countries have adopted a variety of approaches to enhancing the participation of individuals and civil society in the fight against corruption. Most efforts are related to public consultation in policy-making processes and anti-corruption awareness programmes. For example, in the Republic of Korea, the Anti-Corruption and Civil Rights Commission (ACRC) has established the “Citizen Monitoring Group on Integrity Policy,” which consists of university and school students, workers and homemakers, and conducts citizen discussions and surveys to collect anti-corruption policy ideas from citizens. Similarly, in France, to increase the transparency of public audit results, the French Supreme Audit Institution (Cour des Comptes) has developed a citizen-participation platform to garner citizens' opinions on audit topics. In South Africa, the Special Investigating Unit (SIU) has rolled out targeted anti-corruption awareness campaigns with members of communities to raise awareness of fraud and corruption in the Communal Property Associations (CPAs).

The UK has a dedicated Civil Society Strategy which sets out how the government can support and enable civil society to achieve its potential, without compromising its independence. This includes setting out how the government will work with civil society to develop policy and deliver services that work for everyone. Furthermore, in Germany, the Freedom of Information Act states that the federal agencies of Germany must provide citizens with information held by those agencies, including relevant documents available in official files.

Fostering anti-corruption knowledge and a culture of integrity in society are vital to preventing corruption and creating an effective government-citizen synergy to eradicate it. The Government of Mexico has published a booklet titled “10 key ways to understand, prevent and combat corruption”⁸ in order to provide a tool to better understand the phenomenon of corruption and learn how to prevent, report and sanction it. The booklet is user friendly,

⁸ Mexico, Booklet: 10 keys to understand, prevent and combat corruption, April 2022, in Spanish, https://www.gob.mx/cms/uploads/attachment/file/727371/Libro-cuento_10_CLAVES_Final_web.pdf

available in print or digital format, and has been widely promoted through official social media. Similarly, in recognition of the need to launch a systemic campaign against corruption that involves all members of civil society, the Government of India observes “Vigilance Awareness Week” every year, during which campaigning is undertaken to educate people about the importance of integrity in everyday life. All government organizations, public banks, schools and colleges come together to reaffirm the commitment to promoting transparency and accountability in public life by means of taking pledges, holding seminars, community-level meetings and street plays.

As a key component in society, the involvement of youth is essential in supporting the anti-corruption effort, and ensuring a sustainable and effective approach to preventing corruption.⁹ The world today is home to 1.8 billion diverse young people who are future leaders, public servants, politicians and entrepreneurs. Therefore, it is imperative to invest in, work with and empower youth to make informed socio-political choices and contribute to determining and implementing anti-corruption initiatives. In Singapore, the CPIB collaborates with students at institutes of higher education and produces a virtual talk show for youth to discuss various corruption-related issues. Similarly, China actively promotes an integrity culture in institutes of higher education, with the participation of more than 7,000 universities and colleges. China’s young people are actively involved in a diverse range of integrity-education activities.

As corruption exacerbates gender inequalities, and gender inequalities underpin corruption, it is critical that women and persons of diverse gender identities design, participate in and make decisions about the prevention of, and fight against, corruption. The G20 recognises that corruption affects individuals differently, based on their gender and other intersecting inequalities, and the disproportionate impacts that corruption has on women and girls because of their situations of lesser power, economic security and safety. Thus, it is important for women to be able to identify, prevent, and safely report corrupt practices that they experience or witness, as well as to fully and equally participate in and lead the fight against corruption.

A number of G20 countries have developed specific programmes to enhance the participation of women in the fight against corruption. For Instance, in Indonesia, a national network called “I am a Woman against Corruption / SPAK has been established to bring together women determined to fight corruption as anti-corruption agents. SPAK provides training and support to these agents so as to help them raise awareness of corruption and inculcate anti-corruption behaviours in their families, communities and workplaces.¹⁰ In the UK, the Westminster Foundation for Democracy has been exploring the role of women’s political participation through a specialist anti-corruption and gender series, culminating in a 2022 [Report](#). The Anti-Corruption Office of Argentina, together with the Ministry of Women, Gender and Diversity (MMGyD), is pursuing gender-responsive approaches in the development of policies at the provincial and municipal levels. The activities undertaken to date include the holding of a conference titled “Corruption and Gender in Territorial Public Management,” which offered a conceptual framework for the incorporation of gender and human-rights perspectives in the development of public policies on integrity and transparency.

⁹ Organization for Economic Cooperation and Development, Youth and Integrity in MENA and OECD Countries, Organization for Economic Cooperation and Development, 2018, (29 July 2022)

¹⁰ Dyer, Sarah, SPAK Evaluation, page 5, SPAK Indonesia, <http://www.spakindonesia.org/lkapp/wp-content/uploads/2021/05/SPAK-Evaluation-compressed-FINAL-1-3.pdf>

In 2020, the Government of Mexico launched the first public recruitment drive for the Federal Public Administration aimed exclusively at women. The process, which offered more than 1,700 positions for women in Federal Public Administration offices, marked a significant step forward by the Government of Mexico in strengthening equal employment opportunities.

In Australia, the Women in Law Enforcement Strategy (WILES) is a mentoring program set up over 10 years ago to address the under-representation of women in law enforcement, particularly at senior levels, by providing mentoring relationships and workshops to women entering Senior Executive Service roles in law enforcement agencies.

Academia

Academia can provide support for advancing anti-corruption strategies and measures, including through collective action with government, civil-society organizations, and the private sector.¹¹ It can play a key role in advancing the fight against corruption through evidence-based research to inform policy making, sharing knowledge on ethics, integrity and anti-corruption to students, and supporting awareness-raising campaigns. As such, academia can influence and promote the need for enhanced integrity and transparency, and work for higher ethical standards within and outside institutes of further education. In support of this role, G20 countries have engaged in close collaboration with academia in the field of anti-corruption. In the UK, JACU (Joint Anti-Corruption Unit) regularly works together with academia including in the development of a successor to the anti-corruption strategy and ongoing policy discussions. Meanwhile, Argentina, through the Federal Network of Multidisciplinary Studies on Integrity and Corruption, has initiated the creation of a network of academics that is made up of researchers from different disciplines and regions of the country who are focused on the study of issues related to corruption. The network aims to strengthen both the identification of problems and the design and implementation of public policies at the provincial and municipal levels.

Media

The media also has an important role to play in the fight against corruption. It provides information on corruption in the public sector, and demands that both the public and private sectors be more accountable and transparent.¹² For instance, as in many other G20 countries, Australia, South Africa and China engage with the media by providing access to information through press releases, media conferences/briefings and interviews on television and radio. Countries like Saudi Arabia, Singapore, Russia, India and Indonesia also collaborate with the media to strengthen the culture of integrity and for anti-corruption awareness-raising. In the US, the Department of State's Foreign Press Centers hosted an Anti-Corruption Virtual Reporting Series for over 50 foreign journalists. The series included an overview of the new US Strategy on Countering Corruption and briefings from US government officials on initiatives under each of the five pillars of the strategy. In Indonesia, the KPK conducted an intensive scholarship-based training programme known as the Anti-Corruption Journalist

¹¹ Di Palma, Virna, The Role of Academia in Anti-corruption Collective Action, *Basel Institute on Governance*, 2014, <https://baselgovernance.org/blog/role-academia-anti-corruption-collective-action>, (12 August 2022)

¹² United Nations Office on Drugs and Crime, The role of the media in fighting corruption, page 15, *United Nations Office on Drugs and Crime*, 2020, <https://www.unodc.org/e4j/en/anti-corruption/module-10/key-issues/the-role-of-the-media-in-fighting-corruption.html>, (15 August 2022)

Academy/Akademi Jurnalistik Lawan Korupsi (AJLK). The participants in the training were encouraged to design anti-corruption programmes, which were then published on the KPK's social media channels.

The Private Sector

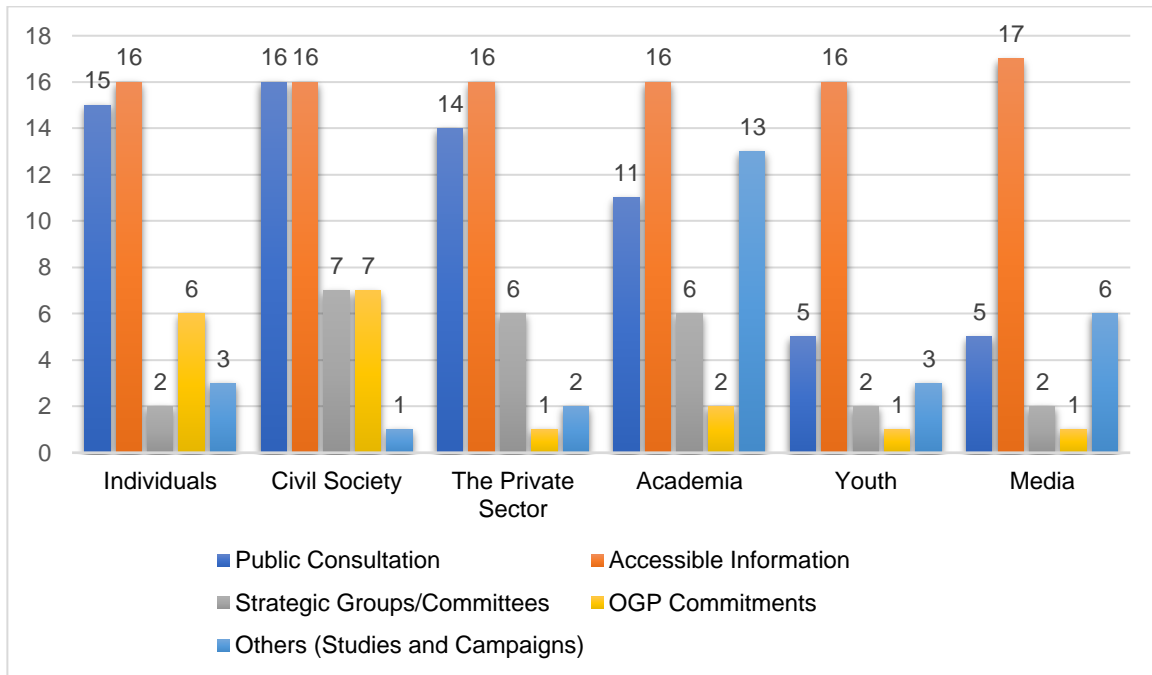
The private sector can contribute to the prevention of corruption by, among other things, applying and implementing principles of good corporate governance. Companies should build corruption prevention systems by instituting internal control programmes in order to create a clean and accountable business environment.¹³ Networks or forums to share knowledge and promote anti-corruption prevention amongst businesses have also been established in several G20 countries. For instance, in Australia, the Bribery Prevention Network (BPN) offers a free, publicly available online portal of accessible resources curated by Australia's leading anti-bribery experts to support Australian business to manage bribery and corruption risks in domestic and international markets. Similarly, in Singapore, the CPIB has established the Anti-Corruption Partnership Network (ACPN) with member companies from the private sector to promote ownership and collaboration in the prevention of corruption in the private sector. It is also important to enhance the capacity of the private sector in preventing corruption. Therefore, guidelines on anti-corruption and seminars, workshops or training on integrity are often provided by governments through their public institutions or anti-corruption authorities. For instance, in France, the Agence Française Anticorruption (AFA) has published new guidelines aimed at helping organizations, whether public or private, big or small, French or foreign, to prevent and detect corruption and related offences. These guidelines provide comprehensive guidance on how to design and implement an effective anti-corruption compliance programme.

Public Participation

Recognizing the critical role of broader stakeholders in anti-corruption programmes, the G20 countries have established a range of public participation initiatives that involve public consultations, provision of access to information, development of strategic groups/committee initiatives, the implementation of OGP commitments, and studies/campaigns. Through these initiatives, the public can share knowledge and become meaningfully involved in awareness-raising programmes on ethics, integrity and anti-corruption activities. Graph 2 below demonstrates public-participation initiatives that have been adopted by G20 countries by type of stakeholder.

¹³ Sarjito, et al, Analysis Good Governance of Corruption Eradication towards Penta Helix Model in Indonesia, *Researchgate*, 2020, page 8, https://www.researchgate.net/publication/342379957_Analysis_Good_Governance_of_Corruption_Eradication_toward_Penta_Helix_Model_in_Indonesia, (11 August 2022)

Graph 2. Public Participation Initiatives



This graph illustrates that most G20 countries encourage public participation in anti-corruption programmes by engaging stakeholders in public-consultation processes and by providing access to information. Engaging the public in public consultations is a crucial step during policy making that most countries undertake in order to shape and discuss policy proposals, including anti-corruption policies. Providing sufficient information to the public also helps encourage people to make concrete contributions to the anti-corruption effort. Further, the provision of information helps strengthen the public’s role as a checks-and-balances mechanism for public sector governance.

Public Participation in the Response to the COVID-19 Pandemic

During the COVID-19 outbreak, countries struggled to control the spread of the virus and were forced to allocate significant resources in response to the crisis, including both in the health and economic sectors. As a result, COVID-19 has posed unprecedented challenges to many countries. In this regard, public participation is also crucial for monitoring government programmes and procurements in responding to the pandemic. It serves as a checks-and-balances mechanism which can promote openness and transparency. In Argentina, for example, a new platform has been designed by the Ministry of Public Works to afford greater visibility to the work carried out in the context of the COVID-19 emergency.

Similarly, in the US, the Pandemic Response Accountability Committee (PRAC) is promoting transparency through its website, PandemicOversight.gov, which features interactive dashboards and provides timely information that allows the public to scrutinize more than \$5 trillion in pandemic relief spending. As a result, 400 pandemic oversight reports have been issued by federal inspectors general and more than 140 reports issued by the Government Accountability Office (GAO). Therefore, the public has access to oversight information at all levels of government. PRAC is also holding regular public hearings with the GAO and federal,

state, local, and tribal auditors. It facilitates discussions on the impact that pandemic programmes have had on local communities, and provides an essential platform for auditors across the country to collaborate and share information on best practices and lessons learned.

In Saudi Arabia, several reporting channels have been established to support the participation of citizens in reporting corruption to the authorities, including to the Oversight and Anti-Corruption Authority (Nazaha) and, in the case of overpricing or commercial fraud, to the Ministry of Commerce. Nazaha also has a dedicated department to respond to concerns raised by citizens. As a result, a number of cases have been detected through initial whistleblowing via such platforms.

To ensure the effectiveness of reporting of corruption cases by the public, it is also important to enhance the public's capacity to identify and detect corrupt practices. A number of G20 countries have provided guidelines or published assessments or research on corruption risks during the COVID-19 pandemic. In Australia, the Commonwealth Fraud Prevention Centre published a COVID-19 Counter Fraud Measures Toolkit and Fraud Control in COVID-19 guidance for Commonwealth government agencies responsible for support measures during the pandemic. Similarly, the UK has published COVID-19 fraud and cybercrime [guidance](#) to assist the public and businesses to identify fraud and appropriate fraud-mitigation measures.

The publication of research or study reports can improve public awareness of corruption risks during the pandemic. Indonesia, for example, conducted a corruption risk assessment on COVID-19 policy, which focused particularly on the allocation of budgetary funding for 1) COVID-19 patient claims; 2) incentives for health workers, 3) tax incentives for the health industry, and 4) COVID-19 vaccine procurement. In China, similar studies have focused on corruption-prone areas, special corruption risks, and the effectiveness of anti-corruption measures in pandemic control and relief work.

2.2 Using Information and Communications Technology (ICT) to Facilitate Public Participation in Anti-Corruption Programmes

Most countries use ICT to combat corruption, including by encouraging public participation. The harnessing of ICT provides a variety of opportunities for the adoption of e-governance measures by minimizing discretion and reducing human intervention in public-service delivery. It can also help to facilitate public awareness-raising and campaigns on anti-corruption, facilitate information-sharing and social mobilisation, and provide digital platforms where individuals can report incidents anonymously. The following are some examples of how ICT is being used to combat corruption:

Improving transparency and accountability. Transparency and accountability are significant for combating corruption. By ensuring access to information about government programmes, governments support the empowerment of individuals and civil society, thereby enabling them to hold public-sector institutions accountable for their decisions. For this purpose, G20 countries like Argentina, Russia, and South Africa have taken advantage of ICT to achieve greater engagement and participation in decision-making and monitoring of government programmes. In Argentina, the strategic plan of the integrity policy of the National Executive Branch (ENI) serves as a roadmap for government entities in their efforts to enhance integrity and transparency. It also incorporates the perspective of transparency in public-sector management, and concrete and measurable actions for implementation by

agencies and for monitoring by citizens. A digital platform has been developed to allow social control of the state and civic monitoring of the level of compliance by the agencies in charge of ENI initiatives. Thus, within the "Map of State Action" information system, there is a specific module focused on follow-up and the evaluation of the initiatives that make up the National Integrity Strategy.

In Russia, several platforms have been developed to encourage public participation: (1) the Russian Public Initiative, which is an online platform where citizens can share public initiatives, (2) the Your Control Platform, which allows members of the public to post assessments on the quality of public and local services, and (3) the Federal Portal of Draft Legal Acts, which is an official website that provides information on the drafting of legal acts by the federal executive bodies and the outcome of relevant public consultations.

In South Africa, government communication and information systems and government departments use websites and social media to communicate anti-corruption messages. The Government also holds hearings publicly and allows the media to broadcast them as widely as possible. The hearings of the Judicial Commission of Inquiry into Allegations of State Capture, Corruption and Fraud in the Public Sector including Organs of State were televised live on major TV channels and radio stations, thus making the hearings accessible to ordinary citizens.

In addition, India has used ICT to achieve greater citizen participation and an enhanced commitment against corruption by introducing an e-integrity pledge. A total of 15,221,773 citizens have taken this pledge so far and, in return, received a certificate issued by the Central Vigilance Commission, an independent anti-corruption commission that serves as the apex integrity organization of India.

Encouraging individual and social monitoring and engagement in the public sector.

Argentina, Australia, Brazil, China, India, Indonesia, Mexico, Russia, Singapore, South Africa, and Türkiye provide examples of initiatives that use ICT to facilitate public monitoring and engagement in respect of government programmes and decision making. In the area of public works, the Ministry of Public Works of Argentina has developed the CaptuData mobile application and Mapalversiones platform.¹⁴ CaptuData is used to monitor the progress of public-works projects while Mapalversiones allows the public to access information, submit comments, and upload images, videos and suggestions on projects being undertaken by the ministry to ensure compliance in the public-works sector. Based on data provided by Argentina, as of December 2021, Argentina had 3,225 works schemes and 1,631 projects in progress, while the platform had received more than 1.2 million visits.

In Brazil, CGU has created FalaBR¹⁵ to serve as an integrated ombudsman and access-to-information online platform for the entire federal government, and state and municipal administrations. FalaBR allows citizens to access information, report wrongdoing, and submit complaints (as well as compliments) on public services and bureaucratic procedures. More than 2,500 public bodies and institutions at the federal, state and municipal levels are currently registered in the system. In this sense, ICT is used to facilitate access to and participation in

¹⁴ Ministerio de Obras Publicas Argentina, <https://mapainversiones.obraspublicas.gob.ar/>

¹⁵ General Controllershship of Union, Integrated Platform for Ombudsman and Access to Information, <https://falabr.cgu.gov.br/publico/Manifestacao/SelecionarTipoManifestacao.aspx?ReturnUrl=%2f>

the decision-making and policy-development processes by providing the public with an online platform for public consultation.

In China, the Chinese Government Network has developed a feature called “I Have a Word for the Premier,” which provides a channel through which the public can voice their opinions. All local governments and departments also provide such features, as well as email addresses, on their official websites so as to allow members of the public to make comments and complaints. These platforms are also available on mobile phones so that enterprises and the public can conveniently report issues relating to improper conduct on the part of government and public officials.

Türkiye has created the Presidency’s Communication Centre (CIMER)¹⁶ to receive applications through a single channel and ensure that they are correctly dealt with so as to guarantee that the petition and information rights guaranteed by the Constitution can be availed of effectively. CIMER provides resources for the formulation of policies by soliciting the opinions and suggestions of citizens on government activities and public-administration operations and transactions. In addition, CIMER aims to inculcate an awareness of the importance of good services throughout the public sector by encouraging citizen feedback.

In Indonesia, a platform called JAGA (Corruption Prevention Network) has been initiated by the KPK to facilitate direct and active public participation through monitoring, proposing improvements to and reporting irregularities in public-service delivery. It allows members of the public to provide input to public-service providers, and monitor the follow-up action taken on their suggestions. In addition, an application called opentender.net has also been created by ICW (Indonesian Corruption Watch) in collaboration with the National Public Procurement Agency (LKPP). It has easy-to-use analytics tools to assess corruption risks and other indicators associated with the conduct of public procurements, such as competition, efficiency and value for money. The platform allows tender competitions to be flagged based on their corruption-risk level.

Encouraging participation of targeted groups (such as youth and the private sector) in anti-corruption efforts. In Australia, efforts to engage the private sector in preventing corruption have been undertaken through the use of ICT. The BPN has made full use of webinars as a method of engaging stakeholders in the private sector, and has made recordings of those webinars available for later reference. The Australian Commission for Law Enforcement Integrity (ACLEI) and anti-corruption commissions also allow members of the public to make reports through secure forms on websites, and review these forms regularly to ensure reports can be lodged without difficulty. Similarly, in Mexico, the Ministry of Public Administration (SPF) has established a Business Integrity Register as a mechanism that promotes the implementation of integrity policies and programmes in companies. Mexico continues to improve the platform by upgrading the relevant features so as to simplify the registration application process, and to strengthen the dissemination of relevant information for companies interested in promoting integrity and best corporate practices, while also providing access to training on the subject.

In Singapore, the CPIB has collaborated closely with students from various institutes of higher learning to co-create a series of novel digital initiatives and web games aimed at inculcating

¹⁶ The Türkiye Cumhuriyeti Cumhurbaşkanlığı, <https://www.cimer.gov.tr/> (07 August 2022)

the importance of anti-corruption among youth. In addition, the CPIB uses online platforms and social media engagement to reach out to the public and, in particular, youth. Recently, the bureau also launched an Instagram account to better reach out to and engage broader segments of the public.

Facilitating public complaints on government programmes, public services or corruption. Online reporting platforms have been put in place by countries to a) ensure the confidentiality of complainants, b) enhance effectiveness in following up reports, and c) better manage public complaints. As in many other G20 countries, India has put in place an online government portal (MyGov). MyGov provides opportunities for citizens to offer their feedback, views and suggestions on all government programmes. The portal also regularly receives complaints, which are then passed on to the relevant ministries. The portal has over 24 million users and is highly popular with youth. It has given a voice to members of the public who would never have been able to reach decision makers previously.

Similarly, in the US, the Council of the Inspectors General on Integrity and Efficiency has put in place a website, Oversight.gov, to consolidate in one place all public reports from federal inspectors general (IG). The website improves the public's access to independent and authoritative information about the Federal Government, and allows the public to access the most recently posted IG reports, as well as reports that are trending, or are the most viewed, over the last seven days.

In the Republic of Korea, ACRC facilitates the reporting of corruption and public-interest infringements through a website. To make a report, the complainant only needs to complete a simple self-authentication procedure, select the relevant agency (ACRC or other agency), and attach the relevant evidence.

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Chapter 3: Educational Initiatives on Ethics, Integrity and Anti-Corruption

3.1 Integration of Ethics, Integrity and Anti-Corruption Values into Education

Unethical conduct underlies all types of corruption. Thus, it is important to detect ethical blind spots, such as conflict of interest, discretion and unconscious biases in decision-making, as well as to strengthen the skills of critical thinking and conflict resolution. Education and training on ethics and integrity can be used to create better conduct and stronger anti-corruption values. Most G20 countries divide education levels into pre-school (0-5 years old), primary (6-12 years old), secondary (13-18 years old) and tertiary (university). In addition, education curricula in most G20 countries are developed by their ministry of education. However, for federal states or devolved administrations, such as Australia, Brazil, UK, Germany and US, education policy is the responsibility of the state and/or local government.

For example, in Brazil, there are three levels of government involvement in the education system. The municipal level oversees early childhood and primary education, while state-level governments are responsible for secondary education (with some also providing higher education through state universities). Meanwhile, the federal government provides additional funding and directives. The national curriculum is created by the National Council of Education, a body that has significant academic and civil society participation. Similar to Brazil, the regional government in Italy has exclusive authority over vocational education and training, whereas the central government has exclusive legislative competence over "general rules on education" and the determination of the basic levels of benefit that must be guaranteed across the national territory. G20 countries have taken various approaches to nurturing integrity, ethics and anti-corruption through education.

International organizations are also active in the field of anti-corruption education. In 2021, UNODC launched the [Global Resource for Education and Youth Empowerment \(GRACE\) initiative](#), which aims to promote the role of education and youth empowerment in preventing and countering corruption. GRACE is structured along three components: (1) [primary and secondary education](#); (2) [academia, research, and training](#); and (3) [youth empowerment](#). The initiative builds on previous educational projects of UNODC and brings to the international community knowledge and experience in working with educators, academics, youth, and anti-corruption authorities to foster a culture of rejection of corruption.

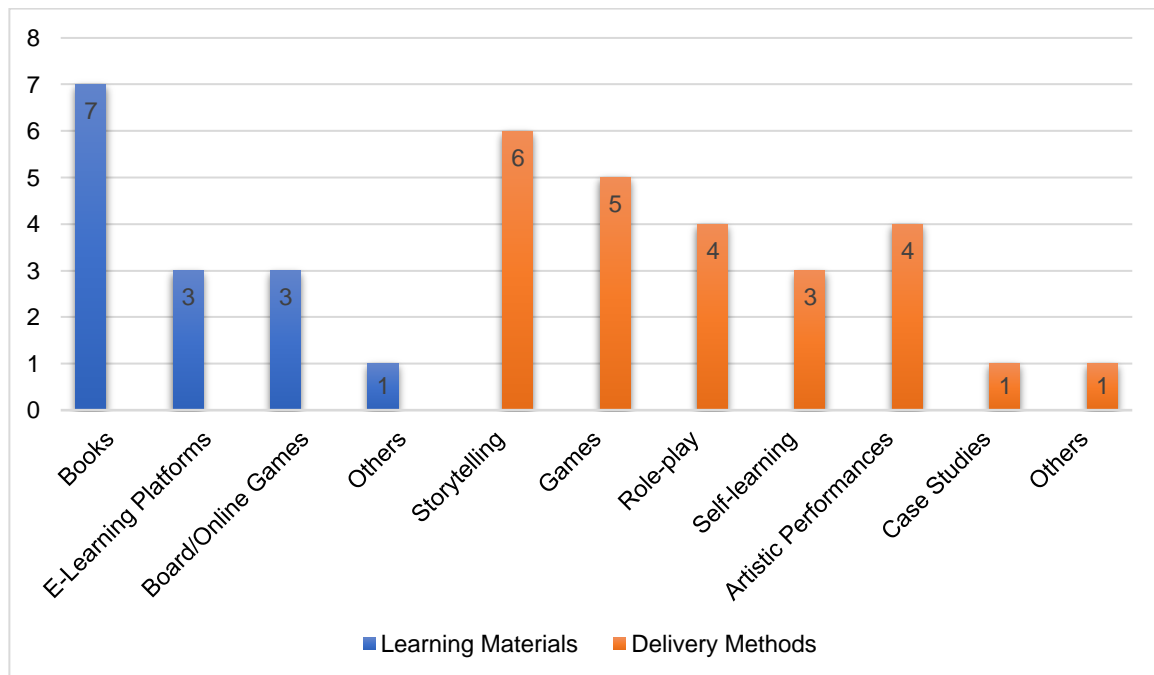
Early Childhood Education

Integrity or value-based education for early childhood aims to instil good behaviour from an early age. It might begin with introducing basic values of integrity, such as honesty, caring, discipline, independence, hard work, responsibility, courage and fairness. In Indonesia, the KPK has developed learning materials to support schools to instil humanitarian values, empathy and concern for others, such as meeting children's basic needs and providing a child-friendly and safe learning environment.¹⁷ The chart below shows that books and story-telling

¹⁷ Anti-corruption Learning Centre, A guide to growing honesty in children from an early age, *Anti-corruption Learning Centre* <https://aclc.kpk.go.id/learning-materials/education/book/a-guide-to-growing-honesty-in-children-from-an-early-age> (23 July 2022)

are the most common learning materials and methods employed by G20 countries to teach integrity and anti-corruption values in early childhood education. Other frequently used methods include games, role-play, artistic performances and case studies.

Graph 3. Learning Materials and Delivery Methods in Early Childhood Education



Some G20 countries have incorporated values such as ethics and integrity into the school curriculum at the early childhood education level, including Argentina, Brazil, China, India, Indonesia, Japan, Saudi Arabia, Singapore, Republic of Korea and Türkiye. This is done by embedding anti-corruption values such as ethics, integrity, transparency and accountability in storytelling, games, role-playing and artistic activities. For instance, the Republic of Korea has created innovative teaching methods for pre-schoolers, such as puppet shows and animated fairy tales about truth and honesty. Some countries, including Brazil, Saudi Arabia, Singapore and Türkiye, have developed extra-curricular activities to teach integrity values to pre-schoolers. In Singapore, early childhood education teachers use a picture book to convey the basic concept of corruption and highlight the importance of honesty. Audio visual materials, such as short movies and e-learning platforms, are also used to help students develop their observational and analytical skills.

Primary and Secondary Education

At the primary and secondary levels, most countries have integrated the values of ethics, integrity and transparency into the school curriculum. Some countries, such as China, Republic of Korea and Australia, teach anti-corruption values through subjects such as ethics or morality. In addition, Saudi Arabia’s Oversight and Anti-corruption Authority and the Ministry of Education have joined hands to incorporate integrity studies into the general education curricula at primary, middle, and secondary levels. Further, a number of initiatives have been adopted to promote integrity among primary and secondary students in Saudi Arabia through

such things as school radio broadcasts, the “integrity-values wall” initiative, and distribution of informational literature.

Overall, social, civic and/or citizenship studies are the most common subjects through which ethics, integrity and anti-corruption are taught to primary and secondary students in the G20 countries. For instance, Brazil, Australia, Singapore, the UK and Indonesia all provide variants of these subjects, covering such topics as values and norms, system of government, democracy, politics, the legislative process, the justice system, the media, and individual and civil society participation in the political landscape. Likewise, Spain has incorporated civic and ethical values in primary and secondary education, including the development of sensitivity and fellow-feeling in the context of ethical, civic and eco-social problems. Singapore has also inserted such messages into the social studies curriculum.

The concept of lifelong learning on ethics and integrity is also important at the primary and secondary levels. Based on this concept, it is expected that students can be more self-initiated to learn about integrity, ethical and anti-corruption. To support lifelong learning, the education system can help to introduce more complex notions related to corruption. At the primary level, the educational curriculum is aimed at fostering the culture of non-tolerance of corruption by instilling integrity and ethical values to school subjects. For instance, in Singapore, students learn about the values, such as integrity, that shaped the decisions made by community and political leaders who contributed to the development of Singapore. In New South Wales, Australia, special education in ethics is provided in primary schools as an alternative subject to special religious education. The curriculum includes age appropriate classes which prompt students from kindergarten to year 8 to consider issues including honesty, integrity, duties of care, sport and ‘cheating’, and different moral and ethical perspectives on issues.

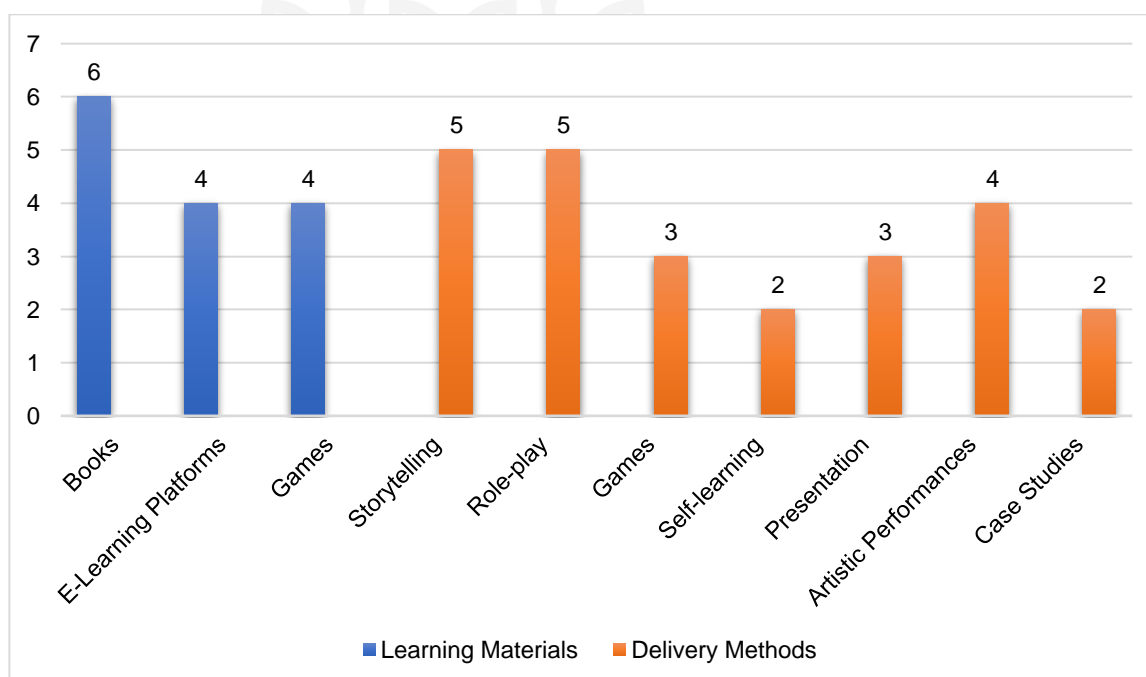
At the secondary level, the subjects have incorporated more specific issues such as types of corruption, the importance of integrity in the public sector and the impact of corruption. In Russia, the standard of basic education has included specific practical requirements to the school subject “Social Studies” and include the acquisition of knowledge on the fight against corruption in the Russian Federation and its application to real life. In Singapore, secondary level students learn about the importance of having honest and capable leaders with the moral courage and integrity to do what is right for the country in line with the principles that shape governance in Singapore. Likewise, the Republic of Korea has included moral values into the secondary education curriculum, such as work ethics and integrity, distributive and corrective justice, and the importance of integrity of public officials. Thus, secondary level students are able to comprehend the different manifestations of corruption, and delve deeper into the impact of corruption.

Another approach that can be taken by countries to enhance integrity values amongst students is through projects or initiatives that are related to anti-corruption. For instance, as part of the “Innovative Approaches Towards Teaching Anti-Corruption in Formal Education” project, Transparency International Italy, supported by the European Commission, has published a handbook for anti-corruption education in high schools. The manual is designed to serve as a guide for high-school teachers so as to allow them to effectively inform students about the issue of corruption. In Saudi Arabia, Nazaha and the Ministry of Education have created an integrity project for education and training, which is aimed at building and enhancing integrity values among students, consolidate positive practices and initiatives, and spread awareness of the importance of integrity values and practices in the educational

community. In this project, some activities and events are conducted through integrity and anti-corruption video, training, dialogue, and workshops and artistic performances related to integrity and anti-corruption issues.

UNODC’s GRACE initiative focuses on promoting and teaching values such as accountability, honesty, integrity, respect, acceptance, and fairness at the primary level (6-12 years old). GRACE educational materials contribute to building resilience among children and help to equip them with skills such as empathy, teamwork, critical thinking, and conflict resolution. UNODC has also developed a variety of educational tools to support teachers and young people (at the [primary and secondary levels](#)) in learning about and teaching on integrity and ethics. These tools include teacher’s lesson plans, comic and story books, and board games. Furthermore, in partnership with UNESCO, UNODC developed a set of tools that promotes teaching on the rule of law, integrity and ethics. These include guidance material for policymakers and toolkits for primary and secondary level educators.

Graph 4. Learning Materials and Delivery Methods in Primary and Secondary Education



The above chart illustrates the learning materials and methods used in primary and secondary education in the G20 Countries, with books, e-learning and games being the materials that are most frequently employed to deliver integrity, ethics and anti-corruption education at the primary and secondary levels.

Some countries, such as Brazil, China, France, Republic of Korea, Türkiye, India and Indonesia, use a variety of tools, such as books, e-learning platforms, case studies, board and online games, comics, and competitions. In China and Türkiye, a variety of methods are also used, for instance, story-telling, role-playing, self-learning, presentations, games and artistic performances. In the Republic of Korea, the Anti-corruption Training Institute (ACTI) has developed an integrity board game, called “Jewel of Principle,” and other integrity games that

are distributed to schools and are published on the ACTI website, Youtube and Internet Protocol Television (IPTV). In addition, Brazil has developed an online game called “The Citizenship Game” that focuses on real-life experiences to foster ethical behaviour and civic engagement among teenagers. Audio-visual materials, such as movies, make the learning process more interesting. In the Republic of Korea, ACTI has inserted integrity values in the storylines of online drama series to promote integrity values.

Tertiary Education (University)

In countries such as Argentina, India and China, anti-corruption and integrity values at the higher education/university level are inserted into course curricula. For instance, in Argentina as part of the curricula, integrity values are embedded in ethics and citizenship training. In China, the Southeast University has included integrity values in the ethics and rule-of-law subjects. Similarly, in India, a number of subjects incorporate ethics and integrity values, such as social studies, moral science, language & literature, and management courses. In France, postgraduate students at Sciences Po Strasbourg, Institut d'Etudes Politiques de Strasbourg, learn about the mission of the HATVP, and the declarative and ethical obligations of interest-group representatives during the course on "Interest Groups and Lobbying," while at the Sorbonne University, the "International Criminal and Business Law" course includes a presentation on the HATVP and the control of criminal risks (breaches of probity).

Furthermore, some countries have developed specific anti-corruption degree programmes in universities that are aimed at the general public, civil servants and professionals. For example, in Argentina, the Universidad Tecnológica Nacional (UTN) offers a diploma in open government and electronic government, Austral University provides an open government and public innovation programme as part of their master's degree in public policy, while Di Tella University offers an advanced programme on compliance, anti-corruption and investigations. Meanwhile in Spain, programmes related to anti-corruption issues come under the political-sciences umbrella (e.g., the master's degree in anti-corruption strategies and integrity policies offered by the University of Salamanca). In Singapore, the Ministry of Education and the institutes of higher learning (IHLs) have worked together to enhance the life skills curriculum and equip students with key life skills competencies to help them navigate work and adulthood. This includes having personal values and professional ethics, and by being able to differentiate right from wrong, act responsibly, and demonstrate trustworthiness, accountability and respect for institutions.

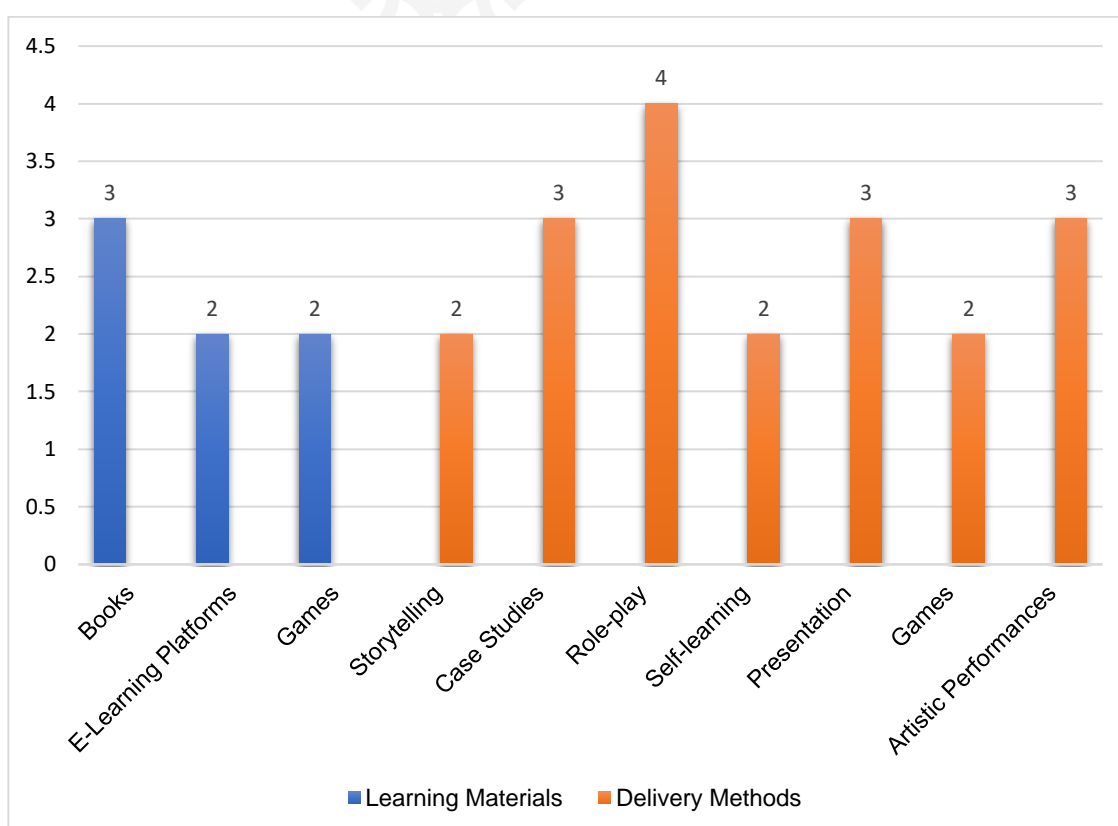
Education on anti-corruption in tertiary education is also promoted through collaboration between anti-corruption agencies and other relevant institutions. In Saudi Arabia, Nazaha works closely with the Ministry of Education to encourage universities to incorporate content on upholding integrity, promoting transparency, and combating corruption in university education curricula. As a result, a number of universities have either established stand-alone subjects as part of general preparation courses, or incorporated specific content on corruption and corruption risks in relevant subjects. In Australia, the Northern Territory Independent Commission Against Corruption (NTICAC) has partnered with the Charles Darwin University and the Batchelor Institute of Indigenous Tertiary Education to deliver courses to tertiary students.

UNODC's GRACE initiative also focuses on supporting [university lecturers](#) in their efforts to equip students and young people with knowledge and skills to better understand and address

corruption and unethical behaviour. In this regard, UNODC developed a university module series on anti-corruption, integrity and ethics. Each module series consist of 14 university modules that are multidisciplinary, interactive, and adaptable to local, cultural, and disciplinary contexts. Each module is designed as a basis for a three-hour session that can be integrated into an existing course, taught as a stand-alone workshop, or developed further into a full course. The modules are also suitable for professional training on anti-corruption, integrity and ethics.

This following graph illustrates the learning materials and delivery methods that are most commonly used by G20 Countries at the tertiary education/university level.

Graph 5. Learning Materials and Delivery Methods in Tertiary Education



3.2 Strengthening the Capacity of Academics and Teachers

The education sector - including teachers, school directors, and policymakers – can help anchor ethics and integrity in the management of education institutions and teaching practices. Schools play a central role in developing students’ knowledge, attitudes, mindsets and skills, and in teaching them how to engage responsibly in society. This is done through the content of what they teach (curriculum) and the way they do so (pedagogy). Therefore, an investment in capacity building for teachers and academics is instrumental to ensuring a sustainable approach to delivering quality education on ethics and integrity. Teachers serve as important role models for demonstrating integrity to children and are thus key to encouraging a conscientious environment, and to teaching children how to act and engage ethically and fairly

in their respective communities. In the context of anti-corruption education, teachers require appropriate skills and competencies to ensure that integrity materials are understandable, meaningful and impactful for students.¹⁸

Most G20 countries develop the capacity of teachers and lecturers through training, webinars and other capacity-building programmes. Some G20 countries, such as Argentina, India, Indonesia, Republic of Korea, Russia, Saudi Arabia, Singapore and Spain, have developed special training programs for teachers/lecturers. The objectives of such programs are to:

1. prepare teachers with the skills and knowledge they need to effectively deliver ethics and civic education.
2. support teachers in assisting students' personal and professional growth through both curriculum and/or co-curricular activities.
3. improve the capacity of educators through integrity courses, including training on up-to-date pedagogical skills.
4. enhance teaching techniques and encourage peer learning.

In addition, UNODC organizes various workshops and training activities to promote use of the modules and strengthen university lecturers' capacity to teach on anti-corruption, integrity and ethics in their academic courses. Furthermore, UNODC maintains a network of academics and provides them with opportunities to exchange knowledge and good practices in the areas of anti-corruption education and research.

Guidelines and handbooks on integrity and anti-corruption education are also provided for use by teachers/lecturers in many G20 countries. For example, China has developed guidelines and handbooks for use by teachers in anti-corruption and integrity related courses.

3.3 Youth Empowerment to Promote Integrity, Ethics and Accountability

Youth, when empowered, can make a difference and contribute to social change by promoting a culture of integrity and the building of more equitable societies. Consequently, it is imperative to ensure that young people are not only heard, but understood and meaningfully empowered.

Youth play various roles in society as individuals, consumers, students, workers and voters. Youth are also sometimes excluded from decision-making, they may lack access to information, and can be victims of corruption. However, youth can also act as agents of change and government partners in creating a culture of integrity within society. A survey carried out by Accountability Lab and the World Economic Forum shows that young people continue to view corruption as the biggest challenge they face.¹⁹ Young people represent a significant portion of society and, they can be exposed to bribery and other corrupt behaviour.²⁰

¹⁸ Organization for Economic Cooperation and Development, Education for Integrity: Teaching on Anti-Corruption, Values and the Rule of Law, *Organization for Economic Cooperation and Development*, 2018, page 11, <https://www.oecd.org/governance/ethics/education-for-integrity-web.pdf> (23 July 2022).

¹⁹ Glencorse and Odeh, How Young People are Turning the Tide Against Corruption, World Economic Forum, 2019, <https://www.weforum.org/agenda/2019/02/how-young-people-are-turning-the-tide-against-corruption/> (16 August 2022)

²⁰ Wickberg, Sofia, Best Practices in Engaging Youth in the Fight Against Corruption, page 1, *U4 Anti-Corruption Resource Center*, 2013, <https://www.u4.no/publications/best-practices-in-engaging-youth-in-the-fight-against-corruption.pdf>, (16 August 2022)

Accordingly, it is necessary to strengthen values such as ethics and integrity, develop policies to address corruption risks faced by youth, and empower youth in the fight against corruption. In many G20 countries, education on ethics, integrity and anti-corruption is promoted in various forms, such as through youth clubs, youth camps, competitions, artistic performances, games and videos. For instance, in Indonesia, a youth camp programme at the village level encourages young people to come up with creative ideas for preventing and eradicating corruption.

In addition, youth integrity clubs have been established by a number of G20 countries. Through these youth clubs, young people can join existing youth movements or engage with other young people who have similar interests in integrity and anti-corruption issues. In India, integrity clubs have been created as an extracurricular activity to rekindle human values in schoolchildren during their formative years. The strategy of the clubs is for “children to learn distinct values playfully as a game and become Champions of Ethics through practice in their real lives.”

Similarly, Saudi Arabia has initiated the Nazaha Clubs (Integrity Clubs), whose members consist of dedicated young people and students in higher education institutions. The mission of the Nazaha Clubs is to promote integrity, enhance transparency and combat corruption by spreading a culture of integrity and immunising future generations against corruption through the involvement of students and youth in awareness-building and relevant educational activities and events. In addition, ACRC of the Republic of Korea involves youth in the “Citizen Monitor Group on Integrity Policy” programme, which involves university and school students, workers and homemakers in discussions and surveys, and is aimed at garnering anti-corruption policy ideas from citizens.

To strengthen corruption awareness, some G20 countries organize competitions for young people. For instance, the Prosecutor General’s Office of Russia has been running an annual international youth competition titled “Together Against Corruption!” for over five years. In 2021, some 6,000 people participated in the contest. Similarly, in Saudi Arabia, the Nazaha Clubs have conducted a competition for young people entitled “Let’s Inspire Integrity.”

The use of technology also adds value to anti-corruption awareness-raising for youth. For instance, the Republic of Korea has initiated awareness-raising programmes by producing online dramas with integrity values inserted into the storylines. In addition, Brazil has developed an online game for teenagers, called the citizenship game, which focuses on real-life experiences to foster ethical behaviour and civic engagement. Further, the Communication University of China has launched an e-magazine titled “Integrity Knowledge,” while the Dalian University of Technology has named November as “Integrity Education Month.”

3.4 Strengthening Integrity and Nurturing an Anti-Corruption Culture Among Public Officials and Professionals through Capacity-Building Programmes

Public officials play a crucial role in ensuring the integrity and proper management of public affairs and public property. Therefore, it is necessary to strengthen the integrity of public officials to support corruption prevention and the delivery of good public services.

A number of new initiatives or programmes have been implemented in this regard by G20 countries, such as the development of anti-corruption guidelines, online learning modules, conferences and other innovative programmes. For instance, the Central Committee of the Communist Party of China (CPC) has issued a series of guidelines that integrates integrity, honesty and accountability for public officials. In Mexico, SFP has developed a virtual training system for public officials called “Sistema de Capacitación Virtual para los Servidores Públicos” (SICAVISP), which offers direct training on issues of ethics, conflicts of interest, austerity, liabilities of public servants and anti-corruption.

The vast majority of G20 countries have identified the importance of building a culture of integrity in the public procurement sector. Public procurement is a government activity that is particularly vulnerable to corruption.²¹ Hence, it is necessary to enhance the level of integrity of public officials who are in charge of this area.²² The experiences of Argentina, Australia, China, France, India, Indonesia, Spain and the UK show that initiatives to strengthen the integrity, transparency and accountability of public officials in the procurement sector can be conducted through training, knowledge-sharing and the enactment of specific regulations. For instance, in Spain, the General State Administration offers courses on anti-corruption issues related to public procurement, taxation, budgeting, and open government for local civil servants. In France, an online game called “En quête d’intégrité” (in quest of integrity) has been designed to raise awareness of public officials on how to prevent and detect corruption and other integrity breaches. This game is divided into 7 chapters based on real-life risk scenarios in the public sector, including procurement.

In terms of capacity development for integrity and anti-corruption, most G20 countries provide various training programmes for public officials that are designed to achieve a range of learning outcomes that will normally include the following:

- enhancing integrity, transparency and accountable behaviour, and improving understanding of codes of ethics and other related regulations.
- creating an integrity culture.
- improving knowledge of relevant anti-corruption policies.
- enhancing awareness of the impact of corruption.
- improving capacity to prevent and detect unethical conduct or corrupt behaviour.
- understanding whistleblower protection procedures.
- understanding corruption risks and how to design, implement and monitor initiatives for the prevention, detection and sanctioning of fraud and acts of corruption.
- understanding investigative techniques.

The experience of Indonesia shows that thematic anti-corruption training that is tailored to the participants’ needs is beneficial to improving the anti-corruption knowledge of public officials. The KPK conducts a tailored training program called “PAKU Integritas” (Strengthening Anti-corruption Knowledge and Integrity of Public Officials) that is aimed at encouraging

²¹ Organization for Economic Cooperation and Development, Preventing Corruption in Public Procurement, Page 6, *Organization for Economic Cooperation and Development*, 2016, <https://www.oecd.org/gov/ethics/Corruption-Public-Procurement-Brochure.pdf>, (27 July 2022)

²² G20 Principles for Promoting Integrity in Public Procurement, page 2, 2015, https://www.unodc.org/documents/corruption/G20-Anti-Corruption-Resources/Thematic-Areas/Public-Sector-Integrity-and-Transparency/G20-Principles_for_Promoting_Integrity_in_Public_Procurement_2015.pdf (10 October 2022)

government ministers, heads of government agencies, provincial government chief executives and senior public officials (echelon 1) to assume the leading roles in preventing corruption in their offices. The KPK also provides “PELOPOR” training for anti-corruption instructor candidates, as well as tailor-made anti-corruption training programmes for the private sector and state-owned enterprises. In South Africa, the National School of Government is continuously developing online courses on anti-corruption and ethics management so as to reach as many public officials as possible. The online courses are also available in the form of e-learning modules on ethics in the public service.

In addition, the National Public Service Ethics Board of Japan encourages executive officials and personnel in charge of ethics administration in each ministry and agency to raise the ethics awareness of employees in their organizations. The Ethics Board supports the planning and implementation of training/educational activities carried out by each ministry and agency, and conducts cross-ministerial training and educational activities. The National Personnel Authority also provides training programmes for national public employees that include lectures on public service ethics.

Most G20 countries have also developed specific regulations to ensure the implementation of integrity programmes for public officials. Several countries require public officials to attend mandatory integrity training. For instance, the Australian Public Service Commissioner’s Directions 2022 require government agencies to arrange for their employees who are new to the APS to undergo a training programme on integrity and the APS Code of Conduct. In accordance with Brazil’s Governance Decree (9203), the Brazilian Government requires public officials to improve their capacity as regards understanding corruption risks and designing, implementing and monitoring initiatives designed to achieve anti-corruption goals. Under the Anti-corruption Act of the Republic of Korea, it is mandatory for all public sector organizations to provide anti-corruption training to their employees and submit the results of such training to ACRC every year.

In Mexico, public officials receive training on the new Code of Ethics of the Federal Public Administration (published in the Official Gazette on February 8, 2022), which establishes respect for human rights as a central principle and axiom of public service, including respect for the concepts of gender equality and dignity. The code is binding on all public officials in the institutions of the executive branch and parastatal bodies, while the training that is provided is aimed at strengthening their capacity to eschew corruption based on ethical and public-integrity principles. Furthermore, the Mexican Government has developed a comprehensive campaign that uses social media and other means to promote the code and the constitutional principles that underpin the public service. The UK Government Counter Fraud Function has a range of professional standards that include capability building on Bribery and Corruption. The UK also has a range of other training for employees including mandatory annual ‘Counter fraud, bribery and corruption’ training for all civil servants.

In Italy, the SNA is providing training for public officials with directorial responsibilities. The training courses address corruption risks and prevention from a transnational perspective. In addition, the SNA has established a community of practices aimed at sharing experiences and best practices on corruption prevention and whistleblowing. Recently, the SNA launched a new project on whistleblowing titled “Training for Transformation,” which covers open administration and innovative training models to enhance the effectiveness of whistleblowing as a tool for co-participation to identify, prevent and respond to maladministration. The project

aims to highlight the role of SNA's training related to perceptions of whistleblowing in Italy as it is not yet fully rooted in Italian culture and legal experience.

3.5 Enhancing the Integrity of the Private Sector

Corruption can distort markets, undermine competition and damage companies' reputations. It also affects the supply chain and increases costs to firms.²³ The private sector plays an important role in efforts to combat corruption as corporate actors can be both part of the problem and the solution.²⁴ Articles 12 and 13 of the UNCAC emphasize the crucial role of the private sector in anti-corruption efforts. Companies that promote anti-corruption standards, including effective compliance systems and integrity measures, contribute to a level playing field for a fair and transparent economic environment.²⁵ Hence, it is necessary to effectively raise awareness and develop capacity and knowledge in the private sector on anti-corruption issues. Effective training programmes are those that demonstrate empirical success through the achievement of their objectives.²⁶

Most G20 countries have developed initiatives to enhance the capacity of and raise awareness of corruption in the private sector. Argentina, Brazil, France, Republic of Korea and Saudi Arabia have provided integrity training aimed at the private sector. In general, the main objective of the training is to improve the private sector's awareness, knowledge and competencies in respect of integrity issues.

In Australia, the Attorney-General's Department has developed a foreign bribery online learning module. This is an interactive training module that provides information to industry and government about Australia's anti-bribery regime. The module also outlines steps that businesses can take to promote compliance, how to report foreign bribery and where to seek further information. In addition, the Integrity Training Center at Nazaha of Saudi Arabia, which has partnered with international organizations, such as the World Bank Group, provides a wide range of trainings, including training for private-sector employees.

Awareness in the private sector on corruption issues can also be raised by means of integrity campaigns and sharing sessions. In Saudi Arabia, Nazaha has launched an awareness campaign that encompasses the concepts of job behaviour and professional ethics, clarifying regulations, procedures and policies, and safeguarding against the various modes of corruption. Singapore's CPIB uses online platforms to organize sharing sessions that enable knowledge and experience-sharing among business actors. Similarly, the US involves the

²³ United Nations Office on Drugs and Crime, Consequences of Private Sector Corruption, page 10, *United Nations Office on Drugs and Crime*, 2019, [https://www.unodc.org/e4j/zh/anti-corruption/module-5/key-issues/consequences-of-private-sector-corruption.html#:~:text=Private%20corruption%20affects%20the%20entire,opportunities%20\(UNODC%2C%20013b\)](https://www.unodc.org/e4j/zh/anti-corruption/module-5/key-issues/consequences-of-private-sector-corruption.html#:~:text=Private%20corruption%20affects%20the%20entire,opportunities%20(UNODC%2C%20013b).). (18 August 2022)

²⁴ U4 Anti-corruption Resource Center, Corruption in the Private Sector, *U4 Anti-Corruption Resource Center*, <https://www.u4.no/topics/private-sector/basics> (10 August 2022)

²⁵ United Nations Office on Drugs and Crime, The Private Sector as a Partner in Anti-Corruption, *United Nations Office on Drugs and Crime*, <https://www.unodc.org/unodc/en/corruption/news/private-sector-and-anti-corruption-education.html> (10 August 2022)

²⁶ Watts et al, Benefits of Effective Ethics Training, page 3, *Researchgate*, 2021 https://www.researchgate.net/publication/347782053_Benefits_of_effective_ethics_training (10 August 2022)

private sector in roundtables, events and conferences on the Foreign Corrupt Practices Act (FCPA) to discuss particular areas of concern in the enforcement of the FCPA.

To develop specific competencies in the private sector on integrity, Indonesia through the KPK's Certification Agency (LSP-KPK) provides training that allows eligible participants to gain certification as integrity officers. Those who receive such certification are then expected to support their company in building an integrity culture and to encourage others to act with integrity. Similarly, in South Africa, a non-governmental body called the Ethics Institute provides an ethics certification programme for both the private sector and public sector. The Government of South Africa has worked closely with this institute to design a public-sector ethics certification programme.

The UNODC project "Global Integrity Education"²⁷ seeks to establish and implement effective integrity education programmes that foster ethical decision-making by private sector employees. To achieve this goal, the project has set up working groups in Kenya, Mexico and Pakistan that bring together private sector representatives and academics to develop 16 localized university integrity modules. Concrete and hands-on examples of integrity challenges from company representatives acting as guest lecturers increase the relevance of the material taught to students. At the same time, the improved ethics and integrity education will benefit the private sector in the long run as university graduates are expected to possess a greater awareness of ethics and integrity. To date, more than 320 trained lecturers in Kenya, Mexico and Pakistan have taught the modules to more than 28,000 university students. The localized university integrity modules are also used as the basis for the development of short on-the-job anti-corruption training programmes for businesses. Furthermore, the project is facilitating work experiences for students in compliance departments of the participating companies. The goal of the project is to create a talent supply chain of university graduates who are empowered to act as ethics ambassadors at their future workplaces in the private sector.

3.6 Anti-Corruption Education for the General Public

In the long term, anti-corruption awareness-raising and education can reinforce values that promote corruption-free societies. By providing anti-corruption education to the general public, it is expected that the public will gain exposure to information and knowledge on integrity, ethics and anti-corruption.

In raising awareness and developing the capacity of members of the public to identify and prevent corrupt behaviour, G20 countries have adopted several approaches. These include:

- providing training on integrity, public ethics and anti-corruption, particularly to those that are especially vulnerable to corruption risks.
- conducting anti-corruption campaigns through film, writing, artistic competitions, contests and other activities, including the use of social media and ICT.
- fostering multi-stakeholder partnerships and dialogue that aim to develop collaboration between government, private sector, academia, civil society and the media in promoting integrity, professionalism and anti-corruption values.

²⁷ The UNODC project "Global Integrity Education" is funded by the Siemens Integrity Initiative. For more information, please visit the [UNODC Business Integrity Portal](#).

- enhancing transparency, accountability and anti-corruption in public procurement, including through the use of ICT (e-auction, e-procurement).
- supporting anti-corruption research/studies, journals and other academic outputs.
- developing corruption-reporting and whistleblowing systems.
- providing protection for witnesses and whistleblowers.

For instance, China provides documentaries, movies, TV shows, advertisements and social contests themed on integrity to ensure that the general public can improve their awareness of fighting corruption. In addition, more than 60 universities across China have established integrity associations that disseminate integrity knowledge among college students.

In France, the HATVP (Haute Autorité pour la Transparence de la Vie Publique) undertakes a variety of initiatives involving non-formal anti-corruption education, which includes regularly engaging with various audiences during training or awareness-raising activities, symposiums and public debates. These initiatives are organized for the various audiences that fall within the scope of its authority, while paying particular attention to initial or continuing training within public-service schools and for public officials. In addition, France, through its National School for the Judiciary (Ecole Nationale de la Magistrature), conducted a training session titled "Corruption: Detection, Prevention, Enforcement" that was attended by various actors, including 60 magistrates. The session addressed the different corruption offences, the actors involved, investigation strategies, and new possibilities for prosecution and conviction, with the training being provided by means of presentations, case studies and round tables so as to allow for a debate on the effectiveness of the French criminal justice arsenal and its position in the international system.

The Board of Ethics (BoE) of Türkiye undertakes a variety of activities to enhance public anti-corruption awareness, such as organizing conferences, seminars and meetings to mark Ethics Day (25 May) each year, making public service announcements, preparing and distributing informative brochures and posters, and posting ethics-related information on social media. Meanwhile, the Cabinet Office Counter Fraud Centre of Expertise of the UK worked throughout the COVID-19 pandemic to highlight unique emergency-fraud typologies to the public. This was aimed at increasing public awareness and encouraging citizens to detect and report incidences of fraud occurring around them. Further, in the Republic of Korea, ACRC's Anti-Corruption Training Institute (ACTI) runs free online anti-corruption and integrity classes for the general public through Korea's three major open online course (MOOCs) sites, including K-MOOC.

Anti-Corruption Knowledge Hubs

A knowledge hub is often defined as an internal and external networking and knowledge-sharing platform.²⁸ For example, Transparency International's Anti-Corruption Knowledge Hub can be used as an online space to present research.²⁹

²⁸ Evers, Hans-Dieter, Knowledge Hubs and Knowledge Clusters: Designing a Knowledge Architecture for Development, page 1, MPRA Paper 8778, *University Library of Munich*, 2008, <https://ideas.repec.org/p/prs/mprapa/8778.html#:~:text=Knowledge%20hubs%20are%20localities%20with,areas%20of%20low%20knowledge%20intensity>. (18 August 2022)

²⁹ Transparency International - The Global Coalition Against Corruption, <https://knowledgehub.transparency.org/>

Some G20 countries such as Australia, Brazil, China, India, Indonesia, Mexico, Republic of Korea, Russia, Saudi Arabia and the UK, have established knowledge hubs to foster anti-corruption knowledge-sharing. For instance, in the UK, England has established online knowledge hubs with the capacity to foster anti-corruption knowledge-sharing. Similarly, the Australian Public Service Commission has developed a networked hub of learning tools named the Australian Public Service Academy (APS Academy),³⁰ which delivers online training packages and supporting resources, including those related to ethics, integrity and the Australian Public Service Code of Conduct.

Some knowledge hubs are also managed by anti-corruption agencies, such as in India, Indonesia, Russia and Saudi Arabia. Most knowledge hubs target groups of public officials, civil society organisations, youth and the public. As an example, the KPK in Indonesia has established the Anti-Corruption Learning Centre (ACLC),³¹ which offers numerous learning programmes and provides anti-corruption certification for public officials and members of the public.



³⁰ The Australian Public Service Academy, <https://www.apsacademy.gov.au/>

³¹ Anti-Corruption Learning Centre, <http://aclc.kpk.go.id/>

Chapter 4: Challenges

Approaches to public participation and education on integrity and ethics can take many forms. Several challenges have been identified by countries in conducting such programmes. The objective of this section is to elaborate on existing challenges in G20 countries.

The COVID 19 pandemic. In 2020, the COVID-19 spread to almost every country in the world. The pandemic has prevented people meeting each other physically, in daily life, in school or at the workplace. Consequently, almost all programmes were conducted virtually, including public participation in anti-corruption and other corruption-prevention programmes. Many countries also focused on economic and health recovery by allocating significant resources to deal with the emergency. Therefore, this may have reduced the effectiveness of public participation and education on anti-corruption programmes.

Ensuring sufficient budgetary funding for anti-corruption programmes. To fight corruption, a comprehensive strategy should be developed and be sufficiently resourced. Consequently, countries should ensure that sufficient budgetary funding and resources are allocated to permit such programmes to be carried out effectively.

Engaging public participation in remote areas. For countries with relatively large territories, it is sometimes challenging to reach people in remote areas. People at grassroots level, especially those in remote rural areas, may not be aware of government anti-corruption programmes. In addition, the availability (or lack) of public-complaints channels may also affect their ability to report corruption to the relevant authorities.



Chapter 5: The Way Forward

Integrity, ethics and measures to fight corruption are crucial to developing a culture of intolerance towards corruption. This complements existing anti-corruption strategies by fostering attitudes and virtues that empower individuals to participate in anti-corruption efforts. In addition, to successfully fight corruption, participation of all relevant stakeholders, such as law enforcement/anti-corruption agencies, civil society, youth, the media, the private sector, communities and the public, is of the utmost importance.

G20 countries can play a pivotal role in further strengthening public participation in anti-corruption efforts and the efficacy of education and awareness raising in integrity, ethics, and anti-corruption.

This could be conducted collectively by the G20 countries through:

- promoting and sharing good practices on public participation and education on ethics, integrity and anti-corruption by the G20 Countries to other countries by using international anti-corruption fora to encourage mutual learning.
- ensuring that the education systems are more accessible, and that there are opportunities for anti-corruption values to be promoted in school curricula.
- ensuring that the public and other stakeholders are able to contribute to anti-corruption efforts.
- exchanging good practices on public participation and education on ethics, integrity and anti-corruption, especially in the following areas:
 - o training and capacity-building for teaching staff in tertiary education.
 - o innovation in the development of education materials, policies and strategies.
 - o digitalisation and innovation using ICT to develop targeted corruption prevention policies and programmes.
 - o public initiatives in preventing corruption and enhancing the delivery of public services.
 - o the sharing of research in the fields of, for instance, psychology, anthropology and ethnology so as to seek solutions to counter corrupt behaviour.
 - o efforts to ensure that all relevant stakeholders are able to engage positively to anti-corruption efforts, in line with domestic legal frameworks.

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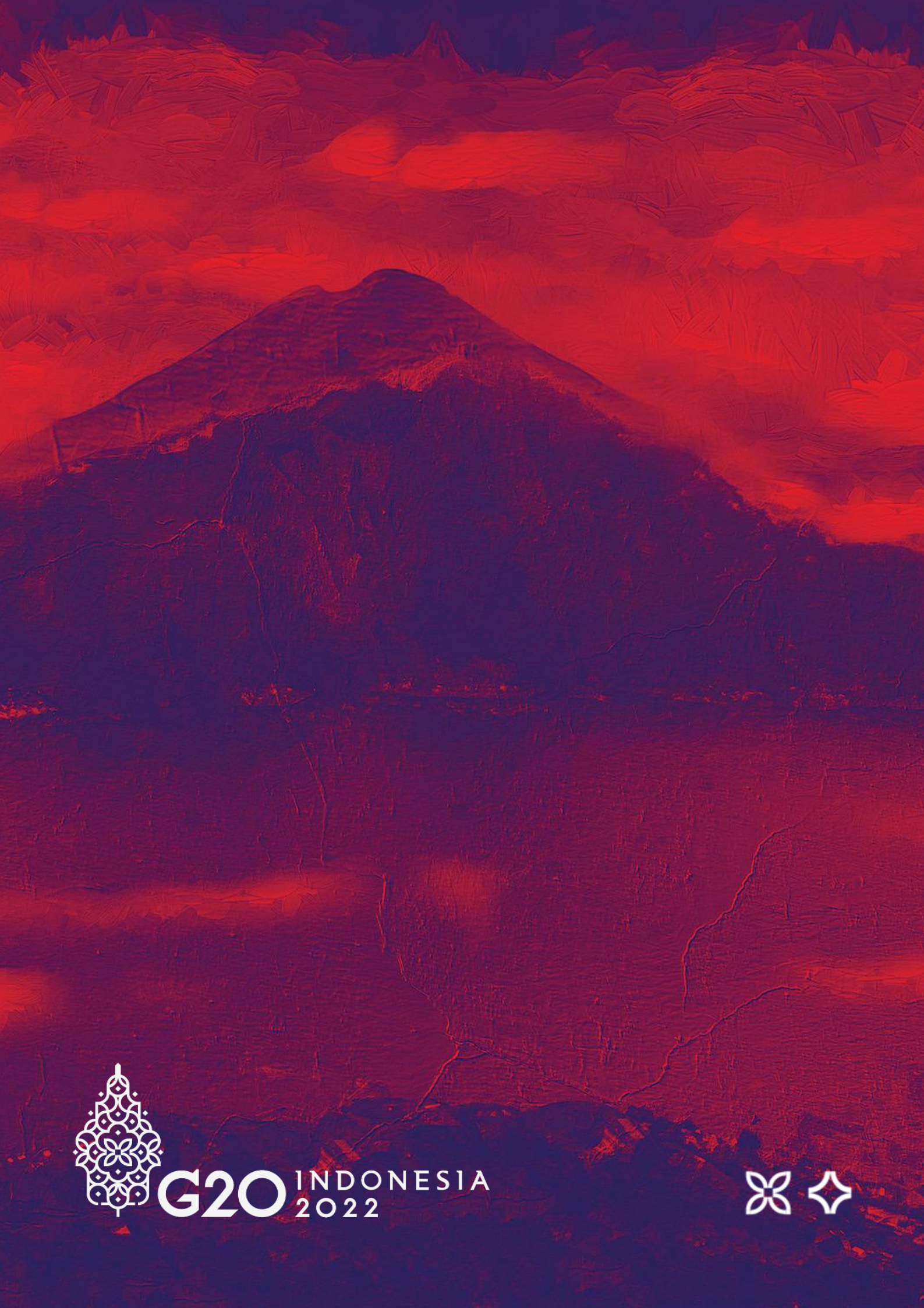
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Compendium of Good Practices on Regulatory
Framework and Supervisory Measures for
Legal Professionals to Mitigate
Corruption-Related Money Laundering Risks

G20 Anti-Corruption Working Group



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Acronyms and Abbreviations

ABA	: American Bar Association
AFP	: Australian Federal Police
AML	: Anti-Money Laundering
AML/CFT	: Anti-Money Laundering/ Countering Financing of Terrorism
AMLSC	: Anti-Money Laundering Sub-Committee in Law Society of Scotland
APEC	: Asia Pacific Economic Cooperation
APG	: Asia/Pacific Group on Money Laundering
APIs	: Application Programming Interface
APTCP	: Act on Prevention of Transfer of Criminal Proceeds, Japan
ARIN-AP	: Asset Recovery Interagency Network - Asia Pacific
AUSTRAC	: Australian Transaction Reports and Analysis Center
BFT	: Bureau Financieel Toezicht (Financial Supervision Office), Netherlands
BO	: Beneficial Ownership
BOSS	: Beneficial Ownership Secure System
BPN	: Badan Pertahanan National (National Land Agency), Indonesia
BRICS	: Brazil, Rusia, India, China, and South Africa
BSA	: Bank Secrecy Act
CARIN	: Camden Asset Recovery Inter-agency Network
CARPA	: Caisses Autonomes des Règlements Pécuniaires des Avocats (Autonomous Fund for Lawyers' Financial Settlements), France
CDD	: Customer Due Diligence
CFT	: Countering Financing of Terrorism
CNAJMJ	: Conseil National des Administrateurs Judiciaires et Mandataires Judiciaires (National Council of Judicial Administrators and Legal Representatives), France
CNB	: Conseil National des Barreaux (National Bar Council), France
CNCJ	: Chambre Nationale des Commissaires de Justice (National Chamber of Commissioners of Justice), France
COAF	: Conselho de Controle de Atividades Financeiras (Council for Financial Activities Control), Brazil
CPBCIM	: Prevención del Blanqueo de Capitales e Infracciones Monetarias (Commission for the Prevention of Money Laundering and Monetary Offences), Spain
CPIB	: Corrupt Practices Investigation Bureau, Singapore

CSN	: Conseil Superieur du Notariat (Council of Notaries), France
CTA	: Corporate Transparency Act
DG AHU	: Direktorat Jenderal Administrasi Hukum Umum (Directorate General of General Law Administration), Indonesia
DHS	: Department of Homeland Security, United States
DLT	: Distributed Ledger Technology
DNFBPs	: Designated Non-Financial Businesses and Professions
EU	: European Union
Eurojust	: European Union Agency for Criminal Justice Cooperation
FATF	: Financial Action Task Force
FCA	: Financial Conduct Authority, United Kingdom
FIC Act	: Financial Intelligent Center Act in South Africa
FinCEN	: Financial Crimes Enforcement Network, United States
FIU	: Financial Intelligence Unit
FTR Act	: Financial Transaction Reports Act in Australia
G20 ACWG	: G20 Anti-Corruption Working Group
IAAF	: International Association Athletics Federation
IACCC	: International Anti-Corruption Coordination Centre
ICT	: Information and Communication Technology
IGIS	: Inspector-General of Intelligence and Security, Australia
INTRAC	: Indonesian Financial Transaction Reports and Analysis Center
JAFIC	: Japan Financial Intelligence Centre (Japan's Financial Intelligence Unit)
JFBA	: Japan Federation of Bar Associations
KNB	: Koninklijke Notariële Beroepsorganisatie (The Royal Dutch Association of Civil-law Notaries)
KYC	: Know Your Client
MASAK	: Mali Suçları Araştırma Kurulu (Financial Crimes Investigation Board), Türkiye
MER	: Mutual Evaluation Review
MLA	: Mutual Legal Assistance
MLO	: Money Laundering Organization
MLRs	: Money Laundering Regulations
ML/TF	: Money Laundering/ Terrorist Financing
MOJ	: Ministry of Justice

NMLRA	: National Money Laundering Risk Assessment
NOvA	: Nederlandse Orde van Advocaten (Bar Association of Netherlands)
NRA	: National Risk Assessment
NRA-FUR	: National Risk Assessment-Follow-up-Report
OAB	: Ordem dos Advogados do Brasil (Brazilian Bar Association)
OCP	: Órgano Centralizado de Prevención (Centralized Organization for the Prevention of Money Laundering), Spain
OECD	: Organization of Economic Co-operation and Development
PAHA	: Protection Against Harassment Act in United Kingdom
PBSs	: Professional Body AML Supervisors, United Kingdom
PEPs	: Politically Exposed Persons
PID Act	: Public Interest Disclosure Act in Australia
RBA	: Risk Based Approach
SAFIU	: Saudi Arabia's Financial Intelligence Unit
SAR	: Suspicious Activity Report
SCTRs	: Significant Cash Transaction Reports
SFO	: Serious Fraud Office, United Kingdom
SHCP	: Secretaría de Hacienda y Crédito Público (Ministry of Finance and Public Credit), Mexico
SNRA	: Supranational Risk Assessment
SRA	: Sectoral Risk Assessment
SRB	: Self-Regulatory Bodies
SSDT	: Scottish Solicitors Discipline Tribunal
StAR	: Stollen Asset Recovery
StGB	: Strafgesetzbuch (German Criminal Code)
STR	: Suspicious Transaction Reporting
TSOC	: Transnational Serious & Organised Crime
UAE	: United Arab Emirates
UIF	: Unidad de Información Financiera (Financial Information Unit), Argentina
UK	: United Kingdom
UNODC	: United Nations Office on Drugs and Crime
US	: United States

Executive Summary

Corruption and money laundering are closely linked. Research shows that failure to implement effective anti-money laundering (AML) measures provides corrupt actors with opportunities and access to the global financial system to extend their illegal activities. The prevalence of one of these illegal activities in a country may signify the prevalence of the other violations of law.¹ Thus, robust regulation and effective anti-money laundering measures contribute greatly to corruption eradication efforts.

In accordance with the G20 Anti-Corruption Working Group Plan 2022-2024, the G20 members have committed to focus on priority areas where the G20 can continue to lead by example and bring added value to global action, including in the area of money laundering. In particular, the G20 members will conduct a stocktake of existing regulatory and supervisory standards for gatekeeping industries and professional enablers. In line with previous commitments² and international standards, including the FATF Recommendations, the G20 countries are also encouraged to share good practices for addressing the misuse of the international financial system to engage in corruption facilitated by professional gatekeepers/enablers, with due regard for professional secrecy and legal professional privilege.³

Recent reporting on the widespread use of offshore entities to hide assets from the authorities has brought into sharp focus the role of gatekeepers in money laundering. Whether knowingly or unknowingly, legal professionals may play a significant role in creating complex structures, including by involving other professionals, so as to facilitate corrupt actors to conceal the proceeds of corruption.⁴ Hence, the money laundering vulnerabilities of legal professionals and the misuse of the services they provide is a significant area of focus for G20 countries.

This Compendium of Good Practices on Regulatory Frameworks and Supervisory Measures for Legal Professionals to Mitigate Corruption-Related Money Laundering Risks is aimed to highlight the positive practices of G20 members in regulating and implementing supervisory measures for legal professionals to prevent corruption-related money laundering, including practices that address the misuse of legal professions, while taking into account existing professional ethical obligations and ongoing work on this subject.

The compendium consists of three chapters. Chapter 1 provides an overview of the regulatory frameworks for legal professionals. Chapter 2 covers how countries implement supervisory measures for legal professionals, including their obligations under domestic AML frameworks, awareness raising, and information and communication technology (ICT) usage to enhance compliance levels, whistleblowing systems, and assessment of legal professionals' compliance. Chapter 3 provides a number of case studies on how countries have handled incidences of corruption-related money laundering that involves legal professionals.

¹ Yepes, C.V. (July 2011). *Compliance with the AML/CFT International Standard: Lessons from a Cross-Country Analysis*, Washington DC: IMF Working Paper, pp.9.

² G20. (2014). *High-Level Principles on Beneficial Ownership Transparency*. G20. (2015). *High-Level Principles on Private Sector Transparency and Integrity*. G20. (2017). *High-Level Principles on Organizing Against Corruption*.

³ G20 Anti-Corruption Working Group. *Anti-Corruption Action Plan 2022-2024*.

https://www.unodc.org/documents/corruption/G20-Anti-Corruption-Resources/Action-Plans-and-Implementation-Plans/2021_G20_Anti-Corruption_Action_Plan_2022-2024.pdf. Accessed on 24 October 2022, pp.5-7.

⁴ *Ibid.*

Some key findings that may be drawn from the compendium include:

Regulatory Frameworks for Legal Professionals to Mitigate Corruption-Related Money Laundering Risks

- Most G20 members have well established regulatory frameworks and supervisory mechanisms for legal professionals.
- Most countries have mechanisms and tools in place, in order to prevent the involvement of legal professionals in money laundering.

Supervisory Measures for Legal Professionals to Mitigate Corruption-Related Money Laundering Risks

- Legal professionals in G20 countries are generally subject to supervisory measures as reporting parties under AML frameworks.
- The majority of G20 countries apply various sanctions or other appropriate measures to legal professionals who fail to comply with AML obligations, including disciplinary, administrative/civil, and criminal sanctions.
- Whistleblowing systems and Suspicious Transaction Reports (STRs) are crucial components of G20 members' AML frameworks.
- Some countries use ICT for reporting, monitoring, and coordination, and for analytical tools to enhance money laundering risk detection.
- Mechanisms to assess legal professionals' compliance with AML supervisory measures have been established by many G20 members -- these are generally conducted by a supervisory body or on a self-assessment basis.

Case Studies on Corruption-Related Money Laundering Cases Involving Legal Professionals

- Several G20 countries have dealt with money laundering cases involving legal professionals. However, only a small number of G20 members have experience of dealing with corruption-related money laundering cases that involve legal professionals.
- G20 members have also encountered a variety of challenges relating to legal professional privilege and secrecy, cross-jurisdictional information-sharing, lack of resources and capacity, and time-consuming international cooperation processes.
- The good practices and lessons-learned that may be drawn from the case studies highlight that money-laundering involving legal professionals poses a mutual challenge that is shared by all G20 countries.

Chapter 1: Regulatory Frameworks for Legal Professionals to Mitigate Corruption-Related Money Laundering Risks

Legal professionals offer a wide range of activities across sectors, businesses and jurisdictions. Given the diversity in scale and activities, some services may be more susceptible to exploitation for money laundering than others. In 2003, the FATF Recommendations were extended to cover Designated Non-Financial Businesses and Professions (DNFBPs) that could facilitate money laundering either unwittingly or wittingly by being complicit in crimes. These professions include legal professionals.

In 2008, the FATF developed guidance and recommendations to combat money laundering that involves legal professionals.⁵ The World Economic Forum's Partnering Against Corruption Initiative, and the Global Future Council on Transparency and Anti-Corruption, supported by UNODC, and the Stolen Asset Recovery (StAR) Initiative have convened the Gatekeeper Taskforce, a cross-sectoral taskforce of industry leaders from finance, investment, corporate law, real estate, and the art and antiquities markets.⁶ The Taskforce has developed the Unifying Framework, a framework for all gatekeeping industries worldwide which advocates self-regulation and collective action as strategies that can supplement and complement government regulation in the fight against illicit financial flows. Furthermore, the OECD has listed a series of counterstrategies that countries may adopt in their fight against professional enablers, including legal professionals,⁷ to align with the FATF Guidance.

The development and implementation of strong regulatory frameworks are crucial to counter the risk of legal professional services being abused to launder illicit funds. Accordingly, it is necessary to discuss the scope of services provided or activities undertaken by legal professionals, and the money laundering risks that stem from legal professionals' activities, prior to discussing the regulatory frameworks used to supervise legal professionals.

1.1. Scope of Legal Professionals

The definition of 'legal professional' varies among countries. Although there may be similarities between them, national regulations may differ quite substantially from one country to another.

Generally, there are three different approaches to defining legal professionals in G20 countries, which are based on (i) qualifications, as governed by national regulations; (ii) range of legal services provided; (iii) and a combination of both of these.

Qualifications, as governed by national regulations

Some G20 members identify legal professionals based on the qualifications described by their national regulations. The qualifications or titles given to these legal professionals may vary

⁵ FATF. *FATF Guidance for A Risk Based Approach Legal Professionals*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Legal-Professionals.pdf>, Accessed on 24 October 2022

⁶ The World Economic Forum and StAR Initiative, *The Role and Responsibilities of Gatekeepers in the Fight against Illicit Financial Flows: A Unifying Framework*, <https://star.worldbank.org/resources/role-and-responsibilities-gatekeepers-fight-against-illicit-financial-flows-unifying>. Accessed on 27 August 2022.

⁷ OECD. *Ending the Shell Game: Cracking down on professionals who enable tax and white collar crimes*. <https://www.oecd.org/tax/crime/ending-the-shell-game-cracking-down-on-the-professionals-who-enable-tax-and-white-collar-crimes.htm>. Accessed on 12 April 2022.

among countries and legal systems, with the same title not always having the same meaning or area of responsibility.⁸ Argentina, Australia, France, Indonesia, Japan and Türkiye all define professions that are considered to be legal professions according to specific qualifications.

According to the French Monetary and Financial Code, legal professionals include lawyers, notaries, bailiffs, judicial auctioneers and judicial administrators-judicial agents (“mandataires de justice”). Meanwhile, for the purposes of Australia’s FTR Act, solicitors, solicitor corporations and partnerships of solicitors fall within the scope of Australia’s AML regulatory framework.⁹ Under Indonesia’s national regulations, lawyers, notaries and licensed conveyancers should be all defined as legal professionals. While Argentina and Türkiye recognize notaries as legal professionals. Legal advisors in Germany, whether members of the respective professional organization or not, are subject to the provisions of the Money Laundering Act, along with lawyers, patent agents and notaries.

Even though the titles given to different legal professionals vary among countries, the FATF Recommendations require countries to regulate the provision of those sectors for AML purposes when providing legal services.

Scope of legal services or activities

A number of G20 members define legal professionals according to the scope of the services they provide or activities they undertake, having regard to their respective national regulations. For instance, Brazil’s Law on Crimes Related to Laundering or Concealment of Assets, Rights and Valuables describes legal professionals as individuals or entities that provide services related to corporate-vehicle creation and management, and residential and commercial properties.

On the other hand, Mexico’s AML legislation consider three different sections in which legal professionals are classified, the first category encompasses legal professionals that provide accounting services, lawyers and outsourcing as an independent service to a business, the second category includes notaries and public brokers, and the last one contemplates custom agents.

Hybrid definitions

In some G20 countries, legal professionals are defined both by their specific titles and the services they provide or activities they undertake. Russia includes specialist advocates, notaries and any individual undertaking entrepreneurial activities in the area of legal services as legal professionals. Meanwhile, Saudi Arabia recognizes that apart from attorneys, any person providing legal services involving the establishment, operation, or management of a legal person or a legal arrangement is susceptible to AML risks.

⁸ FATF. *FATF Guidance for A Risk Based Approach Legal Professionals*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Legal-Professionals.pdf>. Accessed on 24 October 2022. pp. 8.

⁹ Australian Government, *Solicitors*, <https://www.austrac.gov.au/business/industry-specific-guidance/solicitors>. Accessed on 26 October 2022.

1.2. Money Laundering Risks Stemming from Activities of Legal Professionals

Legal professionals are vulnerable to money laundering risks related to the legal services they provide. To successfully disguise and conceal the proceeds of corruption, corrupt actors may seek the involvement of professional gatekeepers, including legal professionals. Legal professionals can facilitate money laundering activities by creating complex corporate structures or providing legal and notarial services, which enable corrupt actors to obscure proceeds of crime within financial transactions.

The FATF Recommendations, supplemented by the Risk Based Approach (RBA) Guidance for Legal Professionals, require countries to establish a regulatory framework that contains anti-money laundering/ countering financing of terrorism (AML/ CFT) obligations to address the money laundering risks associated with legal professionals.¹⁰ Furthermore, the FATF Report on Money Laundering and Terrorist Financing Vulnerabilities of Legal Professionals acknowledges that even law abiding legal professionals are vulnerable to money laundering risks due to the nature of the services they provide.¹¹ Some of the services mentioned in that FATF report have also been identified by G20 members. Drawing from the questionnaire responses, this compendium will focus on four high risk activities that appear to be particularly prone to money laundering. These are (i) corporate vehicle creation and management, (ii) fund/asset management, (iii) utilization of legal professionals' trust accounts, and (iv) residential and commercial property transactions.

1.2.1. Corporate Vehicle Creation and Management

The creation of corporate vehicles (legal persons and legal arrangements) has been commonly misused by criminals to disguise their proceeds of corruption to appear to be legitimate financial gains. According to the OECD, corporate vehicles are legal entities through which a wide variety of commercial activities are conducted and assets are held.¹² These vehicles include a range of organizational forms, and often have limited liability features, including shell companies.¹³ Creation of shell companies could be primarily for licit purposes and they only become criminal when they are used for criminal purposes. However, legal professionals may wittingly or unwittingly be involved in the misuse of such companies since transactions processed through the corporate account of a "shell company" can become effectively untraceable and thus very useful for those looking to hide criminal profits, pay or receive bribes, finance terrorists, or escape tax obligations.¹⁴ Similarly, shelf companies that conducted previous business activities are particularly useful for corrupt actors to hide their

¹⁰ FATF. *FATF Guidance for A Risk Based Approach Legal Professionals*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Legal-Professionals.pdf>. Accessed on 24 October 2022, pp. 9.

¹¹ FATF Report. (2013). *Money Laundering and Terrorist Financing Vulnerabilities of Legal Professionals*, pp. 4

¹² OECD, *Behind the Corporate Veil. Using Corporate Entities for Illicit Purposes*. <https://www.oecd.org/corporate/ca/43703185.pdf>. Accessed on 24 October 2022, pp.13

¹³ Lord, N.; Wingerde, K.V.; Campbell, L. *Organising the Monies of Corporate Financial Crimes via Organizational Structures: Ostensible Legitimacy, Effective Anonymity, and Third-Party Facilitation*. *Adm. Sci.* 8, 17. <https://doi.org/10.3390/admsci8020017>. Accessed on 24 October 2022, pp.10

¹⁴ Nelen, Hans. (2008). *Real estate and serious forms of crime*. *International Journal of Social Economics*, 35, 10.1108/03068290810898963, pp.751-762.

illicit funds as a history of clean business records and legitimate transactions provide an appearance of legitimacy so as to help avoid detection by law enforcement. Indeed, the FATF Recommendations include the requirement that legal professionals obtain information on the beneficial ownership of corporate vehicles.

The possibility of controlling illicit funds with little risk and disguising the illegitimate funds as corporate business transactions explains why corporate vehicles are so frequently misused for illegitimate purposes. They provide an opportunity for criminals to conceal, convert and control the proceeds of crime by making it appear that other entities or individuals are the legitimate beneficial owners.¹⁵ Besides assisting in or facilitating the creation of corporate vehicles, the involvement of legal professionals may also extend to acting in the capacity of company directors or nominees.¹⁶

Some legal professionals may willfully turn a blind eye to the risks posed by particular clients or prospective clients, and consequently conduct inadequate due diligence. For instance, they may not require clients to provide sufficient identification data, information on beneficial ownership or other necessary information. This may be because the legal professional views the financial rewards of providing services to a particular client as outweighing the risks. Where legal professionals are aware that transactions involve money laundering and nevertheless agree to facilitate them, they may often do so by exploiting regulatory differences and gaps between countries where such differences and gaps facilitate the use of corporate vehicles and legal arrangements to obscure the proceeds of crime.¹⁷

The Australian authorities recognize that multi-layered legal entity structures may be utilized by criminals to launder illegitimate gains.¹⁸ Legal professionals may be involved, knowingly or unknowingly, in setting up legal structures, such as companies, partnerships and trusts, in order to:

- support criminal enterprises
- hide ultimate ownership behind layers of companies or trusts in multiple overseas jurisdictions
- move and obscure the ultimate destination of funds
- avoid tax
- conceal wealth, and
- avoid detection and confiscation.

In France, lawyers are also used to facilitate the creation of multi-layered companies or other complex arrangements, including shell companies that are used to open bank accounts in

¹⁵Lord, N., Campbell, L., & van Wingerde, K. *Corporate Vehicles and Illicit Finance: Policy Recommendations*, https://www.research.manchester.ac.uk/portal/files/87092055/CVs_and_Illicit_Finance_Policy_Brief.pdf. Accessed on 24 October 2022, pp. 1.

¹⁶ FATF. *FATF Guidance for A Risk Based Approach Legal Professionals*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Legal-Professionals.pdf>. Accessed on 24 October 2022, pp. 15.

¹⁷ Lord, N., Campbell, L., & van Wingerde, K. *Organising the Monies of Corporate Financial Crimes via Organizational Structures: Ostensible Legitimacy, Effective Anonymity, and Third-Party Facilitation*. Adm. Sci, 8, 17. <https://doi.org/10.3390/admsci8020017>. Accessed on 24 October 2022. pp.13

¹⁸ Austrac, *Business how comply guidance and resources*. <https://www.austrac.gov.au/business/how-comply-guidance-and-resources/guidance-resources/money-laundering-australia-2011>. Accessed on 24 October 2022.

various countries. This concern has also been noted by Russia, where considerable risks potentially arise when specialist advocates provide services to establish legal persons, particularly shell companies.

Similarly, in South Africa, legal professionals may be requested to create and assist in managing fictitious entities, complex legal structures or shell companies that are designed to obfuscate the ultimate beneficial owner and/or the true nature and ownership of assets. The services provided by legal professionals, such as advising on and creating legal entities, make them potentially vulnerable to money laundering abuse.

In Japan's National Risk Assessment (NRA), it is recognized that the establishment or merging of companies presents a potential money laundering risk. Legal professionals may use a money laundering scheme involving companies and other legal persons, and cooperatives and trusts in which offenders can distance themselves from their assets. Then, large amounts of property can be transferred in the name of a business, and the offenders can conceal the beneficial ownership or source of the financial gain.

1.2.2. Fund Management

In several countries, legal professionals provide services that include opening accounts (savings and securities accounts) and managing client funds. In some jurisdictions, legal professionals may also offer detailed financial advice. The extent of the financial advice that may be offered varies from country to country. However, legal professionals are often permitted to offer such advice where it relates to the legal services that they provide. For instance, legal professionals who manage inheritance matters are frequently permitted to provide generic advice on investment planning for testamentary beneficiaries.

Where a legal professional plays a role in fund management, this provides them with authority to conduct transactions with third parties, such as banks and brokers, on behalf of their clients, thus allowing them to move large sums of money, which could include proceeds of crime, from one jurisdiction to another, with the money being transferred or recorded in the name of the legal professional acting as a nominee. The FATF recognizes the money laundering risks associated with specific activities involving the management of savings or client securities accounts, which can lead to legal professionals being exploited by criminals for money laundering purposes.¹⁹ The risk varies depending on a wide range of factors, such as the activities undertaken, the characteristics and identity of the client, and the nature and origin of the client relationship.²⁰

There are a number of factors that may increase money laundering risks when legal professionals engage in fund management activities, including the conducting of cross-border transactions, the use of offshore or shell companies, large transaction volumes, unusual or

¹⁹ FATF. *FATF Guidance for A Risk Based Approach Legal Professionals*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Legal-Professionals.pdf>. Accessed on 24 October 2022, pp. 27.

²⁰ FATF. *FATF Guidance for A Risk Based Approach Legal Professionals*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Legal-Professionals.pdf>. Accessed on 24 October 2022, pp. 27.

unexpected transactions, and high-risk clients.²¹ Some clients may ask legal professionals to transfer funds to offshore trusts or shell companies that serve to distance the funds from their legal or beneficial owners. This risk may be heightened where clients instruct legal professionals to manage large amounts of funds on behalf of beneficiaries or when they wish to conduct complex or unusual transactions. Legal professionals also need to be risk aware when managing funds on behalf of clients from, or with links to, countries that are considered high risk from a money laundering and/or corruption perspective. In view of the money laundering risks posed by the fund and asset management services provided by legal professionals, some G20 countries have adopted specific legislation to ensure supervision of legal professionals' activities in this regard.

France has acknowledged that legal professionals may be used for the purposes of misusing corporate assets, particularly in restructuring and insolvency matters. Japan's NRA, moreover, recognizes that transactions conducted on behalf of clients relating to the management or disposal of cash, deposits, securities and other assets may pose money laundering risks. As legal professionals have valuable expertise and social credibility that helps clients sell assets and use those assets to purchase other assets, the services legal professional provide can facilitate clients to more easily transfer proceeds of crime from one account to another.

1.2.3. Utilization of Legal Professionals' Trust Accounts

Legal professionals may hold client funds in trust accounts (also known as client accounts in some G20 countries).²² Trust accounts are used to accommodate funds that enable legal professionals to undertake transactions on behalf of their clients. According to an FATF Report on Money Laundering Vulnerabilities of Legal Professionals, law enforcement and prosecutorial authorities in many countries are unable to monitor transactions that involve legal professionals' trust accounts as these are protected by confidentiality requirements.²³

While the use of legal professionals' trust accounts is entirely legitimate, some aspects of the practice are vulnerable to misuse. These include:²⁴

- where a legal professional, effectively acting as a financial intermediary, handles the receipt and transmission of funds through an account they control as part of facilitating a business transaction;
- where a client deposits or transfers funds through the legal professional's trust account that are not linked to a transaction that the legal professional is performing on behalf of the client, or where the activities specified in FATF Recommendation 22 are being undertaken; and

²¹ Financial Conduct Authority, *Anti-Money Laundering and Anti-Bribery and Corruption Systems and Controls: Asset Management and Platform Firms*, <https://www.fca.org.uk/publication/thematic-reviews/tr13-09.pdf>. Accessed on 11 September 2022.

²² A trust account is a legal arrangement through which funds or assets are held by a third party (the trustee) for the benefit of another party (the beneficiary). The beneficiary may be an individual or a group.

²³ FATF. *Money Laundering and Terrorist Financing Vulnerabilities of Legal Professionals*. <https://www.fatf-gafi.org/media/fatf/documents/reports/ML%20and%20TF%20vulnerabilities%20legal%20professionals.pdf>. Accessed on 25 October 2022, pp. 32.

²⁴FATF. *FATF Guidance for A Risk Based Approach Legal Professionals*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Risk-Based-Approach-Legal-Professionals.pdf>. Accessed on 24 October 2022, pp. 35.

- where a client requests that a financial transaction be carried out without using the legal professional's trust account, for instance, that it be conducted through the firm's general account and/or the personal or private business account of the legal professional.

The potential for abuse that is inherent in the above practices have also been recognized by some G20 countries. Further, the questionnaire responses indicate that a number of G20 countries now require legal professionals to identify the ownership of funds in their trust accounts and the purposes of transactions conducted through these accounts, and to monitor the accounts for unusual or suspicious transactions.

Investigations conducted by Australian law enforcement agencies acknowledge that legal professionals' trust accounts may be used (knowingly or unknowingly) to launder or conceal the true origin of funds, including, in particular, cash payments. Similarly, France has recognized that the vulnerabilities of legal professionals stem primarily from account management or escrow activity that they may carry out either by virtue of a legal obligation or on a voluntary basis. The sums of in-transit²⁵ or managed funds are often significant, while the funds themselves may be of fraudulent origin.

1.2.4. Real Estate Transactions

Real estate transactions allow corrupt actors to not only obscure their proceeds of crime, but also to enjoy the profits accruing from a long-term investment. In real estate transactions, legal professionals are often involved in preparing, reviewing and registering mortgage documents and purchase agreements, and in ensuring that transactions proceed smoothly. In some countries, legal professionals assist with the arrangements for final settlement by processing payments through their trust accounts. For example, in a property sale and purchase transaction in a number of G20 countries, the buyer first transfers the purchase funds to the trust account of their legal professional, who then transfers them to the trust account of the seller's legal professional, who then finally transfers the funds to the seller.

A paper by the European Parliament titled Understanding Money-Laundering through Real Estate Transactions highlights some examples of how real-estate transactions can be used for money laundering purposes:²⁶

- Use of nominee: a legal professional may stand in the place of the real buyer to give an appearance of a legitimate buyer without a criminal record.
- Trust and shell companies: criminals can deposit their proceeds of crime into offshore trusts and then utilize funds from these trusts to purchase property and as collateral to obtain loans.²⁷

²⁵ In-transit funds are funds that have been received and recorded by an entity, but which have not yet been recorded in the records of the bank where the funds are deposited.

²⁶ European Parliament, *Understanding money laundering through real estate transactions*, https://www.europarl.europa.eu/cmsdata/161094/7%20-%2001%20EPRS_Understanding%20money%20laundering%20through%20real%20estate%20transactions.pdf. Accessed on 11 September 2022.

²⁷ FATF Report, *Money Laundering Using Trust and Company Service Providers*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Money%20Laundering%20Using%20Trust%20and%20Company%20Service%20Providers..pdf>. Accessed on 28 October 2022, pp. 70

- Overvalued or undervalued transactions: criminals collaborate with legal professionals and property agents to overstate or understate asset values compared with their true values. Overvalued assets can then be used as collateral to obtain bigger loans from fictitious lenders so as to launder the proceeds of crime.
- Cash: legal professionals can assist criminals to deposit cash with multiple banks so as to avoid reporting thresholds. These funds can then be used to purchase real estate.
- Financing schemes: credit and mortgage schemes can be used to disguise proceeds of crime by mixing illicit funds with legitimate funds.

Legal professionals such as lawyers and notaries are required to comply with AML obligations, arising from FATF Recommendation 22, including to identify their clients and report suspicious transactions in residential and commercial property transactions.²⁸ AML frameworks applied by countries require legal professionals to implement Know Your Client (KYC) and Customer Due Diligence (CDD) to identify and report suspicious transactions. The responses to the questionnaire from G20 members show that some of them require legal professionals that are involved in real estate transactions to identify any potential money laundering risks within the transaction.

In Brazil, the involvement of legal professionals in real estate transactions is not only limited to assistance with purchase and sale, but extends to providing advice, consultation, accounting and audit activities. Similarly, Argentina requires notaries to report to the Argentine Financial Information Unit if they engage in transactions related to the purchase and sale of real estate in excess of six million Argentine pesos, as well as transactions involving real estate located in border zones that are earmarked for development, and in the border security zone, regardless of purchasers' identities or the amounts involved.²⁹

Türkiye and Spain acknowledge that when lawyers conduct financial transactions related to real estate transactions, they are subject to the ML/TF prevention obligations. Japan also recognizes that transactions on behalf of clients related to necessary acts or procedures for the buying and selling of residential lots and buildings may present a risk of ML/TF.

The high level of money laundering risk that pertains to notaries arises from their role in real estate transactions. In some civil law countries, notaries commonly play a crucial role in such transactions. The latest amendments of the AML legislation in Germany obliges legal professionals to report real estate transactions to the FIU if these exhibit conspicuous features that suggest the possibility of ML/TF. This extension of the reporting obligation for lawyers arose out of the findings of the National Risk Assessment, which identified the real estate sector as one of the key areas that are subject to heightened money laundering risks.

In Italy, notaries are key players in real estate transactions and company incorporations. Thus, they are required to comply with AML obligations and STRs reporting. STRs that they send yearly to the Italian FIU account for more than 90% of the total reports submitted by all legal professionals. Currently, Italy is developing an automated system (notarial data warehouse)

²⁸ FATF, *Guidance For A Risk-Based Approach Real Estate Sector*, <https://www.fatf-gafi.org/media/fatf/documents/recommendations/RBA-Real-Estate-Sector.pdf>. Accessed on 1 September 2022.

²⁹ Ministerio de Justicia y Derechos Humanos Presidencia de la Nación, *Encubrimiento Y Lavado de Activos de Origen Delictivo: Resolución 70/2011 Reporte Sistemático de Operaciones "on line"* <http://servicios.infoleg.gob.ar/infolegInternet/anexos/180000-184999/182612/texact.htm>. Accessed on 28 October 2022.

which is connected to the FIU and other supervising entities. This system could further detect the suspicious activities that may be linked to money laundering and the predicate offences.

1.3. Regulatory Framework

As described above, legal professional services may be misused in certain circumstances by corrupt actors to facilitate money laundering. Consequently, legal professionals are subject to the AML/CFT regulatory frameworks in many G20 countries in order to monitor their activities and prevent abuses. As part of these efforts, it is important to take into consideration the good practices that have been developed to date by the G20 countries as part of their regulatory frameworks.

Strong regulatory frameworks are critical to preventing and/or monitoring the involvement of legal professionals in money laundering, particularly where corruption offences serve as predicate crimes. Regulation provides legal professionals with instruments to better identify suspicious clients and activities, and creates a system to prevent legal professionals from cooperating with or being exploited by criminals engaged in money laundering and other illegal activities. Additionally, robust regulations, which require disclosure, provide authorities with effective enforcement powers, and criminalize potential offences reduce not only money laundering, but also the extent of other illegal activities, such as drug trafficking and other economic crimes.³⁰ This also reduces the immense cost of corrupt behavior, which can impact countries' economic development.³¹

Most G20 countries have enacted and implemented some level of regulation and supervision for legal professionals to combat money laundering in their AML/CFT regulatory frameworks, including when corruption is the predicate crime. Overall, these provisions may be categorized as (i) laws and regulations, (ii) self-regulation, and (iii) codes of conduct.

Laws and Regulation

Laws and regulations contain the principles and rules that govern the affairs of society, and are created and enforced by the competent authority. Some countries also use the term "act" to refer to statutes created by the legislature. Drawing from the questionnaire responses, a number of G20 members have enacted specific provisions focused on legal professionals in their national legislation, including the adoption of FATF Recommendations.³²

³⁰ Chong, Alberto & Lopez-de-Silanes, Florencio. *Money Laundering and Its Regulation. Economics and Politics.* (27th ed.) 10.2139/ssrn.1820066 https://www.researchgate.net/publication/5106238_Money_Laundering_and_Its_Regulation. Accessed on 26 October 2022.

³¹ STAR, *The Role and Responsibilities of Gatekeepers in the Fight against Illicit Financial Flows: A Unifying Framework*, <https://star.worldbank.org/publications/role-and-responsibilities-gatekeepers-fight-against-illicit-financial-flows-unifying>. Accessed on 26 October 2022.

³² According to FATF, all requirements for financial institutions, or DNFBPs or VASPs should be introduced either (a) in law (Customer Due Diligence (R.10), Suspicious Transaction Report reporting (R.20), and Tipping-off and Confidentiality (R.21)), or (b) for all other cases, in law or enforceable means (the country has discretion). The term "enforceable means" refers to regulations, guidelines, instructions or other documents or mechanisms that set out enforceable AML/CFT requirements in mandatory language with sanctions for non-compliance, and which are issued or approved by a competent authority. The sanctions for non-compliance should be effective, proportionate and dissuasive.

The United Kingdom has established a network of legislation that governs supervision and monitoring programs in the legal sector. The Proceeds of Crime Act 2002, the Sanctions and Anti-Money Laundering Act 2018, and the Money Laundering, Terrorist Financing and Transfer of Funds (Information on the Payer) Regulations 2017 (MLRs) are the main pieces of legislation that make up the United Kingdom's AML/CFT regime. The MLRs require independent legal professionals to identify and verify the identity of their clients, understand the risks associated with the sector, and adopt appropriate policies, controls and procedures in line with the FATF Recommendations. In line with the risk-based approach, relevant legal professionals must identify the money laundering and terrorist financing risks they are subject to and ensure the business's policies, controls and procedures effectively mitigate these risks. The Legal Sector Affinity Group, formed of the United Kingdom's legal sector AML/CFT supervisions both regulatory and representative bodies for legal services in the United Kingdom, has jointly produces guidance on complying with the MLRs to help legal professionals navigate the risks and AML obligations associated with the sector. The guidance covers obligations relating to governance, client due diligence (CDD) and enhanced due diligence (EDD), policies, controls and procedures, suspicious activity reports (SARs), staff training and record-keeping, amongst other areas that have been identified as posing risks in the MLRs.

Likewise, Spain's AML legislation mandates the supervision of legal professionals, including the conducting of inspections and checks by Sepblac, Spain's FIU. Sepblac also applies a risk-based approach to ensure that supervisory measures are focused on different economic sectors and the activities which pose a greater risk of ML/TF. Over the last few years, Sepblac has increased its focus on the supervision of legal professionals by streamlining its procedures and adopting measures to ensure compliance with the AML/CFT framework by DNFBPs, particularly legal professionals. Amendments effected to Spain's AML legislation in 2018 enhance the definition of legal professionals.

Meanwhile, anti-money laundering obligations applicable to legal professionals in Indonesia are governed by the Anti-Money Laundering Law and Government Regulation Number 61 of 2021 on Reporting Parties in the Prevention and Eradication of Money Laundering. The government agency responsible for supervising and monitoring the activities of notaries (the Ministry of Law and Human Rights' Directorate General of General Law Administration / DG AHU), has issued a number of regulations that impose AML compliance requirements on notaries. These include:

- Minister of Law and Human Rights Regulation Number 9 of 2017 on the Application of 'Know Your Customer' to Notaries.
- Two circulars of DG AHU on Guidelines for Implementation and Compliance Supervision of 'Know Your Customer' for Notaries

Mexico's AML legislation obliges all legal professionals (lawyers, notaries, and public brokers) to report certain information on their services to the Ministry of Finance and Public Credit (SHCP, by its Spanish acronym). In 2021, Mexico enhanced its AML regulatory framework in

response to its National Risk Assessment on Money Laundering and Terrorism Financing (NRA) that was conducted in 2020. Additionally, a bill was presented in the Senate to amend various provisions of the AML legislation and insert new provisions in order to enhance the obligation for DNFBPs, including legal professionals, to comply with AML legislation and regulations. In Korea, the Act on Regulation and Punishment of Criminal Proceeds Concealment applies to any individuals, including legal professionals.

In Germany, the Administrative Offences Act applies to legal professionals, in conjunction with the Money Laundering Act, the Tax Consultancy Act, the Federal Code for Lawyers, the Patent Agents Code, and the Act Regulating the Accountancy Profession. Powers and responsibilities in relation to notaries are defined by Germany's federal states. Public authorities are empowered to impose all of the sanctions set forth in the Money Laundering Act. A number of adjustments to the money laundering prevention requirements have recently been made in respect of legal professionals. The amendments, which entered into force in 2020, apply to all professionals enjoying 'legal privilege' (notaries, lawyers, tax advisors and accountants). These amendments are particularly relevant for lawyers with regard to reporting obligations. Since the amendments were introduced, the privilege exemption no longer applies to all activities that are covered by the professional duty of confidentiality, but rather is limited to information obtained in the course of giving legal advice or conducting legal representation.

Self-Regulation and Codes of Conduct

Self-regulation may consist of standards, guidance or other forms of principles established by a self-regulatory organization. The organization may have the ability to establish, monitor, and enforce those standards. Meanwhile, a code of conduct is a defined set of rules, principles, values, and expectations that have been developed for members of an organization to guide their expected behavior. A code of conduct provides a foundation for ethical decision-making within the organization. A number of G20 countries regulate and supervise legal professionals through self-regulation and codes of conduct. They are commonly developed by legal professional associations.

In addition to the reporting requirements under Australia's AML/CTF legislative framework, legal professionals are also subject to self-regulation under legislation and rules governing legal practice and professional standards. These standards preclude legal professionals from engaging in unlawful conduct or furthering unlawful purposes, and provide safeguards against the misuse or exploitation of the legal profession for money-laundering purposes. For example, there are robust regulations and standards governing practicing certificates and related conditions, practice management, including regular independent auditing of trust accounts, continuing professional development, complaints handling processes, cost arrangements with clients, record-keeping, customer due diligence and professional discipline.

In the United States, lawyers are primarily self-regulated by organizations such as the American Bar Association (ABA) at the national level, and at the state level through state bar associations, courts, and legislatures. The ABA has initiated several ongoing efforts in recent years to examine whether to adopt new ethical standards for lawyers relating to AML. The ABA Model Rules of Professional Conduct, which are advisory only, serve as models for state rules governing lawyers and their relationships with their clients, the courts and third parties. Most states have enacted rules based on the model rules. Currently, the ABA is looking into

amending the model rules so as to increase the obligations of attorneys to exercise due diligence when dealing with clients who engage in conduct or activities that should give rise to suspicions of criminal activities. Similarly, in Korea, lawyers have ethical obligations as legal professionals. If they violate those obligations, they may be subject to disciplinary actions.

1.4. AML Supervisory Bodies for Legal Professionals, and Their Roles

In mitigating the risks and effects of money laundering, including the threats, vulnerabilities and consequences that arise in the legal professional sector, supervisory authorities³³ have significant roles to play, including:

- Conducting assessments of the AML risks that pertain to legal professionals
- Developing strategic AML policies for legal professionals.
- Strengthening internal control systems for self-regulatory organizations that regulate and supervise legal professionals.
- Issuing regulations to enhance the application of KYC and CDD by legal professionals.
- Improving dissemination of information and training for supervisors in self-regulatory bodies for legal professionals.
- Improving cooperation and coordination with related ministries and agencies in monitoring money laundering risks involving legal professionals.

Routine Activity Theory is a criminology theory which explains how the opportunity for a crime may arise in the absence of a guardian that is capable of preventing the crime. A capable guardian can be anything, either a person or thing, that discourages crime from taking place, formally or informally.³⁴ In this context, a capable guardian is a designated supervisory body responsible for supervising and monitoring legal professionals in relation to money laundering and corruption risks. Correspondingly, the FATF Recommendations advise that supervisory bodies should be vested with oversight and monitoring authority in order to ensure that legal professionals comply with AML frameworks.

Most G20 members assigned their FIUs as the authorities which have responsibilities for supervising and monitoring legal professionals' compliance with AML provisions, in addition to receiving STRs and producing financial analysis of STRs. There are also a number of countries in which government agencies act as the AML supervisory body for legal professionals, while yet others assign the responsibility to legal professional associations.

³³ A "supervisory authority" is an authority that is established by a country or state to supervise compliance with a specific regulation. In this context, such supervisory authorities are responsible for supervising and monitoring AML compliance.

³⁴ Jory A. Maes. *Can Routine Activities Theory Be Applied to Explain White Collar Crime? a Crime-Specific Analysis Using Reverse Redlining*, <https://epublications.regis.edu/cgi/viewcontent.cgi?article=1479&context=theses>. Accessed on 26 October 2022

Financial Intelligence Units as AML Supervisory Bodies for Legal Professionals

A number of G20 countries, including Argentina, Australia, and South Africa, have assigned their FIUs with AML responsibilities, including compliance by legal professionals with AML frameworks.

Argentina's Financial Information Unit (UIF) is the agency charged with ML/TF prevention and deterrence, with the UIF's Supervision Directorate being the body responsible for supervision procedures,³⁵ while the Analysis Directorate is in charge of analyzing suspicious transaction reports submitted by notaries in their capacity as regulated entities.

In South Africa, the Financial Intelligence Centre has power to supervise and enforce AML compliance pursuant to the Financial Intelligence Centre (FIC) Act. The FIC Act requires certain categories of business, including legal professionals, to take steps in respect of client identification, record-keeping, reporting of information, and internal compliance structures.

Government Agencies as AML Supervisory Bodies for Legal Professionals

AML/CFT supervisory responsibilities in relation to legal professionals can be assigned to designated governmental supervisory bodies, such as in Mexico, where the Ministry of Finance and Public Credit (SHCP, by its acronym in Spanish) has authority to receive reports and notices, request information that is necessary to the performance of its duties, coordinate with other domestic and foreign supervisory and public security authorities, issue secondary legislation, and conduct on-site visits through its decentralized bodies.

The Tax Administration Service (SAT) is a decentralized administrative body under the SHCP that regulates, supervise and monitor the DNFBPs, including legal professionals. This supervisory body, receives suspicious activities reports, conducts on site verifications and files information requirements to verify and monitor AML compliance, and if necessary, impose administrative sanctions.

Legal Professional Associations as AML Supervisory Authorities

Several G20 members assign supervisory responsibilities to legal professional associations, including India and the United States. India's state bar councils and the Bar Council of India at the national level are responsible for supervising advocates, establishing professional conduct and etiquette rules for advocates, and imposing disciplinary measures.

Likewise, in the United States, attorneys are primarily self-regulated, both at the national level by organizations such as the American Bar Association (ABA) and at the state level through state bar associations, courts, and legislatures. In some states, membership of the state bar association is required for a lawyer to represent clients. State bar associations enforce the rules and regulations that govern lawyer ethical behavior and the unauthorized practice of law, and discipline attorneys who violate the rules, among other things. Attorneys are required to file a form (Form 8300) for cash transactions exceeding USD 10,000. They may also opt to use a Form 8300 under certain circumstances for cash transactions of less than USD 10,000.

³⁵ República Argentina - Poder Ejecutivo Nacional, *Procedimiento de Supervisión Basado En Riesgos de la Unidad de Información Financiera*, <http://servicios.infoleg.gob.ar/infolegInternet/anexos/315000-319999/318170/res154.pdf>. Accessed on 25 October 2022.

The resulting information is collected by the U.S. Treasury's Financial Crimes Enforcement Network (FinCEN) under the Bank Secrecy Act (BSA).

Hybrid Approach

Some countries assign AML supervisory authority in respect of legal professionals to more than one type of agency, such as in the case of Brazil, China, France, Germany, Indonesia, Italy, Russia, Saudi Arabia, Spain, the United Kingdom, and Türkiye.

France has a different supervisory authority for each legal profession. While all legal professionals are ultimately supervised by the Ministry of Justice, lawyers are supervised by *Caisses Autonomes des Règlements Pécuniaires des Avocats* (CARPA), notaries by the Interdepartmental Chambers/ Council of Notaries (CSN), and other legal professionals by a national council, disciplinary chamber, departmental chamber or national independent commission.

In Italy, AML supervision in respect of legal professionals is conducted by the *Guardia di Finanza* and the professional associations. The *Guardia di Finanza* is a specialized police unit that reports directly to the Minister of the Economy and Finance. This agency supervises and monitors AML compliance by notaries and lawyers. It is worth noting that, according to the Italy's AML Law, legal professionals are obliged to send STRs to the FIU without delay. After receiving STRs, the FIU then conduct a financial analysis and disseminate the results of the analysis to the competent law enforcement authorities (*Guardia di Finanza* and the *Direzione Investigativa Antimafia/Anti-Mafia Investigation Directorate*) for subsequent possible investigations.

In Russia, the risks of involvement of specialist advocates and/or their clients in illicit schemes are mitigated by relevant control measures taken by the Ministry of Justice, the Federal Chamber of Advocates, the Federal Service for Financial Monitoring, the Bank of Russia, and the Federal Tax Service. One significant supervisory measure that has been pursued is the development of AML/CFT guidance for specialist advocates, and its subsequent dissemination through the website of the Federal Chamber of Advocates and the personal accounts of advocates on this website. Furthermore, the Council of the Federal Chamber of Advocates, by its decision of 25 January 2022, adopted the Rules of Internal Control to Counter Money Laundering, Financing of Terrorism and Proliferation of Weapons of Mass Destruction.

In Indonesia, AML supervisory powers are vested in INTRAC (the Indonesian FIU), National Land Agency/Ministry of Agrarian Affairs and Spatial Planning (NLA), and the self-regulatory bodies (SRBs), which have the authority to supervise, regulate and/or impose sanctions on legal professionals for AML non-compliance. INTRAC is responsible for monitoring and supervising the reporting obligations of reporting parties, including legal professionals, while the NLA and the Licensed Conveyancers Association conduct supervision in relation to compliance in the real estate sector. Meanwhile, notaries come under the supervisory authority of the Notaries' Association's Disciplinary Committee, and advocates under that of the Indonesian Advocates' Council's Disciplinary Committee.

In Germany, supervisory authority over legal professionals comes within the ambit of administrative authority, and AML supervision is linked to the professional supervision performed by chambers and bar associations, as well as presidents of the regional courts who perform supervisory functions in respect of notaries.

In the Netherlands, AML supervision for notaries and other legal professionals providing similar services is carried out by the BFT (Bureau Financieel Toezicht / Financial Supervision Office), whereas AML supervision in respect of attorneys-at-law is conducted by local bar presidents, supported by the Dutch Bar Association (Nederlandse Orde van Advocaten / NOvA), which also provides guidances that are tailored to the legal profession. Both the BFT and NOvA conduct risk-based investigations into possible violations of the AML/CFT legislation, including violations resulting from corruption. In addition, other forms of supervision are also employed, including thematic investigations. Investigations can result in findings of violations of AML/CFT legislation, including corruption. Common findings relate to inadequate CDD/KYC procedures, monitoring of transactions, reporting of transactions and/or internal policies and controls.

In Spain, AML supervision over legal professionals is conducted by Sepblac, Spain's FIU, whose supervisory tasks include conducting risk-based inspections and checking on legal professionals' compliance. Between 2014 and 2021, 44 inspections of major law firms, involving some 6,400 lawyers, were completed, with the focus being on compliance with AML/CFT training obligations and audit requirements under Spanish law. As a result of these inspections, 6 law firms were sanctioned (fined and reprimanded) and 4 firms were required to implement remedial measures. In addition, 54 control actions were undertaken in 2017-18. For 2022, 2 additional inspections are planned for firms that are linked to the real estate sector.

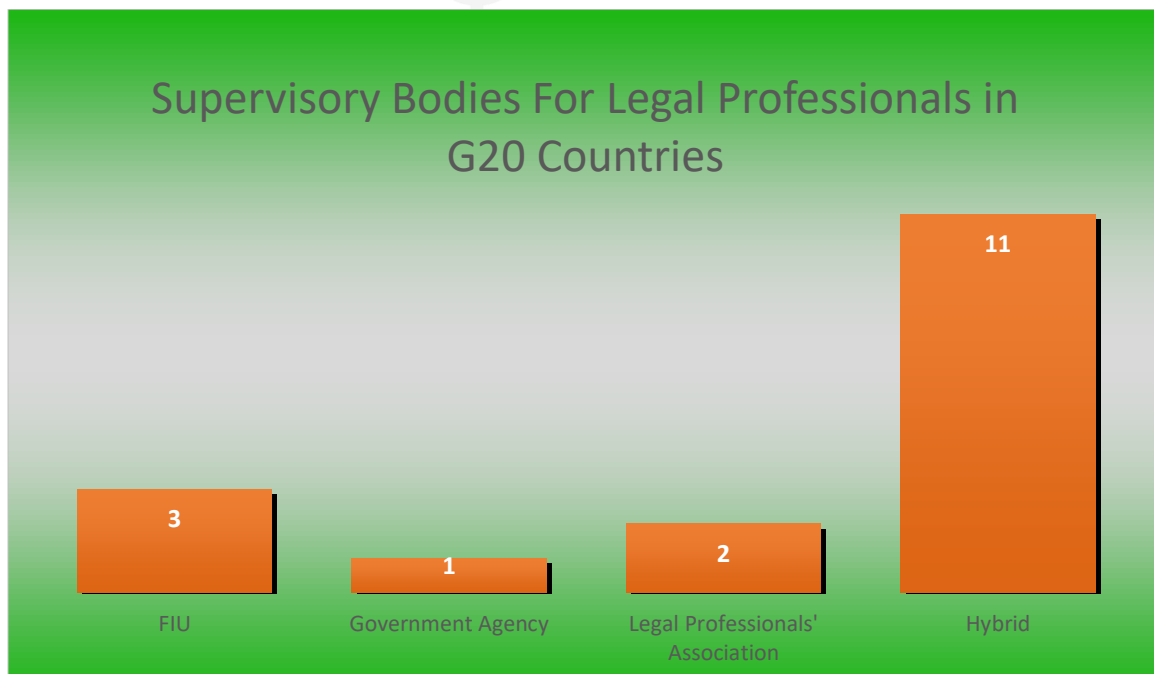


Figure 1 Supervisory Bodies for Legal Professionals in G20 Countries

The above diagram shows how AML supervision is conducted in respect of legal professionals in the G20 countries that responded to the questionnaire. The majority of G20 members assign supervisory powers to a number of agencies, including FIUs, government agencies, and legal professional associations. Three countries assign supervisory functions to their FIUs, while two others do so to their legal professional associations. Meanwhile, legal professionals in Mexico are supervised by a government agency.

1.5. Risk Assessment

The FATF Guidance on National ML/TF Risk Assessment identifies that risk assessment is an essential component of an effective AML/CFT regime.³⁶ Risk assessment can be used to gain an understanding of how risks may occur and the consequences of those risks.³⁷ The findings of a risk assessment should help to identify appropriate mitigation measures to prevent a risk from happening and to identify action to overcome the impact if it does in fact occur. Assessing ML/TF risk involves an information analysis process to understand the likelihood of these risks occurring, and the impact that these risks would have on individual legal professionals, the entire legal professional sector and on the national economy.

The main intent behind the global AML framework, in particular, the FATF Recommendations in regard to legal professionals, is to ensure that legal professionals are not used to launder the proceeds of crime. According to the OECD, additional or supplementary rules and procedures may also be used provided that they address the genuine risks that are involved.³⁸ Therefore, a risk assessment is essential to assess not only money laundering risks but also predicate crimes, particularly corruption. Once these risks are properly understood, countries can then apply AML measures that correspond to the level of risk. Consequently, risk assessment enables countries to prioritize their resources and allocate them more efficiently.³⁹

The responses from G20 countries show that risk assessments have been conducted to identify money laundering threats and vulnerabilities pertaining to legal professionals. Drawing on these responses, risk assessments may be differentiated into two types: (i) national risk assessments that are conducted by countries or national authorities, and (ii) sectoral risk assessments.

National Risk Assessments

A national risk assessment (NRA) defines the level and nature of ML/TF risks that a country faces. It is a self-conducted exercise involving multiple public and private stakeholders in the country. Most G20 members have undertaken an NRA to identify and mitigate their national risks.

According to the NRA conducted by Spain, the legal professions pose a high level of endogenous or intrinsic risk due to a need on the part of organized crime groups for the

³⁶ FATF. (2013). *FATF Guidance on National Money Laundering and Terrorist Financing Risk Assessment*, pp. 4.

³⁷ The Society for Risk Analysis. (2018). *Core Subject of Risk Analysis*, pp.5..

³⁸ OECD, *Risk-based regulation: Making sure that rules are science-based, targeted, effective and efficient* <https://www.oecd.org/gov/regulatory-policy/chapter-six-risk-based-regulation.pdf>. Accessed on 25 October 2022

³⁹ FATF. (2013). *FATF Guidance on National Money Laundering and Terrorist Financing Risk Assessment*, pp. 4.

technical and legal expertise provided by legal professionals. However, the degree of exposure to ML/FT risk on the part of solicitors representing clients in courtroom legal proceedings is considered low. Nevertheless, the level of risk in relation to other services provided by solicitors is higher. Italy also developed an NRA in 2014,⁴⁰ which was followed by a follow-up report (NRA-FUR) in 2018.⁴¹ The NRA-FUR acknowledges that the relative vulnerabilities of notaries and lawyers are significant and very significant, respectively.⁴²

The United States' National Money Laundering Assessment explains that attorneys are licensed by state bar associations and are bound by professional codes of ethics. This document also identifies that while attorneys have strong professional entry and continuing ethical requirements, these may not adequately address ML/TF vulnerabilities and do not require reporting of suspicious activity to the authorities. In addition, there are no enforceable mechanisms to compel attorneys to follow voluntary best-practice guidelines nor any mechanisms which would result in the issuance of civil or criminal penalties for failing to comply with these practices.⁴³

In Mexico, the NRA on Money Laundering and Terrorism Financing 2020 assessed the risks pertaining to the activities of DNFBPs, including legal professionals, and found that legal professional services are medium to low risk. Meanwhile, Russia's latest risk assessment report, published in 2018,⁴⁴ states that the risk of involvement of specialist advocates in money laundering schemes is low. This conclusion was based on a variety of indicators, such as the findings of sectoral assessments on money laundering risks, the insignificant number of financial operations that involve specialist advocates, the fact that only isolated cases of specialist advocates' involvement in money laundering schemes has been identified, the low level of violation of AML/CFT laws, and the insignificant potential damage that resulted from violations. However, the risk of involvement of notaries in money laundering schemes is considered to be moderate. Similarly, Saudi Arabia's NRA also indicates that lawyers have a low risk of ML/TF exposure as they do not have the right to act on behalf of their clients when performing financial transactions. Meanwhile in the Netherlands, the NRA concluded that corruption risks are low and the abuse of legal services to conceal the proceeds of corruption does not constitute one of the top ten ML risks.

Sectoral Risk Assessments

A Sectoral Risk Assessment (SRA) aims to identify, analyze and assess the specific risks that pertain to a given activity sector. Drawing on the questionnaire responses, a number of G20

⁴⁰ Financial Security Committee, *Italy's National Assessment of Money-Laundering and Terrorist Financing Risks*, http://www.dt.tesoro.it/export/sites/sitodt/modules/documenti_en/prevenzione_reati_finanziari/prevenzione_reati_finanziari/NRA_Synthesis_11_01_2017.pdf. Accessed on 26 October 2022.

⁴¹ Ministero dell'Economia e delle Finanze, *National money laundering and terrorist financing risk assessment report*, https://www.dt.mef.gov.it/en/pubblicazioni/analisi_nazionale_rischi_riciclaggio/. Accessed on 26 October 2022.

⁴² Italian Ministry of Economy and Finance. *Italy's national money laundering and terrorist financing risks assessment drawn up by the Financial Security Committee - Up to date as of 2018*. https://www.dt.mef.gov.it/en/pubblicazioni/analisi_nazionale_rischi_riciclaggio/, accessed on 20 October 2022, pp. 30.

⁴³ The Department of the Treasury, *National Money Laundering Risk Assessment*, <https://home.treasury.gov/system/files/136/2022-National-Money-Laundering-Risk-Assessment.pdf>. Accessed on 20 October 2022, pp. 46-47.

⁴⁴ Fedshfm, *national money laundering risk assessment*, https://www.fedshfm.ru/content/files/documents/2018/national_money_laundering_risk_assessment5.pdf. Accessed on 26 October 2022.

countries have performed SRAs to assess the level of exposure of legal professionals to ML/FT risks.

In France, all of the legal professions have developed SRAs that analyze the threats, vulnerabilities and risks related to ML in situations where corruption is the predicate crime. In Japan, the JFBA has summarized the results of its investigations and analysis, and set out the findings in a publication titled 'Risk Assessment of Money Laundering in Legal Practice,' which is used by attorneys when applying measures having regard to the risk-based approach. Japan's National Public Safety Commission annually prepares and publishes an NRA-FUR, which describes the risks of ML/TF in transactions carried out by legal professionals.



Chapter 2: Supervisory Measures for Legal Professionals to Mitigate Corruption-Related Money Laundering Risks

Effective supervision of legal professionals is a significant element of an effective AML and anti-corruption regime. Supervision regimes comprise a wide range of supervisory measures, including the obligations of legal professionals under AML and anti-corruption frameworks, awareness raising, compliance evaluation or assessment, and sanctioning. This chapter will discuss the good practices developed by G20 countries when implementing supervisory measures for legal professionals to prevent money laundering and corruption offences.

2.1. Legal Professionals' Obligations to Mitigate Corruption-Related Money Laundering

Obligated entities, including legal professionals, play a significant role in preventing money laundering and corruption. They provide information that enables the relevant FIU and law enforcement to mitigate and manage money laundering and corruption risks, and to prosecute related offences. Legal professionals in the majority of G20 countries are obliged entities that are subject to supervisory measures. According to the G20 countries' responses, legal professionals are generally required to conduct client identification/CDD, report suspicious transactions, and perform record keeping.

Customer Identification/Customer Due Diligence (CDD)

Legal professionals, as recommended by FATF Recommendations 1, 11, 12, 15, and 17, are required to conduct CDD in specific circumstances when identifying and verifying information on their clients, including beneficial ownership and the nature of the transaction. In particular, legal professionals are obligated to perform CDD when carrying out client transactions that involve real estate, the management of client assets, and creating, operating or managing legal entities.

As discussed above, the vulnerability of legal professionals to money laundering risks varies according to the type of service they provide. Thus, performing CDD prior to and during a transaction is an important mitigation measure to identify and respond to money laundering risks. Given this, most G20 members have made CDD a mandatory obligation for legal professionals.

In this regard, France has issued a *vade mecum* (handbook) on AML/CFT and has published common guidelines on due diligence by legal professionals. Accordingly, legal professionals generally apply CDD, particular where there is a risk of corruption-related money laundering. The CDD process in France includes carrying out client and beneficial owner identification and, to some extent, retaining and updating this information. For lawyers, CARPA is currently developing a database to facilitate the identification of private individuals and beneficial owners. Additional due diligence will also be applied to notaries, particularly in relation to the consistency of checks during real estate transactions, transactions involving complex corporate structures and certified attestation requests from foreign clients.

In Saudi Arabia, the AML/CFT legislation requires the conducting of due diligence to identify and verify information provided by clients or ultimate beneficiaries so as to enable law firms and notaries to assess their exposure to risks. Similarly in China, the “Measures for the Administration of Law Firms Engaged in Legal Business of Securities” that has been issued by the China Securities Regulatory Commission stipulates that lawyers are required to conduct CDD in all cases, and enhanced due diligence (EDD) in the case of clients with complex equity structures, foreign clients or where the law firm is expected to act as a nominee. Further, the Ministry of Justice has issued notarization rules that require notaries in China to collect basic identity information and identity certifications in relation to clients.

Reporting Obligations

Legal professionals may be required to report suspicious transactions when they engage in professional activities or provide services that are vulnerable to money laundering risks. The imposition of reporting obligations can assist the relevant authorities to detect and monitor potential money laundering threats. There are a number of reporting mechanisms utilized by G20 members that serve different objectives. This includes: (i) reporting through an annual reporting mechanism; and (ii) reporting through suspicious transaction reports (STRs) to the national FIU.

With regard to annual reporting, Japan requires attorneys to submit annual reports to their bar associations detailing how they have complied with the obligations imposed on them by the Rules on Verification of Client Identity and Retention of Records, and the Regulations on Verification of Client Identity and Retention of Records (the Rules and Regulations). In relation to STRs, Indonesia’s AML legislation requires legal professionals to identify, verify and monitor client transactions that are suspicious and which potentially give rise to money laundering risks.

In principle, legal professionals in Germany are not required to report regularly to the supervisory authorities. Instead, the supervisory authorities conduct inspections on an ad hoc basis. Within this framework, entities that are inspected may be subjected to comprehensive reporting obligations vis-à-vis the supervisory authorities. Depending on the circumstances, this may also involve reports relating to corruption.

Suspicious transaction reporting requirements vary between G20 countries. The following table illustrates the diversity of reporting obligations that are currently in place.

Country	Legal Professional	Reporting Trigger / Form of Reporting	Supervisory Agency
Argentina	Notaries	Transactions > 4,200,000 Argentina pesos	FIU
Australia	Solicitors, solicitor corporations, partnerships of solicitors	Cash transactions > AUD 10,000	AUSTRAC
Brazil	All legal professionals	Serious indications of money laundering	COAF

France	Lawyers, notaries, insolvency practitioners, judicial trustees		Any suspicious transaction, All transactions between lawyer and client	CARPA
Italy	All legal professionals		Suspicious transactions under Article 35 Legislative Decree 231/2007	FIU
Japan	Attorneys		Annual report	Bar Association
Mexico	All legal professionals		Transactions stipulated in the AML/CFT legislation	Tax Administration Service (SAT) and FIU
Russia	All legal professionals		Suspicious transactions	Federal Financial Monitoring Service
Saudi Arabia	All legal professionals		Suspicious sources of funds and transactions	FIU (SAFIU)
Spain	All legal professionals, in particular, law firms ⁴⁵		Inspections and requests for information using a risk-based approach	SEPBLAC
Türkiye	All legal professionals		Assets or transactions that are potentially illicit or that are used for illicit purposes, transactions in amounts that exceed the amounts designated by the ministry	MASAK
United Kingdom	All legal professionals		Transaction involved when the client or the practice is at risk of having committed any of the principal offences under sections 327 to 329 of Proceeds of Crime Act 2002	National Crime Agency (NCA)
United States	Attorneys, Notaries public		Cash payments > USD 10,000 International transportation of currency > USD 10,000	U.S. tax authority, Department of Homeland Security's Customs and Border Protection unit

Table 1 Reporting Obligations in G20 Countries

In South Africa, notwithstanding reporting obligations, legal professional privilege continues to be respected as the FIC Act excludes the requirement to report if the relevant information was obtained through communications between an attorney, client or third party made in

⁴⁵ Supervision is adjusted for notaries and registrars: supervisory powers/monitoring tools by the respective self-regulatory organizations (SROs), and indirect supervision by SEPBLAC in respect of the activities undertaken by the SROs.

confidence for the purposes of legal advice or litigation. According to South Africa, the main difficulty in applying mandatory reporting to legal professionals under the FIC Act is a lack of clarity on how this can be made compatible with legal professional privilege.

Given the potential conflict between disclosure obligations and the duty to protect legal professional privilege, the United Kingdom has established the Legal Sector Affinity Group guidance provides a detailed decision-making framework to support legal professionals in understanding when it is appropriate to make a disclosure.

In Italy, legal professionals can choose to submit STRs directly to the FIU or to their respective self-regulatory bodies (authorized by decree of the Ministry of Economy). When legal professionals send the STRs to self-regulatory bodies, they subsequently submit the reports to the FIU using IT metrics and encryption tools set out in according to specific protocols of agreement with the FIU. This system ensures the protection of disclosers' anonymity (in addition to the confidentiality of the content of STRs).

Record Keeping

Record keeping is a mechanism to retain data and information that has been gathered. Important data and information is retained so it can be reviewed against an ongoing transaction, or for other purposes, such as future investigations.

Some G20 countries require legal professionals to perform record keeping. For example, Australia imposes record keeping obligations as one of the professional standards of legal professionals. For legal practices operating trust accounts, relevant state and territory rules require them to keep accurate records, which are audited by an external examiner annually each financial year. Solicitors are also subject to supervisory powers that can be exercised by AUSTRAC, including inspection of premises and production of business records to ensure compliance with FTR Act obligations.

Brazil also requires record keeping for every transaction involving domestic or foreign currency, securities, bonds, metals or any asset that can be converted into cash which exceeds the threshold set by the competent authority. Similarly, Italy and Türkiye impose obligations to verify identification data and to prepare and retain verification records and records of certain transactions. Japan also imposes the obligation to verify identification data and the obligation to prepare and preserve verification records and records of specified mandated acts on legal and accounting professionals for certain transactions.

Saudi Arabia's AML legislation requires obliged entities to retain documents and data for all financial transactions, and commercial and monetary transactions, whether local or foreign, for a period of not less than ten years. In specific cases, Saudi Arabia's Public Prosecution Service may oblige DNFBPs, including legal professionals, to extend the record keeping period for as long as required for the purpose of a criminal investigation or prosecution. Such records should be kept in physical or electronic form. Similarly, China requires lawyers to retain work files and records. Additionally, notaries are obligated to preserve comprehensive records of all notarial business and processes for a minimum of 20 years under the "Rules for Notarization Procedure and Measures for the Administration of Notarial Archives."

2.2. Developing AML Awareness for Legal Professionals

Enhancing legal professionals' understanding and knowledge of money laundering risks and corruption is essential. Improving the awareness of legal professionals of the risk of money laundering and the consequences of being involved in money laundering-related activities can help guide legal professionals on how to identify, prevent and monitor money laundering risks in relation to the services they provide and activities they undertake.

Some G20 countries have developed and implement AML awareness programs that generally involve a variety of activities, with training, workshops and publications being the most common.

Training and Workshops

A number of G20 countries provide training and workshops for legal professionals to equip them with the necessary knowledge and skills to improve compliance with AML and anti-corruption measures. Some countries have specifically organized personalized training and workshops for legal professionals, while others have initiated training plans for professionals who are exposed to money laundering risks, such as legal professionals, judicial officials, and other relevant professionals.

France's Conseil National des Barreaux (CNB), a national bar association, conducts training specifically focused on AML/CFT for lawyers. The Conférence des Bâtonniers (which brings together the heads of France's bar associations) has also strengthened the training system for bâtonniers (bar council presidents) on the controls to be carried out in law firms. Meanwhile, the Conseil Supérieur du Notariat (national council of notaries) has created an e-learning programme that is accessible to all notaries and their staff and, together with the professional bodies, provides numerous training courses in the regions.

In 2014, France's National Council of Judicial Administrators and Legal Representatives (CNAJMJ) initiated an intensive training plan for professionals and their employees that provides them with personalized assistance in AML/CFT matters.

According to Italy, the FIU is engaged in many training initiatives and workshops to improve the awareness of legal professionals' AML obligations. Most of these activities are conducted in cooperation with related self-regulatory bodies, including training initiatives to improve the capacity of legal professionals to properly detect and report STRs.

In Saudi Arabia, the Ministry of Justice (MOJ) has organized a number of training programmes and workshops aimed at judges, notaries, and lawyers in order to raise awareness of ML/TF. Similarly, In Indonesia, regular workshops are also organized for notaries. According to the Ministry of Law and Human Rights, these events have had a significant beneficial impact by improving customer due diligence and suspicious transaction reporting, which has been further facilitated by the launching of the GoAML application (an online platform that allows reporting entities to submit STRs electronically). Thanks to these initiatives, a total of 38 STRs have been reported to INTRAC by Indonesian notaries to date. Similarly, Saudi Arabia's Oversight and Anti-Corruption Authority (Nazaha) has held several seminars and workshops for legal professionals, with the aim of raising awareness and building capacity on corruption-related money laundering risks and prevention measures. In arranging these events, Nazaha

collaborated with international organizations, the private sector, and professional associations.

Germany's FIU engages in an ongoing dialogue with legal professionals that are obliged entities using a variety of forums. To enhance this dialogue, the FIU hosts annual AML meetings and workshops in order to raise the awareness of obliged entities.

Publications and Guidelines

Publications and guidelines are commonly used by G20 countries to disseminate updated anti-corruption and AML information. They enable authorities to reach wider audiences of legal professionals. Several countries provide information on portals or websites, while others have developed guidelines or printed catalogues to be distributed to legal professionals.

The U.S. Treasury regularly publishes and updates their National Strategy for Combatting Terrorist and Other Illicit Financing, which is informed by the United States' National Risk Assessment on Money Laundering (NMLRA), among other risk assessments. Türkiye's Presidency of Financial Crimes Investigation Board has also issued a handbook for lawyers, an up-to-date brochure for notaries, guidelines on enhanced measures, guidelines on crypto-asset service providers, guidelines on savings & loans finance companies, and guidelines on identifying the parties to foreign trust agreements.

The FIUs of some G20 members, such as Italy, Japan, Mexico and Spain, have developed a wide range of relevant publications. Italy's FIU has published documents relating to anomaly indicators, models, and patterns of anomalous behavior⁴⁶ and AML/CFT typologies,⁴⁷ as well as press releases on risk factors and symptomatic elements of specific emerging illegal operations,⁴⁸ that aim to raise the awareness of money laundering risks among legal professionals.

Japan Financial Intelligence Center (JAFIC) has published a commentary on the NRA-FUR in the JFBA's magazine in order to enhance the understanding of legal professionals on money laundering risks and prevention measures.

Mexico's FIU coordinated the update of the 2020 National Risk Assessment on Money Laundering and Terrorism Financing (NRA) in collaboration with other relevant authorities. As part of the process, various activities were carried out to boost the AML awareness of related stakeholders, including legal professionals.

Spain's Commission for the Prevention of Money Laundering and Monetary Offences (CPBCIM, or the "AML Commission") and its supporting bodies (Sepblac and its secretariat, whose functions are performed by the Spanish Treasury) consistently strive to raise awareness of money laundering risks among legal professionals. The activities undertaken to date include publishing Spain's NRA, a risk catalogue for legal professions, and several guidances. The NRA is available on the CPBCIM website. Sepblac has also issued a set of

⁴⁶ UIF, *Indicatori, schemi e comunicazioni inerenti a profili di anomalia*, <https://uif.bancaditalia.it/normativa/norm-indicatori-anomalia/index.html>. Accessed on 26 October 2022.

⁴⁷ UIF, *Quaderni dell'antiriciclaggio*, <https://uif.bancaditalia.it/pubblicazioni/quaderni/index.html>. Accessed on 26 October 2022.

⁴⁸ UIF, *Prevention of Financial Crime Phenomena Linked to The COVID-19 Emergency*, https://uif.bancaditalia.it/normativa/norm-indicatori-anomalia/COVID-19_prevention_of_financial_crime_16042020.pdf?language_id=1. Accessed on 26 October 2022.

risk indicators on corruption in international transactions. Likewise, Saudi Arabia's MOJ has published a manual on AML/CFT requirements to be applied by lawyers, which highlights the risks that lawyers are exposed to.

In China, the Ministry of Justice, bar association, notarial association, law firms and notarial institutions have jointly completed the 2020 Risk Report on Anti-Money Laundering and Terrorist Financing Risks for Lawyers and the 2020 Risk Report on Anti-Money Laundering and Terrorist Financing Risks for Notaries. The two reports identify and analyze the major AML risks face by these legal professions.

As part of the program of regular training and courses provided for the legal profession in order to increase awareness of reporting obligations in respect of corruption-related unusual transactions, the Netherlands is currently considering the development of guidance on AML red flags, and on reporting obligations in relation to foreign bribery-based money laundering. The initiative focuses on the legal professions as they are considered to play a crucial role in setting up complex business structures. To deliver the initiative, the Dutch government is working in collaboration with the Netherlands Bar Association and the Royal Dutch Association of Civil-law Notaries. In addition, case studies are published via newsletters and websites as part of the effort to strengthen the feedback loop. Similarly, regional and federal chambers of the legal professions in Germany provide their members with up-to-date information on ML risks and prevention measures via their websites and regular training courses.

2.3. Using Information and Communications Technology (ICT) to Enhance Supervisory Measures

The use of ICT enables authorities to detect, prevent, and monitor ML/TF risks more efficiently. According to recent FATF research on the application of technology in relation to AML programs,⁴⁹ banking technology can examine customer transaction behavior to analyze patterns and predict future transactions. Such examination can, for example, be used to spot suspicious activities based on anomalous patterns or behaviors. Moreover, some banks have developed data-sharing platforms to detect crime-related transactions.⁵⁰ ICT can also be harnessed to enhance customer due diligence, suspicious transaction analyses and reporting, and as a means of information sharing. By using ICT, stakeholders are able to undertake AML/CFT activities in a more timely and cost effective way.

Some G20 countries already use ICT to enhance their AML/CFT frameworks. Overall, G20 countries use ICT for reporting, monitoring, and coordination, and as an analytical tool for enhancing money laundering risk detection.

⁴⁹ FATF, *Opportunities and Challenges of New Technology for AML/CFT*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Opportunities-Challenges-of-New-Technologies-for-AML-CFT.pdf>.

Accessed on 14 September 2022.

⁵⁰ The Wall Street Journal, *Bank Start Using Information Sharing Tools to Detect Financial Crime*, <https://www.wsj.com/articles/banks-start-using-information-sharing-tools-to-detect-financial-crime-11658741402>.

Accessed on 14 September 2022.

ICT for Reporting, Monitoring, and Inter-Agency Stakeholders Coordination

According to FATF research on the use of technology in AML programs, artificial intelligence and machine learning can be applied to big data to automatically analyze, process and monitor suspicious transactions, and to distinguish such transactions from normal or legal transactions in real time.⁵¹ Similarly, ICT, such as distributed ledger technology (DLT) and application programming interfaces (APIs), can facilitate related stakeholders, such as law enforcement agencies, to perform data sharing, follow-up sharing, and enable examination and supervision operations by several entities simultaneously.⁵²

Some G20 countries apply ICT to report and coordinate money laundering detection and prevention in relation to legal professionals. For example, Russia has set up individual personal accounts for legal professionals on the official website of the Federal Financial Monitoring Service. This website enables legal professionals to interact with the authorized body. Such personal accounts are used, in particular, by legal professionals, advocates, notaries, control (supervisory) bodies, including chambers of advocates and notaries, and others, for the purpose of:

- requesting the online submission of documents;
- reporting the level of involvement of reporting subjects in suspicious activities;
- exchanging experiences and expertise;
- providing feedback on the use of information provided to the Service;
- submitting registers of supervised subjects to the Service.

Similarly, in Japan, attorneys have to submit annual reports in compliance with attorneys' obligations under the Rules and Regulations. Responses are consolidated into an electronic file for each bar association to facilitate the identification of attorneys who need to be called to attend hearings and other actions. Likewise, the use of ICT for money laundering supervision has been incorporated into the French National Action Plan on AML-CFT (2021) as a key action to be implemented by the end of 2022.

ICT as an Analytical Tool to Enhance Money Laundering Risk Detection

Machine learning can assist enforcement authorities to identify money laundering risks by using computational methods to process and analyze data on a large scale in respect of money laundering typologies and suspicious activities. According to the FATF, a variety of analyses using ICT to detect money laundering can be developed, such as:⁵³

- Examining entities' transactions with social links and other sources to identify any suspicious features.
- Capturing anomalous behavior of an entity and comparing it with other groups of similar character.

⁵¹FATF, *Opportunities and Challenges of New Technology for AML/CFT*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Opportunities-Challenges-of-New-Technologies-for-AML-CFT.pdf>. Accessed on 14 September 2022.

⁵² FATF, *Opportunities and Challenges of New Technology for AML/CFT*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Opportunities-Challenges-of-New-Technologies-for-AML-CFT.pdf>. Accessed on 14 September 2022.

⁵³ FATF, *Opportunities and Challenges of New Technology for AML/CFT*, <https://www.fatf-gafi.org/media/fatf/documents/reports/Opportunities-Challenges-of-New-Technologies-for-AML-CFT.pdf>. Accessed on 14 September 2022.

- Analyzing historical behavior to establish suspicious patterns.

According to the responses to the questionnaire, it is apparent that a number of G20 countries apply ICT to detect money laundering risks. In Italy, the STR collection process is conducted using an ICT system. In addition, new identity resolution techniques, graph database systems and alert engines are being developed for the purpose of enhancing the analysis of networks and activities. The new technology will employ risk indicators and classification algorithms, machine learning techniques and semantic analysis.

2.4. Mechanisms to Examine Legal Professionals' AML Compliance

Examining the implementation of AML and supervisory measures is crucial to ensuring effective compliance with AML programs by legal professionals. This can be achieved by performing audits or assessments, and by imposing sanctions on legal professionals who fail to comply with their AML obligations.

2.4.1. Assessment on Compliance with AML Supervisory Measures

Assessments allow countries to scrutinize the AML compliance of legal professionals and to measure the effectiveness of current supervisory measures. Some G20 members have established mechanisms to assess legal professionals' compliance with AML supervisory measures. According to the responses received, such assessments can be conducted by a supervisory body or on a self-assessment basis.

2.4.2. Assessment Conducted by Supervisory Body

Assessment can be performed by a supervisory body or a third party appointed by the government. Such assessments aim to examine gaps between the relevant regulations and their implementation, and the findings are used to determine action plans to address the challenges. Among the G20 countries, those that apply this type of assessment mechanism are Argentina, Brazil, China, France, Germany, Italy, Russia, Saudi Arabia, South Africa, Spain, the Netherlands, the United Kingdom and Türkiye. The most common methods used by these countries in assessing legal professionals' AML compliance are assessing and analyzing documents related to or submitted by legal professionals, on-site visits, and inspection and investigation.

In Argentina, the UIF (Argentina's FIU) commences an assessment by analyzing collated documents. If they find non-compliance with legal professionals' obligations, they may impose administrative/civil sanctions, or, in the case of non-serious violations, they may order that corrective action be taken, which action is subject to subsequent evaluation by the UIF.

Italy's Guardia di Finanza has powers to carry out inspections and checks on persons and professionals, acquire data and information from reporting parties, and conduct in-depth investigations of information received from various authorities through international

cooperation and of suspicious transaction reports forwarded by Italy's FIU. The FIU also performs inspections and audits in order to ascertain compliance with STR obligations.⁵⁴

In Türkiye, supervision of compliance with AML obligations is carried out by inspectors. The Presidency may request that an inspection be conducted on an individual basis or as part of an inspection program. Responsibility for inspection in relation to notaries is vested in the Inspection Board of the Ministry of Justice. Notaries are also inspected by the Chief Public Prosecutor's Offices in May each year. Investigations are carried out directly or on the basis of findings of non-compliance arising out of reports submitted to the Treasury and Finance Experts of the Presidency.

For lawyers in Germany, the frequency and rigor of inspections are based on the risks arising out of the specific context in which legal advice is provided. Any involvement by lawyers, and all activities of tax advisors and accountants, are subject to further risk assessment by their self-regulatory bodies. Prior to performing inspections, the self-regulatory bodies assess the obliged entities under their purview in accordance with the National Risk Assessment (NRA) and the Supranational Risk Assessment (SNRA), as well as the FIU's operational-level priority risk areas.

In Saudi Arabia, supervisory bodies of legal professionals can conduct on-site inspections based on information that has been gathered on money laundering risks in particular sectors. Furthermore, the General Directorate of Law Practice periodically evaluates risks at the end of the year to assess the level of AML compliance in relation to corruption and other crimes. This is done using questionnaires that are sent to all legal practitioners. These questionnaires include questions on how to identify risk factors and the due diligence measures that are applied. The results of such evaluations provide the supervisory bodies with insights as to the sectors that require greater focus.

Self-Assessment

Self-assessment involves checks or audits that are carried out by legal professionals themselves. Some G20 members, such as Japan and Indonesia, have adopted this form of assessment for legal professionals.

Attorneys in Japan are required to submit annual reports on the performance of their obligations as attorneys under the Rules and Regulations. These reports are evaluated, and if an indication of involvement in money laundering or non-compliance with the Rules and Regulations is found, the bar association will take the necessary action, such as launching an investigation or giving advice. Disciplinary action may also be initiated if an attorney fails to follow advice that has been proffered or fails to submit an annual report.

Indonesia also applies a self-assessment mechanism to notaries, using the Guidance on Sectoral Risk Assessment of Notaries published by the Ministry of Law and Human Rights. Notaries are required to identify inherent risks in the services they provide, their internal control mechanisms, residual risks, impact of risks, and priority risks.

⁵⁴ Normattiva, *Decreto Legislativo 21 novembre 2007, n. 231*, <https://www.normattiva.it/uri-res/N2Ls?urn:nir:stato:decreto.legislativo:2007-11-21:231!vig=>. Accessed on 25 October 2022.

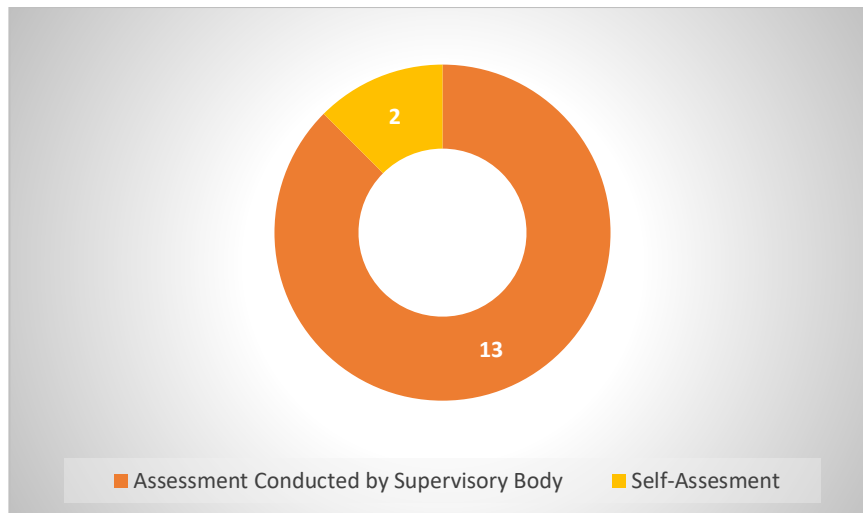


Figure 2 AML - Compliance Assessment of Legal Professionals

The above graph illustrates how AML-compliance assessments of legal professionals are conducted in the G20 countries that responded to the questionnaire. Overall, the vast majority of G20 members assign AML-compliance assessment responsibilities to supervisory bodies, while two countries operate a self-assessment system.

2.4.3. Enforcement and Sanctions

Research indicates that white collar criminals are rational investors who consider the risk-to-return ratio when engaging in crime. This means that, they will generally take into consideration the likely returns if they are successful, and the likely punishment if they are caught. According to Italy's FIU, when the number of STR reports increases by 10%, vulnerability to money laundering decreases by 1%.⁵⁵ This suggests that there is a significant correlation between increases in AML reporting compliance and decreases in potential money laundering activities. Many G20 countries apply criminal and/or administrative/civil and disciplinary sanctions to legal professionals who fail to comply with their AML obligations.

Criminal Sanctions

Criminal sanctions allow offenders to be incapacitated for a period by imprisoning them, or by supervising them closely. Such sanctions also deter offenders (and potential offenders) by penalties given or threatened. Whichever type of sanction is chosen (imprisonment or penalties), one of the anticipated outcomes will be a reduction in criminal behaviour and a corresponding increase in compliance with relevant regulations.⁵⁶

A number of G20 countries impose criminal sanctions for violations of their respective AML frameworks. In Australia, for example, criminal penalties may be imposed on legal professionals who deal with the proceeds of crime. Penalties include significant sentences of imprisonment and/or significant monetary fines. These penalties are tiered based on the value

⁵⁵ Pellegrina, L.D., Maio, G.D., Masciandaro, D., and Saraceno, M. *Money Laundering and Criminal Deterrence: Evidence from Italy*, <https://cear.gsu.edu/files/2019/05/Masciandaro.pdf>. Accessed on 15 September 2022.

⁵⁶ Tait, D. (2001). *The Effectiveness of Criminal Sanctions: A Natural Experiment, Report 33/96-7 To The Criminology Research Council, DMT Subdivision Management & Law No.2001/1, University of Canberra*, pp. 2

of proceeds dealt with, and the person's level of culpability. Similarly, legal professionals in the United States are subject to the same criminal and civil sanctions as other individuals and entities for failing to meet reporting requirements.

In Italy, legal professionals can be sanctioned with imprisonment. In Japan, individual legal professionals (other than lawyers) can be sanctioned by terms of imprisonment with work or fines or both, while firms (legal persons) can be sanctioned by fines.

Administrative/Civil Sanctions

Administrative sanctions (known as civil sanctions in some G20 countries) enable the imposition of punitive financial sanctions and administrative measures upon relevant persons for contraventions of the regulations. They also serve as a deterrent to those operating in the wider economy and other businesses sectors.⁵⁷ This type of sanction allows regulators to respond appropriately to the circumstances of each case, and to provide a proportionate alternative to prosecution for business and other persons who fail to comply with relevant regulations.⁵⁸ Administrative sanctions may include reprimands, monetary sanctions such as fines, confiscation of illegal income or assets, and suspension or revocation of a lawyer's practicing license.

In a number of G20 countries, including Argentina, Brazil, Spain, South Africa, Mexico, and Saudi Arabia, administrative sanctions may be imposed on AML non-complaint legal professionals, including reprimands, fines, penalties, and suspension or revocation of licenses. In Argentina, legal persons who violate the AML framework are liable to a fine amounting to 20% of the value of the property that is the subject matter of the crime, up to a maximum of 500,000 pesos. Meanwhile, Brazil can impose reprimands, fines, temporary disqualification for a period of up to ten years, and suspension of practice rights for legal professionals who fail to comply with AML obligations. Similarly, Mexico's supervisory bodies may impose sanctions that range from fines up to the definitive revocation of notaries, public brokers and custom agents license.

Saudi Arabia's supervisory authority may impose one or more of the following measures on legal professionals who violate the AML framework:

- Issuance of written warning;
- Order to comply with a specific instruction;
- Order to provide regular reports on the measures taken to address an identified violation;
- Monetary fine of up to 5,000,000 riyals per violation;
- Ban on employment of individuals within the sector over which the supervisory authority has competence for a period to be determined by the supervisory authority;
- Restrictions on the powers of directors or executive or supervisory management members and controlling owners, including appointing one or more temporary controllers;

⁵⁷ Isle of Man Financial Services Authority, *Anti-Money Laundering and Countering the Financing of Terrorism (Civil Penalties) Regulations 2019*, <https://www.iomfsa.im/media/2633/civil-penalties-guidance.pdf>. Accessed on 24 October 2022, pp. 4.

⁵⁸ Government of Welsh, *Review of the use and effectiveness of civil sanctions*, <https://senedd.cymru/media/ce5bqtsv/gen-ld10647-w.pdf>. Accessed on 24 October 2022, pp. 3.

- Dismissal or replacement of directors or of executive or supervisory management members;
- Suspension, restriction or prohibition on an activity, business or profession, or of certain business activities or products; and
- Suspension, restriction or revocation of license.

In Indonesia, the Ministry of Justice and Human Rights can issue oral and written warnings, and impose temporary suspensions, and honorable and dishonorable dismissal in respect of notaries who fail to comply with AML regulations. The following table shows the number and type of administrative sanctions imposed on notaries in Indonesia between 2017 and 2020.

Sanctions	2017	2018	2019	2020
Oral warning	0	0	0	0
Written warning	6	1	1	1
Temporary suspension	4	3	10	10
Honorable dismissal	0	1	0	0
Dishonorable dismissal	3	1	1	5

Table 2 Number of Sanctions Imposed on Notaries in Indonesia between 2017 - 2022

Disciplinary Sanctions

Disciplinary sanctions are actions imposed by the authorities or supervisory bodies in response to violations of the regulations or a code of conduct. They stipulate clear consequences for non-compliance with the regulations or code of conduct, and provide an opportunity for the sanctioned party to change their behaviour and comply with the AML framework, especially when they may have been unaware of their non-compliance. It is important that disciplinary sanctions be imposed in a consistent manner in order to avoid any appearance of discrimination or partiality, which would only serve to undermine the deterrent effect of such sanctions.

Legal professional associations in some G20 countries impose disciplinary sanctions for violations of AML obligations. For instance, in India, the disciplinary committee of the Bar Council of India has the power to impose disciplinary measures for violations of The Advocates' Act, including reprimands, suspension, and revocation of license. In Germany, the laws governing the legal professions provide disciplinary sanctions for violations of the duties of legal professionals, including their AML obligations. For example, the disciplinary measures that may be imposed on notaries include written reprimands and/or fines, and ultimately dismissal. However, these disciplinary measures are not specifically aimed at violations of corruption-related money laundering prevention measures, but apply to all professional obligations.

Hybrid Sanctions

The term "hybrid sanctions" refers to the possibility of simultaneously imposing a combination of sanctions in pursuit of multiple punishment purposes. Such hybrid sanctions could include imposing financial impacts and disbarring offenders from professional practice. The inclusion of information in this Compendium on hybrid sanctions does not imply that countries

mentioned in the above paragraphs above have only criminal or only administrative sanctions available. Some G20 members, including China, France, Germany, the Netherlands, Russia, the United Kingdom, and the United States have adopted AML frameworks that incorporate a range of different types of sanctions, such as criminal, administrative/civil, and disciplinary sanctions.

Professional Body AML Supervisors (PBSs) of the United Kingdom have a range of enforcement tools available to them. These range from administrative sanctions, including censures and financial penalties, to suspension, restriction or withdrawal of membership or authorisation to practice, and the ability to direct members to take action to remedy non-compliance and promote future compliance. PBSs can also take disciplinary action for failure to comply with AML obligations. For example, when the Solicitors Regulation Authority finds firms are not upholding their obligations, they will in the first instance engage with that firm to remedy any failures. However, repeated or sustained breaches of their rules could lead to disciplinary action. Specifically, Law Society of Scotland conducts risk based supervisory reviews to identify important failures to comply with the MLRs. Following review of the findings, the Society's Anti-Money Laundering Sub-Committee (AMLSC) can decide to make a complaint about the conduct of the solicitor concerned. Decisions regarding complaints are made by the independent Scottish Solicitors Discipline Tribunal (SSDT) who have various sanctions available to them including fines and strike-offs. The AMLSC will also refer matters to law enforcement for criminal investigation where this is considered to be appropriate.

France's framework also includes the power to impose various types of sanctions (civil, disciplinary, administrative/civil and penal). According to France's MER, the following sanctions have been imposed on legal professionals in recent years:

- For notaries, 19 disqualifications of between six months and eight years arising from inspection reports received by the Public Prosecutor between 2015 and 2020.
- For lawyers, one disciplinary sanction (consisting of a one-month ban on practicing) imposed since 2015.

In China, non-compliant lawyers and law firms are subject to administrative sanctions by the authorities and lawyers' associations, and criminal sanctions if they commit criminal offences. The administrative sanctions that may be imposed on law firms include warnings, fines, confiscation of illegal income, temporary suspension of business operations to allow corrective action to be taken, and revocation of license. The disciplinary actions imposed by lawyers' associations mainly include admonishments, circulation of public notices of criticism, and disqualification. Similarly, supervisory bodies in the Netherlands have broad sanctioning powers that include administrative sanctions, e.g., fines, orders (subject to penalties for non-compliance), official warning or instruction letters, criminal sanctions (e.g. fines and terms of imprisonment), and disciplinary measures (e.g., warnings, fines, suspension or disbarment).

The responses to the questionnaire also indicate that a number of G20 countries can impose only two types of sanction, for example, Italy, Türkiye and Indonesia can impose both criminal and administrative sanctions on non-compliant legal professionals under their AML frameworks, while Japan can impose criminal and disciplinary sanctions on non-compliant legal professionals excluding lawyers, and can impose disciplinary sanctions on non-complaint lawyers.

Türkiye’s Law No. 5549 provides that the sanctions that may be imposed for failure to comply with AML obligations are as follows:

- Administrative fines: pursuant to Article 13 of Law No. 5549, the amount of the administrative fine is determined by the article of the law that has being violated, and identity of the obligated party. Fines range from 30,000 Turkish lira up to 5% or more of the transaction amount.
- Judicial penalties: pursuant to Article 14 of Law No. 5549, imprisonment and judicial fines may be imposed for violations of the obligations set out in Paragraph 2 of Articles 4, 7 and 8 of Law No. 5549.

Criminal and administrative sanctions are also set out in Italy’s Decree 231/2007, under which criminal penalties may be applied in respect of a variety of breaches, including failure to comply with identification requirements, failure to submit client register or late or incomplete submission of client register, failure to submit STR, etc. Meanwhile, administrative sanctions may be applied in respect of violations such as failure to comply with a suspicious transaction suspension order, failure to report a suspicious transaction, failure to keep a client register, violation of disclosure obligations to the FIU, etc.

In Japan, criminal sanctions and disciplinary sanctions may be applied to legal professionals excluding lawyers, and disciplinary sanctions may be applied to lawyers. Criminal sanctions may be imposed on both natural persons and legal entities for non-compliance with AML regulations, which sanctions include imprisonment with work or fines or both for natural persons and fines for legal persons. Disciplinary sanctions are applicable in the case of attorney and judicial scriveners.

The diagram below illustrates the types of sanction featured in this compendium. These sanctions may be imposed in the G20 countries for non-compliance with AML/CFT obligations.

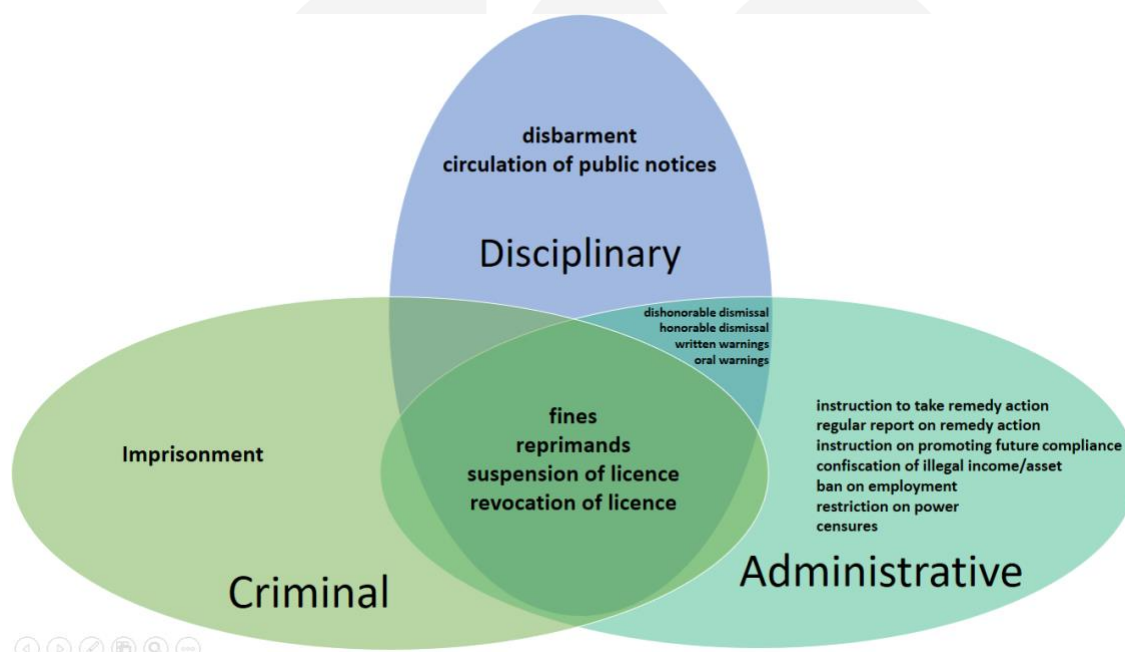


Figure 3 Types of AML/ CFT Sanctions in G20 Countries⁵⁹

⁵⁹ In some jurisdictions, disciplinary sanctions are considered as one form of administrative sanction

2.5. Whistleblowing System

Whistleblowing is a mechanism through which members of organizations voluntarily report wrongdoing, which reports can then be used by the organization to initiate corrective action and improvements. Whistleblowing is a very important mechanism for preventing and mitigating money laundering risks.⁶⁰ Robust whistleblower measures, such as protections for persons who report corruption, encourage persons to come forward to report suspected wrongdoing. Drawing from the questionnaire responses, several G20 countries have incorporated whistleblowing systems into their AML/CFT frameworks.

2.5.1. Whistleblowing Channels

A whistleblowing channel can allow members of the public or members of an organization to report suspicious activities in a confidential manner that may lead to the potential discovery and disclosure of suspected wrongdoers or criminal activities. Overall, the G20 countries provide both internal and external whistleblowing channels.

Internal Reporting

Internal reporting refers to a reporting channel within an organization. Members of organizations may report suspected misconduct to an audit department, a compliance officer, a supervisor, an in-house legal counsel or even an internal “hot line” or “tip line.” Internal reporting can enable organizations to identify misconduct and other criminal acts committed by its employees. It also assists the organization in preventing crime and in developing effective AML and anti-corruption systems within the organization.

A number of G20 countries use internal reporting channels as part of their whistleblowing systems, including Australia and Spain. In Australia, if the discloser is a ‘public official’ and the conduct in question constitutes a ‘disclosure’ under the Public Interest Disclosure Act 2013 (PID Act), a breach of money laundering prevention measures or other AML obligations, it can be reported under the PID Act. The PID Act enables a public official to disclose suspected wrongdoing by another public official or by an Australian government agency, and generally requires that an internal disclosure within the discloser’s agency be made in the first instance before making an external disclosure. There is a similar process under Australia’s Corporations Act 2001 for internal reporting within companies operating in Australia

Association of Land, Business and Movable Property Registrars of Spain launched its whistleblowing channel on March 1, 2022. This is an internal channel that enables the communication, even anonymously, of relevant information on possible non-compliance with the provisions of the AML legislation, the AML regulations and internal compliance policies at the corporate level. The objective is that any registrar, registry employee, manager and/or employee of the Association of Registrars and of the territorial deanships can report AML non-compliances.

⁶⁰ Bhal, K. T., & Dadhich, A. (2011). Impact of ethical leadership and leader–member exchange on whistle blowing: The moderating impact of the moral intensity of the issue. *Journal of Business Ethics*, 103(3), pp. 485-496.

External Reporting

External reporting is when information on suspected wrongdoing is reported externally to the discloser's organization or the organization to which the information relates. This authority must guarantee independence, confidentiality, data protection and secrecy in order to qualify. Suspicious or irregular activities in a number of G20 countries are reported to external reporting bodies, such as in Japan, the United States and Spain.

In Japan, each bar association operates a contact center to receive complaints about attorneys from members of the public. In addition, any aggrieved person may request that disciplinary action be taken against an errant attorney by the JFBA or a bar association.

In the United States, pursuant to the Anti-Money Laundering Act of 2020 (AMLA) and the Bank Secrecy Act, any individual who provides original information relating to a violation of the AML legislation can report the wrongdoing not only to their employers but also to the Secretary of the Treasury and the Attorney General. Whistleblowers can be individuals or groups of individuals acting jointly. U.S. citizenship is not required as money laundering is frequently transnational in nature.

As a member of the European Union, Spain is currently drafting legislation to adopt EU Directive 2019/1937 on the Protection of Persons Who Report Infringements of Union Law, which requires member states to establish internal and external reporting channels.

2.5.2. Whistleblowing Tools

A whistleblowing system provides tools that allow a whistleblower to communicate information on a potential offence in a confidential and straightforward manner. These tools may include a hotline, mail, e-mail, and/or website reporting channels. According to one study, whistleblowing systems can be made more effective if they provide a combination of reporting channels (e.g., directly to specific trusted persons, via a telephone hotline, or through an online channel).⁶¹

In Russia, for example, reports can be submitted through the personal accounts of legal professionals on the website of the Federal Financial Monitoring Service, and in the framework of agreements between the Service and control (supervisory) bodies, chambers of advocates and notaries. Additionally, it is possible to report to the Service through its official website by sending an electronic message or by means of a dedicated hotline.

Similarly, Spain has established a procedure through which notarial employees can anonymously send information related to possible infringements to a special email address at the Centralized Organization for the Prevention of Money Laundering (OCP). In the Netherlands, various government institutions facilitate whistleblower reporting mechanisms, including relevant supervisory organizations, such as BFT and NOvA.

⁶¹ Vanderkerckhove, W., and others. (2016). *Effective speak-up arrangements for whistleblowers*. The Association of Chartered Certified Accountants, pp. 10 -14.

2.5.3. Whistleblower Protection

Whistleblower protection is crucial to the success of anti-corruption and AML detection and enforcement. Whistleblowers who report these offences can put themselves, family members and colleagues at risk. Instead of admitting to corruption and mending their ways, wrongdoers may instead choose to attack or retaliate. Retaliation against disclosers is a serious threat to the effectiveness of anti-corruption programmes, and harms individuals and their livelihoods.⁶²

Australia has incorporated whistleblower protection regimes for the corporate sector. If a legal professional is involved in a company's misconduct, this would provide legal protection to the whistleblower from reprisal or breach of their confidentiality.

South Africa has passed the Protection Against Harassment Act (PAHA) to protect whistleblowers from harassment as a result of their whistleblowing. Harassment under PAHA is defined as "directly or indirectly engaging in conduct that the harasser knows or ought to know causes harm or inspires the reasonable belief that harm may be caused to the complainant or a related person." Any individual, including those who report a legal professional's wrongdoing, can obtain a protection order against a person harassing them. This is granted by the Magistrate's Court and prohibits the perpetrator from harassing the victim any further.

2.5.4. Whistleblower Rewards or Incentives

Monetary rewards are often offered to whistleblowers to compensate and redress the personal and professional distress they may endure during the investigation process. According to a study conducted by Harvard Business School, financial incentives help to increase the detection and deterrence of crime in a cost-effective way.⁶³

Based on the responses of the G20 countries, the United States is one jurisdiction that provides financial incentives for whistleblowers. Specifically, in 2020, the United States passed legislation to enhance its AML whistleblower program. Once implemented, the program will provide for mandatory awards to whistleblowers who report violations of the Bank Secrecy Act (BSA). The United States has also created the Kleptocracy Asset Recovery Rewards Program, which pays rewards to qualified individuals who provide information leading to the seizure, restraint or forfeiture of assets linked to foreign government corruption.

German law provides effective incentives for legal professionals who conduct self-reporting. Pursuant to the German Criminal Code (StGB), a person will not incur a penalty for money laundering under subsections (1) to (5) if that person voluntarily reports the offence to the competent authority or voluntarily occasions such a report to be made, unless the act had already been discovered, in whole or in part, at the time and the offender knew this or, based on a reasonable assessment, should have expected this.

⁶² UNODC, *Whistle-blowing systems and protections*, <https://www.unodc.org/e4j/fr/anti-corruption/module-6/key-issues/whistle-blowing-systems-and-protections.html>, Accessed on 26 October 2022.

⁶³ Dey, Aiysha and Heese, Jonas and Perez Cavazos, Gerardo. (2021). *Cash-for-Information Whistleblower Programs: Effects on Whistleblowing and Consequences for Whistleblowers*, pp.34

Chapter 3: Case Studies on Corruption-Related Money Laundering Involving Legal Professionals

In this chapter we present some good practices developed by G20 members in dealing with corruption-related ML cases that involve legal professionals with a view to sharing these good practices and improving the capacity of members to resolve similar cases. The section is divided into a number of parts: case response process, cooperation with relevant stakeholders in responding to cases, and barriers encountered by G20 countries.

3.1. How Countries Respond to Corruption-Related Money Laundering Cases Involving Legal Professionals

Anti-corruption enforcement measures benefit from money laundering investigations that are conducted hand in hand with corruption investigations as corruption is often the predicate offence to money laundering. This approach enables law enforcement agencies to recover proceeds of corruption and unlawful financial gains as well as to identify corruption schemes and networks themselves.⁶⁴

Several G20 members have reported money laundering cases involving legal professionals. However, only a small number of G20 members have dealt with corruption-related money laundering cases that involve legal professionals.

Case Study 1: France

France reported a case of corruption-related money laundering involving the former president of the International Association of Athletics Federations (IAAF), its officials, and the former president's lawyer. The main proceedings commenced in August 2015, with the opening of a preliminary investigation by the National Financial Prosecutor's Office following an alert issued by the World Anti-Doping Agency, which uncovered evidence that an athlete paid a large sum of money as a bribe to have a positive drug test covered up.

The lawyer of the former IAAF president participated in a conspiracy to receive funds from athletes in return for concealing, delaying or suppressing disciplinary sanctions imposed on those athletes. After multiple investigations, including the exchange of international rotatory letters, indictments and the issuance of arrest warrants, the former president of the IAAF, his lawyer, and other collaborators were prosecuted on charges that included passive and active corruption, money laundering by an organized gang, and breach of trust. On September 16, 2020, the Paris Criminal Court convicted all of the defendants on the relevant charges, including the French lawyer for complicity in active and passive corruption.

⁶⁴ Alessandra Fontana and Pedro Gomes Pereira. (2012). *Using Money Laundering Investigations to Fight Corruption in Developing Countries*, U4 Anti-Corruption Resource Centre, U4, pp. 1.

The case response process involves a number of stages that are the responsibility of various authorities. These stages commonly include detection, investigation, prosecution, and asset recovery.

Detection is the initial process that enables authorities to identify unusual transactions which may indicate the occurrence of corruption-related money laundering offences. Overall, the primary source of detection in the majority of G20 countries is information received from reporting entities. Other sources of detection include the identification of suspicious transactions leading to money laundering from evidence that was seized or forfeited during a predicate crime investigation, and the identification of irregular transactions as a result of the regular audits or examinations conducted by legal professional associations.

The following are sources of valuable information to detect corruption-related money laundering cases:

- Suspicious Transaction Reports

For instance, South Africa's FIU received reports of suspicious and unusual transactions that contained the following red flags:

- Multiple large sums of money were being deposited into the trust account by different persons and companies over a period of two years. These funds were used to make payments to other depositors in South Africa and abroad
- Funds from this account were being remitted to foreign jurisdictions deemed to be tax havens.
- Funds were also transferred to the attorney's personal credit card; his practice expenses were also paid directly from the trust account.

- Suspicious Activity Reports (SARs)

In the United Kingdom, SARs are made by financial institutions and other professionals such as solicitors, accountants and estate agents. SARs can also be submitted by private individuals. As soon as an individual 'knows' or 'suspects' that a person is engaged in money laundering or dealing in criminal property, they must submit a Suspicious Activity Report to the National Crime Agency. Alternatively, rather than making a direct SAR, legal professionals can report suspicions via a legal services regulator or professional body hotline, or can report to their law firm's Money Laundering Reporting Officer who is responsible for receiving and making disclosures.

- Regular Audit or Examination of Legal Professionals

In the United Kingdom, detection also takes place through annual spot checks and examinations conducted in law firms by professional body supervisors.

- Predicate Crime Evidence

The Indonesian anti-graft agency has experience in detecting potential money laundering offences based on bank account records and documents seized during corruption investigations.

Following detection, if the STR or SAR, investigative evidence, or examination/audit findings identify activity that is suspicious, the authorities can then gather further data and information from the FIU, reporting entities and any other relevant stakeholders. Therefore, close collaboration with other agencies is essential when dealing with corruption-related money laundering cases.

3.2. Joint Investigation and Parallel Investigation in Corruption-Related Money Laundering Cases Involving Legal Professionals

Joint investigations or parallel investigations by a number of competent authorities can be undertaken on a temporary basis for the purpose of pursuing criminal investigations. This form of collaboration can be an efficient and effective means of responding to cross-border crimes. Joint investigations also facilitate the coordination of investigations and prosecutions conducted in parallel across jurisdictions.

Several G20 countries have experience in conducting joint investigations and parallel investigations in response to corruption-related money laundering cases involving legal professionals.

Case Study 2: Indonesia

Indonesia has conducted a parallel investigation with the United Kingdom's Serious Fraud Office (SFO) and Singapore's Corrupt Practices Investigation Bureau (CPIB) into a bribery-related money laundering case. The investigation led to a former CEO of Garuda Indonesia, the country's national flag carrier, being convicted of accepting bribes related to aircraft procurements. The scheme involved the laundering of Rp 87.4 billion through multiple channels, the conversion of funds into various foreign currencies, and the transfer of funds to multiple overseas bank accounts. The perpetrator also transferred funds to purchase apartments in Australia and Singapore. In carrying out these activities, he was assisted by a legal professional who claimed to have "unknowingly" concealed the illicit funds.

This investigation began when the Indonesian authorities received information from the SFO and CPIB relating to another corruption case involving the former CEO. Following this, the Indonesian anti-graft agency worked closely with the SFO and CPIB to obtain evidence and seize the perpetrator's assets in Australia.

Spain also actively engages in international collaboration with bodies such as Europol and Interpol in cross-border cases. In addition, cases such as the Panama Papers, and the Pandora and Luxembourg leaks have led Sepblac to cross-check the leaked information against its databases, which has triggered further supervisory investigations and cooperation with other competent authorities.

3.3. International Networks to Facilitate Investigations of Corruption-Related Money Laundering Cases Involving Legal Professionals

Given rapid technological development that facilitates money laundering on a transnational basis, cross-border collaboration between authorities and relevant stakeholders is essential for the effective technical assistance, information sharing, and the recovery of illicit funds. International networks allow countries to engage with their international partners so as to combat money laundering and corruption. Such networks may comprise countries, international organizations, authorities, or other relevant bodies.

The questionnaire responses indicate that several G20 countries use well-established international networks to assist them in responding to money laundering and to recover proceeds of crime. In conducting investigations, the United States has utilized international networks such as the Egmont Group, Camden Asset Recovery Inter-agency Network (CARIN), European Union Agency for Criminal Justice Cooperation (Eurojust), International Anti-Corruption Coordination Centre (IACCC), and StAR/Interpol Global Focal Points Network, along with many other regional networks to enhance its corruption and money laundering-related investigations. The United States also used similar channels for informal cooperation to investigate and prosecute cases involving the 1 Malaysia Development Berhad (1MDB) scheme.

The Australian Federal Police (AFP) maintains strong intelligence and operational relationships with international partners through its active involvement in various group such as the Five Eyes Law Enforcement Group's Money Laundering Working Group and Controllers Practitioners Groups, CARIN, Asset Recovery Interagency Network – Asia Pacific (ARIN-AP), United Nations Office on Drugs and Crime, Interpol and Europol (where AFP is the Australian representative for money laundering) and the Asia/Pacific Group on Money Laundering (APG). Where the principals controlling money laundering syndicates are beyond Australian borders, the AFP leverages its international relationships to disrupt and dismantle those syndicates. For example, cooperation between the AFP, Australian Criminal Intelligence Commission and overseas law enforcement agencies resulted in the disruption of the KHANANI Money Laundering Organization (MLO). The MLO acted on behalf of Transnational Serious & Organised Crime (TSOC) groups and terrorist organization to launder billions of dollars annually between Pakistan, the UAE, United States, United Kingdom, Canada, Australia, and other countries.

To exchange intelligence information among FIUs, several G20 countries are facilitated by international networks such as the Egmont Group. The Egmont Group facilitates and prompts the exchange of information, knowledge, and cooperation amongst member FIUs. According to Italy, FIU-to-FIU international cooperation is essential for exchanging information through dedicated IT channels (the Egmont Secure Web and, at European level, the FIU.Net), as they ensure the security and confidentiality of exchanges. This information has helped Italy's FIU to develop in-depth analyses and provide financial information, particularly where suspicious activities feature significant links with other jurisdictions. Furthermore, the collected information is also beneficial for preparing rogatory requests to foreign law enforcement agencies.

3.4. Considerations When Responding to Cases Involving Legal Professionals

While authorities in the G20 countries have vast experience in dealing with money laundering cases, they continue to encounter challenges, particularly when legal professionals are involved. This section provides an insight into a number of constraints that have been identified and how countries address them.

The following are some of the considerations that G20 countries should be cognizant of when dealing with cases involving legal professionals:

Legal Professional Privilege / Secrecy

Legal professional privilege or secrecy is a fundamental legal right that provides immunity from the exercise of powers which would otherwise compel the disclosure of privileged information, including the production of documents. Legal privilege preserves the confidentiality and secrecy of those communications in business and commercial situations with clients. In common law systems, legal professional privilege and confidentiality are a fundamental component of the rule of law. Documents are normally protected by this privilege if they contain confidential information supplied by a client, or advice supplied by a legal professional to a client. In civil law systems, legal professional privilege and secrecy requirements vary from one jurisdiction to another.⁶⁵

In some cases, legal professional privilege and secrecy can be misused to engage in illicit activities and avoid detection by the authorities. In dealing with corruption-related money laundering cases, the Indonesian authorities have encountered legal professionals who refused to disclose required documents by relying on the privilege defense. In such cases, legal professional privilege will not apply where the client has specifically sought the assistance of the legal professional help to facilitate criminal activities.

In the United Kingdom, to resolve the tension between disclosure obligations under the Proceeds of Crime Act 2002 and the all-encompassing duties of client confidentiality and the duty to protect legal professional privilege, the Legal Sector Affinity Group serves as a decision-making framework which has provided guidance as to when legal professionals are permitted to make a disclosure. According to this guidance, legal professional privilege does not extend to documents which themselves form part of a criminal or fraudulent act, or communications which take place in order to obtain advice with the intention of carrying out an offence. It is irrelevant whether or not the legal professionals are aware that they are being used for that purpose. If the legal professionals are unwittingly being involved by their client in a criminal activity, the courts require prima facie evidence⁶⁶ before legal professional privilege can be displaced. The sufficiency of that evidence depends on the circumstances: it is easier to infer a prima facie case where there is substantial material available to support the inference of an offence. While legal professionals may decide if prima facie evidence exists, they may also ask the court for directions.

⁶⁵ Savage, D. *GIR Guide to Sanctions – Second Edition: EU Sanctions Enforcement*, <https://www.stewartslaw.com/news/gir-guide-to-sanctions-reporting-professional-secrecy-and-legal-professional-privilege/>. Accessed on 21 October 2022.

⁶⁶ Sufficient corroborating evidence appears to exist to support a case.

In France, specific protective provisions apply in respect of searches and seizures carried out at the premises of certain legal professionals, particularly lawyers and notaries, in order to ensure the protection of professional secrecy. France also has provisions that establish reinforced protections, such as the requirement that a magistrate and a representative of the bar association be present, restriction on access to seized documents, and the right to contest a seizure before a magistrate. However, these protective provisions may be disapplied if the legal professional is implicated in the offence for which evidence is sought.

Cross-Jurisdiction Information Sharing

Money laundering and corruption cases that involve a number of countries make it essential that information can be shared between jurisdictions. While substantial progress has been made in improving information-sharing capabilities and affordability, many challenges remain. Time-efficient information sharing is essential for the successful investigation of many cases. If information-sharing powers are not fit for purpose, this can frustrate timely and effective investigative and enforcement action.

The development of international networks can assist information exchange and overcome the obstacles that hamper or prevent cross-border information sharing. An example of such a network is the ARIN-AP, which enables the cross-border exchange of information on individuals, companies, and assets in order to facilitate the recovery of proceeds of crime. Collaboration between legal professional associations can also help to elicit information in a timely fashion. Legal professional associations may establish partnerships with similar organizations in other countries to provide a wider professional network, capacity building, and knowledge and information sharing. The Indonesian Notaries Association has established partnerships with the Dutch and German notaries' associations. These strong partnerships allow the Indonesian Ministry of Justice and Human Rights to gain insights and information on due diligence obligations and compliance in those countries so that they can serve as benchmarks for the development of legislation and regulations in Indonesia. The Indonesian authorities can also obtain information for investigative purposes through legal professional association networks.

Limited Resources and Capacity

Responding to corruption-related money laundering cases, particularly those involving complex schemes, requires adequate resources and knowledge. However, a number of G20 countries face challenges in this regard. According to the United States, obstacles that may affect asset recovery cooperation include challenges such as the lack of competent authorities in jurisdictions from whom assistance is required. In many instances, the failure to designate a central or competent authority impedes the ability to seek assistance from a jurisdiction where evidence regarding criminal activity or recoverable proceeds of crime may be located.

Meanwhile, South Africa has experienced problems in investigating and prosecuting cases of stand-alone and third-party money laundering. These problems are related to the lack of resources and expertise available to law enforcement agencies and authorities to proactively identify the money laundering networks and syndicates operating behind the predicate offenses which they do investigate and prosecute. These problems are compounded by the fact that the networks and syndicates often have overseas links.

Time-Consuming Mutual Legal Assistance Process

Mutual legal assistance (MLA) is the formal method of international cooperation for obtaining government to government assistance, particularly for obtaining evidence to support the investigation or prosecution of criminal offences and to recover proceeds of crime. Such cooperation may involve various agencies and can include multiple procedural steps. Some G20 countries have stated that MLA is a time-consuming and resource-intensive process, and can present challenges when responding to corruption-related money laundering cases.

The Netherlands has stated that the slow pace of MLA in complex cases can be a major obstacle given that investigations are often transnational in character, while Australia has noted that delays in the MLA process can be due to the relevant jurisdiction not being readily identifiable, or where a jurisdiction is not able to provide timely assistance.

3.5. The Way Forward

This Compendium has illustrated various good practices that can be used when designing and implementing supervisory measures in respect of legal professionals so as to prevent corruption-related money laundering in G20 countries. It also highlights a number of lessons learned in respect of the obstacles encountered by G20 countries and the efforts to strengthen global anti-corruption efforts. In the light of these good practices and lessons learned, it may be concluded that the G20 countries should collectively progress implementation of concrete measures to mitigate corruption-related money laundering risks involving legal professionals by:

- Fully implementing relevant principles, standards, and international commitments in this area, notably, the FATF Recommendations;
- exchanging good practices in the implementation of effective regulatory frameworks and supervisory measures for legal professionals with due regard to legal professional privilege and secrecy protection;
- considering developing or supporting the development of measures such as rules or guidance for legal professionals so as to resolve the tension between legal professional privilege and disclosure obligations, and to explain when legal professional privilege may be disapplied;
- strengthening cooperation and engagement with FIUs, law enforcement agencies, relevant authorities, and legal professional associations to enhance multi-jurisdictional information sharing in a convenient, timely, and effective manner. Such robust cooperation can also help countries to obtain informal assistance in certain circumstances, particularly in cases where time is of the essence;
- encouraging assistance, where possible, in investigation and asset recovery to help countries in dealing with cases of corruption-related money laundering, especially countries with limited resources; and
- sharing knowledge and conducting capacity building to enhance the capacity and expertise of law enforcement agencies and relevant authorities when dealing with complex corruption-related money laundering cases.

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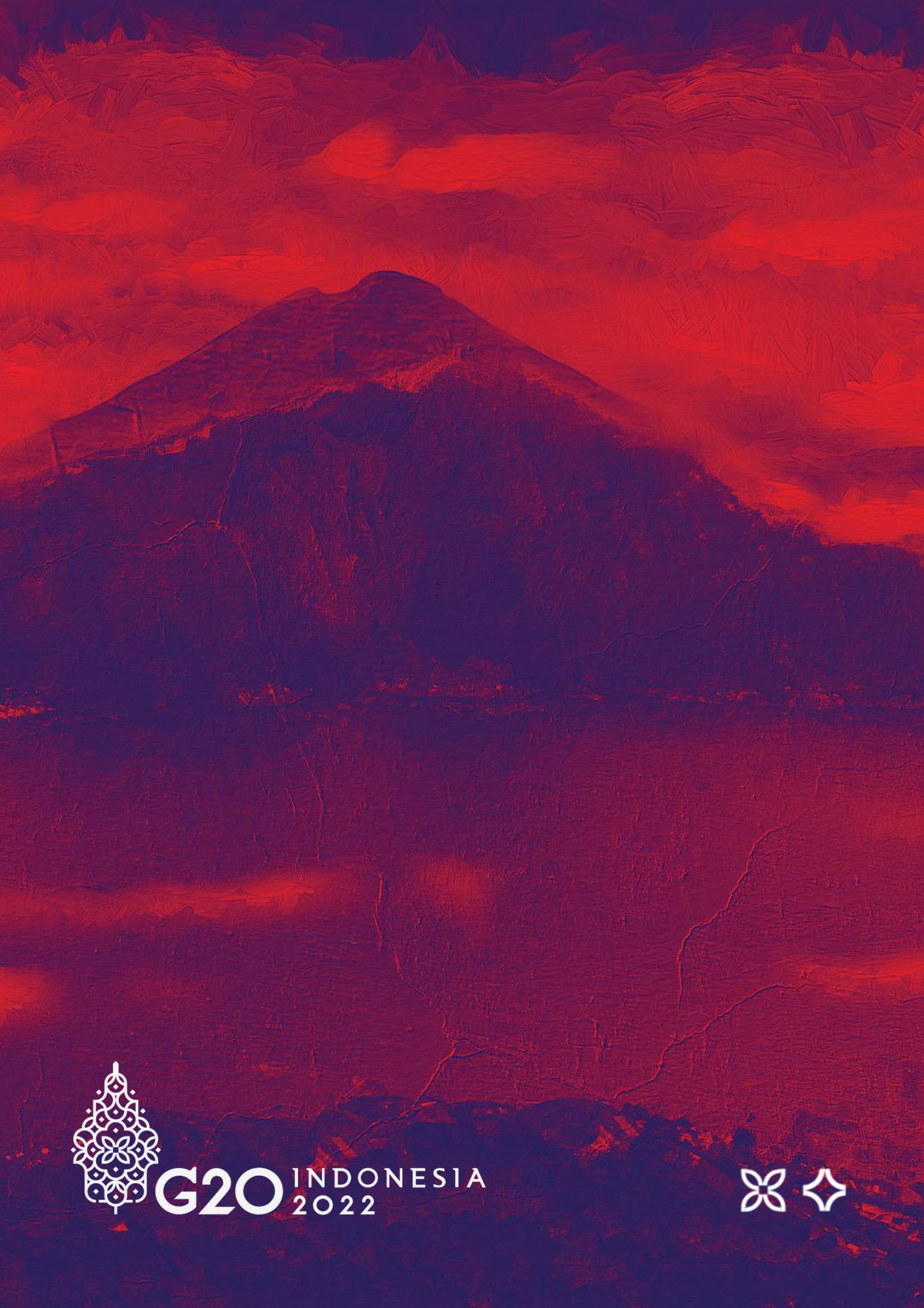
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INDONESIA
2022

Acronyms and Abbreviations

ABF	: Australian Border Force
ACE	: Automated Commercial Environment, United States
ACIC	: Australian Criminal Intelligence Commission
ACLEI	: Australian Commission for Law Enforcement Integrity
ACU	: Southern African Customs Union
ACV	: (Corruption Prevention Contact Person), Germany
AEO	: Authorized Economic Operator, The Republic of Korea
AFIP	: Administración Federal de Ingresos Públicos (Federal Administration of Public Revenues), Argentina
AFP	: Australia Federal Police
ASAIN	: Assessoria de Relacoes Internacionais (International Relations Office), Brazil
ATA Carnet	: Admission Temporaire/Temporary Admission Carnet
ATLAS	: Automated Tariff and Local Customs Clearance System, Germany
BİLGE	: BİLgisayarlı Gümrük Etkinlikleri (Customs Transactions with Computer), Türkiye
CAPSIA	: Cámara Argentina de Prestadores de Servicios Internacionales Aeroexpresos (Customs-Argentine Chamber of International Air Express Service Providers Working Table), Argentina
CBIC	: Central Board of Indirect Taxes and Customs, India
CBP	: Customs and Border Protection, The United States
CCDI	: Central Commission for Discipline Inspection, China
CEISA	: Customs-Excise Information System and Automation, Indonesia
CEPOL	: College Européen de Police (Agency for Law Enforcement Training), The European Union
CFR	: Codes of Federal Regulations, The United States
CITAC	: Customs Intelligence, Targeting and Analyzing Center, Indonesia
COAC	: Commercial Customs Operations Advisory Committee, The United States
CPGRAMS	: Central Public Grievance Redress and Monitoring System, India
Delta	: Dédouanement en Ligne par Transmission Automatisée (Customs Clearance System), France
DGCE	: Directorate General of Customs and Excise, Indonesia

DGoV	: Directorate General of Valuation, India
ENI	: European Neighborhood Instrument, The European Union
FOIA	: Freedom of Information Act, The United States
FRC	: Financial Risk Criteria and Standards, Spain
FRS	: Fraud Risk Scenario, Indonesia
GG	: Grundgesetz/Constitution, Germany
HMRC	: His Majesty's Revenue and Customs, The United Kingdom
I&AC	: Integrity and Anti-Corruption, South Africa
ICT	: Information and Communications Technology
IPA II	: The Instrument for Pre-accession Assistance, The European Union
J5	: Joint Chiefs of Global Tax Enforcement
JIC	: Joint Intake Center, The United States
KCS	: Korea Customs Service, The Republic Korea
MoF	: Ministry of Finance, Indonesia
Nazaha	: Oversight and Anti-Corruption Authority, Saudi Arabia
NCS	: National Commission of Supervision, China
NLE	: National Logistic Ecosystem, Indonesia
NTC	: National Targeting Center, The United States
OECD WGB	: Organisation for Economic Co-operation and Development Working Group on Bribery
OPR	: Office of Professional Responsibility, The United States
OTELLO	: Online Tax Refund at Exit: Light Lane Optimization, Italy
PNI	: United Nations Crime Prevention and Criminal Justice Programme Network
RFB	: Receita Federal do Brasil (Special Departement of Federal Revenue), Brazil
RKC	: Revised Kyoto Convention
RMS	: Risk Management System, India
SAI	: Supreme Audit Institution
SARC	: Service d'Analyse de Risque et de Ciblage (Centralized Risk Analysis and Targeting Center), France
SARS	: South African Revenue Services
SAT	: Sistem Administrasi Pajak (Tax Administration Service), Indonesia

SFP	: (Ministry of Public Administration), Mexico
SIA	: Sport Integrity Australia
SIGMA	: Servicio de Investigación Global del Mercado de Apuestas (Sports Betting Alert System), Spain
SIM	: Sistemático informático Malvina (Malvina Information System), Argentina
SIPUMA	: Sistem Aplikasi Pengaduan Masyarakat (Public Complaint Handling Application System), Indonesia
STAN	: Sekolah Tinggi Akuntansi Negara (State College of Accountancy), Indonesia
SUDenu	: Sistema Único de Denuncias (Single Complaints System), Argentina
TFA	: Trade Facilitation Agreement
TFMICs	: Trade Facilitation Program in Middle Income Countries, Brazil
UCC	: Union Customs Code
UKI	: Unit Kepatuhan Internal (Internal Compliance Unit), Indonesia
UNI-PASS	: Unified, Universal, Unique – Pass (Electronic Customs Clearance System), The Republic of Korea
VUCE	: Ventanilla Única de Comercio Exterior (Foreign Trade Single Window), Argentina
WiSE	: Whistle Blowing System, Indonesia
ZATCA	: Zakat, Tax and Customs Authority, Saudi Arabia



1. Executive Summary

Since the first meeting of the G20 Anti-Corruption Working Group (ACWG) was held in 2011, the Group has made commitments and adopted high-level principles aimed at countering corruption through prevention, criminalization and law enforcement, international cooperation and asset recovery. A priority of the G20 ACWG is to effectively implement these commitments and principles. Reporting on progress made and preparing accountability reports ensures that the Group holds itself accountable to the commitments it has made.

The G20 ACWG Action Plan 2022-2024 directs the Group to make “better use of the reformed, thematic approach to the annual Accountability Report, developed under the Saudi G20 Presidency, as a tool for self-assessing the record of implementation made by G20 countries against specific sets of High-Level Principles and other G20 anti-corruption commitments, to encourage mutual learning of respective good practices and identify ways to improve their implementation, in accordance with our domestic laws and taking into account our countries’ frameworks.”

The 2022 Accountability Report focuses on the efforts of the Group to [counter corruption in customs](#) and [tackle corruption in sport](#). These two areas, which involve complex and cross-agency efforts, were selected to reflect current global anti-corruption issues. They also require extensive internal coordination and information gathering to provide a full-scale review of the G20 ACWG's work in those areas.

A. Countering Corruption in Customs

In the area of countering corruption in customs, G20 countries have taken a number of positive steps to date. These include the adoption of legal measures to enable customs administrations to operate in accordance with a risk-based integrity strategy that is well-integrated within the national anti-corruption framework, provide adequate resources to the customs integrity strategy, build a culture of integrity through transparent internal decision making, raise awareness of integrity-related issues, and encourage training activities.

A number of actions have been taken to improve compliance by G20 countries that have ratified international standards and recommendations on customs-related issues, particularly those that relate to procedures for the timely release of goods, including those developed by the World Customs Organization (WCO). These actions include developing nationwide Time Release Studies (TRS) and procedures in accordance with the WCO policy recommendations. In addition, some members are also taking into account the revised Kyoto Convention as standards to promote trade facilitation and effective controls. The G20 countries that are also members of the European Union (EU) are also bound by European Customs Law and other EU requirements.

Furthermore, several steps have been taken to enhance strategies to prevent, detect and reduce corruption in customs, for example, through implementing appropriate monitoring and control mechanisms, such as internal and external auditing. These steps include appointing dedicated units to monitor internal governance, developing risk management assessments and annual evaluations, and developing fraud risk management programs within customs administrations.

While significant progress has been made, G20 countries have enumerated a number of remaining challenges, the most salient of which include:

1. Lack of resources allocated to the customs administrations in some G20 countries, including human and financial resources.
2. Limited efforts to date in mapping the potential risks of corruption in customs related to organized crime and money laundering.

The nexus between corruption in customs and organized crime and money laundering is not included in the 2017 High Level Principles on Countering Corruption in Customs. However, given the importance of the issue, G20 countries may consider developing research, measurement and assessment, and monitoring trends, typologies and reports with a view to gaining a better understanding of the potential risks of corruption in customs related to organized crime and money-laundering.

B. Tackling Corruption in Sports

Tackling corruption in sport is a stated priority of the G20 ACWG, as highlighted by the adoption of the High-Level Principles on Tackling Corruption in Sport in October 2021. The G20 ACWG has leveraged existing national and international anti-corruption frameworks, in particular the United Nations Convention against Corruption (UNCAC), to effectively promote, develop and implement anti-corruption measures in the sports sector.

Tackling corruption both on and off the field of play is still an emerging issue of concern for criminal justice authorities in G20 countries, and has attracted an increasing level of attention and resources.

Measures taken by the G20 countries to tackle the complexity of sport-specific forms of corruption include the development of specific anti-corruption legislation, such as laws which address competition manipulation and illegal betting, and the establishment of multi stakeholder approaches involving the public and private sector to enhance coordination and cooperation. A notable trend that has been observed is the creation of specialized bodies or mechanisms to comprehensively tackle wrongdoing in sport. The G20 has also taken a strong interest in the governance of sports organizations, and regulations have been introduced to ensure that the autonomy of sport is not abused by those looking to exploit it for illicit gain.

To further enhance the application of the G20 High-Level Principles on Tackling Corruption in Sport, and implement the commitments that have been made, G20 members may wish to consider:

1. Potential areas for future work, including the continued inclusion of corruption in sport on the agenda of the G20 ACWG so as to permit the exchange of information and sharing of good practices;
2. Developing comprehensive policies on anti-corruption in sport based on an assessment of the corruption risks faced, including those related to the organization of major sports events, involvement of organized crime in sport, competition

manipulation, illegal betting and those that negatively affect children, young athletes and other vulnerable groups;

3. Establishing a domestic specialized body or bodies with clear responsibility for the prevention, detection, investigation and sanctioning of corruption in sport, while ensuring that the necessary independence, training and resources required to effectively carry out these functions will be available;
4. Supporting programmes, projects, task forces, expert groups and existing initiatives at the national, regional and global levels that promote and enhance cooperation and the exchange of information and good practices among law enforcement, criminal justice authorities and corruption prevention authorities, lawmakers, policymakers and sports organizations;
5. Publishing the reports of existing specialized bodies that tackle corruption in sport in order to increase awareness of how they function, and to identify and share good practices;
6. Facilitating the collection of data on corruption in sport to enable evidence-based policy-making, including information on adjudicated cases, and the effectiveness of existing mechanisms and networks for information exchange and the promotion of cooperation.

Tackling the challenges posed by corruption in sport using identified risks, evidence and good practices will require significant political commitment, cooperation and coordination, and the effective implementation of agreed measures by G20 members.

Key Recommendations and Way Forward

A key function of the approach taken in the Accountability Report this year is to facilitate the identification of potential future work by the G20 ACWG in the areas of countering corruption in customs and tackling corruption in sports. Based on the analysis, potential areas for future work include:

1. Continuing to implement the 2017 [High Level Principles on Countering Corruption in Customs](#) and the 2021 [High-Level Principles on Tackling Corruption in Sport](#);
2. Enhancing the implementation of relevant national and international legal and regulatory frameworks to address corruption in customs and sports;
3. Strengthening cooperation between government, law enforcement and judicial authorities, private sector, civil society, academia, and other relevant stakeholders to combat corruption in customs and sports;
4. Promoting the use of innovative measures and technologies which help build the capacities of relevant authorities and sports organizations to prevent and combat corruption in customs and sports.

2. Introduction

Corruption has a disproportionate impact on the poor and most vulnerable, increasing the costs of and reducing access to public services, and worsening environmental degradation. With less than a decade to achieve the 2030 Agenda for Sustainable Development, G20 countries must find more immediate and comprehensive sustainable development solutions that will balance the need for global industrialization with human development. It is a daunting task, but it is achievable.

Change begins in each country as well as collectively. In this regard, the G20 should engage in collective action to understand and tackle corruption in all its forms towards the achievement of the 2030 Agenda for Sustainable Development.

The Indonesian Presidency, following the path started during the 2020 Saudi Presidency, recognizes that the G20 ACWG Accountability Report is a key element for the Group to analyze and evaluate the progress made in implementing the G20's anti-corruption commitments. This year, the Accountability Report provides a more detailed overview of progress made and challenges faced by G20 countries in selected areas addressed by the ACWG, instead of pursuing a general and broader overview across all of the topics covered by the Group.

This approach is in line with the request from the Group to focus on the effectiveness of the measures taken by G20 countries in meeting their commitments, as reflected in the High-Level Principles (HLPs) and other G20 anti-corruption commitments endorsed by G20 leaders, with the aim of being as compliant as possible with the agreed commitments.

The G20 ACWG has agreed that enhanced efforts are needed to address challenges, and emerging difficulties in implementing our previous joint commitments and obligations under the existing international anti-corruption architecture, particularly those enshrined in the UNCAC. Thus, the Group will strive to facilitate the implementation of existing G20 commitments and develop further action without duplicating work undertaken elsewhere.

Corruption manifests itself in different areas. The G20 ACWG has acknowledged the need to enhance anti-corruption efforts in areas that are especially vulnerable to corruption. This acknowledgment has been translated into a number of commitments by the Group.

The Indonesian Presidency recognizes the importance of the G20 ACWG tackling the threats that corruption poses to the integrity of customs and sport, and will continue to increase the Group's efforts to strengthen both the anti-corruption legal and policy frameworks, as well as to promote the role of the private sector and civil society, while maintaining high integrity, accountability, and transparency standards.

In developing this Accountability Report, the G20 ACWG members' responses to the 2022 self-assessment questionnaire, which focuses on countering corruption in customs and tackling corruption in sports in recent years, have been taken into account. Ensuring implementation of prior commitments remains a key priority for the Group as well as ensuring progress towards the agreed commitments in the G20 Anti-Corruption Action Plan 2022-2024.

3. Key Achievements of the G20 ACWG in 2022

This section presents an overview of the G20 ACWG's key achievements in 2022 based on the G20 Anti-Corruption Action Plan 2022-2024.

A. G20 High-Level Principles on Enhancing the Role of Auditing in Tackling Corruption

Auditing plays an important role in contributing to the fight against corruption. It assists institutions in better ensuring integrity, accountability, and transparency, particularly in sound financial management of public affairs and public property, as well as the efficient use of public resources. Therefore, the Group has endorsed the G20 High Level Principles on Enhancing the Role of Auditing in Tackling Corruption, which elaborates on key principles that highlight the importance of auditing to help detect corruption and the role of auditors and Supreme Audit Institutions (SAIs) in preventing corruption. Leading by example, G20 countries can apply these principles in accordance with the fundamental principles of domestic frameworks and legal systems, and as guidance to enhance and complement existing anti-corruption commitments.

B. G20 ACWG Compendium on Public Participation and Anti-Corruption Education Programmes

Collaboration between government and the public contributes to the greater effectiveness of anti-corruption efforts. In addition, education continues to be an important topic for discussion within the G20 ACWG, particularly in relation to sustainable improvement of the quality of anti-corruption education programmes and the involvement of students and youth at all educational levels. The G20 ACWG Compendium provides an overview of the current legal framework governing public participation and education on ethics, integrity, and anti-corruption; good practices on public participation and anti-corruption education, including integration of ethics, integrity and anti-corruption values into learning and education programmes; the use of Information and Communications Technology (ICT) to promote public participation; and noting anti-corruption education tools, including knowledge hubs. The Compendium also highlights the main challenges faced by G20 countries in encouraging public participation and delivering anti-corruption education programmes.

C. G20 ACWG Compendium on Supervisory Measures and Regulatory Framework for Legal Professionals to Mitigate Corruption-Related Money Laundering Risks

The Indonesian Presidency has collated information on national good practices and challenges facing G20 members in regulating and monitoring corruption-related money-laundering risks among legal professionals. The Compendium considers how G20 members establish and implement supervisory and regulatory frameworks to prevent and detect money laundering that involves legal professionals who are either unwittingly exploited by corrupt actors seeking to conceal the proceeds of crime or who actively facilitate corruption-related money laundering.

D. G20 ACWG Background Note on Mitigating Corruption Risks in Renewable Energy

Growth in the renewable energy sector, with the massive funding that accompanies it, can create corruption risks. A strong risk-based approach is required to develop a government-wide strategy for promoting transparency and integrity and mitigating corruption risks in this sector. The Indonesian Presidency recognizes the need to raise awareness and develop a better understanding of the threats that corruption poses to renewable energy and, therefore, to energy transition. The Background Note focuses on how corruption risks in the renewable energy sector can be mitigated, and is aimed at helping to frame the G20 ACWG's future discussions and actions on this matter.

Cooperation with the B20, C20, L20, P20 and T20:

Business and civil society play a critical role in preventing and detecting corruption, and the inclusion of engagement groups such as the B20 and C20 in the policy setting dialogue has enriched the outcomes obtained. Furthermore, the B20, C20, L20 and T20 were active participants in each of the three ACWG meetings held in 2022. Additionally, for the first time, P20 representatives attended some of the Group's meetings to present on the topic of parliamentary perspectives on the G20 ACWG agenda, with the goal of strengthening engagement and cooperation between the parliaments of G20 countries and other relevant international actors.



4. Overview of Progress in the Area of Countering Corruption in Customs and Tackling Corruption in Sport

4.1. Countering Corruption in Customs

4.1.1. Background

This section contains information on good practices and challenges in the implementation of the G20 [High-Level Principles on Countering Corruption in Customs](#), and presents recommendations for the G20 ACWG on how to further enhance the G20 response to corruption in customs.

The 2030 Agenda for Sustainable Development recognizes international trade as an engine for economic development and poverty reduction through the promotion of specialization, competition, economies of scale and innovation. Trade and competition are powerful drivers of growth, resulting in increased living standards and job creation. The G20's growth strategies include reforms to facilitate trade by lowering costs, streamlining customs procedures, reducing unnecessary regulatory burdens, and strengthening trade-enabling services.

Customs officials have significant responsibilities for regulating cross-border trade, including collecting taxes, deterring illicit trade, controlling goods subject to prohibitions or restrictions, and contributing to economic competitiveness by facilitating trade. Ineffective and inefficient customs administration, whether caused by lac of resources, cumbersome customs procedures or corruption, can negatively impact the benefits of international trade, trust in government, as well as sound economic and public sector reforms.

In addition, the economic impact of COVID-19 has lasted longer than the health crisis itself. The continuity of trade during the pandemic was important for all economies, as nations still needed to import and export goods. The introduction of modern risk-based customs processes that balanced the need for compliance with customs law, on the one hand, and for trade facilitation, on the other, helped to ensure that essential goods reached their destinations on time, while maintaining compliance and allowing the clearance process to be conducted remotely and digitally.

Customs administrations play an essential role in facilitating global trade, reinforcing integrity in cross-border exchanges of goods and services, and in collecting public revenue. Preventing and combating corruption in customs is essential. Corruption can be combated effectively only as part of a comprehensive strategy that is adapted to national and local contexts.

Following the adoption of the [High-Level Principles on Countering Corruption in Customs](#) during Germany's Presidency in 2017, the Indonesian G20 Presidency requested G20 ACWG members to share information on the implementation of the principles by completing and returning a questionnaire that was designed and circulated by the Indonesian Presidency. The current report was developed based on the 21 responses that had been received per 15 September 2022.

Submissions were received from the following members of the Group containing relevant information on countering corruption in customs: Argentina, Australia, Brazil, China, European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, Netherlands, the Republic of

Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, the United Kingdom, and the United States.

The full text of the submissions received is available on the [G20 Anti-Corruption Resources website hosted by UNODC](#).

4.1.2. Frameworks, Achievements and Good Practices

This section of the report highlights the G20 ACWG’s achievements, good practices, and challenges in relation to the implementation of the 2017 [High-Level Principles on Countering Corruption in Customs](#). The section is structured principle by principle and is followed by a concluding section summarizing the key recommendations arising out of the analysis.

Principle 1:

“Leading by example”

G20 Countries should ensure that customs administrations operate in accordance with a risk-based integrity strategy that, where applicable, is well-integrated with the national anti- corruption framework. G20 countries should also ensure that an adequate amount of resources is devoted to the implementation of customs’ integrity strategies, and that customs administrations management lead by example in the discharge of their official duties.

G20 countries should ensure that customs administrations build a culture of integrity through transparent internal decision-making, integrity awareness-raising and training activities, as well as an open organizational culture that is responsive to integrity concerns.

Table 1. Overview of responses relevant to the implementation of Principle 1

Measures Undertaken	Number of G20 Countries
Integrity frameworks and such as policies, guidelines, procedures, code of conduct and public service ethic, risk assessment program ¹	19
Adequate resources allocated ²	17
Build culture of integrity ³	19

¹ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Netherlands, Mexico, Russia, Saudi Arabia, South Africa, Spain, United Kingdom, United States.

² Argentina, Australia, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Netherlands, Mexico, Saudi Arabia, South Africa, Spain, United Kingdom, United States.

³ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Netherlands, Mexico, Russia, Saudi Arabia, South Africa, Spain, United Kingdom, United States.

Most G20 countries have established mechanisms that enable customs administrations to operate in accordance with a risk-based integrity strategy that is well integrated with the national anti-corruption framework. The available frameworks range from policies, guidelines, procedures, codes of conduct, public service ethics requirements, and integrity assessment tools for preventive and punitive measures.

A wide variety of mechanisms have been adopted by G20 countries to enable customs administrations to operate in accordance with their risk-based integrity strategies. These include integrity frameworks and policies, dedicated inspection and supervision units, risk assessment programs and guidelines, promoting digitalization of processes and services, and the undertaking of customs integrity perception surveys in cooperation with the WCO.

G20 countries have allocated an adequate amount of resources to the implementation of customs integrity strategies, to help ensure that customs administrations' management leads by example in the discharge of its official duties.

Several good practices were identified in terms of implementing customs integrity strategies, including the development of specific assessment surveys, risk management, and the appointment of dedicated persons or the establishment of dedicated units for such purposes. Germany, for example uses assessments as a tool to strengthen integrity and to determine the risk of corruption in all areas of customs administration operations. Similarly, the Netherlands also carries out integrity assessments. When incidents occur, law enforcement investigates and prosecutes. Lessons learned are communicated and applied. Furthermore, safeguards are implemented based on risk assessments that are conducted on systems, buildings, information, and employees.

As part of the effort to prevent corruption, Indonesia, through the Directorate General of Customs and Excise (DGCE), has applied the Three Lines of Defence concept, consisting of Management, the Internal Compliance Unit, and the Inspectorate General. The application of the concept includes the provision of training on preventing and eradicating corruption to high-level DGCE officials/employees, stakeholders, and service users. In the Republic of Korea, the Korea Customs Service (KCS) has established the Customs Border Targeting Centre as a dedicated unit to conduct integrated risk management using data from various channels, and to develop profiling and targeting criteria. In this way, both inbound and outbound deliveries are subject to risk assessment.

In South Africa, the South African Revenue Service (SARS) and the WCO conducted the country's first-ever Customs Perception Survey in 2021, the results of which will inform the WCO/SARS Customs Working Group. Based on the survey findings, several initiatives have already been undertaken. Due to the findings on the Code of Conduct & Ethics, the Code is currently being reviewed in accordance with WCO recommendations. A SARS Integrity and Anti-Corruption Framework has also been developed and approved.

Spain's risk-based integrity strategy for customs administration is in line with and part of the general framework of systems and mechanisms of control at the national and European Union levels. These control systems, in place for the entire Spanish public administration, use a multi-layered approach based on permanent internal and external control. In Argentina, the Customs Service, Federal Administration of Public Revenues (AFIP), has established an Integrity and Public Ethics Committee and an Executive Directorate of the Integrity and Public

Ethics Committee in order to develop a coherent and comprehensive integrity system, in accordance with the Regulations of the Integrity and Public Ethics Committee. In France, customs headquarters, process on a centralized basis all requests from customs officers who wish to leave the administration to take up positions in the private sector in order to assess whether this would involve a conflict of interest. In addition, a charter of ethics in customs was distributed to all customs officers in 2018 in order to re-assess customs officers' duties and declarative obligations.

A number of G20 countries have established dedicated supervision units or appointed dedicated contact persons: Germany has designated Corruption Prevention Contact Persons (ACV) in all customs departments; Indonesia has established offices of the Customs Internal Compliance Unit (UKI) throughout the country to maintain the integrity of customs officers; Italy has set up a special Transparency, Access, and Anti-Corruption Office in the Excise, Customs and Monopolies Agency; and Japan has appointed Customs Personnel Inspectors.

G20 countries have also implemented measures to ensure that customs administrations build a culture of integrity through transparent internal decision-making, integrity awareness-raising, training activities and an open organizational culture. A number of good practices in G20 countries are in place that help to ensure a culture of integrity, including the development of integrity assessments, conducting training and enhancing the use of ICT in promoting transparency. The WCO, for example, developed an Integrity Assessment Mission for Brazilian customs (Special Department of Federal Revenue (RFB)), which was carried out from November to December 2020, with the following objectives: 1) to assess the current integrity situation of the customs environment in which the RFB operates, 2) to identify areas and opportunities for further improvement, and 3) to provide strategic and technical advice and recommendations concerning integrity and anti-corruption.

Principle 2:

“Implementing appropriate integrity standards”

G20 countries should set integrity standards for customs officials that encourage high standards of conduct, good governance, and adherence to public service values. Integrity standards should be established with a view to provide a clear basis for disciplinary, administrative, and criminal sanctions based on appropriate law enforcement processes.

India's Central Board of Indirect Taxes and Customs (CBIC) regularly provides training to its officers on integrity and vigilance-related issues at its dedicated National Academy of Customs, Indirect Taxes and Narcotics, and its Zonal Training Centers. In the United Kingdom, the UK Border Force operates an integrity programme, as well as an Anti-Corruption Intelligence Unit. This unit has instituted improvements to Border Force's response to integrity issues, and delivers updated policies and procedures. Separately, HM Revenue and Customs (HMRC) has a rolling prevention program that focuses on organizational learning and best practices so as to raise awareness of internal fraud and integrity issues. These are provided to all new starters, targeted at areas of concern, and are delivered face to face or via online presentations. In the United States in 2022, Customs and Border Protection (CBP) created an

accountability and transparency web page on its public-facing website where the public can find various types of information, including policies, press releases on critical cases, annual reports on investigative and accountability activity, and monthly statistics on employee arrests and cases that are related to corruption.

G20 countries⁴ maintain high integrity standards, and have relevant strategies or action plans in place for custom officials that encourage high standards of conduct, good governance, and adherence to public service values. These standards include the development of codes of ethics, integrity programmes, integrity plans, and asset declarations, and provide a clear basis for disciplinary, administrative, and/or criminal sanctions based on appropriate law enforcement processes.

The integrity standards established by G20 countries include the principles of professional ethics, conflict of interest management, and prohibitions and restrictions applicable to all employees within the customs administration. Furthermore, G20 countries have taken steps to publish annual reports that compile key statistics on misconduct and corruption with the objective of enhancing the transparency of customs authorities' efforts to tackle corruption. In the United Kingdom, for example, the integrity standards that apply to customs officials are set out as part of the [Civil Service values](#), as well as HMRC's and Border Force's values. Integrity standards also feature in specific conduct policy within HMRC. Border Force has a code of ethics and a clear discipline and conduct policy. Additionally, within HMRC these standards are set out within conduct guidance for all HMRC staff known as the "Upholding Standards of Conduct" policy. This has been live since February 2020.

In the United States, CBP publishes an annual report with key statistics on misconduct and corruption. The purpose of this report is to increase transparency and awareness of CBP's efforts to prevent, detect, and investigate misconduct and corruption among CBP employees and to highlight examples of the breadth and depth of work the Office of Professional Responsibility (OPR) does on behalf of the entire CBP workforce. This report is publicly available.

Principle 3:

"Transparency"

G20 Countries should ensure that its customs procedures are applied in a predictable, consistent and transparent manner, taking into account international standards and good practices. Appeal and administrative review mechanisms should be accessible for traders to challenge or seek review of customs-related determinations.

International customs administration standards have been ratified and adopted by most of the G20 member countries, including the Trade Facilitation Agreement of the World Trade Organization (WTO), the Kyoto Convention, and regional standards such as the EU's Union

⁴ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Netherlands, Mexico, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States.

Customs Code (UCC), and the United States-Mexico-Canada agreement. The procedures have been applied in a predictable, consistent, and transparent manner.

Some good practices have been demonstrated by G20 countries. Argentina ratified the Trade Facilitation Agreement of the WTO in 2018, and previously ratified the Revised Kyoto Convention (RKC) in 2015, which consists of a revision and update of the International Convention on the Simplification and Harmonization of Customs Procedures. In Indonesia, the DGCE has issued regulations based on the WCO rules, with necessary adjustments to take account of Indonesian national law. DGCE also implemented the Kyoto Convention in 2006 with the objective of simplifying and harmonizing customs procedures. In addition, DGCE has implemented the 1967 Arusha Declaration and its revisions.

Saudi Arabia's customs procedures have been developed based on the WTO and WCO agreements to ensure clarity and transparency. Meanwhile, Indian Customs initiated the Turant Customs Programme in 2019 that instituted reforms to introduce faceless, contactless and paperless customs procedures. These reforms aim to usher in a more transparent and accountable customs administration so as to enhance ease of doing business and facilitate trade. In Spain, customs procedures are based on the EU's UCC and its implementing provisions. The UCC provides a comprehensive framework of customs rules and procedures in the EU customs territory that are adapted to modern trade realities and communication tools.

Regarding appeal and administrative review, a number of G20 countries have established effective frameworks that are accessible to individuals and entities.⁵ G20 countries have demonstrated good practices in this area by developing appeal and review mechanisms and methods. For instance, the Indian Customs Act contains detailed provisions for judicial review and resolution of disputes by way of appeals and review. A citizen can lodge grievances with the public authorities on any subject related to service delivery 24/7 through the Central Public Grievance Redress and Monitoring System (CPGRAMS), a single portal connected to all of the ministries/departments of the Government of India and States. Meanwhile in Indonesia, DGCE regulations provide a method for exporters and importers to file objections with the DGCE, which can be done manually or in person.

In Italy, traders may participate in/request a review of customs decisions at two different stages: (i) before the adoption of the decision, and (ii) after the decision has been adopted, in accordance with article 22, paragraph 6 of the EU's UCC, which provides for a right to be heard. Except in exceptional cases that are expressly provided for, the Italian customs administration is obliged to inform the trader in advance of their intention to adopt an unfavorable decision and to allow the trader to express their views on the matter. In Saudi Arabia, the Zakat, Tax and Customs Authority (ZATCA) has a framework that allows for a right to appeal and review that is available to all individuals and entities. Appeals or petitions for reconsideration of decisions can be submitted in accordance with the provisions of the unified customs system.

In Türkiye, article 242 of the Customs Law gives all parties dealing with the customs administration the right to challenge decisions made against them within certain time limits. In addition, in accordance with Türkiye's administrative procedure legislation, it is possible to

⁵ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Netherlands, Republic of Korea, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and United States.

bring matters that the internal appeal system has been unable to resolve before an independent judge. Meanwhile, in the United States, section 174 of Title 19 of the United States Codes of Federal Regulations (CFR) deals with the administrative review of decisions of a port director or Center director, including the requirements for the filing of protests against such decisions, amendment of protests, review and accelerated disposition, and provisions dealing with further administrative review. 'Centers' are national CBP offices that are responsible for performing certain trade functions and making certain determinations as set forth in particular regulatory provisions regarding importations by importers that are considered by CBP to be in the industry sector. Additionally, 19 CFR Part 182 covers provisions applicable to Canadian and Mexican exporters and producers under the United States-Mexico-Canada agreement.

Principle 4:

“Automation”

G20 Countries should endeavour to:

- (a) take into account, as appropriate, international standards and recommendations on customs related matters, particularly those related to procedures for the timely release of goods, including those developed by the World Customs Organization (WCO);
- (b) make electronic systems accessible to customs users. Automated customs systems should be configured in such a way as to increase efficiency, remove opportunities for corruption and increase the level of accountability; and
- (c) enhance automated systems for risk analysis and targeting.

Table 2. Overview of responses relevant to the implementation of Principle 4

Measures Undertaken	Number of G20 Countries
Ratified international standards and recommendations on custom related matters ⁶	17
Developed an accessible ICT for individuals and entities ⁷	17

Most G20 countries have ratified international standards and recommendations on customs related matters, particularly those involving procedures for the timely release of goods, including those developed by the WCO.

Moreover, G20 countries have taken steps to further implement the WCO recommendations in national frameworks aimed at promoting customs administration that is efficient, transparent, and that uses digital and technology-driven procedures, benefiting from the use

⁶ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States.

⁷ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States.

of ICT. Some of the G20 countries also mentioned that they have [Time Release Studies \(TRS\)](#) in place. TRS is a unique tool and method to measure the actual performance of border procedures, including customs activities, in a systemic and standardized way by measuring the time taken to release and/or clear goods, as recommended by the WCO.

The following countries' responses contained information related to TRS and compliance with the WCO's Revised Kyoto Convention. In Brazil, under the framework of the Trade Facilitation Program in Middle Income Countries (TFMICs), the WCO and World Bank validated Brazil's first ever nationwide TRS, which was successfully conducted by the RFB based on WCO methodology and with the engagement of the other key governmental agencies. Moreover, China actively takes into consideration policy recommendations from the WCO, such as TRS, to calculate customs clearance times. Currently, 99% of customs clearance is done online.

As EU member states, France, Germany, Spain and Italy are bound by the EU's UCC and other EU requirements, which are fully in line with the WTO Trade Facilitation Agreement, the provisions of the WCO Revised Kyoto Convention and the Istanbul Convention on Temporary Admission. The United Kingdom has implemented the WTO Trade Facilitation Agreement and WCO standards concerning the timely release of goods. Japan has also implemented the WCO standards on procedures related to the timely release of goods. As a result, since 2018, the customs clearance procedures took 2.1 hours (126 mins) for maritime cargo, and 0.3 hours (18 mins) for sea cargo on average. The Korea Customs Service operates a customs administration system that is compliant with international standards, such as the Trade Facilitation Agreement (TFA) and the Revised Kyoto Convention (RKC). In Türkiye, the National Single-Window system enables traders to obtain the documents and licenses needed for customs procedures from a single point, and to execute and complete their customs procedures using a single point of application.

G20 countries have taken steps to promote the use of ICT in their customs administrations and have succeeded in providing timely services and reducing physical contact with service users, aiming to significantly reduce opportunities for corruption. However, in responding to the COVID-19 pandemic, G20 countries were compelled in some instances to adopt additional measures to expedite customs processes.

France, Germany, and Spain, as EU members and in line with the UCC, put in place specific customs procedures in order to facilitate imports and exports. Meanwhile, Saudi Arabia adopted an e-government platform and system. Digitization of services has helped to reduce opportunities for corruption in itself. More importantly, it has facilitated links to Oversight and Anti-Corruption Authority (Nazaha's) platforms, allowing the authority to monitor and flag corruption risks across government platforms with the aid of ICT-based solutions. The United Kingdom introduced temporary facilitations that meant no duty or VAT was due for imported medical supplies, equipment and protective garments (or donated equipment). The UK also introduced measures to reduce face-to-face contact, such as extending the validity or accepting digital copies of certain accompanying trade documents, like the ATA Carnet.

For several years, the EU and international organizations, including the OECD, the World Bank, the WCO, and the WTO have provided recommendations on the use of ICT to enhance trade facilitation and improve customs administration processes.⁸

⁸ Gareth Lewis. 2009. The Impact of ICT in Customs. World Customs Journal. Available [here](#).

Most of the G20 countries have developed accessible ICT for individuals and entities bringing items through customs (customs users).

Picture 1. ICT Systems for Customs Administration



The Accountability Report highlights some good practices related to the use of ICT within customs administration, in particular during the COVID-19 pandemic. In Australia, customs procedures were not radically altered during the pandemic. While some lighter-touch arrangements were put in place to facilitate shipments of equipment and vaccines essential to combating COVID-19, the shipments were still required to meet Australia's customs and biosecurity requirements. Meanwhile in China, the General Administration of Customs of China issued a List of Coordination Measures for Facilitation of Customs Clearance and Response to COVID-19. The customs clearance procedures for enterprises were simplified by reducing the number of documents and certificates that needed to be attached and prioritizing customs clearance of epidemic prevention materials. This effectively reduced the cost of imports and exports for enterprises, and ensured the continuing smooth operation of the industrial and supply chains.

Principle 5:

“Reform and modernization”

G20 Countries should periodically review their customs systems and procedures, aiming to streamline out-dated and burdensome practices and procedures, and increase transparency in decision-making with a view to minimize opportunities to engage in unethical, fraudulent or corrupt acts.

According to the questionnaire responses, G20 countries⁹ periodically review their customs systems and procedures, aiming to streamline outdated and burdensome practices and procedures, improve transparency in decision-making and minimize the opportunities to engage in unethical, fraudulent, or corrupt acts. While there is no uniform approach to reviewing custom systems and procedures, a majority of G20 countries indicated that they take various considerations into account in establishing such measures. The use of ICT and the modernization of systems are the most common approaches, in addition to setting strict access and authorization requirements to use these systems. The systems developed by most G20 countries are user friendly and available to a wide range of relevant stakeholders for the purpose of improving relationships between customs administrations and the private sector.

The report recognizes diverse practices in implementing Principle 5. In 2020, the Australian National Audit Office reviewed fraud control arrangements in the Department of Home Affairs for the purpose of assessing their effectiveness. Meanwhile in India, the Department of Revenue is constantly working to reduce the compliance burden on businesses and citizens. The Acts, rules, and regulations that come under the purview of the CBIC are continuously reviewed, and changes in procedures are instituted where necessary. The CBIC has taken a series of steps to promote open, transparent and productive relationships between the customs administration and the private sector. In Indonesia, the DGCE has an internal control monitoring program that monitors business processes using FRS (Fraud Risk Scenario) mechanisms. Framework assessments are generally carried out through periodic reviews of the applicable customs systems and procedures, followed by a review of existing mechanisms. The UKI plays an active role as a supervisory unit.

Italy has introduced “Online Tax Refund at Exit: Light Lane Optimization (OTELLO),” an information system that enables the digitalization of the procedure for obtaining the required customs stamp on tax free invoices in order to be entitled to direct relief or the subsequent refund of VAT due on the goods purchased in Italy by individuals residing or having their domicile outside the EU. The procedure automates the process by eliminating the direct involvement of customs’ officials. In the Netherlands, periodic reviews are conducted in respect of the procedures under EU regulations and/or new insights on risks within the procedures. Based on the results of these reviews, adjustments are implemented and communicated to stakeholders. In Spain, in line with the EU Customs Risk Management Framework and its common financial risk criteria and standards, all customs decisions are made using the risk analysis system in order to prevent their modification by officials (unless expressly authorized by their superiors). All of the procedures are collated in a single and

⁹ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Netherlands, Republic of Korea, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States.

unalterable electronic file, with strict access control to corporate applications rounding off the system.

Principle 6:

“Human resources management”

G20 Countries should ensure that customs administration human resources policies are based on principles of fair and transparent systems for recruitment, hiring, retention, promotion and retirement of customs officials in accordance with their merits, equity and aptitude, as well as on organizational and ethical standards among customs officials. G20 countries should also ensure that customs administrations retain qualified and high performing individuals by providing them with adequate benefits and opportunities to enhance their professional careers.

Several of the measures reported by G20 countries on customs administration human resources policies and practices align with article 7 of the UNCAC, which requires that recruitment, hiring, retention, promotion and retirement systems be based on the principles of efficiency, transparency, and objective criteria, such as merit, equity and aptitude.

In this regard, many G20 countries outlined examples of the processes they employ in managing customs human resources administration. In France, in addition to national legal frameworks and civil-servant legal status generating rights and obligations for customs officers, French Customs has published a charter of values that include integrity, professionalism, exemplary conduct and neutrality. It also promotes gender and professional equality. In Germany, public sector personnel selection is focused on recruiting the best candidates in terms of, among other things, aptitude, competence and professional performance, as stipulated in Article 33 (2) of the Constitution (Grundgesetz GG), which mentions that every German has equal access to public office according to aptitude, competence and professional performance.

Recruitment of officials by the DGCE in Indonesia is carried out through national and internal mechanisms. The general recruitment of civil servants at the national level is conducted using a public recruitment system that is governed by government regulations. Meanwhile, internal recruitment covering all units of the Ministry of Finance (MoF) is carried out centrally, including the recruitment of graduates of the State College of Accountancy (STAN). In Russia, the recruitment and dismissal procedures for the civil service (including the customs administration) are regulated by Federal Laws No. 79-FZ and No. 114-FZ. The main principles underlying the civil service are priority for human rights and freedoms, equality, professionalism and competence, stability, and accessibility of information.

Almost all G20 countries¹⁰ reported that they provide their customs administration staff with adequate salaries, benefits and opportunities to enhance their professional careers, particularly in the case of qualified and high performing individuals.

¹⁰ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Netherlands, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States

Generally, G20 countries allocate suitable financial and budgetary resources and provide appropriate remuneration to customs administration staff, and have suitable recruitment, evaluation and promotion procedures in place. However, one G20 country reported that although its remuneration policies are reasonable, it is nevertheless constrained by budgetary restrictions.

In terms of compensation, rights, and benefits and opportunities, G20 countries have developed different approaches and strategies. For example, in France, a contract has been signed by the Director General, Director of the Budget and Secretary General of the Ministry of the Economy, Finance and Recovery that guarantees that French Customs will have the necessary human and financial resources available [to implement the national customs strategy](#) until 2025. In Germany and Russia, the compensation provided to customs administration staff is based on their duties as civil servants. Compensation includes remuneration and benefits, including medical care, as well as contributions to moving costs and work relocation expenses. In Italy, in order to avoid illegality, abuses or partiality in the recruitment and promotion system, the Italian Excise, Customs and Monopolies Agency defines participation requirements, educational qualifications, and length of service required for promotion; and appoints an examining committee to verify qualifications and requirements, including in relation to potential conflicts of interest.

Principle 7:

“Relationship with the private sector”

G20 Countries should promote open, transparent and productive relationships between their customs administrations and the private sector.

Most G20 countries¹¹ have developed open, transparent, and productive relationships between their customs administrations and the private sector through the adoption of a variety of measures, such as creating working groups, regular meetings and public hearings.

Based on the responses to the questionnaire, several distinct approaches to the implementation of Principle 7 were identified. Argentina has created ‘Institutional Dialogue Areas’ and established a number of joint working groups, one of the which is the Customs - Argentine Chamber of International Air Express Service Providers (CAPSIA) Roundtable, which was set up in September 2021 as a public/private forum within the scope of the WCO’s Cross Border Electronic Commerce Framework. In Australia, in recognition of the important role of industry in customs and border protection, the Department of Home Affairs and the Australian Border Force (ABF) have published the Industry Engagement Strategy 2020: Trade, Customs and Traveler, which outlines the approach to industry engagement on trade, customs and traveler facilitation, and provides a framework for engagement and consultation between Government and industry on a broad range of policy, operational and regulatory issues.

¹¹ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Netherlands, Saudi Arabia, South Africa, Spain, United Kingdom, United States.

Measures undertaken by China's customs authorities include sending out open letters, making public integrity commitments, signing memorandums of cooperation with enterprises on clean customs, and holding workshops with the private sector. France has put in place rules and standards on processes that allow agents from the private sector to work in the French administration, including customs, and vice versa. In India, implementation of the Authorized Economic Operator (AEO) programme in Indian customs administration remains one of the most significant showcases of the relationship between Indian customs and the private sector. Indian customs launched the AEO programme in 2011 in alignment with the WCO SAFE Framework of Standards to secure and facilitate global trade (adopted in 2005). Meanwhile, the Korea Customs Service operates an AEO programme for highly compliant companies. Companies with AEO status voluntarily comply with their customs obligations, as stipulated by the law, while in return, the Korea Customs Service grants them a range of benefits, including, but not limited to, expedited customs clearance, thereby leading to a mutually productive relationship between customs and the private sector.

South Africa has established a forum for customs stakeholders that bring together traders, importers and exporters for the purpose of minimizing the opportunities for corruption. Customs officers from neighbouring countries are also invited to attend this forum for the purpose of developing joint anti-corruption efforts.

The UK is represented by HMRC in the J5 (Joint Chiefs of Global Tax Enforcement), alongside Australia, the US, Canada and the Netherlands. The J5 recently held discussions with finance partners in the private sector as part of a J5 Public Private Partnership and the new Global Financial Institutions Summit. The J5 PPP has a multilateral public-private workstream focused on sharing best practices to tackle corruption and insider threats.

In the United States, the Office of Trade Relations utilizes several measures to promote open, transparent and productive relationships with the private sector, including the Commercial Customs Operations Advisory Committee (COAC), trade symposiums, round tables and educational webinars designed to update and engage the private sector on customs-related policy changes and issues.

Principle 8:

“Audit and Reporting”

G20 Countries should enhance strategies to prevent, detect and reduce corruption in customs, including the implementation of appropriate monitoring and control mechanisms such as internal and external auditing, as well as effective investigation and prosecution regimes. Such strategies should encourage higher levels of integrity and effective mechanisms to detect incidents of corruption at all levels, and strengthen accountability.

Customs officials and customs users should be provided clear channels to report wrongdoing, misbehaviour and unethical activities and, when such information is provided, it should be investigated in a prompt and appropriate manner.

Table 3. Overview of responses relevant to the implementation of Principle 8

Measures Undertaken	Number of G20 Countries
Developed or implemented strategies to prevent, detect and reduce corruption in customs ¹²	19
Provided clear channels to report wrongdoing, misbehaviour and unethical activities ¹³	20

G20 countries have reported a range of measures that are designed to enhance strategies to prevent, detect and reduce corruption in customs, including the implementation of appropriate monitoring and control mechanisms, such as internal and external auditing, and ensuring effective investigations and prosecutions.

The questionnaire responses reveal a variety of approaches to auditing and reporting. China's efforts in enhancing strategies to prevent, detect and reduce corruption in customs administration include enhancing the internal audit function, improving internal control, strengthening personnel recruitment and appointment processes, improving the customs inspection system, and enhancing financial management within the customs authority. In Germany, the Federal Ministry of the Interior prepares an annual report for the Federal Government on the integrity of the entire federal administration, in which the integrity management of the customs administration is comprehensively and transparently presented.

Directorate General of Valuation of India (DGoV) India undertakes random checks of sensitive formations through its zonal units. Such checks also help devise adequate methods to ensure discretionary powers are not misused or exercised arbitrarily. Additionally, a list of officers of doubtful integrity and an agreed list of officers are compiled in order to ensure that those appearing on the lists are not posted to sensitive/corruption prone areas. In South Africa, SARS has developed Fraud Risk Management Programme 2022-2025, which includes fraud risk governance and preventative and detection strategies and controls. SARS has also developed a Customs Integrity Action Plan aimed at enhancing integrity in the customs administration.

In addition to efforts aimed at enhancing strategies to prevent, detect and reduce corruption in customs, G20 countries have also adopted measures and established systems to facilitate the reporting by customs administration staff of acts of corruption to the appropriate authorities. Clear channels for customs officials and customs users to report wrongdoing are also provided. Further protection is necessary for the reporting persons to enable the public to report in good faith, without fear of retribution or retaliation.

Many countries provided information on the strategies and mechanisms established to facilitate both internal and public reporting on wrongdoing, misbehaviour, and unethical activities. Argentina has created an 'Ethics Channel' so that AFIP staff and public can report

¹² Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Netherlands, Russia, Saudi Arabia, South Africa, Türkiye, Spain, United Kingdom, United States.

¹³ Argentina, Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Republic of Korea, Mexico, Netherlands, Russia, Saudi Arabia, South Africa, Türkiye, Spain, United Kingdom, United States.

non-compliance with AFIP's Code of Ethics, which, incidentally, enshrines the principles of non-retaliation and confidentiality in respect of complainants. In Brazil, there is a specific complaints feature available on the [RFB website](#). All complaints that are submitted are monitored by internal and external control bodies, and a whistleblower protection system is in place and is implemented. In France, dedicated officers within each general directorate are responsible for receiving and managing confidential requests and complaints from customs officials regarding any threats that may endanger their personal and professional activities, and to give advice on a case-by-case basis regarding possible actions, such as whistleblower or harassment claims. Moreover, French customs has an inspection body that is in charge of resolving all claims from the general public and users of customs services.

Germany is currently transposing into German national law EU Directive 2019/1937 on protecting persons who report breaches of European Union law. The directive contains several provisions that, once transposed, should contribute to significantly reinforcing Germany's whistleblower protection framework. In India, the CBIC has adopted CPGRAMS (Central Public Grievance Redress Monitoring System) for handling public complaints and grievances related to public services. CPGRAMS is a standardized web-based solution and an integrated application to register and address grievances received online, by post, and by hand. Similarly, Mexico provides a 'Comprehensive Citizen Complaints System' platform that is operated by the Ministry of Public Administration (SFP) and serves as a single window for registering, capturing, managing and dealing with complaints, and which guarantees the security and confidentiality of complainants. In addition, the 'Internal and External Corruption Alerting Citizens' mechanism ensures the anonymity of whistleblowers (and the information they provide). In the United States, CBP employees must report misconduct allegations to the Joint Intake Center (JIC). Reports can be conveyed anonymously. Members of the public may also report misconduct to the JIC or the CBP Information Center.

Additional information

- *Strengthening International Cooperation*

Most G20 countries¹⁴ have supported programmes, projects, task forces, expert groups, and/or other initiatives aimed at countering corruption in customs, and promoting and enhancing cooperation and the exchange of information and good practices among law enforcement, criminal justice authorities, and corruption prevention authorities, lawmakers, and policymakers.

Argentina, Australia, China, France, Indonesia, Italy, Saudi Arabia and the UK all participate in the Integrity Subcommittee of the WCO, and its workshops, seminars and other related activities.

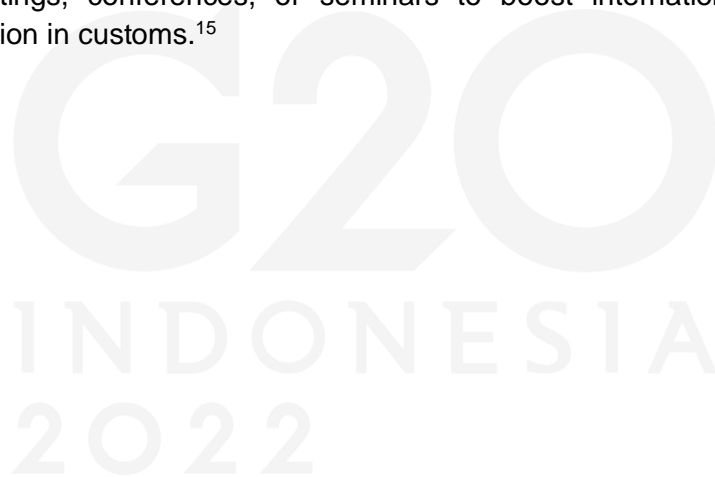
G20 countries reported that a key prerequisite for success in strengthening international cooperation in customs administration is the establishment of effective coordination mechanisms. A variety of approaches were reported by G20 countries in this regard. In Japan, the United Nations Asia and Far East Institute for the Prevention of Crime and the Treatment of Offenders (UNAFEI) was established by the United Nations and Japan as an international

¹⁴ Argentina, Australia, Brazil, China, European Union, France, Germany, India, Indonesia, Italy, Japan, Netherlands, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, United Kingdom, United States.

training and research institute, and has delivered an 'International Training Course on the Criminal Justice Response to Corruption' every year since 1998, focusing on the current corruption situation and countermeasures to the causes of corruption. The Republic of Korea has established cooperation channels with the United States and some countries in Latin America, including Mexico. It has also signed a Letter of Intent on Drug Control Cooperation with Thailand, and plans to sign one with the Netherlands. In South Africa, SARS has a dedicated Stakeholder Management Unit and an International Relations Unit responsible for facilitating cooperation and exchange of information within South Africa and with international stakeholders. The SARS Stakeholder Management Unit and the Southern African Customs Union (ACU) have established partnerships with law enforcement and criminal justice agencies. The ACU further represents SARS at the National Anti-Corruption Strategy Agency.

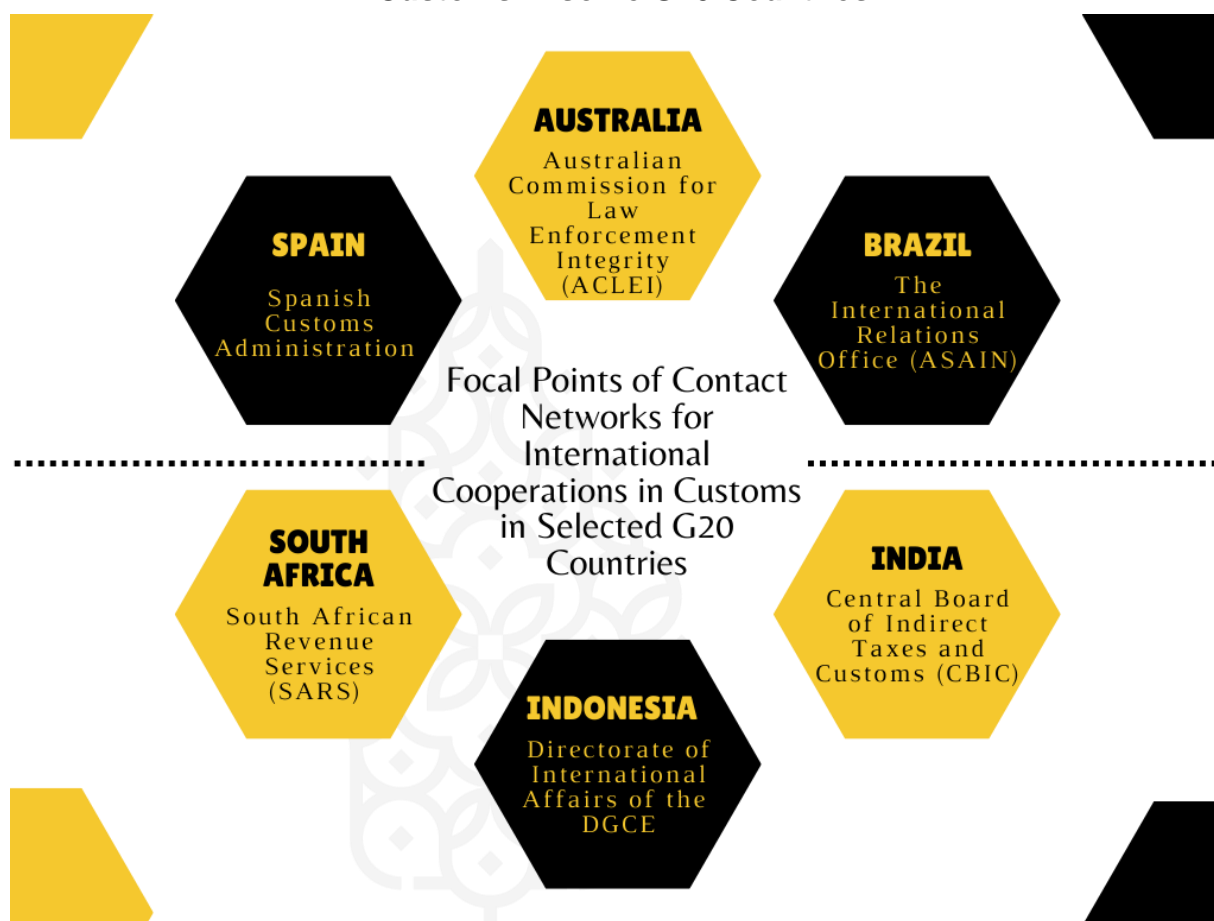
Aiming to enhance compliance towards international standards by promoting a multi-stakeholder approach, the European Commission has assisted partner countries by providing funding of EUR 448 million for the development of anti-corruption programmes in the 2014-2020 period under both the Instrument for Pre-Accession Assistance (IPA II) and the European Neighbourhood Instrument (ENI). These include tailor-made programmes to help build partner countries' capacities to implement international and EU standards on the prevention and repression of corruption and money laundering, and to ensure an effective judicial response. In addition to central and local governments and institutions responsible for anti-corruption, these programmes may also target parliaments, media (including investigative journalists) and civil society.

The majority of G20 countries that responded to the questionnaire indicated that they had established focal points of contact networks or competent authorities for international cooperation that actively exchange information concerning cases and participate in international meetings, conferences, or seminars to boost international cooperation in countering corruption in customs.¹⁵



¹⁵ Australia, Brazil, China, India, Indonesia, Italy, Japan, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States

Picture 2. Focal Points of Contact Networks for International Cooperation in Customs in some G20 Countries



- *Countering Corruption in Customs related to Organized Crime*

Many G20 Countries¹⁶ reported that they have taken steps to map the potential risks of corruption in customs related to organized crime and money-laundering by conducting research, measurement or assessment, or monitoring trends and typologies, with the aim of gaining a better understanding of the potential risks of corruption in customs related to organized crime and money-laundering. However, the responses provided did not clearly indicate the range of topics that were covered, when the studies were conducted, or how the studies were used to map the potential risks of corruption in customs related to organized crime and money laundering. One G20 country reported that they have published a study on trade-based money laundering, and how their government has worked with partners to combat the threat. Another G20 country reported that intelligent assessments had been undertaken and developed to identify the risks of exploitation by serious and organized crime groups to import illicit goods.

Nevertheless, some specific examples were provided. In Australia, Operation Zeus was a joint investigation conducted by the Australian Commission for Law Enforcement Integrity (ACLEI), the Australian Federal Police (AFP) and the Department of Home Affairs into allegations that

¹⁶ Australia, Brazil, China, India, Indonesia, Italy, Republic of Korea, Russia, Spain, United Kingdom, United States.

an ABF officer assisted a criminal syndicate by facilitating the importation of a shipping container of illicit tobacco into Australia. The ABF officer, who was identified due to his multiple unlawful accesses to various ABF computer systems, was arrested and charged on 8 August 2017 and subsequently pleaded guilty to the charges of receiving a bribe and aiding and abetting the importation of tobacco products knowing of an intent to defraud the revenue.

In the United States, the CBP OPR operates a behavioral research program that studies corruption and misconduct to identify trends and inform/improve prevention, detection, and investigative efforts. Additionally, in 2020, the Government Accountability Office published a study on trade-based money laundering and how the U.S. government has worked with partners to combat the threat. The report found that some criminal and terrorist organizations use trade-based money laundering to disguise illicit proceeds and fund their operations.

Notwithstanding the progress achieved in implementing the High Level Principles on Countering Corruption in Customs, as described in the previous chapter, G20 countries continue to face a number of challenges in countering corruption in customs. The most significant of these are:

- Some G20 countries allocate insufficient resources to their customs administrations, resulting in a shortfall in human and financial resources.
- Although G20 countries have taken a very important step by adopting the 2017 High Level Principles on Organizing Against Corruption, the efforts made to map the potential risks of corruption in customs related to organized crime and money laundering remain limited to date.



4.2. Overview of Progress in the Area of Tackling Corruption in Sport

4.2.1. Background

This section contains information on the good practices and challenges in the implementation of the [G20 High-Level Principles on Tackling Corruption in Sport](#) and presents possible ways forward on how to further enhance G20 members' responses to corruption in sport.

The sports sector has undergone comprehensive changes in recent decades. Globalization, a huge influx of money at the top level of professional sport, the rapid growth of legal and illegal sports betting and marked technological advances have transformed the way sport is played and consumed. These factors have also had a major impact on corruption in sport, both in terms of its scale and its forms, and on the role played by international organizations, governments and sports bodies in countering it. The role of organized criminal groups in corruption in sport and the criminal infiltration of sports organizations has grown markedly as a result of recent evolutions in sport. Criminal groups are exploiting vulnerabilities linked to development-related changes and the weaknesses of legislative and regulatory frameworks that govern sport. Therefore, there is a need to develop comprehensive policies on anti-corruption in sport based on an assessment of the risks faced.

The exact nature and scale of corruption in sport is still unknown because of the challenges in detecting this form of crime. To address this knowledge gap and ensure that responses are based on evidence, support to and engagement in data-gathering on corruption in sport is key. Effective prevention measures include the promotion of education and awareness-raising about the threats and risks of corruption in sport, and developing strategic, collective and coordinated responses.

Anti-corruption institutions in sport are in many ways still in their infancy. To tackle corruption in sport, it is important to use a multi-stakeholder approach to public-private cooperation and support existing initiatives that promote and enhance cooperation and the exchange of information and good practices between law enforcement authorities, criminal justice authorities, corruption prevention authorities, lawmakers and policymakers, international organizations, sports organizations, civil society and other relevant stakeholders. Furthermore, there is a need to strengthen legislative and regulatory frameworks and tools to address the unique anti-corruption issues arising in the context of sport.

Following their adoption under the Italian Presidency in 2021, the Indonesian Presidency requested the G20 ACWG members to share information on the implementation of the [High-Level Principles on Tackling Corruption in Sport](#), based on a questionnaire that was produced and circulated by the Presidency. The present report was developed based on the responses received by the G20 ACWG by 6 November 2022.

The submissions from the following members of the Group contained information on tackling corruption in sport: Australia, Brazil, China, European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, Netherlands, the Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, the United Kingdom, the United States, INTERPOL, OECD and UNODC.

The full text of the submissions received has been made available on the [G20 Anti-Corruption Resources website hosted by UNODC](#).

4.2.2. Frameworks, Achievements and Good Practices

This section of the report highlights the achievements, good practices and challenges of the G20 ACWG in their implementation of the 2021 [High-Level Principles on Tackling Corruption in Sport](#). The section is structured principle by principle and is followed by a section arising out of this analysis which presents possible ways forward on how to further enhance G20 members' responses to corruption in sport.

Principle 1:

“Gather information to develop an evidence-based understanding of and raise awareness on corruption in sport”

A comprehensive, evidence-based understanding of the nature, scale, scope and risks of multifaceted corruption in sport is key to the successful development and implementation of effective measures to tackle this problem. This also safeguards sport's positive contribution to the Sustainable Development Goals.

In addition to competition manipulation and illegal betting, corruption and other crimes that impact on sport include those linked to the transfer of athletes, the ownership and administration of sports organizations and the organization of sports events. Forms of misconduct found in sports include fraud, bribery, abuse of authority and money-laundering, often facilitated by conflicts of interest. Anecdotal evidence and media reports indicate that systems used for the transfer of athletes are also vulnerable to corruption and other criminal conduct. Specific phenomena linked to the transfer of athletes include illicit financial flows, including money-laundering, hiding or disguising beneficial ownership, involvement of organized criminal groups and trafficking in persons.

This raises questions about the involvement of organized criminal groups in sport, as well as the governance of sports organizations at municipal, national, regional and global levels. Often, there is limited knowledge and understanding of these threats on the side of law enforcement and criminal justice authorities, as well as limited awareness of how existing legal frameworks and anti-corruption regime can be applied to sports to effectively tackle corruption.

The below analysis of the responses received shows that more work is required by the G20 ACWG to understand the scale, scope and manifestations of corruption in sport at different levels and to implement or adapt measures to address the negative economic and societal consequences of corruption in sport more effectively, and in particular their impact on youth.

Table 4. Overview of responses relevant to the implementation of Principle 1

Measure Undertaken	Number of G20 Members
Research conducted on corruption in sport ¹⁷	19
Results of research made publicly available ¹⁸	18
Awareness-raising campaigns ¹⁹	18

Research and studies are crucial to inform the development and implementation of evidence-based initiatives which are effective in tackling corruption in sport. Through their adoption of the High Level Principles on Tackling Corruption in Sport, ACWG members agreed to encourage the collection and analysis of information to better understand the specific risks associated with corruption in this sector and to make this information publicly available and widely disseminated. As indicated in Table 4, 19 of the G20 members indicated that they had conducted research and studies with a specific focus on corruption linked to sport themselves, or supported research and studies undertaken by academia, international organizations and others, including the private sector.

There is no uniform approach to developing research and studies on corruption linked to sport. As the responses highlight, a wide range of stakeholders, including from national authorities, academia, the private sector and civil society were involved. Law enforcement and sport integrity agencies in Australia, and national authorities in Germany, Italy, Spain and the United Kingdom as well as sports-related public authorities in Indonesia and Mexico conducted research and studies. Relevant research and studies were also undertaken by academia in the case of Türkiye and Saudi Arabia, the private sector in the United States and civil society organizations in Spain.

The reported research and studies cover a wide range of topics. The Australian Criminal Intelligence Commission (ACIC), in partnership with Sport Integrity Australia (SIA), developed knowledge products on the involvement of organized crime in Australian sport and related sport activities, such as betting. The Republic of Korea reported conducting a survey of athletes with disabilities which included a section on “economic human rights violations” (e.g. bribery, embezzlement) in the survey. In Italy, the Department of Sport conducted research on match-fixing within the European project “Stop Match-Fixing Italia” in partnership with the Catholic University. The Italian International Institute Study Sport Society conducted qualitative research on match-fixing. International organizations have also developed research, generally involving several jurisdictions and topics, such as the OECD report on Mitigating Corruption Risks in the Procurement of Sporting Events and the 2021 UNODC [Global Report on Corruption in Sport](#).

¹⁷ Australia, China, European Union, France, Germany, Indonesia, Italy, Mexico, Netherlands, Republic of Korea, Russia, Saudi Arabia, Spain, Türkiye, United Kingdom, United States, INTERPOL, OECD, and UNODC

¹⁸ Australia, China, European Union, France, Germany, Indonesia, Italy, Mexico, Netherlands, Republic of Korea, Russia, Saudi Arabia, Spain, Türkiye, United Kingdom, INTERPOL, OECD, and UNODC

¹⁹ Australia, Brazil, China, European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Spain, Türkiye, United Kingdom, INTERPOL, and UNODC.

Most of the research and studies cited were over three years old, which in the context of a fast-moving sector such as sport, may make results outdated for the development of measures.

As highlighted in Table 4, 18 of the G20 members also indicated in their responses that they had taken measures or implemented campaigns to raise public awareness of the importance of tackling corruption in sport and promoting the active participation of the private sector, academia, civil society, youth, and the media in the prevention of and fight against corruption in sport. In addition to the use of websites, the important role of social media to raise public awareness of corruption in sport was highlighted by Australia, the Republic of Korea, INTERPOL and UNODC. Japan, Russia, Saudi Arabia, Spain, the United States and UNODC underscored the value of developing partnerships with relevant sports organizations, linked to major sports events, to enhance communication, and to effectively develop media campaigns drawing attention to the problem of corruption in sport. Brazil and Türkiye noted that specialized regulations and parliamentary inquiries were also effective in this regard. Australia, Italy, INTERPOL and UNODC attached particular importance to specialized training, education, and capacity-building workshops to develop comprehensive, evidence-based understanding of the nature, scale, scope, manifestations and risks of corruption in sport at national, regional and international levels.

Principle 2:

“Strengthen legal and regulatory frameworks to address corruption in sport more effectively”

Protecting sport from corruption requires adequate legislation, regulations and enforcement thereof.

Sound legal and regulatory frameworks are important to effectively tackle the different manifestations of corruption in sport, protect youth and vulnerable groups from its negative impact and ensure sport’s positive role in economic and social development. This importance underscores Principle 2 and the commitment to criminalize corruption offences in sports, enforce relevant legislation and develop and implement effective strategies.

The responses of the G20 ACWG members showed that, while laws are in place to address corruption in sport, their implementation may be limited given the small number of relevant adjudicated cases which were reported. This suggests that corruption in sport remains a low-risk, high-reward activity for those seeking to exploit sport for illicit gain.

Table 5. Overview of responses relevant to the implementation of Principle 2

Measure Undertaken	Number of G20 Members
Relevant UNCAC offences criminalized and enforced ²⁰	19
Specific laws against manipulation of competitions and/or illegal betting ²¹	18
Strategies, policies or practices to tackle corruption in sports ²²	18

Most countries indicated that they have criminalized bribery and other forms of corruption in line with the UNCAC. Most countries also indicated that they had enacted laws against sport-specific or sport-related corruption, such as competition manipulation and illegal betting. This specific criminalization by many countries of the manipulation of sport competitions is in line with a global trend that has recently been identified²³ The existence of specific offences relating to the manipulation of sports competitions can contribute to more effective prevention, investigation, prosecution and sanctioning of manipulation of sports competitions and international cooperation in cross-border cases.

Moreover, ACWG countries reported that, even in the absence of specific legal provisions related to the varying corrupt practices in sport, general anti-corruption provisions, anti-bribery laws and anti-fraud legislation can be applied to cases involving corruption in sport (this is the case in Australia, Brazil, China, France, Germany, Indonesia, Italy, Japan, Mexico, Netherlands, Russia, Spain, Saudi Arabia, South Africa, Türkiye and the United Kingdom). The legal frameworks vary, and in Russia, for example, there is criminal liability for the manipulation of sports competitions, while in China and Spain, other criminal provisions against corruption are applied in the context of sport. Limited information was provided on the implementation of laws or the effectiveness and/or challenges of using general anti-corruption, anti-bribery and anti-fraud legislation to prosecute corruption in sport.²⁴

Australia, Indonesia, Mexico, Russia and Spain also referred to laws that either make gambling illegal or, where gambling is legal, make it illegal if done outside of a regulated environment. In Mexico, there are sanctions on players and spectators who attend a venue

²⁰ Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Netherlands, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and the United States.

²¹ Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and the United States.

²² Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Mexico, Netherlands, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and the United States.

²³ The 45 jurisdictions that criminalize this act, as identified in the 2021 UNODC-IOC publication [Legal Approaches to Tackling the Manipulation of Sports Competitions – A Resource Guide](#) are: Albania, Algeria, Argentina, Armenia, Australia, Azerbaijan, Brazil, Bulgaria, China, Cyprus, Denmark, El Salvador, France, Georgia, Germany, Greece, Hungary, Israel, Italy, Japan, Kyrgyzstan, Latvia, Lithuania, Malta, Namibia, New Zealand, North Macedonia, Paraguay, Philippines, Poland, Portugal, Republic of Korea, Republic of Moldova, Russian Federation, San Marino, Slovakia, South Africa, Spain, Sri Lanka, Sweden, Switzerland, Türkiye, Ukraine, United States and Uruguay.

²⁴ South Africa reported two cases where convictions were made for match-fixing. Spain also reported an operation it carried out by its security forces to dismantle a criminal network dedicated to bribing professional tennis players and match fixing.

where gambling is carried out illegally, as well as, on owners, organizers, managers or administrators of the house or premises, open or closed, in which prohibited games or bets are carried out.

In terms of national responses related to the development, use and application of strategies, policies or practices to tackle corruption in sports, Australia, Brazil, France, Indonesia, Italy, Mexico, South Africa and the United States noted that tackling corruption in sport was part of a broader national anti-corruption strategy, policy or practice. Saudi Arabia and the United Kingdom had specific sports related anti-corruption strategies in place. Specifically, in Saudi Arabia, the Ministry of Sport announced several updates and amendments to its strategy, including a greater use of technology, to achieve increased transparency in the governance of sports clubs.

It should be noted that there is no “one-size-fits-all” approach to the development of strategies, policies or practices effective to tackle corruption in sport. The ACWG members recognized this as an area that the Group should explore further.

Principle 3:

“Ensure effective law enforcement against corruption in sport”

Protecting sport from corruption at the international, regional, national and local levels requires specific competencies and expertise, as well as developing and implementing detection and reporting mechanisms.

Corruption in sport is often complex, transnational in nature and involves the use of modern technologies. Therefore, when appropriate, a variety of innovative methods should be used to prevent, detect, investigate and prosecute it. It is also essential that law enforcement officials and anti-corruption authorities are provided with tailored training and that whistle-blowers are encouraged and enabled to report suspicious information to authorities.

The responses revealed a trend towards developing specialized bodies to tackle corruption in sport. Specialized units have been developed within law enforcement agencies in Australia, France and the United States. In France, cases relating to corruption in sports are handled by the National Financial Prosecutor's Office and specialized investigating judges. The existence of a specialized judiciary has proved to be effective and has resulted in numerous successful prosecutions. The Republic of Korea has developed an entity focused on education and awareness-raising of corruption in sports, while Australia has a central body (Sport Integrity Australia) for policy development, intelligence, investigations (primarily of doping cases), education, outreach and capability building in relation to sport integrity. These bodies, although they have varied mandates, are each specialized in corruption specifically in sports, which illustrates a trend towards dedicated responses to the complex and specific corruption risks that arise in sport.

Several ACWG countries – such as Australia, China, Germany, Indonesia, Saudi Arabia, South Africa, Spain, the United Kingdom and the United States – reported incorporating corruption in sport into the training of law enforcement and/or anti-corruption authorities. In Germany, the Federal Criminal Police Office implements police training programmes focused

on anti-corruption. Such courses and related seminars are open to both police staff of the constituent states and the Federal Police. These courses also include dedicated presentations on the manipulation of sports competitions. Moreover, trainings for the police in the constituents' states are held on this topic. Spain similarly organizes a yearly course on the investigation of economic crimes for its Judicial Police (Economic Crime Groups), in which relevant officials, specialized lawyers and judges instruct agents and units of the Judicial Police and provide them with resources and support to investigate corruption in sport cases.

In terms of the types of training delivered, the responses received highlighted that training focused predominantly on the development of reporting mechanisms in sport, tackling competition manipulation, enhancing collaboration between criminal justice authorities and sports organizations and strengthening legislative and regulatory frameworks to tackle corruption in sport. Australia, Italy, the Republic of Korea and Saudi Arabia highlighted that such training was often delivered as part of a general package of measures to strengthen integrity in sport.

G20 ACWG members also organized and supported conferences to promote the exchange of information and good practices at the national level (Australia, Brazil, Italy, Indonesia, Germany, Mexico, Spain and UNODC); at regional levels (INTERPOL and UNODC); and at the international level (Russia, OECD and UNODC). For example, Australia hosted multiple conferences for law enforcement agencies and Sport Integrity Australia to enhance coordination of collection, analysis and dissemination of information and intelligence in relation to sport integrity threats.

Table 6. Overview of the reported types of training provided by G20 ACWG members for law enforcement officials, corruption prevention and criminal justice authorities on preventing, detecting, investigating and prosecuting corruption in sport

Measure Undertaken	Number of G20 Members
Anti-corruption training not specific to sport ²⁵	8
Specific training on addressing corruption in sport for law enforcement and/or criminal justice authorities ²⁶	20
Preventive and/or awareness-raising activities aimed at sport organizations and/or educators ²⁷	6
Anti-doping training ²⁸	5

²⁵ Brazil, France, Germany, India, Japan, Mexico, Russia, and Saudi Arabia.

²⁶ Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Mexico, Netherlands, Republic of Korea, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States, INTERPOL, OECD, and UNODC.

²⁷ Australia, France, Republic of Korea, Saudi Arabia, Türkiye, and the United Kingdom.

²⁸ Australia, Brazil, France, Italy, and the United Kingdom.

Reporting persons or “whistle-blowers” play a key role in the prevention and detection of corruption in sport. The responses received highlighted that reporting mechanisms have been or are being implemented by national authorities as well as by sports organizations.

Legal frameworks established in many ACWG countries provide accessible mechanisms for the reporting of allegations of corruption more broadly. However, in some cases, additional efforts have been made to facilitate the reporting of corruption specific to the sport sector. Sport Integrity Australia (SIA) offers a reporting function where sports participants can make reports, including anonymously. Similarly, the Saudi Football Association, in cooperation with Sportradar, launched the SAFF Integrity Application that allows players, administrators and fans to report suspicious cases.

In some cases, the reporting mechanisms in sport are issue-specific, such as the anti-competition manipulation reporting mechanisms found in France and the United Kingdom. Of note is the establishment of reporting mechanisms by sport organizations or by independent entities such as betting operators to facilitate the reporting on instances of competition manipulation and illegal betting. Such mechanisms exist in Australia, France, Germany, Italy, Spain and the United Kingdom.

Apart from sport-specific reporting mechanisms, multiple platforms to report concerns around competition manipulation and betting more generally exist among G20 ACWG members. In Spain, the Sports Betting System Alert System (SIGMA), managed by the Directorate General for the Regulation of Gambling of the Ministry of Consumer Affairs, allows members of the system to share information and provides a network for the sports sector, law enforcement and criminal justice authorities, and gambling operators. In the United Kingdom, a number of sports bodies have whistle-blower hotlines for their participants to report concerns regarding suspected corruption in sport. The Gambling Commission Sports Betting Intelligence Unit, set up in 2009, also operates a [confidential reporting hotline](#) that allows people to report concerns around match-fixing and sports betting integrity.

While G20 members highlighted several platforms for reporting corruption, further information would be needed on the number and nature of complaints, their outcomes and whether they led to detection or prosecution to assess their effectiveness. Strengthening and improving mechanisms to report corruption in sport should remain on the agenda of the G20 ACWG.

Table 7. Overview of answers relevant to Principle 3

Measure Undertaken	Number of G20 Members
Mechanisms for the reporting of corruption ²⁹	16
Mechanisms to protect reporting persons ³⁰	17
Reporting mechanisms established by sports organizations ³¹	5

²⁹ Australia, Brazil, France, Germany, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and the United States.

³⁰ Australia, Brazil, China, France, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and the United States.

³¹ Australia, Brazil, Russia, Saudi Arabia, and United Kingdom.

It is critical that those who report wrongdoing are given protection. In this regard, 16 members of the G20 ACWG stated that legal frameworks existed to protect reporting persons, which also applied to those persons reporting corruption in sport. The Republic of Korea highlighted that, as of September 2020, those who report corruption in sport to the Sports Ethics Centre will be legally protected under the Public Interest Whistleblower Protection Act. Confidentiality of reporting corruption in sport is provided for in Australia, Brazil, China, France, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye and the United States.

Improving the protection of reporting persons is another topic that the G20 ACWG should continue to explore, recognizing the greater attention paid to integrity in sports and the protection of athletes, including children and young athletes. In recognition of this, almost all G20 ACWG members reported that they encourage sports organizations to establish reporting mechanisms. Lessons learned on the effectiveness of reporting mechanisms should be shared among members of the G20 ACWG, for example as part of collective action toward the implementation of the 2019 [G20 High-Level Principles for the Effective Protection of Whistleblowers](#).

Principle 4:

“Strengthen international cooperation among law enforcement, criminal justice and corruption prevention authorities, as well as lawmakers and policymakers, to effectively tackle corruption in sport”

Given the international, regional and national manifestations of corruption in sport, it is essential to enhance cooperation and coordination mechanisms among law enforcement, criminal justice and other relevant authorities.

Corruption in sport is a transnational phenomenon that requires coordinated action across borders to prevent wrongdoing, investigate offences and prosecute offenders. It is also crucial to build effective cooperation between sports representatives and relevant law enforcement authorities, as well as to enhance cooperation between local and international sports organizations. A multi-stakeholder approach is key to the effective fight against corruption in sport. In recent years, there has been a significant increase in the number of international and regional initiatives to help law enforcement authorities and sports organizations to share information and enhance cooperation.

In recognition of this, G20 ACWG members stated that they supported programmes, projects, task forces, expert groups and/or other existing initiatives that promote and enhance cooperation and the exchange of information and good practices among law enforcement, criminal justice authorities and corruption prevention authorities, lawmakers and policymakers.

In particular, they noted their support for the following initiatives:

- [Network of National Platforms](#) (Group of Copenhagen/GoC established under the Convention against the Manipulation of Sports Competitions, also known as the 'Macolin Convention')
- [INTERPOL Match-Fixing Task Force \(IMFTF\)](#)
- [International Partnership Against Corruption in Sport \(IPACS\)](#)
- International Olympic Committee (IOC) Integrity Sports International Forum
- [OECD Global Network of Law Enforcement Practitioners against Transnational Bribery \(GLEN\)](#)
- UNODC Global Operational Network of Anti-Corruption Law Enforcement Authorities ([GlobE Network](#)) and UNODC [Programme on Safeguarding Sport from Corruption and Crime](#)

Countries also reported engaging with processes and initiatives developed by the Council of Europe, the European Union Agency for Law Enforcement Cooperation, the European Anti-Fraud Office and the European Union for Intellectual Property.

While a variety of mechanisms for international anti-corruption cooperation were reported, further information would be needed to indicate how often these mechanisms were used to exchange information on cases of corruption in sports.

Table 8. Overview of support provided by G20 ACWG members to relevant programmes, projects, task forces, expert groups and/or other existing initiatives

Measure Undertaken	Number of G20 Members
Group of Copenhagen/GoC ³²	9
INTERPOL Match-Fixing Task Force (IMFTF) ³³	19
IPACS ³⁴	14
OECD GLEN ³⁵	15
UNODC GlobE Network ³⁶	15

³² Australia, France, Germany, Italy, Netherlands, Spain, Switzerland, United Kingdom, and the United States.

³³ Australia, Brazil, France, Germany, India, Indonesia, Italy, Japan, Netherlands, Republic of Korea, Russia, South Africa, Spain, Switzerland, Türkiye, United Kingdom, United States, INTERPOL, and UNODC

³⁴ Australia, Brazil, France, Germany, Italy, Japan, Saudi Arabia, Spain, Switzerland, Türkiye, United Kingdom, United States, OECD, and UNODC.

³⁵ Australia, Brazil, France, Germany, India, Indonesia, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, United Kingdom, United States, and OECD.

³⁶ Brazil, China, India, Indonesia, Mexico, Netherlands, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, United States, and UNODC.

Measure Undertaken	Number of G20 Members
UNODC Programme on Safeguarding Sport from Corruption and Crime ³⁷	20

The majority of G20 ACWG countries also reported that focal points for international cooperation were appointed. Most of these are focal points for general corruption cases and not specifically related to corruption in sport. For example, in China, the International Cooperation Department of the Central Commission for Discipline Inspection (CCDI) and the National Commission of Supervision (NCS) are responsible for international anti-corruption cooperation.

However, it is reported that some countries such as the Netherlands, which has a specialized prosecutor for fraud in sport, also have specialized focal points or authorities or are in the process of establishing them. Such specialized focus points could enhance the effectiveness of domestic and international cooperation. Spain also takes the approach of using one single focal point to facilitate cooperation: The Chief of the Anti-corruption Section in the Criminal Intelligence Unit of the Guardia Civil acts as the focal point of this security body for the INTERPOL Competition Manipulation Task Force, the UNODC GlobE Network, and the Analysis Project (AP) on corruption of Europol.

Principle 5

“Tackle corruption in sport related to organized crime”

The infiltration of organized criminal groups can exacerbate corruption in sport. G20 countries should tackle the potential exploitation of sport by criminal groups that use it for money-laundering, illicit gains and other illegal acts linked to corruption within the framework of sport integrity as a whole.

Reports produced by UNODC³⁸ and Europol³⁹ have highlighted the influence and serious threat posed by criminal organizations to the social and economic role of sport. Organized criminal groups use corruption to facilitate their infiltration of sport. This enables them to exploit and manipulate sport in both amateur and professional environments and to generate illicit profits, project power and influence at local, national, regional, and global levels.

The involvement of organized criminal groups in sport is widespread and takes place on a global scale. It is linked to competition manipulation, corruption in sports organizations, illegal betting, money-laundering, human trafficking and smuggling of migrant athletes and other sports-related corrupt activities. Greater information and knowledge are required to

³⁷ Australia, Brazil, China, European Union, France, Germany, India, Indonesia, Italy, Japan, Mexico, Netherlands, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Switzerland, Türkiye, United Kingdom, United States, INTERPOL, OECD, and UNODC.

³⁸ <https://www.unodc.org/unodc/en/safeguardingsport/grcs/section-6.html>.

³⁹ <https://www.europol.europa.eu/publications-events/publications/involvement-of-organised-crime-groups-in-sports-corruption>.

understand the threat posed by organized crime in the context of sport; to develop effective policies, mechanisms and initiatives to effectively address its challenges; and to allocate the necessary resources to implement the necessary actions. The involvement of organized criminal groups in sport and their use of corruption is a growing area of concern and should remain on the agenda of the G20 ACWG, also in light of the Group's focus on the links between corruption and organized crime as well as on corruption measurement. In this area, the ACWG is in a unique position to combine existing work streams with a view to gaining a deeper understanding.

Table 9. Overview of measures taken by G20 ACWG members to enhance cooperation to monitor trends, types and reports to identify good practices aimed at tackling and addressing the threats posed by organized criminal groups to sport

Measures Undertaken	Number of G20 Members
Partner with national law enforcement to gather data ⁴⁰	12
Work with academic institutions to build an evidence base ⁴¹	4
Exchange information with the private sector ⁴²	7

13 G20 ACWG members⁴³ reported taking measures aimed at tackling and addressing the threats posed by organized crime to sport. While there is a lack of comprehensive data on the role and impact of organized criminal groups in sport, some ACWG countries have taken measures to gather such data.

12 G20 members⁴⁴ cited collaboration among national law enforcement authorities to gather more systemic data on the threats posed by organized crime to sport. Italy identified the lack of a systematic collection of data as a key challenge to the efforts to counter the involvement of organized crime in sport.

Partnerships with academia, statistical institutions and the private sector are important to improve data-gathering efforts. An overview of the key measures taken by the G20 ACWG (see Table 10 below) highlights that only, Australia, INTERPOL and UNODC, were working with academic institutions to build an evidence base. In partnering with academia, the Australian Criminal Intelligence Commission (ACIC) works closely with the Australian Institute of Criminology to conduct research and build an evidence base informing policy and practice

⁴⁰ Australia, China, France, Germany, India, Italy, Netherlands, Spain, Türkiye, United Kingdom, United States, and UNODC.

⁴¹ Australia, France, INTERPOL, and UNODC.

⁴² Australia, France, Netherlands, Spain, United Kingdom, United States, and UNODC. Please also note that while this question was not specifically asked in the questionnaire, it was highlighted by number of G20 members in their responses to the questionnaire.

⁴³ Australia, China, France, Germany, India, Italy, Netherlands, Spain, Türkiye, United Kingdom, United States, INTERPOL, and UNODC.

⁴⁴ Australia, China, France, Germany, India, Italy, Netherlands, Spain, Türkiye, United Kingdom, United States, and UNODC

to counter crime. Only five G20 members (the Netherlands, Spain, the UK, the United States and UNODC) cited working with the private sector to exchange information. The [UNODC Global Report on Corruption in Sport](#) presents an overview of global trends of organized crime in sport. It highlights examples from around the world and presents conclusions and policy considerations on how to tackle this problem through partnerships, including governments, sports organizations, academia and the private sector.

While the involvement of organized crime in sport is a concern for the members of the G20 ACWG, the responses show an infrequent and low number of risk assessments, studies and monitoring of trends linked to organized crime and money-laundering in sport, as highlighted in Table 10 below. High-quality and regular research is key to the effectiveness of measures to tackle the infiltration and exploitation of sports by organized criminal groups.

A corruption risk assessment is a methodology that can be used to identify and address vulnerabilities, such as those which can be exploited by organized criminal groups using corruption to infiltrate the sport sector. Once identified, risks⁴⁵ can be prioritized, and measures, policies and resources can be developed and allocated to better tackle the use of corruption by organized crime to infiltrate sport, make illicit profit or launder proceeds of crime.

Responses to the questionnaire show that 12 G20 members have implemented measures to map the potential risks of corruption in sport related to organized criminal groups and money-laundering, as outlined in Table 10 below. France has started a risk mapping exercise on corruption in sport related to organized crime and money-laundering based on court decisions and investigations led by law enforcement authorities. The Federal Bureau for Investigations and the Department of Justice in the United States work closely with the private sector, state-level and local law enforcement authorities and gaming regulators to monitor trends and develop responses. Due to its sensitive nature, however, this information is not public.

International organizations have also taken action in this area. [The UNODC Programme on Safeguarding Sport from Corruption and Crime](#), an integral part of the UNODC Global Programme against Corruption, supports Governments, sport organizations and relevant stakeholders to tackle corruption and crime in sport. Numerous resources⁴⁶ have been produced under this programme, [and are freely available](#) online, including the [UNODC Global Report on Corruption in Sport](#). [The report](#) highlights the changing landscape of sport and its relation to corrupt practices, the existing initiatives to tackle the problem, issues related to detecting and reporting wrongdoing, as well as how existing legal frameworks can be applied to address corruption within this area. It offers a roadmap to effectively tackle the issue of crime and corruption in sports, and also sets out policy considerations to help address these issues. INTERPOL, through its media monitoring project, collects data on the potential risks of corruption in sport related to organized crime and money-laundering. The INTERPOL Match-Fixing Task Force (IMFTF) brings together law enforcement agencies from around the world to tackle match-fixing and corruption in sport.

⁴⁵ For examples of relevant risks, please see https://www.unodc.org/documents/Safeguardingsport/Documents/COVID-19_and_Anti-Corruption_FINAL_VERSION_3.pdf.

Table 10. Overview of reported measures taken by G20 ACWG members to map the potential risks of corruption in sport related to organized crime and money-laundering

Measures Undertaken		Number of G20 Members
Measures conducted to map risks of corruption in sport linked to organized crime ⁴⁷		12
Types of Measures Taken	Risk assessments ⁴⁸	5
	Studies ⁴⁹	6
	Monitoring trends and typologies ⁵⁰	5

Principle 6:

“Support sports organizations to enhance governance, transparency and accountability and ensure the integrity of major sports events, including associated procurement”

Major sports events have become an integral part of modern society. Given that members of the G20 ACWG will host major sports events in the coming years, there is a clear interest in enhancing governance, transparency and accountability and in developing effective measures to tackle some of the unique risks of corruption associated with major events. For example, the 2026 FIFA World Cup will be co-hosted by Canada, Mexico and the United States, and France will host the Olympic Summer Games in 2024.

There are four stages⁵¹ that can be identified in the preparation and delivery of major sports events: (1) conceptualization, (2) planning and implementation, (3) legacy ownership transfer (that takes place immediately after a major sports event) and, (4) post-event operations and governance. Although all these stages are vulnerable to different forms of corruption, the responses to the questionnaire did not provide examples of the types of risks prominent in the different jurisdictions. In general, examples of such risks include the manipulation of host selection processes, financial kick-back schemes involving the use of public funds in the development of event-related infrastructure, conflicts of interest involving international sports organizations, reselling of event tickets by event organizers for personal gain, and corruption linked to sponsorship opportunities and the acquisition of media rights.

⁴⁷ Australia, Brazil, China, France, Germany, India, Italy, Netherlands, Spain, Türkiye, United Kingdom, and UNODC.

⁴⁸ Australia, Brazil, France, Italy, and the United Kingdom.

⁴⁹ Australia, Brazil, China, Germany, Spain, and UNODC.

⁵⁰ Australia, Brazil, France, Spain, and UNODC.

⁵¹ [UNODC Global Report on Corruption in Sport, pp 278.](#)

The G20 ACWG responses identified different legal frameworks and anti-corruption measures related to the governance of major sports events (see Table 11 below). While it is important to have tailored legal frameworks and anti-corruption measures in place to enhance governance and ensure the integrity of major sports events, enforcement of such frameworks and measures is often a challenge. The ACWG countries adopted different types of measures to enhance implementation and enforcement, including compliance audits, public funding criteria linked to the adherence to legal measures, reporting requirements and training (see Table 11 below). The most cited measure was compliance audits with 15 ACWG countries using this measure (see Table 11 below), public funding criteria linked to the adherence to legal measures was indicated by 5 countries and anti-corruption training was cited by 4 countries.

In Brazil, the General Law on Sports requires adherence to transparency and governance rules of sports organizations as a condition for the eligibility for public funding. As part of this, sports organizations are required to publish financial and contracting information, adopt mandatory internal control and transparency mechanisms, establish social control instruments that are subject to independent auditing, and prevent nepotism and conflict of interest. The Republic of Korea conducts sports event site monitoring and sports ethics enhancement campaigns through face-to-face activities. This includes visits by the responsible authorities to summer camp and regular training sites, facility inspections, lodging inspections and consultations with athletes and instructors.

Table 11. Overview of G20 ACWG responses on the existence of relevant legal frameworks and the types of anti-corruption measures related to governance and major sports events

Measures Undertaken		Number of G20 Members
Legal measures in place ⁵²		14
Types of Measures Taken	Compliance audits ⁵³	15
	Public funding criteria ⁵⁴	5
	Reporting requirements ⁵⁵	2
	Training ⁵⁶	4

⁵² Australia, Brazil, China, Germany, India, Italy, Mexico, Netherlands, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and the United States.

⁵³ Australia, Brazil, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, Spain, and Türkiye.

⁵⁴ Australia, Brazil, Germany, Mexico, and the United Kingdom.

⁵⁵ Australia, and Brazil.

⁵⁶ France, Republic of Korea, Russia, and Saudi Arabia.

Facilitating inter-agency cooperation is important to promoting the exchange of information and coordination between relevant authorities that play a role in preventing and countering corruption, in particular anti-corruption, law enforcement and criminal justice authorities. Cooperation between sports governing bodies and sports betting entities is also essential to effectively prevent and detect corruption in sport. G20 members recognized the importance of national cooperation and identified its promotion as a priority to better prevent corruption in sport.

15 G20 ACWG members⁵⁷ have implemented measures to promote trust and cooperation among sports organizations, law enforcement, criminal justice and corruption prevention authorities to effectively prevent and detect corruption in sport.

While the majority of ACWG countries cited the use of different mechanisms to facilitate cooperation, they also noted limited engagement with and by stakeholders from the sports sector, which is a significant impediment to the effective use of measures developed to prevent, detect, investigate and prosecute instances of corruption in sport. As reflected in the response submitted by Mexico, “while defined strategies are being implemented at the level of public institutions, effectiveness of this is impacted because the requirements are not mandatory for sports associations which are key stakeholders”.

The G20 ACWG should consider supporting national, regional and global initiatives aimed at enhancing collaboration and the exchange of information between criminal justice authorities and sports organizations in the fight against corruption in sport.

9 members of the G20 ACWG⁵⁸ cited in their responses that they have measures in place to regulate professional activities of agents, intermediaries, advisers and representatives of athletes and the transfer of athletes between clubs, associations and sports organizations to prevent corrupt conduct and unethical behaviour. In Brazil, the transfer of athletes and activities of intermediaries are regulated by the general law on sports. Additionally, Brazil has enacted legislation with the aim of enhancing the management of football clubs and their implementation on fiscal responsibility. In Spain, even if law enforcement agencies do not carry out activities specifically addressed at agents, representatives or intermediaries, constant vigilance of potential corruption in particular as regards football led to the so-called “Operation Lanigan”, whereby Spanish authorities charged a powerful agent and several of his/her associates for arranging fictitious transfers of players with the aim of making their ultimate transfer to a big team more expensive and earning substantial commissions in the process. In the United Kingdom, certain individual sports governing bodies provide a regulatory framework and require individuals and companies wishing to act as agents or intermediaries to be registered, for example, rugby and football. However, effective regulation in this area remains a challenge because, as highlighted in some of the responses, such activities of professionals within sports organizations are predominantly the responsibility of sports organizations themselves to address through their internal policies. There is a need for states to maintain oversight to ensure that this autonomy is not abused, and that all actors involved in sport are held to the highest standards of ethical behaviour.

⁵⁷ Australia, China, France, Germany, India, Japan, Mexico, Republic of Korea, Russia, Saudi Arabia, South Africa, Spain, Türkiye, United Kingdom, and United States.

⁵⁸ Australia, Brazil, China, India, Italy, Saudi Arabia, South Africa, Spain, and the United Kingdom

5. Conclusion

5.1 Countering Corruption in Customs

The global effort to control the risk of corruption in customs administrations has been a focus for G20 countries since the adoption of the [High-Level Principles on Countering Corruption in Customs](#) in 2017. This G20 ACWG Accountability Report reveals the extent of the progress made by G20 countries since that commitment was made.

Various mechanisms for both preventing and combating corruption in customs administrations continue to be developed through regulations, procedures and guidelines, assessment tools and the designation of dedicated compliance units or persons. Appropriate integrity standards are in place to encourage high standards of conduct, good governance, and adherence to public service values. G20 countries continue to improve the integrity of customs officials by disseminating policies, providing awareness training, adopting codes of conduct, and applying appropriate sanctions in respect of violations.

In general, the G20 countries allocate sufficient resources, both human and financial, to their customs administrations. In addition, the use of technology continues to be expanded, with automation helping to speed up customs processes, reduce the level of human error, and minimize the potential for corruption arising from direct contact between customs officials and customs users.

The application of ICT has also helped to ensure the smooth operation of customs processes during the COVID-19 pandemic. Transparent and effective innovations were adopted to simplify and expedite the clearance process, and to minimize physical or social contact. Some of the procedures that were developed during the pandemic continue to be applied, notwithstanding that the situation has already returned to normal in many G20 countries.

Most G20 countries are also working to actively improve their strategies to prevent, detect and reduce corruption in customs, including by implementing appropriate monitoring and control mechanisms, such as internal and external auditing, and have made significant efforts to promote open, transparent and productive cooperation between customs administrations and the private sector.

Considering that customs processes often involve cross-border trade, it is important that international standards be developed and implemented. For this reason, G20 countries continually strive to improve the regulatory standards applicable in their respective countries by ratifying and adopting international standards, including those developed by the WCO, or regional standards such as those applied by the EU. In addition, many G20 countries participate in international forums that allow them to share experiences and good practices, and also collaborate in capacity building activities, such as training and seminars.

5.1.1 Possible ways forward for the G20

To continue the efforts to counter corruption in customs, G20 countries may wish to consider taking further steps that include:

- Facilitating the G20 ACWG future agenda on countering corruption in customs, and conducting exchange sessions where G20 countries can share good practices and establish collaboration and partnerships;
- Strengthening collaboration between customs administrations and both the public and private sectors by developing more open, transparent, and productive relationships, including collaboration for the implementation of the WTO Trade Facilitation Agreement;
- Taking measures to allocate adequate resources to effectively identify, prevent, and counter corruption in customs;
- Enhancing the use of ICT for customs administration by adopting technologies replacing paper-based customs procedures with electronic operations in order to create more efficient and transparent customs processes;
- Improving G20 countries efforts to ensure appropriate follow-up on reports of wrongdoing in customs administrations;
- Supporting capacity development programs for customs administrations so as to enhance compliance with international standards, including those developed by the WCO; and
- Enhancing efforts to map potential risks of corruption in customs related to organized crime and money laundering.

5.2 Tackling Corruption in Sport

The risk of corruption has grown alongside the globalization of sport. While the evolution of sport has been positive in many respects, it has also brought with it complex sport-specific corruption risks. Corruption in sport is multifaceted, continually evolving and shaped by a wide range of actors in both the public and private sectors. Therefore, to effectively tackle corruption in sport, there is a clear need to involve all relevant stakeholders, including governments, sports organizations, private sector sports entities, civil society and others. Cooperation and coordination are fundamental so that knowledge can be shared and capacity strengthened with a view to developing and implementing comprehensive and integrated anti-corruption strategies. The legal instruments developed globally, primarily the UNCAC, can also be used to promote and develop anti-corruption policies in the sports sector, in accordance with applicable domestic law.

Public authorities have only recently displayed interest in establishing regulations against corruption in sport. Of particular concern is the strategy of infiltrating organizations that is used by organized criminal groups to target sports entities. Corruption in sport, however, cannot be considered as a purely exogenous threat. What has also attracted public scrutiny is the reach, scale and complexity of criminal networks within sport. Governance in sports organizations is therefore a key area for countries to regulate in order to ensure that sport autonomy is not abused.

Tackling corruption in sport is a stated priority of the G20 ACWG. Given the challenges faced in this regard, the Group should devote more time, efforts and resources in order to better

understand the unique challenges posed by this manifestation of corruption, and to support national, regional and global responses. Further research and analysis are necessary to inform evidence-based policies and implement initiatives to support the prevention, detection, investigation and prosecution of corruption in sport. As countries recover from the COVID-19 pandemic, sports activities and sporting events will increase. The G20 countries represent the world's largest economies and, especially as the hosts of major sports events, have a significant role to play in preventing and countering corruption in the sport ecosystem in their jurisdictions. The challenges of corruption in sport are surmountable but require significant political commitment, cooperation, coordination and effective implementation of measures that are based on identified risks, evidence and good practices.

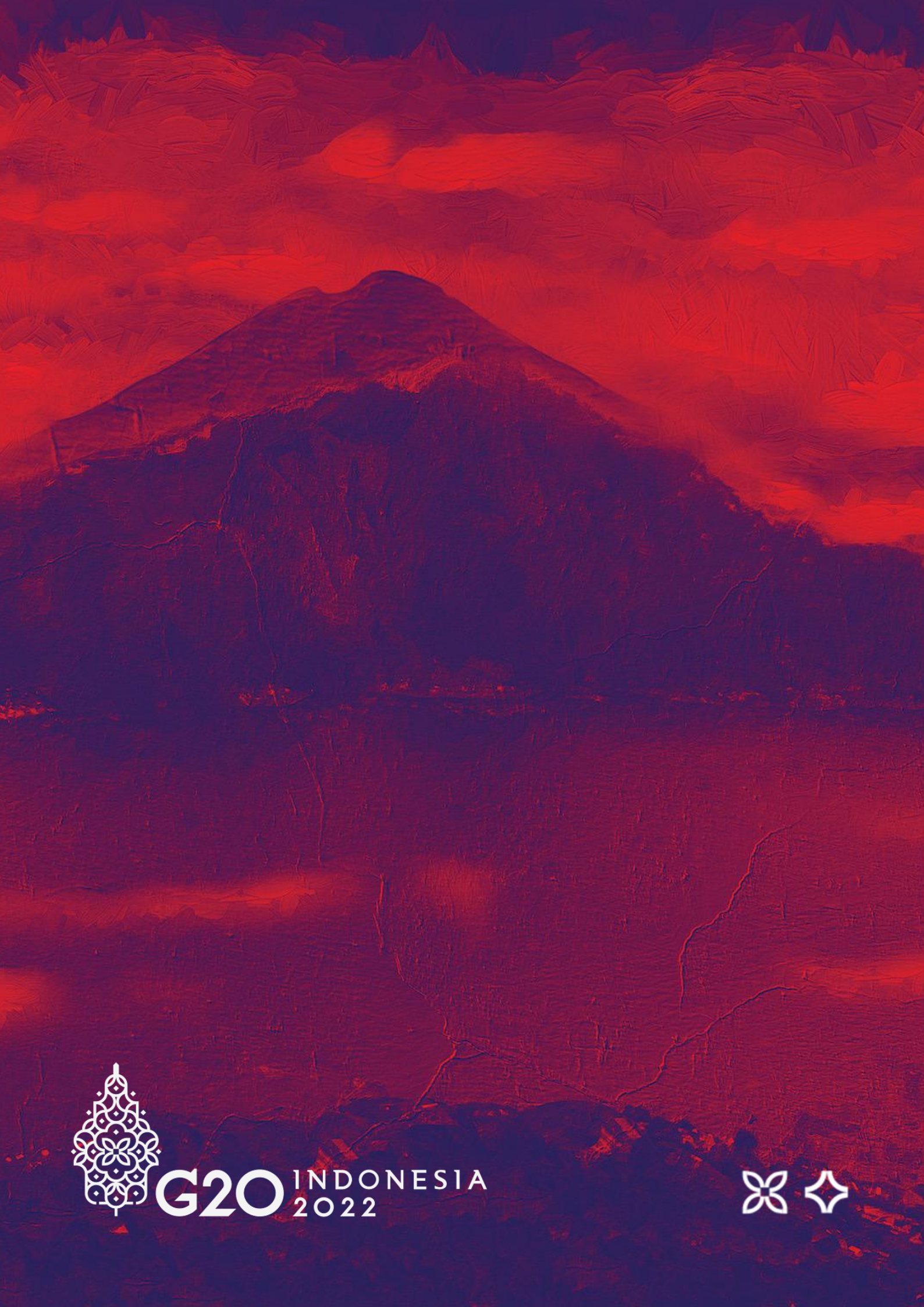
5.2.1 Possible ways forward for the G20

In order to successfully and effectively tackle corruption in sports, G20 members may wish to consider taking further steps that include:

- Continuing to include corruption in sport on the agenda of the G20 ACWG to facilitate the exchange of information and sharing of good practices;
- Developing comprehensive policies on anti-corruption in sport based on an assessment of the corruption risks faced, including those related to the organization of major sports events, involvement of organized crime in sport, bribery and competition manipulation, illegal betting, and those risks that negatively affect children, young athletes and other vulnerable groups;
- Establishing a national specialized body or bodies, or ensuring specialized expertise within existing bodies with clear responsibility for the prevention, detection, investigation and sanctioning of corruption in sport, while ensuring that the necessary independence, training and resources required to carry out the functions effectively will be available;
- Supporting programmes, projects, task forces, expert groups and existing initiatives at national, regional and global levels that promote and enhance cooperation and the exchange of information and good practices among law enforcement, criminal justice authorities and corruption prevention authorities, lawmakers, policymakers and sports organizations, as well as the private sector and civil society;
- Publishing the reports of existing specialized bodies which tackle corruption in sport to increase the understanding of how they function and to identify and share good practices; and
- Facilitating the collection of data on corruption in sport to enable evidence-based policy-making, including information on adjudicated cases, and the effectiveness of existing mechanisms and networks for exchanging information and promoting cooperation.

6. Annexes

Please see separate annexes



G20 INDONESIA
2022



G20 PRESIDENCY CHAIR'S SUMMARY
The G20 Joint Finance and Agriculture Ministers' Meeting
Washington DC, USA, 11 October 2022



The G20 Finance Ministers and Agriculture Ministers met for the first time in Washington, DC, USA on 11 October 2022. The meeting was convened by the Indonesian G20 Presidency in collaboration with the Kingdom of Saudi Arabia, and was attended by G20 members, invited countries, and international and regional organizations.

1. The Presidency noted that immediate actions are needed to address global food insecurity. The Presidency highlighted that the world is waiting for the G20 to deliver concrete action on this critical issue, and it is G20 members' responsibility to demonstrate that the G20 can respond effectively to the current crisis through coordinated multilateral action.
2. Members noted that since 2020, risks to food security and nutrition around the world have increased due to numerous factors, such as the unprecedented COVID-19 pandemic and extreme weather events. Many members expressed the view that Russia's war against Ukraine is exacerbating global food insecurity and called for an end to the war. One member expressed the view that unilateral sanctions are negatively impacting global food insecurity, while some members noted that sanctions related to the war in Ukraine are not targeted at agricultural goods or fertilizers.
3. Many members noted with alarm the increasing food insecurity of vulnerable groups across the world, which has eroded progress in reducing poverty, achieving the Sustainable Development Goals, and is putting vulnerable communities and households at greater risk of poverty and malnourishment.
4. Many members noted that medium- to long-term challenges remain, and more efforts are needed to improve agricultural productivity and capacity, increase sustainable farming practices and respond to climate change, maintain open and transparent trade, and improve the availability of fertilizers.
5. Some members reaffirmed their commitment to use all available policy tools to address the risk of food insecurity. Many members supported the need for increased cooperation to ensure a coordinated global response to tackling food insecurity, and noted the need to work with other multilateral initiatives in this endeavor, while avoiding duplication.
6. Members welcomed several ongoing initiatives so far to address food insecurity which have been initiated by regional and international forums and organizations. International organizations in the meeting detailed some of their initiatives, including the World Bank Group's (WBG) USD 30 billion food security response and USD 6 billion global platform for private sector intervention; International Monetary Fund's (IMF)'s Food Shock Window; and the Islamic Development Bank's USD 10.5 billion food security response program. Some expressed their support for potential debt service standstills if appropriate, under the existing G20 Common Framework for Debt Treatment, however, others emphasized the need to consider country circumstances when assessing debt relief initiatives. At the individual country level, several initiatives were reported by many members in the meeting.
7. Members agreed to ask the Food and Agriculture Organization (FAO) and the WBG to share with us the results of their mapping exercises on food insecurity, which will be consolidated in the future with inputs from technical experts and other relevant international organizations, and will provide a systemic analysis of responses to address food security. This will identify any major gaps in global responses; examine food and nutrition variables and funding; examine the supply and demand of fertilizers; build on the G20 Agricultural Market Information System (AMIS); and identify any medium-term issues that require further technical and systemic analysis. FAO and WB will report back to us by the 2023 Spring Meetings.
8. Members reiterated their support for open, transparent, inclusive, predictable, and non-discriminatory rules-based multilateral trading systems.
9. The Indonesian G20 Presidency will continue to lead the G20 in closely monitoring the state of global food security in our future meetings and into the Indian G20 Presidency.

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Part I – Summary of Discussion on the Global Economy

1. Members agreed that the recovery of the global economy has further slowed as risks have continued to materialize. Many members strongly condemned Russia's war against Ukraine and expressed the view that Russia's illegal, unjustified and unprovoked war of aggression against Ukraine is impairing the global economic recovery. A few of these members noted that the sanctions against Russia do not target food. One G20 member expressed the view that the war in the Ukraine and sanctions have impacted the global economy. One G20 member expressed the view that the sanctions are the main cause of the negative impacts on the global economy. Most members agreed that there are still pressures on fertilizer, food, and energy prices, which have exacerbated existing inflationary pressures, and contributed to the increasing risk of food and energy insecurity. Many members noted the importance of continued action on long-term structural challenges such as climate change, while one member cautioned against the premature halt of investment in fossil fuels and called for balanced and just transitions policies in response to climate change. A number of members emphasized the need to address debt vulnerabilities.
2. Members were concerned about the increasing food and energy insecurity of vulnerable groups across the world as discussed in the High Level Seminar on Strengthening Global Collaboration for Tackling Food Insecurity on 15 July and the G20 Joint Finance and Agriculture Ministers' meeting on 11 October. Many members noted the temporary and targeted measures they have implemented to support the most vulnerable. Members welcomed the International Monetary Fund (IMF)'s Food Shock Window within its emergency lending instruments.

Part II – Agreement on Concrete Deliverables

3. To support our collective ambition to recover together, recover stronger, we reaffirm our commitment to well-calibrated, well-planned, and well-communicated policies to support sustainable recovery, with due consideration to country-specific circumstances. We confirm our commitment to mitigate scarring effects to support strong, sustainable, balanced and inclusive growth. We will stay agile and flexible in our fiscal policy response, standing ready to adjust to the changing circumstances as needed. Temporary and targeted measures to help sustain the purchasing power of the most vulnerable and cushion the impact of commodity price increases, including energy and food prices, should be well designed to avoid adding to high inflationary pressures. We will continue to enhance macro policy cooperation, preserve financial stability and long-term fiscal sustainability, and safeguard against downside risks and negative spillovers. Macroprudential policies need to remain vigilant to guard against rising systemic risks as financial conditions tighten. We commit to progress the 2030 Agenda for Sustainable Development to achieve stronger, greener and more balanced and inclusive global development. Fiscal policies should reflect the increased investment needed for the green, digital, and sustainable transitions. We reaffirm the importance of the rules-based, non-discriminatory, fair, open, inclusive, sustainable and transparent multilateral trading system with the World Trade Organization (WTO) at its core in restoring growth and job creation, and reiterate our commitment to fight protectionism and encourage concerted efforts for reform of the WTO. Recognizing that many currencies have moved significantly this year with increased volatility, we reaffirm our April 2021 exchange rate commitments. We also reiterate the importance of global cooperation and express our appreciation to the Indonesian G20 Presidency for its efforts to maintain an effective system of multilateralism through the G20.
4. G20 central banks are strongly committed to achieving price stability, in line with their respective mandates. To that end, they are closely monitoring the impact of price pressures on inflation expectations and will continue to appropriately calibrate the pace of monetary policy tightening in a data-dependent and clearly communicated manner, ensuring that inflation expectations remain well anchored, while being mindful to safeguard the recovery and limit cross-country spillovers. Central bank independence is crucial to achieving these goals and buttressing monetary policy credibility.
5. We continue to prioritize collective and coordinated action to get the pandemic under control and be better prepared for future pandemics. We welcome the establishment of the pandemic prevention, preparedness and response financial intermediary fund (PPR FIF) hosted by the World Bank and take note of the constitution of its Governing Board, which has adopted the PPR FIF's governing documents. We welcome the PPR FIF's inclusive membership and representation from low- and middle-income countries, civil society organizations and donors, and acknowledge the World Health Organization's (WHO) technical expertise and central coordination role in this endeavor, which reflects its leadership role in the global health architecture. We look forward to the launch of the PPR FIF's first call for funding proposals as soon as possible, to deliver investments that strengthen and support pandemic PPR at national, regional and global levels. We commend the financial pledges by founding donors to the

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PPR FIF, amounting to over USD 1.4 billion, and we encourage additional pledges, on a voluntary basis. We commit to increase the capacity of developing countries for pandemic PPR through the PPR FIF, and look forward to the stocktaking review of the PPR FIF at the end of its first year to draw on lessons learned and incorporate any changes needed to ensure the PPR FIF is operating in accordance with its governing documents and effective at filling critical PPR gaps and that it continues to have a central coordination role for the WHO, maintains a strong connection to the G20, and is inclusive of the perspectives of low- and middle-income countries and additional non-G20 partners in its decision making. We note the progress of the work of the G20 Joint Finance-Health Task Force (JFHTF) aimed at, among others, developing coordination arrangements between Finance and Health Ministries, possibly including those from non-G20 countries, while ensuring that there is no further duplication and fragmentation of the global health governance system and maintaining the crucial leadership role of the WHO. We look forward to G20 Finance and Health Ministers continuing their discussions, including providing guidance in November, on next year's JFHTF mandate.

6. We reaffirm our commitment to the swift implementation of the OECD/G20 two-pillar international tax package. We welcome the progress on Pillar One. We also welcome progress on Pillar Two Global Anti-Base Erosion (GloBE) Model Rules, which pave the way for consistent implementation at a global level as a common approach, and we look forward to the completion of the GloBE Implementation Framework. We call on the OECD/G20 Inclusive Framework on Base Erosion and Profit Shifting (BEPS) to finalize Pillar One, including remaining issues and by signing the Multilateral Convention in the first half of 2023, and to complete the negotiations of the Subject to Tax Rule (STTR) under Pillar Two that would allow the development of a Multilateral Instrument for its implementation. We reaffirm our objective to strengthen the tax and development agenda in light of the July 2022 G20 Ministerial Symposium on Tax and Development, and we note the G20/OECD Roadmap on Developing Countries and International Tax. We support the progress made on implementing internationally agreed tax transparency standards, including regional efforts and welcome the signing of the Asia Initiative Bali Declaration in July 2022. We also welcome the Crypto-Asset Reporting Framework and the amendments to the Common Reporting Standard, both of which we consider to be integral additions to the global standards for automatic exchange of information. We call on the OECD to conclude the work on implementation packages, including possible timelines, and invite the Global Forum on Transparency and Exchange of Information for Tax Purposes to build on its commitment and monitoring processes to ensure widespread implementation of both packages by relevant jurisdictions.

7. We reiterate our commitment to strengthening the long-term financial resilience of the international financial architecture, including by promoting sustainable capital flows, and developing local currency capital markets. We welcome the IMF's revised Institutional View on Liberalization and Management of Capital Flows and look forward to continued discussions with international organizations on the coherent implementation of international frameworks for the use of capital flow management measures, while being mindful of their original purpose. We look forward to further progress by the IMF in operationalizing the Integrated Policy Framework and welcome the report by the Bank for International Settlements (BIS) on Macro-financial stability frameworks. We welcome continued exploration of how Central Bank Digital Currencies (CBDCs) could potentially be designed to facilitate cross-border payments, while preserving the stability and integrity of the international monetary and financial system. We welcome the successful completion of the G20 TechSprint 2022, a joint initiative with the BIS Innovation Hub (BISIH), which has contributed to the debate on the most practical and feasible solutions to implement CBDCs. We reiterate our commitment to maintaining a strong and effective Global Financial Safety Net with a strong, quota-based and adequately resourced IMF at its center. We remain committed to revisiting the adequacy of quotas and will continue the process of IMF governance reform under the 16th General Review of Quotas, including a new quota formula as a guide, by 15 December 2023.

8.¹ We reiterate our commitment to support all vulnerable countries to recover together, recover stronger. We welcome pledges amounting to USD 81.6 billion through the voluntary channelling of Special Drawing Rights (SDRs) or equivalent contributions, and call for further pledges from all willing and able countries to meet the total global ambition of USD 100 billion of voluntary contributions for countries most in need. We welcome the operationalization of the Resilience and Sustainability Trust (RST) to help eligible low-income countries, small states and vulnerable middle-income countries address longer-term structural challenges that pose macroeconomic risks, including those stemming from pandemics and climate change. We welcome the voluntary contributions to the RST

¹ Noting that one member has divergent views on debt issues in paragraph 8, and emphasized the importance of debt treatment by multilateral creditors like MDBs.

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and call for additional pledges and timely contributions to it and to the Poverty Reduction and Growth Trust (PRGT), especially for subsidy resources, to ensure a broad pool of contributors to meet funding needs. We remain open to explore viable options for countries to voluntarily channel SDRs through Multilateral Development Banks (MDBs), while respecting national legal frameworks and the need to preserve the reserve assets status of SDRs. We will continue to explore ways, including through balance sheet optimization measures, and other potential avenues, to maximize MDBs' development impact. We welcome early deliberations and urge MDBs to continue to discuss options for implementing the recommendations of the G20 Independent Review of MDBs' Capital Adequacy Frameworks within their own governance frameworks, and to deliver an update to us in Spring 2023. This will inform the ongoing development of a roadmap for the implementation of the recommendations, while safeguarding MDBs' long-term financial sustainability, robust credit ratings and preferred creditor status. We acknowledge the concluding report on the 2020 Shareholding Review of the International Bank for Reconstruction and Development (IBRD) and look forward to the 2025 Shareholding Review. At this challenging juncture, we reiterate our commitment to step up our efforts to implement the Common Framework for Debt Treatment beyond the Debt Service Suspension Initiative (DSSI) in a predictable, timely, orderly and coordinated manner. We welcome progress in this regard, including the provision of financing assurances for Zambia. We welcome progress made by creditor committees so far and encourage the timely conclusion of the debt treatments for Chad and Zambia by early 2023. We also encourage the conclusion of the debt treatment for Ethiopia under an IMF-supported program. We are concerned about the deteriorating debt situation in some vulnerable middle-income countries. This could be addressed by multilateral coordination that involves all official and private bilateral creditors to take swift action to respond to their requests for debt treatments. We stress the importance for private creditors and other official bilateral creditors to commit to providing debt treatments on terms at least as favorable to ensure fair burden sharing in line with the comparability of treatment principle. We affirm the importance of joint efforts by all actors, including private creditors, to continue working toward enhancing debt transparency. We welcome the efforts of private sector lenders who have already contributed data to the joint Institute of International Finance (IIF)/OECD Data Repository Portal, and continue to encourage others to also contribute on a voluntary basis.

9. Revitalizing infrastructure investment in a sustainable, inclusive, accessible, and affordable way will ensure we recover stronger. We endorse the voluntary and non-binding G20/GI Hub Framework on How to Best Leverage Private Sector Participation to Scale Up Sustainable Infrastructure Investment which will consider country circumstances, and which will complement investment from other sources, including public investment and finance provided by MDBs. We note the Outcome Document from the 2022 G20 Infrastructure Investors Dialogue. To enhance social inclusion and address subnational disparities, we endorse the G20-OECD Policy Toolkit on Mobilizing Funding and Financing for Inclusive and Quality Infrastructure Investment in Regions and Cities, prepared with the support of the Asian Development Bank (ADB). We note the Preliminary Findings Report on Gender Inclusive Approaches in Private Participation in Infrastructure in promoting gender considerations during the infrastructure lifecycle and look forward to the final report. We endorse the InfraTracker 2.0 which will enable both the public and private sectors towards transformative infrastructure investment post-COVID-19, by providing insights into long-term infrastructure strategies and plans. To narrow the digital divide, we endorse the G20 Compendium of Case Studies on Digital Infrastructure Finance: Issues, Practices and Innovations. We note the endorsement in July of the Quality Infrastructure Investment (QII) Indicators and associated guidance note, developed for the G20, which are voluntary and non-binding and consider country circumstances, and we look forward to further discussions on how the QII indicators can be applied. We welcome progress made by the Infrastructure Working Group (IWG) towards developing a possible new governance model for the Global Infrastructure Hub (GI Hub) and ask the IWG to finalize principles to guide the process, and report back to us as soon as possible.

10. Our commitment to tackling urgent global challenges such as climate change and environmental degradation, including addressing biodiversity loss, remains critical to achieving greener, more sustainable, more prosperous and inclusive economies and societies. In the context of strengthening global efforts to reach the objective of the United Nations Framework Convention on Climate Change (UNFCCC) and the goals of the Paris Agreement, as well as implementing the COP26 commitments, we reiterate that our policy mix toward carbon neutrality and net zero should include a full range of fiscal, market and regulatory mechanisms including, as appropriate, the use of carbon pricing and non-pricing mechanisms and incentives, and phase out and rationalize, over the medium term, inefficient fossil fuel subsidies that encourage wasteful consumption and commit to achieve this objective, while providing targeted support to the poorest and most vulnerable, and in line with national circumstances. We acknowledge the macro-economic risks stemming from climate change and will continue discussions on the costs

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and benefits of different transitions. We also recognize the challenges faced by many developing countries in accessing finance and technology for that purpose. In this regard, we urge the fulfilment of the commitment made by developed countries, to the goal of mobilizing jointly USD 100 billion in climate finance per year by 2020 and annually through to 2025 to address the needs of developing countries, in the context of meaningful mitigation actions and transparency on implementation.

11. We remain committed to take actions in support of orderly, just and affordable transitions to achieve the objectives of the 2030 Agenda for Sustainable Development in line with the UNFCCC and the Paris Agreement as well as with the convention on Biological Diversity. We welcome the progress made across the G20, international organizations, other international networks and initiatives, and the private sector in addressing the priorities of the G20 Sustainable Finance Roadmap, which is voluntary and flexible in nature, and call for further efforts to advance the Roadmap's recommended actions that will scale up sustainability financing. We welcome the establishment of the Sustainable Finance Working Group's online dashboard and repository of relevant work, to illustrate ongoing and future progress made on the Roadmap, and encourage members to contribute on a voluntary basis, taking country circumstances into consideration. We endorse the 2022 G20 Sustainable Finance Report which articulates practical and voluntary recommendations for jurisdictions and relevant stakeholders in developing transition finance frameworks, improving the credibility of financial institutions' net zero commitments and scaling up sustainable finance instruments, with a focus on improving accessibility and affordability. We also welcome the valuable discussion during the Presidency's Forum on policy levers that incentivize financing and investment to support the transition.

12. In the face of a more challenging global economic and financial outlook, we underline the need to reinforce global financial system resilience and ask the Financial Stability Board (FSB) and IMF to continue their monitoring efforts. We commit to sustaining global financial stability, including through continued coordination of policy measures and implementation of international standards. We look forward to the FSB's final report on financial sector exit strategies and scarring effects of COVID-19 and its conclusions regarding financial stability issues prior to the Leaders' Summit in November. We strongly support global policy actions to increase resilience, in particular against cross-border spillovers, including by addressing the identified structural vulnerabilities in non-bank financial intermediation (NBFI) from a systemic perspective, and we look forward to the FSB's NBFI progress report with policy proposals to address systemic risk in NBFI, including in open-ended funds. We welcome the report by the Basel Committee on Banking Supervision (BCBS), the BIS Committee on Payments and Market Infrastructures (CPMI), and the International Organization of Securities Commissions (IOSCO) on the review of margining practices. We support taking forward the implementation of the FSB updated Roadmap for addressing climate-related financial risks which complements the G20 Sustainable Finance Roadmap. Globally consistent data are needed in order to effectively address climate-related financial risks. We look forward to the finalization of standards by the International Sustainability Standards Board (ISSB) in support of globally consistent, comparable and reliable climate-related financial disclosures, and its work beyond climate, and we welcome the efforts to achieve interoperability across disclosure frameworks. We welcome the FSB progress report on achieving consistent and comparable climate-related financial disclosures and the final report on supervisory and regulatory approaches to climate-related risks. We look forward to the report by the FSB and the Network for Greening the Financial System (NGFS) on climate-scenario analysis by jurisdictions in November.

13. We welcome ongoing work by the FSB and international standard setters to ensure that the crypto-assets ecosystem, including so-called stablecoins, is closely monitored and subject to robust regulation, supervision, and oversight to mitigate potential risks to financial stability. We welcome the FSB's proposed approach for establishing a comprehensive international framework for the regulation of crypto-asset activities based on the principle of 'same activity, same risk, same regulation'. We welcome the FSB consultative report on the review of its high-level recommendations for the regulation, supervision and oversight of "global stablecoin" arrangements. We also welcome the FSB consultation report on promoting international consistency of regulatory and supervisory approaches to crypto-assets activities and markets. It is critical to build public awareness of risks, to strengthen regulatory outcomes and to support a level playing field, while harnessing the benefits of innovation. We welcome the final guidance by the BIS CPMI and IOSCO which confirms that the Principles for Financial Market Infrastructures apply to systematically important stablecoin arrangements. We support continued implementation of the G20 Roadmap for Enhancing Cross-Border Payments, including the future delivery of the initial estimates for key performance indicators and 2022 Progress Report that sets out priorities for the next stage of work. We encourage central banks, other public authorities and the payments industry to continue to work collaboratively on these

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important initiatives to enhance cross-border payments. We welcome the report by the BIS CPMI on interlinking payment systems and the role of Application Programming Interfaces (APIs) that was presented in a joint workshop by the Indonesian G20 Presidency in coordination with the BIS CPMI and the BSIH on cross-border payments and interoperability at the Festival Ekonomi Keuangan Digital Indonesia (FEKDI) 2022. We also welcome the joint report by the BIS CPMI, BSIH, IMF, and World Bank on options for access to and interoperability of CBDCs for cross-border payments. We welcome the FSB consultative report on achieving greater convergence in cyber incidents reporting, and look forward to the final report. We welcome the results of the second phase of the Data Gaps Initiative (DGI-2) and will continue to work with partners in addressing the identified remaining challenges. We welcome the workplan on the new Data Gaps Initiative (DGI) prepared by the IMF, FSB and the Inter-Agency Group on Economic and Financial Statistics (IAG) in collaboration with participating members. We ask the IMF, the FSB and the IAG to begin work on filling these data gaps and report back on progress in the second half of 2023, noting that the targets are ambitious and delivery will need to take into account national statistical capacities, priorities, and country circumstances as well as avoiding overlap and duplication at international level. We welcome the progress of work on the review of the G20/OECD Principles of Corporate Governance, including the second report and the ongoing public consultation, and look forward to further updates on the review.

14. The pandemic has widened inequality for the most financially vulnerable and underserved groups especially women, youth, and Micro, Small, and Medium Enterprises (MSMEs). We endorse the G20 Financial Inclusion Framework on Harnessing the Benefit of Digitalization, with the objective of boosting productivity and fostering a sustainable and inclusive economy for underserved groups guided by the G20 2020 Financial Inclusion Action Plan. The framework builds upon a practical Implementation Guide for the G20 High-Level Principles for Digital Financial Inclusion, a living database related to digital and innovative financial products and services to MSMEs beyond credit, and a preliminary regulatory toolkit for MSMEs access to digital financial services. To address digitalization and sustainable finance developments, and support financial inclusion and well-being, we endorse the updated G20/OECD High-Level Principles on Financial Consumer Protection and welcome the updated G20/OECD High-Level Principles on SME Financing.

15. We recognize the need for the international community to step up their efforts to effectively combat money laundering, terrorism financing, and proliferation financing. We reaffirm our commitment to delivering the strategic priorities of the Financial Action Task Force (FATF) and its FATF Style Regional Bodies (FSRBs) to lead global action to respond to these threats. We welcome the initiative by the FATF to promote implementation of international standards on virtual assets, in particular the "travel rule", and transparency of beneficial ownership, and acknowledge their role in the fight against systemic corruption and environmental crimes, which gravely impact economies and societies. We welcome the initiative from FATF to promote international standards on transparency of beneficial ownership of legal persons in particular through the requirement to provide efficient access to beneficial ownership information such as through a registry or alternative mechanisms. We support the ongoing work of the FATF to enhance global efforts to seize criminal proceeds and return funds to victims and states in line with domestic frameworks. We encourage all G20 members to strengthen collaboration to adopt and effectively implement the FATF standards.

G20 Chair's Summary

Fourth G20 Finance Ministers and Central Bank Governors Meeting
Washington DC, 12-13 October 2022



ANNEX

Additional issues for further action

International Financial Architecture

1. We task the International Financial Architecture Working Group to work in coordination with the MDBs on the recommendations from the Independent Review of MDBs' Capital Adequacy Frameworks that would need a coordinated approach among MDBs, and to report back in July 2023.
2. We ask the World Bank for a timely update on the progress of the 2025 IBRD Shareholding Review.
3. We look forward to close monitoring by the IMF and World Bank of debt vulnerabilities in low- and middle-income countries.
4. We look forward to the IMF and World Bank debt transparency report in March 2023.

Financial sector

5. We look forward to the FSB final report on financial sector exit strategies and scarring effects of COVID-19 and its policy considerations prior to the Leaders' Summit in November.
6. We look forward to the FSB-NGFS report on the outputs of climate scenario analysis by jurisdictions in November.
7. We look forward to the progress of the New DGI to be reported in the second half of 2023.
8. We look forward to the final report on achieving greater convergence in reporting cyber incidents to financial authorities.
9. We look forward to the FSB progress report with policy proposals to address systemic risk in NBFIs in November.
10. We look forward to the FSB report on key performance indicators to monitor progress towards the quantitative targets for the cross-border payments roadmap in November.

Reports and Documents Received

Global Economy

1. Presidency Note on Policy Setting for Exit Strategies to Support Recovery and Addressing Scarring Effect to Secure Future Growth
2. IMF G20 Surveillance Note
3. IMF G20 Background Note on Minimizing Scarring from the Pandemic
4. G20 Report on Strong, Sustainable, Balanced, and Inclusive Growth

International Financial Architecture

5. G20 Expert Panel Report on the Independent Review of Multilateral Development Banks' Capital Adequacy Frameworks
6. BIS Macro-financial Stability Frameworks and External Financial Conditions

International taxation

7. OECD Secretary-General Tax Report to G20 Finance Ministers and Central Bank Governors

Infrastructure

8. G20/GI Hub Framework on how to Best Leverage Private Sector Participation to Scale up Sustainable Infrastructure Investment
9. GIF-World Bank Stocktake of Approaches that Leverage Private Sector Investment in Sustainable Infrastructure
10. OECD Report on advancing the environment and data for sustainable infrastructure financing
11. GI Hub Report on infrastructure transition pathways
12. G20-OECD Policy Toolkit on Mobilizing Funding and Financing for Inclusive and Quality Infrastructure Investment in Regions and Cities, prepared with support from ADB

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13. OECD Report on Addressing Territorial Disparities in Future Infrastructure Needs in the Wake of the COVID-19 Crisis
14. World Bank Preliminary Findings Report on Gender Inclusive Approaches in Private Participation in Infrastructure
15. G20 Compendium of Case Studies on Digital Infrastructure Finance: Issues, Practices and Innovations
16. G20 Blueprint for Scaling Up InfraTech Financing and Development
17. GI Hub and AIIB stocktake of approaches on scaling up InfraTech
18. GI Hub InfraTracker 2.0 report
19. Compendium of Quality Infrastructure Investment (QII) Indicators and associated guidance note, developed for the G20
20. Outcome Document from the 2022 G20 Infrastructure Investors Dialogue

Sustainable Finance

21. 2022 G20 Sustainable Finance Report

Financial sector

22. FSB Chair's letter to the G20 Finance Ministers and Central Bank Governors, July 2022
23. FSB Chair's letter to the G20 Finance Ministers and Central Bank Governors, October 2022
24. FSB Roadmap for Addressing Financial Risks from Climate Change: Progress report
25. FSB Interim Report on Exit Strategies to Support Equitable Recovery and Address Effects from COVID-19 Scarring in the Financial Sector
26. IMF-FSB Report on the G20 Data Gaps Initiative (DGI-2): Progress Achieved, Lessons Learned, and the Way Forward
27. G20 Roadmap for Enhancing Cross-border Payments: Consolidated Progress Report for 2022
28. G20 Roadmap for Enhancing Cross-border Payments: Priorities for the next phase of work
29. Report by the Committee on Payments and Market Infrastructures (CPMI) on interlinking payment systems and the role of application programming interface
30. CPMI, BIS IH, IMF, and World Bank Report on Options for access to and interoperability of CBDCs for cross-border payments
31. Second report on the review of the G20/OECD Principles of Corporate Governance
32. BCBS, CPMI and IOSCO Review of margining practices
33. FSB progress report on achieving consistent climate-related financial disclosures,
34. FSB final report on supervisory and regulatory approaches to climate-related risks
35. FSB proposed framework on international regulation of crypto-asset activities
36. FSB consultative report on regulatory, supervision, and oversight of crypto-asset activities and market
37. Review of the FSB High-Level Recommendations of the Regulation Supervision and Oversight of "Global Stablecoin" Arrangements
38. BIS CPMI-IOSCO Guidance on Application of the Principles for Financial Market Infrastructures to stablecoin arrangements
39. FSB consultative document on achieving greater convergence in cyber incident reporting
40. The IMF Revised Workplan of New DGI

Financial inclusion

41. Updated G20/OECD High-Level Principles on Financial Consumer Protection
42. Updated G20/OECD High-Level Principles on SME Financing
43. Implementation Guide for the G20 High-Level Principles for Digital Financial Inclusion
44. Digital and Innovative Financial Products and Services for MSMEs Beyond Credit
45. The G20 Financial Inclusion Framework on Harnessing the Benefit of Digitalization, with the objective of boosting productivity and fostering a sustainable and inclusive economy for underserved groups guided by the G20 2020 Financial Inclusion Action Plan

Financial Action Task Force

46. Priorities for the Financial Action Task Force under the Singapore Presidency – Objectives for 2022-2024

Chair's Summary: Health Ministers' Meeting of the G20

28 October 2022

On 27 – 28 October 2022, the G20 Health Ministers' convened in Bali for the second Ministerial meeting. The meeting was also attended by invited countries and international organizations.

The said meeting and its related meetings (working groups and side events) have reviewed Leaders' commitment to strengthen global health governance as stated in the G20 Rome Leaders' Declaration.

The Indonesian G20 Presidency in 2022 highlighted as a challenging year. The current geopolitical tensions have also exacerbated the challenges to the global health. The compounded effects of the ongoing and potential future pandemic, as well as geopolitical conflicts have dramatically deteriorated physical and mental health and social wellbeing conditions.

In this regard, many delegations expressed deep concern regarding the increased and ongoing conflicts in many parts of the world, including the war in Ukraine, which have far-reaching effects beyond the region. The damage caused by the conflict on health care facilities, as well as casualties in health care workers, have disproportionately affected the most vulnerable, women and children. The war exacerbates the ongoing global food security crisis and malnutrition. Many members expressed their condemnation to Russia in this regard, while others view that G20 Health Working Group is not the proper forum to address geopolitical issues. The meeting was also highlighted with the call for peace, cessation of hostilities, and an end to war.

Moreover, the meeting acknowledged the need for G20 members to continue collaborating with all countries, especially low- and middle-income countries (LMICs), international organizations, and civil society organizations to address global health needs, as well as the need for G20 countries to work together to address health inequities. Furthermore, the urgent need to address the gaps in pandemic PPR and the need to strengthen health system recovery to respond to health emergencies were further elaborated.

The meeting discussed proposed initiatives under Indonesian G20 Presidency on pandemic Prevention, Preparedness and Response (PPR), with the three health priority issues, namely: Building Global Health System Resilience; Harmonizing Global Health Protocols; and Expanding Global Manufacturing and Research Hubs for pandemic PPR. The meeting shared the same view to implement G20 Health Ministers' Action to Strengthen Global Health Architecture (Bali Global Health Action).

G20 Health Ministers' Action to Strengthen Global Health Architecture

1. The G20 Health Ministers (The Ministers), met in Bali, Indonesia, on 27 and 28 October 2022 to strengthen their collective efforts to “Recover Together, Recover Stronger” from the current global health crisis and better prepare for future health risks by strengthening the global health architecture.
2. Since COVID-19 was declared a Public Health Emergency of International Concern (PHEIC), Ministers have made tremendous progress in curbing the pandemic. While the COVID-19 pandemic is not over, the World Health Organization (WHO) has recently declared monkeypox as another PHEIC, reinforcing that international health threats are ever present and that the G20 and broader global community must come together to improve their collective preparedness and response capabilities.
3. The Ministers reaffirm their Leaders' commitment to strengthen global health governance as stated in the G20 Rome Leaders' Declaration. The Ministers acknowledge the need for G20 members to continue collaborating with all countries, especially low- and middle-income countries (LMICs), international organizations, and civil society organizations to address global health needs.
4. The Ministers reaffirm their collective commitment to respect the right of all persons to the enjoyment of the highest attainable standards of physical and mental health, as well as the need for G20 countries to work together to address health inequities.
5. Therefore, under the theme of ‘Strengthening Global Health Architecture’, Ministers have focused their collective efforts on pandemic Prevention, Preparedness and Response (PPR), with the three health priority issues set by the Presidency, being: Building Global Health System Resilience; Harmonizing Global Health Protocols; and Expanding Global Manufacturing and Research Hubs for pandemic PPR.
6. The Ministers acknowledge the urgent need to address the gaps in pandemic PPR and the need to strengthen health system recovery to respond to health emergencies. The Ministers reaffirm the need to ensure coherency and complementarity of efforts avoiding duplications between existing and upcoming international initiatives and actions for pandemic PPR, including surveillance, workforce training and financing aspects. The Ministers support the work of the Intergovernmental Negotiating Body (INB) that will draft and negotiate a legally binding instrument, that should contain both legally binding and non-legally binding elements mindful that the decision will be made by World Health Assembly, to strengthen pandemic PPR. The Ministers also support the working group on the International Health Regulations that will consider Amendments to the International Health Regulations (IHR) (2005). The Ministers underscore the importance of full implementation of the IHR (2005) and the leading and coordination role of WHO in global pandemic PPR efforts. The Ministers recognize the value of technical guidance by the Quadripartite (FAO, UNEP, WHO, and WOA), stressing the importance of the One Health approach to Pandemic PPR and beyond, including Antimicrobial Resistance (AMR).
7. The Ministers thank the Indonesian G20 Presidency for its leadership through a particularly challenging year and for convening the Health Ministers' Meetings and the Joint Finance-Health Ministers' Meetings, including the one held in Yogyakarta on 21 – 22 June 2022, as well as Health Working Groups Meetings and their side events, and the Joint Finance-Health Task Force (JFHTF) Meetings. These meetings reflect the enduring commitment of the G20 members and partners to ensure better pandemic PPR by strengthening the global health architecture.
8. Furthermore, the side events recognized the need for enhanced G20 collaboration in addressing global health issues concurrent with the COVID-19 pandemic, particularly on the three topics addressed in the side events Tuberculosis (TB), the One Health approach, and Antimicrobial Resistance (AMR). The Ministers invite the future G20 presidency to continue to work on these important topics as appropriate.

The Ministers reaffirm the importance of addressing the continuity of health services beyond COVID-19, in light of the repercussions of the pandemic on physical and mental health, and social well-being, paying special attention to women and girls and to the needs of the most vulnerable, due in part to isolation, loss of life, unemployment, food insecurity, increased violence against women and girls, and constrained access to education as well as health services, including sexual and reproductive health, and increased social and economic inequalities. The Ministers encourage greater recognition of the impact of COVID-19 pandemic on health and care workers, including on their mental health.

10. The Ministers will continue promoting a healthy and sustainable recovery which builds towards achieving and sustaining Universal Health Coverage (UHC). The Ministers recognize the need to achieve UHC under the SDGs, and the importance of the UN General Assembly comprehensive review in 2023 on gaps and solutions to accelerate progress towards the achievements of UHC, emphasizing the need for strengthening primary health care as cornerstone of UHC.

Building Global Health System Resilience

11. The Ministers recognize the need for predictable and sustainable financing to support pandemic PPR. As initiated by the Saudi Arabian G20 Presidency, the Italian G20 Presidency and continued by the Indonesian G20 Presidency, and in collaboration with their Finance Ministry colleagues, Ministers welcome the provision of additional financial resources in this regard, including through the operationalization of the Financial Intermediary Fund for Pandemic Prevention, Preparedness and Response (PPR FIF/Pandemic Fund). The PPR FIF/Pandemic Fund is hosted by the World Bank, and has been established in close collaboration with the WHO which, as the lead international technical agency responsible for PPR and custodian of the IHR (2005), will play a central role in the PPR FIF/Pandemic Fund. The PPR FIF/Pandemic Fund complements the work of existing institutions and provides additional international financing for PPR, especially to support increased PPR capacities for eligible countries.
12. The Ministers recognize the important work accomplished by the G20 JFHTF, including gap analysis in PPR financing and their leadership in the development of the PPR FIF/Pandemic Fund. In this regard, Ministers continue to collaborate and coordinate with the G20 Finance Ministers, welcome ongoing discussions and future work envisioned for the JFHTF while ensuring that there is no duplication and fragmentation of the global health governance system. The Ministers look forward to the G20 Joint Finance and Health Ministers' Meeting in November 2022, including providing guidance on next year's JFHTF mandate.
13. The Ministers support the importance of balanced voice between contributors and co-investors in the PPR FIF/Pandemic Fund Governing Board and its decision-making on a transparent basis. As a financing mechanism that will promote a more coordinated approach to pandemic PPR investments, Ministers acknowledge the importance of relevant international and regional organizations in the PPR FIF/Pandemic Fund, including as Implementing Entities.
14. The objective of the PPR FIF/Pandemic Fund is to provide a dedicated stream of additional funding for critical pandemic PPR functions in eligible countries through investments and technical support at national, regional and global levels. The Ministers support that the identified priorities for the PPR FIF/Pandemic Fund should be science- and evidence-based, and answer priority financing needs. The Ministers commend the financial pledges by founding donors to the PPR FIF/Pandemic Fund, amounting to over USD 1.4 billion, and Ministers encourage additional pledges on a voluntary basis. The Ministers call on countries and philanthropies to contribute to the PPR FIF/Pandemic Fund, while also sustaining support for ongoing and longstanding domestic and global health investments, organizations, and initiatives.
15. The Ministers recognize the extensive COVID-19 immunization as a global public good. The Ministers welcome efforts by the Access to COVID-19 Tools-Accelerator (ACT-A) platform, including the COVAX Facility and other initiatives to promote equitable access to pandemic medical countermeasures. The Ministers recognize the ongoing need for mobilizing essential health

resources for PPR to future health crises, building on the lessons learnt from the existing mechanisms. In this regard, Ministers recognize the role of innovative and flexible partnerships in global health, such as Gavi, the Global Fund, CEPI, Unitaaid, FIND, and the Medicines Patent pool, can play in close collaboration with WHO, UNICEF and its Member States in building global health resilience and response capacity against future pandemic threats. The Ministers note that the result of the ACT-A External Evaluation can be used as input for future discussions under the Indian G20 presidency on platforms for pandemic medical countermeasures mobilization. These discussions should include consideration of global and regional networks with balanced decision-making and governance.

16. Therefore, any such future initiatives for pandemic medical countermeasures should make efforts in closing gaps in development of timely and equitable access to medical countermeasures during and between emergencies. With regard to such future initiatives, the G20 and WHO have important roles to play, working with various stakeholders, including non-G20 countries, LMICs, multilateral organizations, relevant actors, and civil societies.
17. The Ministers recognize the importance of a strong and adaptable global health architecture and underscore the role of the multilateral trading system with the WTO at its core in supporting increased resilience for COVID-19 and future pandemics. The Ministers acknowledge the adoption at the WTO's 12th Ministerial Conference (MC12) of the Ministerial Declaration on the WTO Response to the COVID-19 Pandemic and Preparedness for Future Pandemics and the Ministerial Decision on the TRIPS Agreement. As the Trade Ministers agreed at MC12, no later than six months from the date of the Ministerial Decision on the TRIPS Agreement, WTO Members will decide on its extension to cover the production and supply of COVID-19 diagnostics and therapeutics.
18. In pandemic PPR, surveillance, including genomic surveillance, through the One Health approach, is crucial in order to detect pathogens and antimicrobial resistance that may cause outbreaks in humans. To enable global pathogen surveillance as part of their commitment to implement the IHR (2005) and a timely response to disease outbreaks and related emergencies, Ministers encourage sharing of pathogen data, in a timely manner on shared, and trusted platforms in collaboration with WHO. The Ministers encourage sharing of benefits arising from the utilization of pathogens consistent with applicable national laws. The Ministers encourage access to genomic sequence data to be in a safe and secure, equitable, transparent, and timely manner. Such access should be governed by the principles of sustainability, accountability, and balanced with sound principles for scientific data management and stewardship.
19. Therefore, Ministers recognize the role of existing international data sharing platforms that played a critical role in global pathogen surveillance especially during the COVID-19 pandemic. Working with the Quadripartite to encourage these platforms to ensure interoperability, as well as to include other pathogens with pandemic potential or public health threats is welcomed. The Ministers encourage countries to enhance cooperation in genomic surveillance and provide support to such platforms. The Ministers also welcome the establishment of the WHO Hub for Pandemic and Epidemic Intelligence.

Harmonizing Global Health Protocols

20. A lack of coordination of the implementation, adjustment, and lifting of international travel-related measures during the COVID-19 pandemic has hampered the full recovery of people and mobility of goods to pre-pandemic levels. Building on their Leaders' commitment to facilitate international travel in a safe and orderly manner, Ministers acknowledge the importance of shared technical standards to facilitate seamless international travel, interoperability, and recognizing digital and non-digital solutions aligned with countries' relevant legal provisions including those used for COVID-19 proof of vaccination or verification of tests as well as the IHR (2005) which provide an overarching legal framework for addressing public health emergencies that have the potential to cross borders.

21. Recognizing that a range of COVID-19 digital and non-digital certification systems exists, Ministers endeavor to move towards interoperability of systems including mechanisms that validate proof of vaccination, whilst respecting the sovereignty of national health policies, and relevant national regulations such as personal data protection and data-sharing.
22. The Ministers acknowledge and value the ongoing work, including by relevant international organizations such as WHO, the International Civil Aviation Organization, the International Maritime Organization, OECD, and Global Digital Health Partnership (GDHP) in improving trusted, cross-border interconnectivity and health systems to facilitate international travel and support global collaboration in health. The Ministers support ongoing innovations emanating from the learning of COVID-19 pandemic management that have the potential to facilitate international travel and Point of Entry requirements.
23. The Ministers acknowledge the important role of trust networks and interconnectivity between countries in recognizing digital and nondigital health certificates that are in line with countries' underlying health regulations. The Ministers respect the autonomy of each country in a federated manner to achieve interoperability of the various digital vaccination certificate that are in line with national and international health regulation such as IHR (2005). The Ministers acknowledge that continued global cooperation is necessary to establish trust among countries and Minister support continued international dialogue and collaboration on the establishment of trusted global digital health networks as part of efforts to strengthen prevention and response to future pandemics. Further steps should capitalize and build on the success of the existing standards and digital COVID-19 certificates.

Expanding Global Manufacturing and Research Hubs for Pandemic PPR

24. The COVID-19 pandemic has highlighted the importance of early and continued investments in medical countermeasure product research and development and manufacturing ecosystems to close gaps that contribute to inequitable access to countermeasures particularly during pandemics.
25. The Ministers recognize the need for strengthening sustainable global and regional research and development networks as a critical part of pandemic preparedness efforts across G20 countries including strategies for sharing technology, knowledge and data on a voluntary and mutually agreed terms to facilitate better access to affordable Vaccines, Therapeutics, and Diagnostics (VTDs) globally, especially in developing countries for future pandemics. The Ministers commit to nurturing under WHO coordination an ecosystem of manufacturing and research and development, which encourages strong collaboration between academia, government, research institutions, civil society, philanthropic foundations, international organizations, and private entities. The Ministers acknowledge the importance of public-private partnership, technology transfer, and knowledge sharing on voluntary and mutually agreed terms.
26. The Ministers highlight the importance of building on existing and emerging research and manufacturing networks as well as existing organizations contributing to safe and effective VTDs to avoid unnecessary duplication and fragmentation while identifying capacity gaps and exploring new collaborative models. Furthermore, Ministers recognize the need for a mapping exercise and gap analysis of existing networks in partnership with international organizations as well as other information including lessons learned that will inform the preparation of the action plan for strengthening VTD manufacturing and research networks could bring added value. Next steps, will be considered under the Indian G20 Presidency. The Ministers support the WHO mRNA Vaccine Technology Transfer hub in South Africa and two centers in Brazil and Argentina as regional hubs, as well as the spokes in all regions of the world with the objective of sharing technology and technical know-how on voluntary and mutually agreed terms. The Ministers acknowledge that 7 countries, namely Argentina, Brazil, India, South Africa, Saudi Arabia, Türkiye, and Indonesia, have volunteered to participate and support an initiative for VTDs manufacturing and research network.
27. In nurturing a manufacturing ecosystem, Ministers recognize the need and the opportunity to build on existing and emerging networks that are already contributing to more distributed manufacturing

of VTDs while avoiding duplication of effort. These include the network of manufacturers established as part of the mRNA Vaccine Technology Transfer Programme, led by WHO and the Medicines Patent Pool (MPP), CEPI's network of preferred partners and the network of MPP-licensed generic therapeutic manufacturers established to ensure geographically distributed supply of COVID-19 anti-viral drugs.

28. Acknowledging the importance of swiftly reacting to pandemics, Ministers will support science to shorten the cycle for the development, manufacturing, and distribution of safe and effective VTDs, with the ambition to develop VTDs from 300 to 100 days in the long term acknowledging the differences in challenges to develop vaccines compared to therapeutics and diagnostics, following the identification of such threats while maintaining strong regulatory oversight and public confidence, and work to make them affordable and widely available. The Ministers acknowledge the importance of strengthening regulatory systems so that they are prepared for pandemic events. Additionally, Ministers acknowledge the importance of training the workforce from LMICs to bridge the gap in accessing VTDs, such as the Korean Global Training Hub for Biomanufacturing, with the support of WHO Academy.

Side events on Tuberculosis, Antimicrobial Resistance, and Implementing a One Health approach

29. The COVID-19 pandemic highlighted the importance of implementing a One Health approach to prevent, prepare and respond to health emergencies and diseases outbreaks, since pandemics are frequently caused by zoonotic pathogens. Further, the COVID-19 pandemic has slowed, and in some context eroded, progress made in both TB control and combating AMR that eventually hampers the achievement of Sustainable Development Goals (SDGs). The Ministers commend efforts made by the Indonesian G20 Presidency to place these issues on the G20 agenda and to prioritize addressing the TB and AMR threats, and strengthening support for the One Health approach.
30. The Ministers advance their efforts to address TB by integrating TB response with domestic and international efforts to achieve SDG target 3.3, and in parallel to accelerate research and innovation. In particular, Ministers recognize the ongoing need for financing efforts to combat TB and acknowledge the donations to date to the Global Fund in the effort to achieve the US \$18 billion target for the ongoing Seventh Replenishment of the Global Fund, which provides 76 percent of all international financing for TB.
31. The Ministers acknowledge the critical component of the One Health approach in improving human, animal, and environmental health and developing multi-level resilience across countries, and Ministers recognize the technical leadership and coordinating role of the Quadripartite (WHO, FAO, WOAHA, and UNEP), to improve the health of humans, animals, plants, and the environment, including the contribution of the One Health High-Level Expert Panel (OHHLEP), particularly its work on a definition of One Health.
32. The Ministers reaffirm the importance of strengthening national AMR governance, stewardship, and infection prevention control. The Ministers encourage G20 countries to implement the AMR National Action Plans and monitor progress through the Quadripartite Tracking AMR Country Self-Assessment Survey. The Ministers acknowledge the need to strengthen existing surveillance systems, such as laboratory-based surveillance, for integrated One Health surveillance to provide more robust data on priority pathogens and resistance mechanism, supported by the Quadripartite for early warning of AMR emergence and spread. The Ministers support initiatives to catalyze AMR research and development. The Ministers note the upcoming establishment of Independent Panel on Evidence for Action Against AMR, as recommended by the IACG with a scope concurred by UN Member States. The Ministers support national, regional and global initiatives on AMR research and development clinical trial networks, regulatory reforms and market access strategies in accordance with national laws and regulations. The Ministers reaffirm the importance of achieving the five objectives defined in the Global Action Plan on AMR. The Ministers also reaffirm their commitment to strengthening infection prevention, and control program and antimicrobial

stewardship, as well as affordable and equitable access to VTDs to address the ever-growing threat of AMR. The Ministers will explore the appropriateness of the inclusion of AMR in the proposed international instrument on pandemic PPR.

33. In line with the three side-events, Ministers support the Lombok G20 One Health policy brief, Call to Action on Financing for TB response, and Call to Action on AMR as Annexes to this document.

Way Forward

34. The Ministers express their commitment to take forward efforts accomplished during Indonesia's G20 Presidency on the Action to Strengthen Global Health Architecture. The Ministers thank the Presidency for steering the Health Working Group and advancing the momentum on multilateral collaboration to "Recover Together, Recover Stronger." The Ministers also thank International Organizations and other stakeholders involved in taking forward the Presidency's priorities.
35. The Ministers welcome India's Presidency of the G20 during which Ministers look forward to progressing substantive discussions inter alia on strengthening health emergencies prevention, preparedness and response, strengthening cooperation with the pharmaceutical sector and in quality and affordable medical countermeasures, as well as digital health solutions to aid achievements of UHC and other SDGs.

The Lombok G20 One Health Policy Brief

Context

This policy brief sets out seven recommendations to strengthen the One Health approach, highlighting ways in which this approach can improve health systems and develop multi-level resilience in all G20 countries at all levels. Various technical aspects of the brief have been developed and updated following a process of consultations at three G20 One Health pre-event meetings and a G20 One Health side event, while gap mapping analysis has also been conducted by the World Health Organization (WHO) One Health Initiative team on behalf of the Indonesian G20 Presidency. During this series of meetings, G20 members and invited countries, alongside several international organisations, discussed a broad spectrum of One Health components, that is important to prevent, predict, detect, prepare for, and respond to global health threats.

This brief is informed and guided by previous efforts, such as the Rome Leaders' Declaration¹, the Global Health Summit, the G20 Joint Finance and Health Ministers' Communiqué², and the Call to Action on "Building One Health Resilience"³. As such, it leverages and positions technical leadership and the coordinating role of the Quadripartite (WHO, Food and Agriculture Organization/FAO, World Organization for Animal Health/WOAH and United Nations Environmental Programme/UNEP); and is supported by the One Health High-Level Expert Panel (OHHLEP), an advisory panel to the Quadripartite, that supports their provision of evidence-based scientific and policy advice to address the challenges in preventing, predicting, detecting, preparing for and responding to global health threats, in order to improve the health of humans, animals, plants and the environment. This includes promoting health and Sustainable Development Goals (SDGs), through the adoption of the One Health approach.

Global health challenges necessitate a One Health approach

The COVID-19 pandemic has clearly demonstrated the importance of undertaking a One Health approach to address health threats, recognizing the interconnectedness between the health of humans, animals, plants, and the environment; biodiversity; and food systems. It highlighted existing vulnerabilities and inequalities worldwide, with wide-ranging consequences for populations who have been historically marginalised and excluded. It underscored the importance of resilient and sustainable health systems and the need to implement systems and structures that are capable of preventing and mitigating threats in relation to the human-animal-plant-environment interface. Through the adoption of the One Health approach, systems can enable greater resilience for the health of individuals and communities, thereby helping to ensure that the overall health of humans, animals, plants, and the environment are considered simultaneously, for the benefit of present and future generations.

In the future, we will be confronted with zoonotic infections that may develop to cause epidemics and pandemics, and new and existing strains of multidrug resistant pathogens, as well as other health threats. Threats will continue to emerge or re-emerge, putting lives at risk, endangering animal health, threatening ecosystems, food security and damaging the global economy, fuelled by changing climate conditions. A transformative approach is required in our relationship with the

¹<https://www.consilium.europa.eu/media/52730/g20-leaders-declaration-final.pdf>

²https://www.mef.gov.it/inevidenza/2021/article_00067/G20-Joint-Finance-and-Health-Ministers-Communique-29-October-2021.pdf

³https://www.salute.gov.it/imgs/C_17_pagineAree_5459_10_file.pdf

environment and how we address the emergence, re-emergence, spill-over and spread of disease. Importantly, we must acknowledge that climate change and biodiversity loss undermine life-supporting systems essential to human and animal health existence. This will involve placing greater emphasis on prevention—including infectious disease prevention and control, infection prevention and control, accurate laboratory detection, and appropriate epidemiological response—and preparedness; and investing in measures that take stock of, analyse and act on the complex economic, social, and environmental determinants of health.

Breaking the silos that exist between sectors and disciplines will require innovative approaches and strengthening of social, administrative, scientific and political will. Greater investment in applied and multidisciplinary implementation research, including in social behaviour change across the spectrum from building new knowledge to piloting and scaling is needed to enable sustainable, locally relevant scientific and evidence-based interventions that channel scientific inquiry toward positive change. The One Health approach provides a cohesive framework for this transformation, as it encompasses a multisectoral approach relevant to innovation, sustainable development and economic growth.

One Health offers a powerful approach for understanding and transforming systems. Crucially, it takes the connectivity, complex interdependencies between the health of humans, animals, plants, including ecosystems, and the interdisciplinary knowledge and expertise into consideration. A definition of the One Health approach⁴ developed by the OHHLEP reiterates the need for effective collaboration across sectors and disciplines, along with the importance of communication, coordination and capacity building in this process. This integrated and holistic approach helps to address the underlying drivers of zoonotic disease, Antimicrobial Resistance (AMR) emergence and other related health threats, thereby improving disease prevention and preparedness, mitigating the impacts of health risks and threats, implementing science-based and sustainable solutions, hence promoting long-term health for all.

To prevent, predict, detect, prepare for and respond to emerging health challenges, all relevant sectors must collaborate in an integrated manner – to achieve together what can not be achieved alone. The SDGs provide a framework towards improved economic, environmental, climatic, food system and social sustainability; however, to achieve these goals, we must first scale up joint efforts across sectors and address the damaging impact that recent health challenges have had on progress towards the achievement of SDGs. Only then can we make necessary strides towards balancing and optimizing the health of humans, animals, plants and the environment.

How to implement One Health effectively and successfully

The One Health approach needs to be applied globally, regionally, bilaterally, nationally, and locally, involving all relevant sectors and groups in society and linking all layers, considering different national capacities from high-level policies to activities on the ground, including community engagement. This includes fostering a common understanding of the One Health approach and promoting One Health governance at all levels, thereby enabling countries to operationalise One Health at scale. It is critically important that multisectoral and interdisciplinary collaboration be facilitated, through the provision of platforms and opportunities for engagement with all relevant stakeholders. Mapping of key stakeholders should be done for each One Health priority since focal points for different One Health priorities are not the same in most countries. Resources should be mobilised, evidence-based data should be identified and validated, information should be shared in a timely manner, measures and actions to enable better access to digital health and environmental data sharing in collaboration with international governance should be implemented.

⁴<https://www.fao.org/3/cb7869en/cb7869en.pdf>

The gaps that exist between institutions and disciplines represent barriers to the effective tackling of One Health challenges and must therefore be bridged. The success of a One Health approach depends on strong political commitment. This means long-term engagements at all levels, spanning all relevant sectors of government and championed by Heads of State. A whole-of-society approach demands engagement with all levels of government, the private sector, civil society, academia, and the media in their respective roles as policymakers, regulators, implementers, practitioners and influencers. Despite lessons learned from multiple health challenges, disease outbreaks and epidemics in the past, investment in the One Health approach to diagnostic surveillance and response systems remains limited, fragmented and has proved to be unsustainable. The World Bank estimates that an annual investment of approximately US\$1.9-3.4 billion is required to build and operate systems for effective disease prevention and control in low- and middle-income countries (LMICs)⁵. Investments to strengthen capacities to prevent the onset of a pandemic comes with an expected 86 percent annual rate of return and when directed toward sustainable improvements in resilient and responsive health systems improve lives and livelihoods. However, insufficient attention has been given to preventative measures and the reduction of risks to the health of humans, animals, plants and the environment. Greater collaborative dialogue is therefore required between human, animal, plant, and environmental health organisations and the financial sector, in order to secure long-term funding and investment. Crucially, One Health provides the mechanism by which these dialogues and the resulting funding mechanisms can be successful.

One Health should not be considered separately or in isolation, but rather as an integral component of investment packages. Cost benefit analyses can provide insights into the benefits of programmes and their sustainability, focusing on the interface of the health of humans, animals, plants and the environment. This may include containment of AMR, preventing and reversing environmental pollution and degradation to safeguard ecosystems, tackling the effects of climate change, conserving biodiversity and mitigating climate change impact, and strengthening an integrated health surveillance system for pest, disease and environment. It also covers activities for improving air quality, advancing animal health and welfare, combatting AMR, strengthening animal production sanitation along the value chain, improving human sewage and water sanitation, improving laboratory capacity and public health systems, strengthening multisectoral one health workforce capacity through pre-service and in-service education, and developing and implementing multi-sectoral plans with all relevant stakeholders to improve and maintain health. All these initiatives are necessary and fiscally prudent, given that the cost of inaction is far greater than the price of prevention.

By integrating data and knowledge systems, while also conducting joint surveillance and workforce development, One Health systems can be strengthened. This has potential to increase capacity to manage epidemic and pandemic infectious diseases; augment efforts to address neglected and endemic chronic and infectious diseases, including zoonotic diseases, vector-borne disease threats; improve availability of safe, quality food; and water; and improve prevention, rapid detection, and control emergence and spread of pathogens with antimicrobial resistant strains across all One Health sectors. The traditional separation of sectors and disciplines, as well as, their increasing divergence due to specialisation, poses a significant challenge to the development and implementation of an integrated, transdisciplinary approach. This tends to contribute to the widened gaps in One Health implementation. In this sense, it is important to share information and data from the different sectors involved in order to ensure an integrated monitoring of the different relevant areas. A monitoring and evaluation framework for One Health priorities based on a domestic risk analysis and taking into account national context is therefore suggested to identify and address gaps in where a One Health approach should be implemented.

⁵ <https://www.worldbank.org/en/topic/agriculture/brief/safeguarding-animal-human-and-ecosystem-health-one-health-at-the-world-bank>

Seven steps to improve One Health implementation

G20 members, alongside various international organisations, considered the following seven steps to better implement the One Health approach. The G20 will take into account these seven recommendations. The G20 will also consider these recommendations in their work with their global partners, recognising that the uneven distribution of health threats will necessitate support for countries that are disproportionately affected and those with comparatively limited resources for prevention.

The following recommendations are based on the recently developed One Health Joint Plan of Action (2022-2026) (OH JPA)⁶ by the Quadripartite and guided by recent findings from G20 One Health pre-events meetings, the One Health implementation gap mapping analysis done by most of G20 and analysed by the WHO One Health Initiative. These recommendations support the implementation of One Health systems locally, nationally, bilaterally, regionally, and globally in order to strengthen capacities and build more resilient and responsive health systems to address complex multi-dimensional health risks. These recommendations espouse multi-sectoral action, collaborative governance, inclusiveness, equity and multi-level cooperation, taking into account socio-cultural and economic issues in the context of One Health. To bring them to fruition, sustained financing for the operationalisation of One Health will also be required.

We hereby affirm that the Quadripartite should continue to take a leading role in providing technical support in supporting a One Health approach for countries and international society. We welcome the Quadripartite's role in One Health financing and recognise that multilateral development banks, and other global financing mechanisms and institutions should also play a more active role in financing for One Health. We also note that this international financing should be supported by an increase in One Health financing at the domestic level.

1 | Raise awareness and advocacy for a One Health approach priorities with

key stakeholders in relation to the interconnectedness of human, animal, plant and environmental health. This includes working with policy and decision makers in communities to convey the benefits of interdisciplinary cooperation and primary prevention (e.g., spillover prevention), conserving natural ecosystems and raising awareness of the health and economic benefits they provide. Risk factors and drivers need to be identified, along with practical solutions for risk mitigation and spillover prevention. In recognition that there is no time to waste on inaction or fragmented initiatives, the One Health approach has to be acted upon immediately by all relevant sectors. A common understanding of the One Health Approach should be based on the definition published by the OHHLEP and endorsed by the Quadripartite. Moreover, the One Health approach should be integrated into the new pandemic agreement currently being discussed at WHO.

2 | Identify gaps and opportunities by engaging in comprehensive and regular

assessment, monitoring and evaluation. At the regional, national and sub-national level, governments should support both the development and implementation of One Health action plans according to the respective priorities of countries. This involves making use of existing tools, surveillance mechanisms and instruments for this purpose adapted as per region, country, sub-national context; bringing sectors and disciplines together, backed by regulatory frameworks where appropriate, to make collective decisions on how to act on the assessments findings. In this regard, we acknowledge the G20 Self-Assessment Questionnaire exercise that could be further utilized by the Quadripartite to support this process.

⁶ <https://www.who.int/news/item/01-12-2021-tripartite-and-unep-support-ohhlep-s-definition-of-one-health>

3 | Develop mechanisms to support an overarching One Health governance

and coordination framework. This approach should be applied where relevant, to leverage existing solutions and develop mechanisms to support an overarching One Health governance using Quadripartite structures and coordination framework based on international standards for all relevant policies and programs. This includes fostering a whole-of-society and whole-of-government integrated approach in the spirit of One Health collaboration, as per country context at the national and sub-national level. This will help to ensure that decision-makers and practitioners across health and related sectors (i.e., doctors, veterinarians, nurses, pharmacists, microbiologists, farmers, environmentalists, natural resource managers, sanitarianism health regulatory agents, community workers, paraprofessionals and educators) can coordinate and collaborate to prevent, predict, detect, prepare for and respond to health threats at global, regional and national levels. Ultimately, this approach will help to improve the health of humans, animals, plants, and the environment, while also contributing to sustainable development. To that end, society as a whole should recognise the basic principles and core benefits of the One Health approach.

4 | Develop science- and evidence-based business cases for funding or

investment in One Health, with building on initiatives at the community, national, cross-border, regional, and global levels. This needs to be practical and based on country priorities or needs to support national and sub-national authorities (including ministries of health, agriculture, environment, finance and other related ministries) and relevant agencies in their assessment and decisions on investments in One Health. This will be underpinned by achieving goals, not only considering economic gain, but also the outcomes on the main objectives, such as human livelihood, animal health and wellbeing, social development, animal welfare, conservation of ecosystems and biodiversity.

5 | Be Guided by the Quadripartite's One Health Joint Plan of Action as a

blueprint for action for countries and stakeholders as appropriate, allowing them to strengthen collaboration and mainstream the One Health approach at global, regional, country national and sub-national levels (especially in large countries with a federal government structure). This includes developing national One Health plans and/or integrating One Health into relevant plans considering the principles prioritized by the OH JPA, including appropriate, actionable and measurable targets; mobilize sustained investment; promote a whole-of-society approach; and pursue collaboration, learning and exchange across regions, countries, and sectors to enhance One Health capacities to strengthen health systems. Examples of action plans that would benefit from this guidance include those which reduce the risks from emerging and re-emerging zoonotic epidemics and pandemics; control and strive to eliminate endemic zoonotic, neglected tropical, address wildlife dimensions, and vector borne diseases; strengthen assessment, management and communication of food safety risks; and integrate the environment aspects.

6 | Implement the One Health approach in all relevant policies to better

prevent, predict, detect, prepare for and respond to health threats arising from the linkages between humans, animals, plants and the environment. Responses to zoonotic diseases should be evidence-based on the best available science and data, taking the wider implications for ecosystems into consideration. Sustainable and effective communication, coordination and collaboration between those sectors is therefore a critical aspect of all efforts geared towards disease prevention, preparedness and response, and efforts to address the related

aspects in this regard. Lack of a One Health approach implementation can hamper efforts to prevent chronic, non-communicable and infectious diseases, including future outbreaks, epidemics, and pandemics which will likely arise at the nexus of human-animal-environmental interactions.

7 | Facilitate One Health research, knowledge sharing, capacity building

and voluntary knowledge transfers by creating an enabling environment in which learning research and knowledge sharing can thrive. This involves creating synergies and promoting frameworks and processes including collaborative learning and research and knowledge sharing that facilitate and promote One Health action, investing in research and expert researchers to increase our collective understanding and knowledge on One Health contexts, while also building on the expertise of relevant organisations, communities, and R&D partnerships. By increasing scientific insight, consolidating lessons learned, demonstrating best practices, setting up knowledge sharing networks, more effective One Health approaches can be implemented. By enhancing networking opportunities and providing training and increased awareness, a more skilled, informed, and competent health and other related workforce will be prepared to address One Health priorities. Moving forward, this international network of One Health experts can then be mobilised and deployed where and when they are needed. This network can include, among others, various community health workers, facility-based health workers, community-based animal health workers, sanitarians, health regulatory agents, environmental health professionals (rangers and others), social health workers, sanitary agents, farmers, veterinarians, domestic animal owners and environmentalists, as well as human, plant, animal, and environmental laboratory, surveillance, and epidemiological experts, economists, and sociologists. To enable capacity building at all levels, opportunities that emerge from these interactions can be leveraged for individual, community and institutional learning, research, and education information exchange; this includes tertiary and professional education, along with initiatives aimed at coordinating programmes, partnerships, research and networks at the international level.

In conclusion, the G20 members can set an example for countries, particularly for LMICs and support them in the implementation of a One Health approach. These recommendations are key to informing decision-makers and enabling coordinated actions and public policies. A combination of these actions, when effectively implemented collaboratively and multilaterally, can help to balance the health of humans, animals, plants, and the environment to ensure healthy lives and promote well-being.



G20

INDONESIA 2022

1ST HEALTH WORKING GROUP SIDE EVENT ON TUBERCULOSIS
30 March 2022

ANNEX-1

CALL TO ACTION ON
FINANCING FOR TB RESPONSE



This **Call to Action on Financing for TB Response** has been drafted by the Indonesian G20 Presidency in consultation with G20 members, in collaboration with World Health Organization, Stop TB Partnership, Global TB Caucus, Global Fund, USAID, World Bank, and Stop TB Partnership Indonesia without prejudice to members' views and does not purport to suggest agreement among G20 members on these issues. This Call to Action is attached to the Chair's Summary Health Ministers' Meeting of the G20 2022 as an Annex.

1. **Tuberculosis (TB) is one of the leading causes of death among infectious diseases**, claiming more than 4,100 lives a day. It remains the leading killer of people with HIV and a major contributor to antimicrobial resistance related deaths⁷.
2. **The COVID-19 pandemic has significantly disrupted access to TB services**. As a result, there was an 18% drop in the number of people newly diagnosed and reported in 2020, and the number of people who died of TB increased to 1.5 million. Global spending on TB services also decreased for the first time since 2016, potentially derailing fragile gains made to date.
3. **The combined impact of TB and COVID-19 is fueling inequalities and shattering economies**. WHO estimates that, on average, 47% of TB-affected households face costs that equal more than 20% of household income or expenditures, and that an estimated 1.9 million incident cases of TB are attributable to undernutrition.
4. **Worsening socioeconomic conditions as a result of the COVID-19 pandemic is anticipated to further fuel the TB epidemic**, especially in the absence of wide coverage of social protection and universal health coverage for vulnerable persons.^{1,3,8} It is estimated that failure to meet the targets in the World Health Organization's (WHO) End TB Strategy could result in 31.8 million TB deaths and US\$17.5 trillion lost from 2020 to 2050⁹.
5. **Lack of adequate financing remains the most important barrier to ending the TB epidemic**. It is estimated that the world needs at least \$13 billion in 2022 and \$19.6 billion each year from 2023-2030¹⁰ to end the TB epidemic. With only \$5.3 billion invested by countries in 2020¹, as per WHO monitoring of the financial TB response notes, this means global investments need to increase fourfold by 2023 to achieve the funding needed.
6. An additional US\$4 billion per year will be required to support research and development of new diagnostics, medicines and vaccines necessary to end TB. this means quadrupling the currently available US\$0.9 billion¹¹ investment. **G20 member countries account for almost 50% of all new infections and deaths due to TB** and possess strong financial capacity, and the know-how to mount a robust TB response.
7. Furthermore, **G20 Members have consistently committed to address tuberculosis, particularly multidrug-resistant TB (MDR TB), as part of the global AMR response**. Despite these high-level commitments, the 2020 progress report by the United Nations Secretary General notes that both actions and investments fell far short of those needed to reach agreed targets, particularly among children, and outlined ten recommendations to accelerate progress.¹²

In light of the above, we, the representatives of G20 Member countries who met at the first Health Working Group Side Event “Financing TB Response: Overcoming COVID-19 Disruption and Building Future Pandemic Preparedness”:

- A. Reaffirm our commitment to meet the targets set for ending tuberculosis by 2030 under the Sustainable Development Goals and the WHO End TB Strategy, and in the Political Declaration of the UN High Level Meeting on TB, by strengthening international ties and working together to ensure a holistic, sustainably financed, and accountable response to TB
- B. Recognize the important role of the G20 members in strengthening the global response to end TB by promoting health and disease prevention — including through infection prevention and control (IPC) activities, accurate laboratory detection and appropriate epidemiological responses — and leveraging policy and financial tools to foster an inclusive and sustainable

⁷ [Global tuberculosis report 2021](#). Geneva: World Health Organization. (2021). Licence: CC BY-NC-SA 3.0 IGO

⁸ [Secretariat of the United Nations Conference on Trade and Development. \(2021\). Trade and Development Report](#).

⁹ [Sachin Silva, Nimalan Arinaminpathy, Rifat Atun, Eric Goosby, Michael Reid. \(2021\). Economic impact of tuberculosis mortality in 120 countries and the cost of not achieving the Sustainable Development Goals tuberculosis targets: a full-income analysis. The Lancet Global Health, Volume 9, Issue 10](#).

¹⁰ The Global Plan to End TB, 2018–2022. Geneva: Stop TB Partnership; 2019. The Global Plan to End TB, 2023–2030. Geneva: Stop TB Partnership; 2022

¹¹ Treatment Action Group, Stop TB Partnership. Tuberculosis research funding trends 2005–2019. New York: Treatment Action Group; 2020.

¹² United Nations. (2021). Progress towards the achievement of global tuberculosis targets and implementation of the political declaration of the high-level meeting of the General Assembly on the fight against tuberculosis ([A/75/236](#))

world, as envisioned in the WHO End TB Strategy and the 2030 Agenda for Sustainable Development; Recognize the zoonotic potential of TB, i.e. apply the One Health approach.

- C. Provide leadership in the preparation for the 2023 United Nations General Assembly High-Level Meeting on Tuberculosis to ensure sustained commitment and action to end TB, with support from the World Health Organization, Stop TB Partnership and other relevant stakeholders
- D. Recognize the critical and catalytic role political leaders play in shaping the urgency and degree of effort required to meet the 2030 End TB targets, including raising additional resources to address unmet needs;
- E. Acknowledge the central role of the World Health Organization in coordinating the global response to end TB, and in monitoring the global financing landscape for TB prevention¹³, diagnosis, treatment and care, in close collaboration with the Stop TB Partnership and other relevant stakeholders, including civil society and affected communities, and the central role of Member States;
- F. Welcome the commitment and support for the Global Fund to fight AIDS, TB and Malaria, through the Seventh Replenishment held in September 2022 to help significantly increase the allocation for TB programmes to close critical funding gaps especially in LMICs, acknowledging that the Global Fund is the largest multilateral provider of grants for HIV, TB and Malaria and contributes to mitigating the impact of COVID-19 on progress made against other infectious diseases and on fragile health systems and contributes to strengthening pandemic preparedness;
- G. Underscore Unitaïd's critical role in fighting against tuberculosis, as the world's largest multilateral donor of tuberculosis research and development, helping to make diagnostics and treatment available and affordable;
- H. Promote adequate and sustainable investment in prevention — including through IPC activities, accurate laboratory detection, and appropriate epidemiological responses — research, capacity building, voluntary licensing and voluntary technology transfer in mutually agreed terms, digital health including real-time surveillance and health information systems, to accelerate the pace of development, manufacturing, and deployment of new tools and countermeasures including vaccines, diagnostics and safe, effective, and shorter treatment regimens for combating drug-resistant forms of TB, in the context of the global AMR response
- I. Promote efforts to end TB as part of an effective One Health multisectoral approach to combat AMR with relevant sectors and agencies. include actions to combat MDR and XDR-TB in the implementation of national AMR action plans that require support and collaboration at the local, national and regional levels; where appropriate based on burden;
- J. Drive rights-based, gender-sensitive multisectoral approaches, policies, and service delivery innovations which address barriers that limit access to services;
- K. Forge partnerships with all relevant stakeholders, including TB survivors, parliamentarians, civil society, technical and multilateral agencies, development banks, and the World Health Organization, among others, to ensure that the world recovers from the TB crisis. We pay tribute to all health care professionals and frontline workers for the essential services they are providing to our societies and citizens;

¹³ Including through IPC activities, accurate laboratory detection, and appropriate epidemiological responses

The current trajectory in financing and implementing the TB response, including necessary research and development, is inadequate to ensure equitable and sustainable efforts to reach, diagnose and cure people with the deadly disease, and to prevent millions from becoming infected or ill. Building on the preceding G20 commitments, we call for G20 Member countries and partners to:

- L. Mobilize adequate, predictable, and sustainable resources to close the funding gap and to enable universal access to WHO-recommended TB prevention — including through IPC activities, accurate laboratory detection, and appropriate epidemiological responses — diagnosis, treatment and care tools and services, especially in low and middle-income countries, through national, bilateral and multilateral channels as well as private investments, including through innovative financing mechanisms
- M. Integrate the TB response within domestic and international financing mechanisms for social protection, humanitarian responses and pandemic preparedness to enable comprehensive, integrated multi sectoral response;
- N. Support and enhance the application of existing multilateral platforms and funding mechanisms, to accelerate the development and availability of safer, more effective and affordable TB vaccines, diagnostics, and treatment regimens, considering issues of scalability, access, and manufacturing along the research continuum;
- O. Prioritize TB financing in the G20 countries' and to accelerate progress towards closing TB investment gaps in the context of the 2023 United Nations High Level meeting on TB;
- P. Increase funding for the development of more effective TB vaccines and TB diagnostics – including point of care tests, by 2025, drawing on lessons learnt from the unprecedented progress made in COVID-19 research and development;
- Q. Foster multi country collaborations for undertaking TB research for development and validation of new tools for diagnosis, treatment and prevention of TB disease and infection.
- R. Leveraging strengths of collaborating countries to develop detailed plans for TB research.
- S. Ensure the highest political commitment for multi sectoral partnership to streamline the comprehensive implementation of evidence based policy required to halt the TB epidemic.
- T. Enhance community engagement by encouraging community support to TB patients with an objective to provide additional patient support to improve treatment outcomes.
- U. Engage with public and private partners to develop effective, affordable, rapid, and easy-to-use tools for screening and diagnosing TB infection and disease; for detecting drug resistance, and for monitoring treatment outcomes at community level in low resource settings;
- V. Mobilize domestic resources in high TB burden countries to strengthen and integrate community efforts within the formal TB response and health system;
- W. Recommend rapidly transitioning to real-time surveillance data and advanced technology utilization for TB response;
- X. Ensure continuity of equitable and high-quality treatment, care and support services for mobile populations, including internally displaced people and migrants and programming that address the needs of the most affected and populations in vulnerable situations, for a more efficient and effective TB response.



G20 CALL TO ACTION ON ANTIMICROBIAL RESISTANCE

1. **Antimicrobial resistance (AMR), in particular antibiotic resistance, is among the top ten global public health threats¹⁴ and an urgent health challenge for the next decade¹⁵.** Emerging AMR potentially risks eroding many of the health and development advances of modern medicine and achievement of the Sustainable Development Goals (SDGs). AMR does not recognize borders and affects humans, animals, plants, food, environment, trade and the world economy. Low-and-Middle Income Countries (LMICs) are disproportionately impacted by AMR as they often lack sufficient access to human and animal healthcare services and to quality and safe medicines, AMR and antimicrobial use (AMU) and antimicrobial consumption (AMC) functional and representative surveillance programs, waste management systems, wastewater treatment, sufficient laboratory and diagnostic capacity, appropriate governance and the regulatory frameworks needed to respond adequately to AMR. The COVID-19 pandemic has significantly disrupted AMR governance and implementation of interventions such as stewardship, surveillance, routine vaccination programs^{16,17}, and has increased inequality of access to healthcare and essential medicines in LMICs. It has also highlighted the urgent need for sustainable, equitable and cost-effective global and national joint responses. We will work to ensure that our collective COVID-19 response investments enhance improvements in national capacity to prevent, detect and respond effectively to AMR and explore the appropriateness of the inclusion of AMR in international instruments on pandemic prevention, preparedness and response currently under negotiation at WHO.

2. **To better address the AMR threat, robust surveillance and monitoring are required globally:** Accurate and reliable data on AMR, AMU and AMC is needed across humans, animals, plants, food and the environment. A recent study¹⁸ estimated that at least 1.27 million deaths per year are directly attributable to bacterial AMR (i.e. antibiotic resistance) and pointed to the limited existing high-quality data to inform policy decisions and science-based interventions at local, subnational, national, regional and global levels. We urge countries to join the WHO Global Antimicrobial Resistance and Use Surveillance System (GLASS) and participate in regional AMR and AMU surveillance networks. We encourage countries to also join the monitoring program on AMU in animals, through the WOAHA ANimal AntiMicrobial USE (ANIMUSE)¹⁹ Global Database. We acknowledge the development of the International FAO Antimicrobial Resistance Monitoring (InFARM)²⁰ data platform and system by the FAO for AMR in the food and agriculture sectors and AMU in crops. Furthermore, we also request the Quadripartite to update member states on TISSA²¹, the upcoming Quadripartite platform for linking and referring current initiatives for AMR and AMU surveillance data across sectors (human, animal, plant, food, and environment) at the national, regional and global levels. We continue to be guided by the Codex Alimentarius on integrated monitoring and surveillance of foodborne antimicrobial resistance, and correspondingly, WOAHA's chapters around monitoring of the quantities and usage patterns of antimicrobial agents used in animals from the terrestrial and aquatic animal health codes.

3. **Scaling up collaborative, coordinated, One Health AMR surveillance, risk assessment and interventions is required** to contain and minimize health impact and health expenditure – in the

¹⁴ AMR has been declared as one of the top ten global public health threats facing humanity by WHO in 2019.

¹⁵ <https://www.who.int/news-room/photo-story/photo-story-detail/urgent-health-challenges-for-the-next-decade>.

¹⁶ 2021 TrACCS report.

¹⁷ <https://www.oecd.org/health/Antimicrobial-Resistance-in-the-EU-EEA-A-One-Health-Response-March-2022.pdf>

¹⁸ Global burden of bacterial antimicrobial resistance in 204 countries and territories in 2019: an analysis for the Global Burden of Disease Study', The Lancet, 2022.

¹⁹ <https://amu.woah.org/amu-system-portal/home>.

²⁰ <https://www.fao.org/antimicrobial-resistance/resources/database/the-international-fao-antimicrobial-resistance-monitoring-infarm-system/fr/>

²¹ <https://web.oie.int/download/WG/AMR/AMR-Tripartite-Workplan-updated-08-April-2019.pdf>

human, plant and animal sectors - as well as socioeconomic and environmental consequences. Surveillance is critical for understanding and assessing the emergence and spread of AMR and effective pandemic preparedness, prevention and response efforts. Therefore, we encourage countries to empower on-the-ground, integrated One Health AMR surveillance efforts to improve the use of local data and strengthen national-level capacity. Scalable, proven One Health interventions exist, including implementation of biosecurity and Infection Prevention and Control (IPC) activities in human and animal health; pollution control and minimization - through clean water, sanitation and hygiene; vaccines where available and appropriate; antimicrobial stewardship capacity and programs to ensure responsible and prudent use of antimicrobials to preserve antimicrobial efficacy in healthcare, community and animal health; accurate laboratory detection, improved digital reporting and appropriate evidence and risk-based interventions to target priority microbes and infectious diseases and anticipate future risks; and strong governance at all levels. Prevention-focused actions and a specific focus on providing LMICs with support should be prioritized to mitigate the risks posed by AMR, as investments into tackling AMR will pay for themselves²².

4. **Start somewhere, start small, now, and sustain efforts:** It is time to establish the steps needed for all countries to start somewhere, start small, and sustain actions based on One Health approaches whenever relevant. We recall the fictional One Health exercise at the 2018 G20 Argentina Presidency on the spread of antibiotic resistant *Escherichia coli* through multiple transmission routes, between sectors and across borders and the WHO Tricycle Protocol in piloted countries. We encourage countries to monitor the WHO priority microbes, the bacteria identified in the monitoring framework of SDG 3 - including but not limited to *Escherichia coli*, notably strains resistant to third generation cephalosporins and carbapenems, and methicillin-resistant *Staphylococcus aureus* (MRSA) - as well as other nationally determined priority pathogens and commensal bacteria.
5. **We aim to increase equitable access to vaccines, therapeutics and diagnostic tools (VTDs) and innovative preventive tools, to prevent and control infections in human, plant and animal health:** We will prioritize provision and equitable access to affordable, safe, timely and quality assured antimicrobials, diagnostic tools and services and prevention measures using integrated science and risk assessments, including alternatives to antimicrobials when relevant, across sectors (humans, animals and plants), particularly for populations in vulnerable situations and ensuring responsible and prudent use of antimicrobials in all settings. We appreciate the new antimicrobials and affordable diagnostics being developed through global initiatives and the need to enhance global efforts to increase availability of new and existing VTDs for human and animal health. Extending the production of VTDs within LMICs, while ensuring antimicrobial stewardship and minimizing environmental pollution, can help diversify and strengthen their innovation and production capabilities.
6. **Progress has been made:** We welcome the new Quadripartite (FAO, UNEP, WHO, WOA) Collaboration for One Health, supported by the One Health High-Level Expert Panel, and its efforts to coordinate joint One Health work through global activities addressing health risks at human-animal- food-plant-environment interfaces. We encourage the Quadripartite Joint Secretariat on AMR to emphasize that all actions on AMR should be grounded in strong science and sector-specific strategies and programs, while also advancing the One Health approach when relevant and the Global Action Plan on AMR. We welcome the integration of AMR as an action track of the One Health Joint Plan of Action (OH JPA). The G20 also welcomes the establishment of the Multi-Stakeholder Partnership Platform on AMR by the Quadripartite and building on the 2021 G20 Health Ministers' Declaration, we also urge the swift establishment of the Independent Panel on Evidence

²² The 2018 OECD report "Stemming the Superbug Tide. Just A Few Dollars More" (<https://www.oecd.org/health/stemming-the-superbug-tide-9789264307599-en.htm>) showed that, in OECD countries, investments in a package of policies addressing AMR "would pay for itself within a year, and end up by saving 4.8 billion of dollars per year" and would "produce savings of about USD 1.5 for every dollar invested."

for Action Against Antimicrobial Resistance following the recommendations of the UN Interagency Coordination Group (IACG) report. We note with appreciation the SECURE²³ initiative by WHO and Global Antibiotic Research & Development Partnership (GARDP) to establish a relevant product portfolio of antibiotics driven by public health needs.

CALL TO ACTION

- a. **We call for reaffirmed commitment from G20 Member States to lead by example and implement our own AMR National Action Plans (NAPs)** across all sectors, in line with the Global Action Plan on AMR and to consider the integration of AMR action track of the OH JPA when updating NAPs. Where necessary and appropriate, we reaffirm our commitment to support each other and share knowledge and assistance with other G20 countries through existing bilateral and multilateral mechanisms. We encourage G20 countries to monitor progress on NAP implementation through the annual Tracking AMR Country Self-Assessment Survey (TrACSS)²⁴. The G20 encourages increased implementation of NAPs on AMR in LMICs, through new and existing national, bilateral and multilateral mechanisms, including the AMR Multi-Partner Trust Fund, relevant UN and multilateral organizations or other financial instruments. The G20 welcomes the Quadripartite' s ongoing initiative of developing global and national AMR investment cases in collaboration with other stakeholders to enhance domestic and external funding for implementing high-impact AMR multisectoral interventions.

- b. **We call for Member States to address AMR with One Health AMR surveillance implementation and contribute to achieving the SDGs.** We look forward to the creation of the Quadripartite Technical Group on Antimicrobial Resistance and Use Integrated Surveillance (QTG-AIS) to provide advice and guidance on the development of global and context-appropriate regional and country-level systems for integrated surveillance and the establishment of effective capacity across all sectors.
We call for collaboration on strengthening surveillance systems among G20 countries, including capacity building to strengthen the quality, frequency and representativeness of the clinical, epidemiological, and microbiological data collection and data analysis so that those sharing data equally benefit from the information. The G20 welcomes the WHO project on AMR periodic nationally representative prevalence surveys in select countries, including Indonesia, to improve surveillance. The G20 strongly encourages contributing to regional and global surveillance architecture including GLASS and ANIMUSE, and to consider participation in global AMR and AMU monitoring initiatives in development, including the InFARM data platform and the TISSA integrated data platform. We encourage WHO to develop regional AMR surveillance networks in Eastern-Mediterranean and African Regions and collaboration with Asian networks. The G20 also supports FAO ATLASS in assessing and defining areas to improve laboratory capacity and the sharing of emerging AMR organisms in the food and agriculture sectors.

- c. **We call for commitment to enhance the coverage and quality of diagnosis of infections and resistant infections** at all levels of the health system among the G20 countries. Stronger laboratory systems and reliable diagnostics are the basis for reliable surveillance data, and appropriate outbreak investigation, infection prevention and control and patient management. The G20 strongly encourages strengthening the capacity of microbiology laboratories at national and sub-national levels to diagnose disease and detect AMR, thereby facilitating timelier and more appropriate treatment, as well as the training of health professionals regarding the diagnostic process (including clinical examination). The G20 acknowledges the need for increased investments in diagnostic facilities and capacity development, including laboratory facilities, appropriate equipment, dedicated and trained staff, laboratory methods, internal and external laboratory quality assurance

²³ <https://www.who.int/groups/secure-expanding-sustainable-access-to-antibiotics>

²⁴ TrACSS – Has been renamed from “Tripartite” to “Tracking AMR Country Self-Assessment Survey” after the official inclusion of UNEP within the Quadripartite.
www.amrcountryprogress.org.

and quality control, laboratory networking and diagnostic stewardship²⁵, including engagements with relevant international organizations.

- d. **We call upon the United Nations Secretary General and the Quadripartite to establish the Independent Panel on Evidence for Action against AMR**, as recommended by the IACG, with a scope agreed by UN Member States. In response to the clear need for interventions to be guided by evidence, a focused, streamlined and sustainable panel is needed to generate, monitor and synthesize evidence on the drivers, risks and options for mitigation of AMR including its broader economic and social impacts. We recognize that the panel should align with existing and emerging global structures related to One Health and health security and iterate the importance of establishing the Panel prior to the 2024 High-Level Meeting on AMR.
- e. **We call for strengthened engagement with the Global AMR R&D Hub, OECD, the Quadripartite and other international antimicrobial research and development organizations** whenever possible and relevant, including: Combating Antibiotic-Resistant Bacteria Biopharmaceutical Accelerator (CARB-X), GARDP, including its SECURE initiative and the Global Health Security Agenda - Antimicrobial Resistance Action Package (GHSA-AMR). The G20 encourages efforts to close GARDP's funding gap to facilitate the "5 by 25" Initiative to deliver five new treatments by 2025. We encourage the convening of a discussion between Health and other relevant ministries and international organizations to promote collaboration and facilitation on research and development of new antimicrobials, while taking measures to preserve their efficacy, as well as effective and affordable diagnostic tools and vaccines, addressing unmet public health needs, across the One Health spectrum and other alternatives to antimicrobials and disease prevention and control measures.
- f. **We call for improved infectious disease prevention and control.** The G20 will work to improve infectious disease prevention and biosecurity. Reducing the incidence of infections decreases the use of antimicrobials and the potential for antimicrobial resistant pathogens to spread. The G20 will work to ensure COVID-19 response investments in healthcare IPC results in sustainable improvements in national IPC capacity. Effective IPC programs are crucial to ending avoidable health-care-associated infections and the spread of AMR, and are the foundation of safe, effective, high quality health service delivery. The G20 recognizes the WHO IPC assessment framework (IPCAF)²⁶ as a critical tool to support the implementation of the WHO Guidelines on core components of IPC programs.
- g. **We call for the advancement of antimicrobial stewardship** as a priority area across the One Health spectrum. The G20 asks the Quadripartite support to increase advocacy across political, multilateral, and technical fora on the critical importance of preserving the effectiveness of existing antimicrobials. By focusing on the development of diagnostic tools that support appropriate use decisions when clinically relevant, the G20 will complement the G7's research and innovation agenda. We also encourage the strengthening of the evidence base for the behavioral and social aspects of inappropriate use, to inform more effective and targeted stewardship-focused innovations.

²⁵ <https://apps.who.int/iris/bitstream/handle/10665/251553/WHO-DGO-AMR-2016.3-eng.pdf>

²⁶ <https://www.who.int/publications/i/item/WHO-HIS-SDS-2018.9>

G20 PRESIDENCY CHAIR'S SUMMARY
The Second G20 Joint Finance and Health Ministers' Meeting
Bali, Indonesia, 12 November 2022



Part I: Summary of Discussions on Global Health Context

1. Many members strongly condemned Russia's illegal, unjustified and unprovoked war of aggression against Ukraine and called for an end to the war. These members expressed concern about the damage caused by the conflict on critical health infrastructure, as well as casualties in health care workers, which have disproportionately affected the most vulnerable, women and children. They expressed the view that the war exacerbates the ongoing COVID-19 pandemic, global food security crisis and malnutrition, with resulting health and economic impacts. Some members noted the various views that have been advanced about the unfortunate and ongoing war between Russia and Ukraine and did not think it was appropriate to address geopolitical issues in this forum. Two members were concerned by the multiplicity of geopolitical tensions, conflicts and other controversies of this kind in many parts of the world, and expressed the view that it was not appropriate to condemn one member in this forum.

Part II: Agreement on Concrete Deliverables and Further Actions

We agreed on the importance of tackling critical global health issues through multilateral cooperation and agreed on the following outcomes.

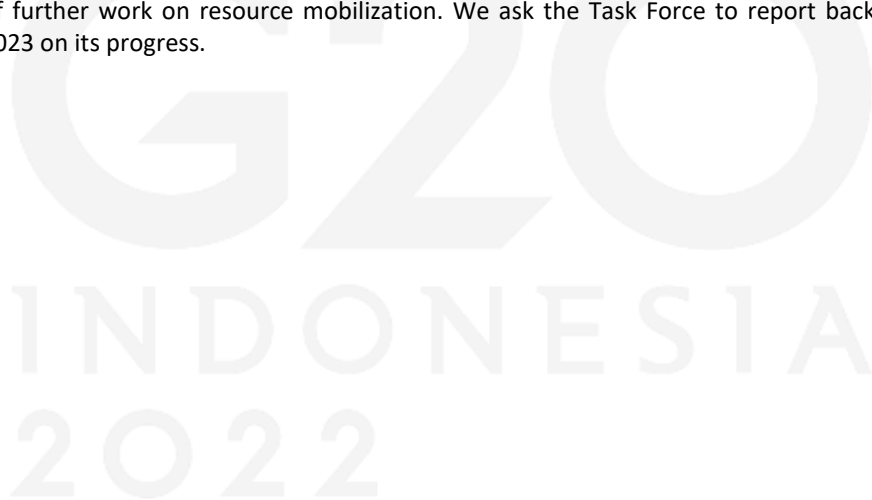
2. The impact of the COVID-19 pandemic continues to be felt worldwide. We reaffirm our commitment to bring the pandemic under control everywhere as soon as possible, put people at the center of preparedness and response, and to strengthen our collective efforts to prepare for, prevent, detect, report, and respond to health emergencies, notably promoting resilience of global, national and regional health systems, and communities, and the achievement of Universal Health Coverage (UHC). We recognize the vital importance of timely, equitable and universal access to safe, affordable, quality and effective vaccines, therapeutics and diagnostics (VTD). We welcome rising COVID-19 vaccination rates across the globe and encourage further efforts to increase vaccinations, especially in low and low-middle income countries, though achievements remain far short of the World Health Organization (WHO)'s target of 70 percent of people fully vaccinated in all countries. We note the decline in testing rates globally. We continue to support national and international efforts to address these gaps, including through the Access to COVID-19 Tools Accelerator (ACT-A) pillars and agencies as the world transitions to long-term control of the virus. We also recognize the importance of effective global surveillance, workforce training, strengthening VTD manufacturing, research and development, and tackling the threat of anti-microbial resistance, adopting a One Health approach.

3. We continue to support the ongoing urgent efforts to strengthen the global health architecture for pandemic prevention, preparedness and response (PPR). We support the work of the Intergovernmental Negotiating Body that will draft and negotiate a legally binding instrument, that should contain both legally binding and non-legally binding elements mindful that the decision will be made by the World Health Assembly, to strengthen pandemic PPR and the working group on the International Health Regulations that will consider targeted amendments to the International Health Regulations (IHR) (2005). We support the WHO's work in promoting efforts to enhance pandemic PPR governance, systems, and financing in accordance with member states. We recognize the role innovative and flexible partnerships in global health, such as Gavi, the Global Fund, CEPI, Unitaid, FIND, and the Medicines Patent pool, can play in close collaboration with WHO, UNICEF and its Member States in building global health resilience and response capacity against future pandemic threats.

4. The G20 Joint Finance-Health Task Force (the Task Force), co-chaired by Italy and Indonesia and assisted by its Secretariat hosted by the WHO with support from the World Bank, has advanced its mandate from the G20 Leaders' 2021 Rome Declaration to contribute to strengthening global health architecture. Under the Indonesian G20 Presidency, it has promoted collective actions to respond to the pandemic, assessed pandemic PPR financing gaps, catalyzed the establishment of a financial facility, and explored various options aimed at developing coordination arrangements between Finance and Health Ministries.

5. The G20 High Level Independent Panel, as well as the WHO and World Bank have estimated there is an annual pandemic PPR financing gap of approximately USD 10 billion. As initiated by the Saudi Arabian G20 Presidency, the Italian G20 Presidency and continued by the Indonesian G20 Presidency, we welcome the provision of additional financial resources, to assist in financing critical gaps in implementing IHR (2005) and increase PPR capacities. In this regard, we welcome the establishment of a new Financial Intermediary Fund for Pandemic PPR (the 'Pandemic Fund') hosted by the World Bank. It aims to address critical pandemic PPR gaps and build capacity at national, regional and global levels, bring additionality in financial resources for pandemic PPR, catalyze complementary investments, and facilitate a coordinated and coherent approach to pandemic PPR strengthening. We welcome the Pandemic Fund's inclusive membership and representation from low- and middle-income countries, civil society organizations and donors, and acknowledge the WHO's technical expertise and central coordination role in this endeavor, which reflects its leadership role in the global health architecture. We appreciate the work of the Secretariat hosted by the World Bank, with the WHO as technical lead and as chair of the Technical Advisory Panel. We look forward to the launch of the Pandemic Fund's first call for proposals as soon as possible. We commit to increase the capacity of developing countries for pandemic PPR through the Pandemic Fund, and look forward to the stocktaking review of the Pandemic Fund at the end of its first year to draw on lessons learned and incorporate any changes needed to ensure it is operating in accordance with its governing documents and effective at filling critical pandemic PPR gaps, and that it continues to have a central coordination role for the WHO, maintains a strong connection to the G20, and is inclusive of the perspectives of low- and middle-income countries and additional non-G20 partners in its decision making. We commend the pledges by current donors, amounting to over USD 1.4 billion, and encourage additional voluntary pledges. We call on new donors to join the Pandemic Fund, as they are able to.

6. It is essential to continue collaboration between Finance and Health Ministries for pandemic PPR. We extend the mandate of the Task Force, and ask the Secretariat of the Task Force to work with the Task Force co-chairs, the incoming Indian G20 Presidency, the G20 Troika, and G20 members to agree on a Task Force workplan for 2023, taking into account a multi-year planning horizon. We thank the WHO for continuing to host the Secretariat, with support from the World Bank. In 2023 the Task Force will continue to be co-chaired by Indonesia and Italy, representing advanced and emerging economy perspectives, and will continue to draw on expertise of the WHO, International Financial Institutions and other relevant organizations, with the support of the 2023 Indian G20 Presidency. To expand the voice of lower income countries we invite key regional organizations to join the Task Force meetings, as appropriate. We will work closely with the WHO to ensure the Task Force continues to complement the global pandemic PPR architecture and there is no further duplication and fragmentation of the global health governance system. Delivering on the mandate from the G20 Rome Leaders' Declaration, in 2023 the Task Force will continue developing coordination arrangements between Finance and Health Ministries, and share best practices and experiences from past finance-health coordination in order to develop joint responses to pandemics, as appropriate. The Task Force will undertake work to better understand economic risks and vulnerabilities from pandemics, and how to mitigate them, with a focus on finance and health coordination in response to new pandemics, considering country-specific circumstances and recognizing the importance of further work on resource mobilization. We ask the Task Force to report back to Finance and Health Ministers in 2023 on its progress.



ANNEX

G20 ACTION FOR STRONG AND INCLUSIVE RECOVERY

Upon submissions from G20 members, invited countries and international organizations, the Presidency has issued the following illustrative list of concrete actions, projects, and initiatives aimed to advance international collaboration in order to recover together, recover stronger, noting that inclusion in this list does not imply endorsement by all G20 members, and ownership as well as implementation of each project shall be under the purview of the proposing country(ies) and/or organization(s). The list is as follows:

I. GOVERNMENTS

A. Health

1. Support and contribution to the Coalition for Epidemic Preparedness Innovations/ CEPI (multi-countries)

CEPI is currently in efforts to mitigate COVID-19, particularly through research and development of vaccines and its role in the COVAX. The following countries have committed contributions and/or given their support:

- a. Australia is contributing concrete collaboration of AUD 100 million replenishment.
- b. Canada has contributed CAD 114 million to CEPI since its establishment in 2017. This includes CAD 90 million toward COVID-19 vaccines (2020-21) and CAD 24 million for research and development into vaccines for high-risk pathogens (2017-2023).
- c. The European Union contributed USD 199 million from 2017 to 2021 and has committed another USD 34 million for the following years.
- d. Germany supports CEPI in 2022 with EUR 80 million as part of the German contribution to ACT-A and intends to support CEPI with additional EUR 100 million until 2026.
- e. Indonesia is contributing USD 5 million within a period of 5 years as announced by the Indonesian Minister for Health during the CEPI Global Pandemic Preparedness Summit on 7 March 2022.
- f. In the two-year period 2020-2021, Italy has contributed EUR 15 million to CEPI. Moreover Italy has contributed EUR 4 million in 2022, with a total of EUR 20 million for the period 2022-2026.
- g. Japan announced a new contribution of USD 3 million to CEPI on top of its contribution of up to USD 220 million.
- h. The Republic of Korea is contributing USD 9 million within a period of 3 years.
- i. The Kingdom of Saudi Arabia has pledged USD 500 million to support global efforts to combat the coronavirus pandemic in 2020. The Kingdom allocated USD 150 million to the Coalition for Epidemic Preparedness and Innovation (CEPI), USD 150 million to the Global Alliance for Vaccines and Immunizations (GAVI), and USD 200 million to other health organizations and programmes.
- j. On 7-8 March 2022, the UK hosted the Global Pandemic Preparedness Summit, which raised USD 1.535 billion for CEPI. The UK pledged GBP 160 million (USD 211million) towards CEPI's 5-year strategy to help reduce the time to develop vaccines against new health threats to just 100 days.
- k. The United States, through the Partnership for Global Infrastructure and Investment (PGII), has pledged USD 150 million over three years to support CEPI's ongoing efforts to develop COVID and other vaccines as well as other health security measures.
- l. Singapore commits concrete collaboration of USD 15 million contribution over 5 years.

2. Support and contribution to the Financial Intermediary Fund for Pandemic PPR (Pandemic Fund) (multi-countries)

The FIF will finance critical investments to strengthen pandemic PPR capacities at national, regional, and global levels, with a focus on low- and middle-income countries and in close collaboration with donor and co-investor countries, philanthropies, civil society organizations, the WHO, the World Bank, and the G20 Health and Financial Task Force. Developed with leadership from Italy and Indonesia as part of their G20 Presidencies, and with broad support from the G20 and beyond, over USD 1.4 billion in financial commitments have already been announced for the FIF, including:

- a. Australia is contributing AUD 50 million to the Pandemic Fund.
- b. China has pledged a contribution of USD 50 million to the newly established FIF.
- c. At the 4th Joint Finance Health Task Force Meeting, Indonesia has announced its contribution of USD 50 million.
- d. Germany has made a contribution of EUR 69 million.
- e. India has made a contribution of USD 10 million.
- f. Italy with EUR 100 million.
- g. The Republic of Korea has made a contribution of USD 30 million.
- h. EU's lead support of USD 450 million to the FIF for pandemic PPR.
- i. France has announced financial support to the FIF.
- j. The United States/PGII has announced USD 450 million in contributions.
- k. The Netherlands' financial contribution of USD 10 million.
- l. Singapore with a concrete collaboration of USD 10 million contribution.
- m. UAE contribution of USD 20 million.
- n. Other countries who have announced contributions: UK (GBP 25 million), Japan (USD 10 million), Spain (USD 15 million), South Africa (USD 5 million).
- o. Organizations and/or philanthropies: Bill and Melinda Gates Foundation (USD 15 million), Welcome Trust (GBP 10 million), Rockefeller Foundation (USD 15 million).

3. Indo-Pacific Regulatory Strengthening Program (RSP) (Australia)

A regional initiative aimed at capability-building for medical and pharmaceutical regulatory authorities (NRAs) to ensure timely access to safe, high quality and effective medical products for the diagnosis, treatment, and prevention of infectious disease threats in the Indo-Pacific. Concrete collaboration of up to AUD 17 million (2018-2022).

4. Support and contribution to COVAX Advance Market Commitment (AMC) and the Access to COVID-19 Tools Accelerator (ACT-A) (multi-countries)

A WHO-led global initiative to support the safe and equitable distribution of COVID-19 vaccines to low and middle-income countries. Countries have made the following commitments:

- a. Australia with AUD 215 million contribution (further AUD 85 million announced 1 April) with a project total of approximately USD 15 billion.
- b. Canada has committed over CAD 2 billion to the Access to COVID-19 Tools Accelerator. Included in these ACT A commitments is Canada's support of approximately CAD 840 million to the COVAX Facility for vaccine procurement, delivery and the design and implementation the dose sharing mechanism. Canada is also a co-chair of the COVAX AMC Engagement Group. Canada is on track to meet the commitment to donate the equivalent of 200 million doses by year end. To date, Canada has donated the equivalent of more than 140 million doses and is continuing to allocate donations primarily through the COVAX Facility on an ad hoc basis according to country demand.
- c. China has donated USD 100 million to COVAX for the distribution of vaccines to developing countries.
- d. The European Union has supported COVAX with EUR 1 billion in grants for vaccines purchase (EUR 400 million) and guaranteed loans (EUR 600 million) in 2020 and 2021, and additional EUR 375 million to deliver vaccines on the ground. Overall, the EU and its

Members States contribute with over EUR 5 billion (in grants and loans) to the COVAX Facility. The European Union also pledged EUR 715 million to the Global Fund.

- e. Since 2020, France contributed EUR 510 million to ACT-A, of which EUR 300 million went directly to COVAX.
- f. Germany has since 2020 contributed EUR 3.3 billion to ACT-A, of which more than EUR 1.43 billion went directly to COVAX. Germany has co-hosted the COVAX AMC summit this year.
- g. Indonesia supports and is Co-Chair to the COVAX-AMC.
- h. So far, Italy, has contributed to the multilateral response to the COVID-19 pandemic with EUR 524 million, of which over 485,5 million directly for COVAX.
- i. The Republic of Korea has pledged: (1) USD 100 million in the form of cash and in-kind contribution in 2022 to COVAX AMC; and (2) USD 300 million to the ACT-Accelerator over the next three years (2023-2025).
- j. Saudi Arabia supports the ACT-A.
- k. UK funding of GBP 548 million has enabled the COVAX Facility to deliver over 1.5 billion COVID-19 vaccines to 87 developing countries.
- l. The US has established a financing vehicle via the Development Finance Corporation (DFC) to provide to up to USD 1 billion in bridge financing to Gavi. This will allow COVAX to react quickly to the COVID crisis by guaranteeing commitments from other donors and ensure safe and equitable distribution. With regards to the ACT-A, the US's contribution has exceeded USD 7.3 billion, inclusive of funding contributions through Gavi, the Vaccine Alliance (USD 4 billion), CEPI (USD 50 million), the Global Fund (USD 2.729 billion), UNICEF (USD 220.7 million), and WHO (USD 384 million) - as reflected in the ACT-A Public Commitment Tracker.
- m. Singapore commits a concrete collaboration of USD 5 million contribution.
- n. Spain has committed EUR 100 million to Gavi and EUR 75 million to CEPI in the framework of COVAX through IFFIm. Additionally, Spain has contributed EUR 5.8 million to COVAX, and 3.5 million to UNITAID as part of the treatment pillar of ACT-A.

5. Australian Expert Technical Assistance Program – Regional Support and Safety Monitoring (AETAP-RSSM) (Australia)

To support Pacific and Southeast Asian countries' efforts to deliver safe, effective, and equitable COVID-19 immunization programs, in line with best practices. Concrete collaboration of AUD 10 million (2021-22, TBC).

6. Last Mile Initiative to support COVID-19 vaccination campaigns in the Global South and increasing vaccine coverage (Germany)

Involving 34 pilot countries, mainly in Africa, the projects will be commissioned by the Federal Foreign Office and the Federal Ministry for Economic Cooperation and Development, bilaterally through German development cooperation agencies (GIZ/KfW) and in cooperation with national authorities, the joint vaccine delivery partnership, AVATT, and non-governmental actors, and multilaterally with partners such as UNICEF, WHO, Gavi. The Last Mile Initiative is a new initiative that builds on or is closely linked to existing projects by these partners. Project phase: May 2022 to December 2022, Budget EUR 850 million (of which EUR 224 million go to bilateral projects, and to ACT-A agencies as part of the German fair share to ACT-A).

7. Support to the WHO mRNA hub (Germany, Canada, United States, EU, France, Italy)

WHO, jointly with Medicine Patent Pool, established the first global mRNA technology transfer hub in South Africa, as a research and training center. Launched in July 2021, the South African Hub located at Afrigen is fully ready to operate, with the main equipment in place. The WHO mRNA hub is supported by G20 and ACT-A as a flagship project and received commitments of USD 68 million. The EU and its Member States are also providing collectively EUR 40 million, including Germany with EUR 3 million. France is also supporting the hub and its spokes with a EUR 70 million contribution. Canada provided CAD 15 million in support to

the WHO mRNA Hub. The hub started the development of its own mRNA COVID vaccine based on the Moderna methodology, and the first batches of COVID-19 mRNA vaccines have already been produced. It aims to start the clinical testing phase by 11/2022. The U.S. National Institute of Allergy and Infectious Diseases (NIAID) is collaborating with Afrigen to share technical expertise related to the development of next-generation mRNA vaccines and therapeutics.

8. Strengthening of national and regional antimicrobial resistance (AMR) detection and surveillance in CARICOM member countries (Argentina)

This triangular project represented the most ambitious initiative of Argentine cooperation in the Anglophone Caribbean executed in the spirit of South-South Cooperation. Argentina is actively seeking to carry out a second part of the program, with the same counterparts or with new partners, agencies or organizations that are interested in South-South Cooperation.

9. DIPC - Digital Innovation in Pandemic Control (Germany)

It provides short-term contribution to more resilient health systems and enables more effective health immunization interventions based on high-quality, real-live data in the partner countries.

10. WHO 'Global Biomanufacturing Workforce Training Hub' (Republic of Korea)

The project strengthens vaccine cooperation with various countries and organizations. On Feb 23, 2022, WHO named Korea as the host of its Global Biomanufacturing Workforce Training to provide training to bio and healthcare professionals from low- and middle-income countries.

11. 100 Days Mission (UK, United States)

Initiated by the UK as part of its 2021 G7 Presidency and developed it in collaboration with international organizations, industry chiefs and chief science advisers who joined the pandemic preparedness partnership in April 2021. The 100DM presents 25 recommendations to guide the international community on steps that can be taken now, and over the longer term, to meet the mission of achieving safe and effective diagnostics, therapeutics, and vaccines in the first 100days from a pandemic threat being identified. Since June 2021, international organizations, governments, industry, and philanthropic implementation partners have mobilized and formed strong coalitions to deliver the 100DM's recommendations. The initiative CEPI is supposed to fulfill a central role regarding the implementation of the 100DM.

12. Coordination Platform for PPR funding (UK)

A G20 driven Finance-Health coordination forum for pandemic PPR. This will aim to strengthen finance-health coordination arrangements to address a key gap in the Global Health Architecture for PPR, which has been highlighted as a major gap by the WHO Director General. The platform will be a new, integral part of the global architecture for pandemic PPR.

13. PREZODE - PREventing ZOonotic Diseases Emergence – Initiative (France)

PREZODE was launched on January 11, 2021, during the 4th edition of the One Planet Summit, by President of France Emmanuel Macron with the support of the European Commission President and the FAO's Director General. PREZODE aims to network, on a global scale, both research work and operational actions to prevent the risks of zoonotic emergencies and pandemics, through for instance the reduction of pressures on biodiversity, and to support the integration and strengthening of human, animal, and environmental health networks in accordance with the "One Health" approach. It will improve knowledge on the risks of the emergence and spread of zoonoses, strengthen surveillance activities and early warning systems already in place and ensure greater compliance with prevention measures for future diseases. It will also support the work of the One Health High-Level Experts Panel.

14. French Muskoka Fund (France)

The French Muskoka Fund was created in June 2010 following the G8 Summit held in Muskoka, Canada, to help reduce maternal, newborn, infant and child mortality by

strengthening national health systems. The Fund contributes to the health and well-being of mothers, newborns, children, and adolescents by implementing (the most cost-effective) high-impact, cross-sector interventions. The inclusion of the Muskoka Fund as a key project of the G20 health agenda would make significant progress towards strengthening health systems and the advancement of maternal, newborn, infant health in low and middle-income countries.

15. Support to Unitaid, Medicines Patent Pool and WHO vaccine technology transfer hub (France, the Republic of Korea, Canada, Spain, UK, Italy)

Unitaid is a key initiative to provide innovative treatments at an affordable price, especially against HIV for access to antiretroviral treatments. Unitaid has been instrumental in the fight against COVID-19 globally to provide effective treatments such as oxygen. It has committed in March 2022 USD 56 million to boost access to medical oxygen globally, within ACT-A. Setting Unitaid as a key project for the G20 roadmap could launch a dialogue on financing and discussing ways of implementing the 2023 – 2027 strategy, both in the fight against COVID-19 and expanding access to key treatments more broadly. The Republic of Korea has also contributed USD 15 million within a period of 3 years. Canada has provided CAD 35 million to Unitaid in support of their work on COVID-19 Therapeutics, including medical oxygen and CAD 15 million in support to the WHO mRNA Hub. UNITAID's Medicines Patent Pool (MPP) and WHO's COVID-19 Technology Access Pool (C-TAP) finalized a licensing agreement in November 2021 with the Spanish National Research Council (CSIC) for a COVID-19 serological antibody technology. The UK supports and has provided GBP 560 million of core funding to Unitaid since 2006. In 2021, Italy contributed EUR 1 million to Unitaid (Covid-19 Oxygen Emergency Taskforce) and is evaluating a new contribution.

16. Support and contribution to the Global Fund (UAE, US, Australia, Germany, Indonesia, the Republic of Korea, Canada, Italy, European Union, Spain)

Over the past 20 years the Global Fund has saved 44 million lives and reduced the combined death rate from HIV, tuberculosis (TB) and malaria by more than half in the countries in which the Global Fund invests. The Global Fund seeks to build resilient and sustainable systems for health and strengthen pandemic preparedness, making the world more equitable and safer from future threats. Concrete collaboration of EUR 50 billion disbursed (since 2002):

- a. Australia pledged AUD 242 million (2020-2022) in the Fund's 6th replenishment round.
- b. Canada has contributed over CAD 3.5 billion to the Global Fund to-date (since 2002) and disbursed CAD 125 million to the COVID-19 response mechanism to date.
- c. The EU and its Member States, as Team Europe, are a major contributor to the Global Fund. For the Sixth Replenishment of the Global Fund 2020-2022, the European Commission pledged EUR 550 million and for the Seventh Replenishment EUR 715 million. Together with the pledges from EU Member States, Team Europe's contribution consists of more than EUR 4.3 billion for the period 2023-2025. The 2001-2022 contributions by the EU and its 27 Member States to the Global Fund come to USD 21.2 billion.
- d. France has already contributed more than EUR 6 billion since 2001 and has pledged EUR 1.596 billion in the Global Fund's Seventh Replenishment (2023-2025).
- e. Germany has contributed between 2002 and September 2022 USD 5.1 billion and has pledged 1.3 billion at the replenishment conference in September 2022 for the years 2023-2025.
- f. Indonesia has pledged USD 10 million over the next 3 years.
- g. Italy has contributed a total of over EUR 1 billion (USD 1.349 billion) and confirmed steady commitment for the upcoming cycle. In 2019, Italy pledged EUR 161 million for the Sixth Replenishment.
- h. The Republic of Korea has contributed USD 25 million (2020-2022) in the Global Fund's Sixth Replenishment and increased its pledge to USD 100 million on the Seventh Replenishment (2023-2025).

- i. The United States supports the Global Fund replenishment and will host the replenishment this year. The United States is providing USD 3.5 billion to the Global Fund for its COVID-19 Response Mechanism.
- j. Spain has contributed over USD 770 million since the creation of the fund. It has pledged EUR 130 million in the 2022 Replenishment Conference.
- k. UAE pledged EUR 50 million in the Global Fund's Sixth Replenishment round (2020-22).

17. Framework Program for Specialized Medical Training (Spain)

Aims to help developing countries move towards universal health coverage, increasing access to essential specialized medical care for the entire population. Given the limited development of the level of specialized care at the hospital level and the shortage of qualified personnel, the health authorities of the partner countries, being aware of the technical complexity involved in the training of a specialist doctor, request the support of the Spanish cooperation to the strengthening of teaching conditions in their own countries, valuing the quality and efficiency of their health system and the training of medical specialists.

18. Comprehensive support for COVID-19 vaccination (Japan)

Comprehensive support for development and production, procurement and supply, and transportation and inoculation of COVID-19 vaccines, which aims to ensure equitable access to vaccines throughout the world. Among others, JICA signed a loan agreement of up to USD 200 million with the African Export-Import Bank (Afrexim) to support COVID-19 responses in Africa including vaccine manufacturing in the continent. From fiscal year 2022, Japan will provide up to USD 100 million in assistance, primarily to the Indo-Pacific region, to support the three pillars of a vaccination data system, border control management, and infectious waste disposal.

19. Public Health Workforce Laboratorium (Italy)

The G20 Health Declaration endorsed by G20 Health Ministers and the Principles enshrined in the Rome Declaration both reiterate the importance of adequately investing in the worldwide health and care workforce. The Laboratorium, launched during the Italian G20 Presidency in 2021, aims to become a state-of-the-art lifelong learning center providing the very latest innovations in adult learning to global health for health professionals.

20. Manufacturing and Access to Vaccines, Medicines, and Health technology products in Africa Initiative (Global Gateway) (EU)

This initiative of the EU and its Member States ("Team Europe") was launched in June 2021 and aims at reinforcing African pharmaceutical systems and manufacturing capacity to facilitate access to safe, effective, quality, and affordable essential vaccines, medicines, and health technologies for all. Work in cooperation with pharmaceutical companies is ongoing in Senegal, Rwanda, South Africa, and Ghana, with opportunities being assessed in several other African countries. At the region level, the initiative supports regulatory strengthening and the African Medicines Agency, the WHO mRNA Technology Transfer Hub in South Africa and the secretariat of the Partnership on Africa Vaccine Manufacturing hosted by the Africa Centre for Disease Prevention and Control. At the global level, the initiative involves ongoing engagement with the WHO, ACT-A/COVAX Manufacturing Task Force and the global health initiatives such as Gavi/COVAX and The Global Fund to Fight AIDS, Tuberculosis and Malaria. Team Europe aims to mobilize EUR 1 billion for this initiative.

21. EU-Latin America and Caribbean partnership on local manufacturing of vaccines, medicines, and other health technologies, and strengthening health systems resilience (Global Gateway) (EU, Mexico)

This collaboration initiated in June 2022 aims to boost Latin America's manufacturing capacity, foster equitable access to quality, effective, safe, and affordable health products, help strengthen regional resilience to tackle endemic and emerging diseases, as well as enhance capacities to cope with non-communicable diseases. It will revolve around 3 main pillars: (1)

boosting private sector investments to strengthen manufacturing capacities and supply chains in the region; (2) research and technology transfer; (3) a conducive regulatory environment.

22. Development and accessibility of antimicrobials (EU)

The EU has allocated EUR 15 million for WHO-coordinated initiatives to strengthen preparedness and response to cross-border health threats such as Anti-Microbial Resistance, like GARDP, SECURE and WHO priority pathogen lists and pipeline analyses.

23. Investigation of antiviral activity and immunomodulatory effects of Mediterranean herbs and spices against SARS-CoV-2 using in vitro models (Türkiye)

It aims to evaluate antiviral potential of herbs and spices, significantly contributing the use of functional foods to overcome COVID-19 pandemic on health issues in the Mediterranean region. The confirmation of functional and bioactive Mediterranean herbs and spices against SARS-CoV-2 infection will be promoted as part of solutions for more resilient and prosperous Mediterranean societies. Türkiye contribution of EUR 70,000 and Malta of EUR 200,000.

24. Vaccine Maitri (India)

In line with India's ethos of caring for the entire planet, India has sent vaccines to several nations under the Vaccine Maitri programme. These vaccination efforts have made the global fight against COVID-19 stronger with a total of approximately 233 million doses delivered in about 100 countries, including in South Asian, Latin America, and Africa.

25. Global Centre for Traditional Medicine (India)

India and the WHO have established world's first Global Centre for Traditional Medicine (WHO GCTM) in 2022 in Jamnagar, India. The Centre aims to harness the potential of traditional medicine from across the world through modern science and technology to improve the health of people and the planet. The center focuses on four main strategic areas: evidence and learning; data and analytics; sustainability and equity; and innovation and technology to optimize the contribution of traditional medicine to global health and sustainable development. The Centre will be supported by an investment of about USD 250 million from India.

26. Vaccine Partnership (Australia, India, Japan, United States)

The Australia, India, Japan, US Vaccine Partnership is accelerating pandemic recovery through action in the Indo-Pacific on equitable and inclusive vaccine access and strengthening broader health security and resilience.

27. World Bio Summit (Republic of Korea)

The Republic of Korea and the WHO co-host the 'World Bio Summit' in Seoul to present a vision for the international community against future pandemic outbreaks.

28. Support and contribution to the Global Health Security Agenda (GHSA) (multi-countries)

GHSA is a multilateral initiative of more than 70 countries, international organizations, non-government organizations, and private sector companies that work together to leverage and complement the strengths and resources of multisectoral and multilateral partners to address priorities and gaps in building and improving country capacity and leadership in the prevention and early detection of, and effective response to, infectious disease threats. The goal is for more than 100 countries to strengthen their health security capacities and demonstrate improvements in at least five technical areas to a level of 'Demonstrated Capacity' or comparable, as measured by relevant health security assessments, such as those conducted within the WHO IHR Monitoring and Evaluation Framework. Progress toward the target has steadily increased since 2017. The GHSA involves G20 members including Australia, Argentina, Canada, China, France, Germany, India, Indonesia, Japan, Mexico, the Republic of Korea, Saudi Arabia, South Africa, Türkiye, UK, United States, as well as Spain, the Netherlands, and UAE. The Republic of Korea has committed to contributing USD 200 million within a period of 5 years and hosts GHSA Ministerial Meeting in November 2022. Canada

participates in technical exchanges (i.e. GHSA Action Package on AMR). Italy supports the initiative and currently holds the Presidency of the Steering Committee.

29. The Initiative for Global Vaccine Access (Global VAX) (United States, Canada)

Global VAX has committed more than USD 1.7 billion to accelerate vaccine uptake in over 100 countries around the world with intensive surge support in 11 sub-Saharan African countries. This includes supporting national vaccination campaigns; launching mobile vaccination capacity for hard-to-reach and rural populations; assisting countries in vaccine policy-making and planning for strategic health care worker and resource deployment; investing in cold chain and supply logistics to safely store and deliver vaccines; fighting mis- and disinformation about COVID-19 vaccines; and supporting the development of health information systems to better evaluate vaccine distribution equity and monitor vaccine safety. Canada is the Chair of Line of Effort meeting 3: Information gaps and fighting mis/disinformation about COVID-19 vaccines.

30. Support for the Digital Health Center of Excellence (WHO and UNICEF)

The Digital Health Center of Excellence (DICE) is a multi-agency consortium co-led by the United Nations Children's Fund (UNICEF) and the World Health Organization (WHO), with the support of the United States. It was established in 2021 as the field-facing support mechanism for UNICEF's Digital Health and Information Systems unit and WHO's Digital Health and Innovation Department. DICE works to improve donor coordination, ensure alignment with the Digital Investment Principles, guide investments into Digital Public Goods and Global Goods, and provide targeted technical assistance and quality assurance to countries seeking support with COVID-19 and other health needs.

31. Cooperation at Noguchi Memorial Institute for Medical Research in Ghana (Japan)

The Noguchi Memorial Institute for Medical Research (NMIMR) is a leading biomedical research Institute in Ghana. It was established in 1979 with grant aid from Japan, and many international partners and research organizations around the world have made significant contribution to the development of the institute. At the peak of the COVID-19 pandemic in 2020, NMIMR was responsible for approximately 80% of all PCR tests undertaken in Ghana. NMIMR has also provided guidance on infectious disease testing in 11 countries in West Africa and played a leadership role in regional infectious disease control.

32. Joint Production and Technology Transfer on COVID-19 Vaccines (China)

The Chinese government supports the cooperation among vaccine manufacturers from various countries in joint production and technology transfer on COVID-19 vaccines. Relevant cooperation has resulted in a production capacity of approximately 250 million doses in G20 members and guest countries such as Indonesia, Türkiye, Mexico and the UAE.

33. Preparedness for Current and Future Pandemics (Mexico-EU Joint Fund) (Mexico, EU)

The Mexico-EU Joint Fund was officially launched on November 30, 2021. The European Commission and AMEXCID have worked together to create this instrument with EUR 3.5 million. In this framework, both have agreed to develop projects to respond to current and future pandemics since 2022. The goal is to allow co-financing of projects of common interest, with an emphasis on support and response to the situation generated by COVID-19, compliance with the 2030 Agenda and the development of Southeast Mexico and Central America.

34. Support to TB Reach (multi-countries)

Established in 2010, TB REACH addresses gaps in the global TB response by providing funding to test pioneering approaches that reach more people with TB. G20 leaders in 2019 affirmed their commitment to end epidemics of AIDS, tuberculosis, and malaria. Canada, USA, and the UK are participating and key G20 countries have expressed a strong commitment to TB elimination including Indonesia, South Africa, India, and Brazil.

35. Trans-Atlantic Platform: Recovery, Renewal and Resilience in a Post-Pandemic World (RRR) (Canada)

It aims to address key gaps in our understanding of the dynamic and complex interaction of medium and long-term societal effects of COVID-19 pandemic. This understanding, in turn, should advance knowledge of how to mitigate the negative societal effects of COVID-19 pandemic and support recovery and renewal in a post-pandemic world. 19 teams were Awarded Grants in the RRR Call. The projects involve researchers from 12 funding countries.

36. New Frontiers in Research Fund Special Call (Canada)

It aims to mobilize Canadian-led research efforts in support of a more equitable, sustainable, and resilient post-pandemic reality, by supporting projects that directly address one or more of the research priorities outlined in the United Nations Research Roadmap for the COVID-19 Recovery. Applications are due in August 2022 and results are to be announced in January 2023. Research teams are expected to include international members. The inclusion of team members from lower-middle or lower-income countries is strongly encouraged.

37. JPIAMR call: One Health interventions to prevent or reduce the development and transmission of antimicrobial resistance (Canada)

Launched in January 2021, the call advocated for a One Health approach to 1) understand the impact of interventions on the development and transmission of antibiotic resistance and to 2) design, implement, evaluate, and compare interventions that will have a true impact on preventing or reducing the development and transmission of antibiotic resistance in and between the different One Health settings (human, animal, environment). The projects involve researchers from the funding countries and researchers from areas where the risk and burden of AMR is greatest, such as in LMIC settings in Asia and Africa.

38. Establishment of an African Institute for Pandemic Preparedness (South Africa)

The institute includes genomic surveillance, as well as vaccine and diagnostic development, and will develop health protocol guidelines to improve interoperability between health information systems, digital health applications for international travel, and provide capacity building for the “network of “brains” for scientists in virology, immunology, epidemiology, and other fields related to public health emergencies, to ensure timely learning among experts.

39. Global Initiative for Vaccine Equity (Canada)

Canada’s Global Initiative for Vaccine Equity (CanGIVE) aimed at supporting vaccine delivery and distribution in 13 targeted countries, most of them in Africa. CanGIVE will support country-led efforts to enhance vaccine delivery and distribution, increase vaccine confidence and generate demand, as well as support local production of vaccines. CanGIVE will work with ACT-Accelerator partners in: Bangladesh, Colombia, Côte d’Ivoire, the Democratic Republic of Congo, Ghana, Haiti, Jamaica, Jordan, Mozambique, Nigeria, Senegal, South Africa, and Tanzania. Canada has committed CAD 200 million to CanGIVE,

40. Global Innovation Hub for Improving Value in Health (Saudi Arabia)

The Global Innovation Hub for Improving Value in Health is a knowledge body that was created by the G20 during the Saudi Presidency. The Hub aims to facilitate key knowledge and information transfer between countries and organizations, improved allocation of resources in health (building towards UHC), and widescale adoption of value models in all member countries. Collaboration with the Hub can be cross sectorial and engage individual countries and international Organizations.

41. Strengthening regional and global pandemic response capacities: Rapid Response Mobile Laboratories (RRML) network (Russia)

Under this project, joint international exercises are being done by Russia with partner countries and the WHO to train experts on using mobile laboratories during the outbreak of infectious disease in accordance with the WHO standards on biosecurity. Nowadays 25 mobile

laboratories and clinics that were provided by the Russian Federation operate in 6 CIS countries, Mongolia, Vietnam, DRC. Additional mobile laboratories could be supplied to Republic of Congo, Burundi, Venezuela.

B. Digital Economy

1. International Telecommunication Union (ITU) Development Projects funding (Australia)

Through ITU development projects, Australia is working to close our region's digital divide, building digital connectivity, and using digitalization for post-pandemic recovery. Projects include enhancing cross-sectoral digital skills programs for vulnerable groups, and harnessing ICT for the digital economy and inclusive digital society. Concrete collaboration of AUD 850,000 per annum with project-specific values to be confirmed.

2. Cyber and Critical Tech Cooperation Program: Safety by Design in Southeast Asia (Australia)

It advocates Safety by Design as a model approach to online safety for governments, industry, and organizations across the Southeast Asian digital ecosystem, to help accentuate a more inclusive digital economy. Concrete collaboration of AUD 1.69 million (2021-2024).

3. 'Big Data' initiative (Australia)

A regional initiative to provide insights to development challenges in the Asia-Pacific and builds on Australia's support to the UN PULSE-Lab Jakarta (PLJ), a partnership between UNDP and the Government of Indonesia. It supports policymakers to use digital data sources in the delivery of government programs. Australian funding totaling AUD 12.7 million (2015-2023).

4. e-Phyto and trade modernization (Argentina)

The initiative emerged in 2017 as a result of a strategic cooperation project between Argentina and Australia. e-Phyto is the electronic version of a paper phytosanitary certificate, which reduces the possibility of using fraudulent documentation, improves efficiency and speeds up the process of releasing the goods exchanged between countries. Once the Project is finished and depending on the results of its evaluation, the possibility of carrying out a second phase with additional partners could be taken into account.

5. Open Data Unified Platform for G20 Countries (Saudi Arabia)

Collaboration with the global innovation hub for improving value in health on supporting pandemic preparedness, health system resilience and value-based care as a continued engagement from the Saudi Presidency.

6. G20 International Enrichment Platform (Saudi Arabia)

Establish an international platform to provide enriching educational, cultural, and informative digital audio-visual materials on all aspects of G20 values and priorities past and current.

7. Digital skills and opportunities for skills development in the context of labour market digitalization Southeast Asian countries (Russia)

To develop world-class skills among teachers and masters of vocational training as best practitioners who introduce new technologies into the skills development system and to develop short educational programmes in information and communication and digital skills for different age groups of Southeast Asian citizens.

8. Innovations for smart and sustainable cities in Russia and Southeast Asian countries (Russia)

To create innovative tools and approaches to improve efficiency of interaction between "smart cities". The project consists of three basic components: applied research in collaboration with

Southeast Asian experts, development of a digital platform, and an international event – a conference with experts, startups and investors from Russia and Southeast Asian countries.

9. Project on providing digital internet access to rural and remote areas (Russia)

To share practical information on connecting rural and remote areas with access to network infrastructure including internet access; provide consultation on concrete cases to choose better and more efficient solutions on digital connectivity; and provide recommendations regarding investments, including consultation with G20 members' investing banks as well as international and regional ones, such as World Bank, BRICS New Developing Bank, etc.

10. US-Singapore Third Country Training Programme (Singapore, United States)

The TCTP is a partnership between Singapore and the US to support ASEAN community-building efforts through capacity building programmes on enhancing connectivity, promoting sustainable development, and strengthening regional resilience. Under the TCTP, Singapore and the US have jointly conducted digital economy and ICT courses (amongst others) to strengthen Southeast Asian countries' understanding of the regulatory landscape for the digital economy at the regional and global levels, to enable them to maximize opportunities. Singapore and the US have also co-hosted the TCTP on renewable energy to support energy officials from Southeast Asia on enhancing energy transition efforts by identifying opportunities and challenges on the deployment of renewable energy, and deepening understanding on the applications of various energy technologies.

11. Multiple CBDC Bridge (mBridge) (UAE)

A wholesale central bank digital currency (CBDC) co-creation project that explores the capabilities of distributed ledger technology (DLT) and aims to address the problematic points in conventional cross-border payments. In 2021, the partners developed the mBridge Trail Platform, demonstrating a substantial improvement in processing cross-border fund transfers from an average of 3 to 5 days to near real-time, as well as a significant reduction of the processing and transaction costs involved. The project in 2022 has focused on delivering a real value pilot in a controlled environment using blockchain technology, with coordination of all members of central banks as well as 20 commercial banks. The project has fostered continued collaboration between member central banks, while ensuring compliance to local policy and legal requirements of each specific jurisdiction.

12. Digital 4 Development Hub (EU)

The Digital4Development Hub, launched by the EU in December 2020, is a multi-stakeholder platform with the aim of boosting an inclusive, green, and human-centric digital transformation. The platform brings together public administrations, private sector, civil society, and academia to facilitate dialogue, shares expertise, and identify initiatives in partner countries to scale up investments of diverse European and global partners. It operates at both global and regional level through its Regional Branches. Africa and Latin America and Caribbean branches are operational and concrete progress is being made towards the Asia branch. Like-minded partner countries participate in the activities and contribute content via the Advisory Groups and ad hoc events.

13. Digital Economy Packages (Global Gateway) (EU)

To foster inclusive and green human-centric digitalization, Team Europe is proposing to partner countries worldwide tailor-made digital packages combining infrastructure investments with cooperation and technical assistance on ensuring the protection of personal data, cybersecurity, the right to privacy, trustworthy Artificial Intelligence as well as open Internet. The packages cover: (1) digital connectivity; (2) digital skills; (3) digital transformation of businesses and (4) digital governmental services. With the aim of tackling the global digital divide and strengthening secure and trusted digital connections, priority is given to underserved regions, countries and populations.

14. e-VidyaBharati & e-AarogyaBharati (e-VBAB) Network Project (India)

The project has been developed to deliver tele-education and telemedicine services, including remote locations in 54 African countries. It is an extension and technological upgrade of the earlier Pan Africa e-Network Project (PAeNP), that was implemented from 2009 to 2017 using satellite connectivity. The project's next phase, renamed e-VBAB, was launched in October 2019, to be implemented using internet-based web portals to make available the facilities and expertise of some of the best universities and super-specialty hospitals in India to the people of Africa. The project aims to offer 15,000 tele-education scholarships, 5,000 tele-consultations and 5,000 Continued Medical Education (CME) services over a period of 5 years.

15. Centre of Excellence in Software Development and Training (India)

Centre of Excellence in Software Development and Training (CESDT) with Virtual classrooms and e-Learning Technologies has been established in Cambodia, Lao PDR and Myanmar. This is intended towards digital capacity building in the Mekong region

16. CoWIN, Unified Payments Interface (UPI), DIKSHA (India)

India has offered various digital technology platforms as Open Source digital public goods to deliver services such as health, education and financial inclusion. It is an existing project and Singapore, UAE, Nepal, Bhutan, and France have adopted the UPI.

17. East Micronesia Cable (Australia, Japan, US)

The joint project aims to improve internet connectivity to the Federated States of Micronesia (FSM), Kiribati, and Nauru by providing funding to build a new undersea cable. The project comprises financing and implementation support.

18. Digital Innovation Network (Indonesia)

The Digital Innovation Network (DIN) aims to facilitate commercial negotiations between industry actors and G20 members to produce commercial deals to encourage innovation as a solution to optimize digital economy potential. DIN is an extension of the G20 Innovation League, ensuring continuity of while also elevating the program.

19. G20 Online Training Programs on E-commerce (China)

It aims to strengthen policy exchanges and experience sharing in the field of e-commerce among G20 members and beyond, explore mutually beneficial and win-win cooperation models, share the dividends of digital economic development, and facilitate inclusive growth and common prosperity by promoting the upgrading of global industrial and supply chains. By the first half of 2022, China has held 41 online capacity building lectures, benefiting around 6,600 entrepreneurs and government officials from Brazil, Chile, Rwanda and Panama.

C. Energy

1. Cooperation on Carbon Capture, Utilization, and Storage (CCUS) (Indonesia)

Initiative proposed by the Indonesian Ministry of Energy and Mineral Resources and Tangguh LNG on Carbon Capture, Utilisation and Storage (CCUS), toward GHG emission reduction and achievement of net zero emission goal. Tangguh LNG is located in Indonesia and operated by BP (UK), partnered with Mitsubishi Inpex, JX Nippon, KG Mitsui, LNG Japan (Japan) and CNOOC (China). Tangguh LNG CCUS-EGR Project aims to reduce carbon emission and enhance gas field recovery, with total emissions reduction up to 25 million tonnes CO₂. It will also support post-pandemic economic recovery through providing opportunities for small scale industry surrounding it to provide goods and services via contract and employment. Up to now, Tangguh LNG has created 1.5 million jobs and supported local economic development.

2. Indonesia–Türkiye: Capacity Building Program in the Renewable Energy Sector (Indonesia)

As the implementation of the Indonesia-Türkiye MoU on Development Cooperation, Indonesia and Türkiye are working on capacity building programs in the renewable energy sector, targeting countries in the African region:

- a. Project Solar PV Power Generation Training: developing basic up to advanced level skills and competency for design, installation, and O&M on Solar PV Power Generation.
- b. Project Utility Scale Wind Energy Implementation: stimulating discussions over Utility Scale Wind Energy Implementation and Best Practice sharing.

3. Support to the International Energy Agency (IEA) collective action for emergency release of oil stocks (Australia, the Republic of Korea, Canada)

IEA members have committed over 180 million barrels of emergency oil stocks through two coordinated draw-downs in March and April 2022. The Republic of Korea has committed a total of 11.65 million barrels of emergency oil stocks in March and April 2022. In response to the global energy crisis, Canada has announced the incremental increase in its oil and gas production of up to 300,000 barrels per day by the end of 2022.

4. Support to the IEA Clean Energy Transitions Program (Australia, UK, Canada, Singapore, European Union)

IEA's Clean Energy Transitions Programme (CETP) is designed to support a range of emerging economies to plan and manage an orderly energy transition. The CETP leverages IEA Members' commitment and the all-fuels and all-technologies expertise of the IEA to better support and help accelerate global clean energy transitions, particularly in major emerging economies. The programme focuses on areas which allow the IEA to draw on its particular strengths and capabilities and that can make a material difference in target countries. Canada is providing up to CAD 8 million in climate finance to the IEA CETP. Singapore and the IEA co-organize annual capacity building activities under the Singapore-IEA Regional Training Hub since 2017, which has trained more than 1,000 participants from more than 30 countries, including 11 G20 countries (Australia, Canada, China, India, Indonesia, Japan, the Republic of Korea, South Africa, Turkey, UK, United States), covering a wide range of energy issues including energy efficiency, clean energy financing and low carbon buildings. The EU provided EUR3.5M funding for the CETP, which support enabled, among others, the IEA's recent report on Enhancing Indonesia's Power System.

5. Promoting convergence for sustainable biomass and bioenergy growth (Brazil, Canada)

Project conducted under the Clean Energy Ministerial (CEM)'s Biofuture Platform Initiative as part of the Initiative of the Clean Energy Ministerial. This collaboration project aims to address the lack of consensus regarding sustainable biomass quantification which is contributing to significant policy instability and uncertainty, trade barriers, and other roadblocks. An ambitious CEM collaboration project, supported by G20 and involving a wide variety of stakeholders, around an evidence-based process to align views on this field, would be able to promote greater convergence and provide trustful guidance that can de-risk investment in the sustainable low-carbon bioeconomy, while ensuring sustainability. Proposing G20 governments: Argentina, Brazil, Canada (co-lead of the Biofutures Platform with the United States), India and the USA. Additional Countries: Hungary, Netherlands, and Portugal. Partner organizations: GBEP, IEA Bioenergy TCP and IRENA.

6. Support to the Middle East Green Initiative (Saudi Arabia)

Support and contribute to the Middle East Green Initiative's regional initiative for clean fuel solutions for cooking that seeks to benefit more than 750 million people worldwide. This will also lead to improvement of health, women empowerment, and environment protection. This initiative invites countries and other international partners to join the Kingdom in actioning work on clean cooking globally under the Middle East Green Initiative.

7. Declaration on Accelerating the Transition to 100% Zero Emission Cars and Vans (UK, Canada)

The Declaration was signed at COP26 and signatories commit to rapidly accelerating the transition to zero emission vehicles to achieve the goals of the Paris Agreement. Together, signatories will work towards all sales of new cars and vans being zero emission globally by 2040, and by no later than 2035 in leading markets. Government signatories will work towards all sales of new cars and vans being zero emission by 2040 or earlier, or by no later than 2035 in leading markets. Government signatories in emerging markets and developing economies will work intensely towards accelerated proliferation and adoption of zero emission vehicles and call on all developed countries to strengthen the collaboration and international support offer to facilitate a global, equitable and just transition.

8. Just Energy Transition Partnerships (JETPs) (France, Italy, UK, EU, Germany, United States)

JETPs aim to support pathways to low emissions and climate resilient development, to accelerate the just transitions, and to develop new economic opportunities to support a shift towards a low carbon future, through capacity building and financing in collaboration with MDBs and other finance institutions, the private sector as well as other partners. JETPs were launched at COP26 with South Africa being the first partner and a resolution to mobilize an initial amount of approximately USD 8.5 billion by the EU, France, Germany, the UK, and the US over the next three to five years. The Partnership is expected to prevent up to 1-1.5 gigatonnes of emissions over the next 20 years. Further JETPs are currently being discussed with Vietnam (co-leads the EU and UK), India (co-leads USA and Germany), Indonesia (co-leads USA and Japan), Vietnam (co-leads EU and UK) as well as Senegal (co-leads Germany and France).

9. Race to Zero (UK)

Race to Zero is a global campaign to rally leadership and support from businesses, cities, regions, investors for a healthy, resilient, zero carbon recovery that prevents future threats, creates decent jobs, and unlocks inclusive, sustainable growth. Commitments recognized in the campaign are required to meet a minimum set of procedural criteria representing the “Starting Line” for the race: pledge to reach net zero GHGs as soon as possible and by mid-century at the latest, in line with global efforts to limit warming to 1.5 degree Celcius; within 12 months of joining, explain actions to be taken toward achieving both interim and longer-term pledges; take immediate action toward achieving net zero; commit to report publicly at least annually on progress against interim and long term targets as well as the actions being taken.

10. Breakthrough Agenda (UK, the Republic of Korea, Canada)

The Glasgow Breakthrough Agenda was launched at COP26 with a commitment to make clean technologies and sustainable solutions the most affordable, accessible, and attractive option in each emitting sector globally before 2030. Starting in 2022, countries have committed to review global progress, including at Mission Innovation and Clean Energy Ministerial meetings, informed by an annual report, led by the International Energy Agency, working in collaboration with IRENA, the United Nations High-Level Climate Action Champions, and other institutions, bodies and industry leaders as appropriate. The Republic of Korea joined the commitment at COP26. Canada endorsed the Breakthrough Agenda at COP26 and participates in the following Breakthrough initiatives: Power; Steel; Road Transport; Hydrogen; and Agriculture. Canada also participated in the peer-review process of the Breakthrough Agenda Report, which is set to be released at the Global Clean Energy Action Forum in September.

11. Global Coal to Clean Power Transition Statement (UK)

The statement was signed at COP26, noting that coal power generation is the single biggest cause of global temperature increases and committing to work together to make clean power the most affordable and accessible option globally, with ensuing economic and health benefits.

Signatories affirm a shared vision to accelerate the transition away from unabated coal power generation as is essential to meet their shared goals under the Paris Agreement, in a way that benefits workers and communities and ensures access to affordable, reliable, sustainable, and modern energy for all by 2030.

12. Statement on International Public Support for the Clean Energy Transition (UK, Canada)

The Statement was signed at COP26 and commits signatories to actions that align their international public support towards the clean energy transition and out of unabated fossil fuels. Signatories agree to prioritize support fully towards the clean energy transition, striving to “do no significant harm” to the Paris Agreement goals, local communities and local environments. They commit to end new direct public support for the international unabated fossil fuel energy sector by the end of 2022, except in limited and clearly defined circumstances that are consistent with a 1.5 degrees Celsius warming limit and the goals of the Paris Agreement. Signatories will encourage further governments, their official export credit agencies and public finance institutions to implement similar commitments into COP27 and beyond.

13. Climate Finance Leadership Initiative (CFKI) (UK)

Initiative convenes leading companies to mobilize and scale private capital for climate solutions, creating country-centric CFLI's, i.e. CFLI India. Active projects in India, and projects being prepared for launch in Indonesia, with planning for further CFLI's in South Africa and Vietnam. There is G20 support and connection through the Country Platforms workstream, and CFLI is the delivery arm of GFANZ. Supported by: G7, some G20.

14. Seed Capital Assistance Facility (SCAF) (UK)

A concessional finance facility that supports clean energy project development in frontier markets in low and lower-middle-income countries in Asia and Africa. Currently in Phase II, SCAF is funded by UK aid and the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear safety, Germany. SCAF currently has 3 projects in Indonesia, including two wind projects and Indosolar, as well as 25 other projects in 13 other developing countries.

15. Support and contribution to Climate Investment Fund (CIF) (multi-countries)

The CIF comprises of two funds:

- The Clean Technology Fund (CTF), that provides resources to scale up low-carbon technologies with a significant potential for long-term greenhouse gas emissions savings. The CTF operates in Indonesia and other Middle-Income Countries by accelerating decarbonization through targeted investments in large-scale renewable energy, energy efficiency and clean transport projects. Canada contributed CAD 200 million to the CTF.
- The Strategic Climate Fund (SCF), that provides financing to pilot new development approaches or scale-up activities aimed at a specific climate change challenge or sectoral response. The SCF currently finances three such programs: The Forest Investment Program (FIP), Pilot Program for Climate Resilience (PPCR), and Scaling Up Renewable Energy in Low-Income Countries Program (SREP) and is launching a new Nature People Climate (NPC) Fund in 2022. Italy and Sweden have provided financing of EUR 170 million to capitalize on the NPC. Canada has contributed CAD 100 million to the SCF.

The UK, US, Canada, Germany, Japan, France and Italy, are among G20 CIF contributors, as well as Spain (USD 135 million total contribution), Denmark, Norway, Sweden, and Switzerland. The CIFs launched their new era of programmes at COP26, commencing with the launch of the Accelerating Coal Transition Investment Programme (ACT-IP), to which Canada has contributed CAD 1 billion, that supports a just energy transition through increase of renewable energy, improved energy efficiency and storage and phase out of coal in selected countries. 3 of 4 pilot countries are G20 members, and Indonesia was selected as a country to participate in this programme and is currently developing an investment plan - which sets out the country's plans for coal phaseout.

16. International Solar Alliance – Capacity building for accelerated large-scale deployment of solar energy (France, India)

The International Solar Alliance (ISA) was launched by India and France at the COP-21 in 2015. The aim is to facilitate energy access in every corner of the world by delivering cleaner electricity to all by 2030 and to unlock USD 1 trillion of investment by 2030. It is an action-oriented and collaborative platform for increased deployment of solar energy technologies as a means for bringing energy access, ensuring energy security, and driving energy transition in its member countries. Concrete collaboration of USD 6,8 million as proposed budget for projects in 2022. ISA Assembly has also agreed to establish an international network of Solar Technology and Application Resource Centres (STAR C), to provide solar technology and application resourcing services to Member Countries so that they can achieve scaled up deployment of solar energy to meet their needs. The first phase of the program has recently been launched in partnership with the UNIDO and will primarily focus on Small Island Developing States of the Indo-Pacific and Sub-Saharan Africa.

17. Zayed Sustainability Prize (UAE)

The Prize recognizes global non-profit organizations, small and medium sized enterprises (SMEs) and high schools for their impactful, innovative, and inspiring sustainable solutions across the categories of Health, Food, Energy, Water and Global High Schools. Concrete collaboration of USD 42.75 million awarded to NPOs, SMEs and high schools (2008-present).

18. Support and contribution to Energy Transition Accelerator Financing Platform (UAE)

Global climate finance facility to accelerate the transition to renewable energy in developing countries. Concrete collaboration of USD 1 billion (target by 2030). Managed by the International Renewable Energy Agency (IRENA). USD 400 million anchor funding provided by the UAE.

19. UAE-Caribbean Renewable Energy Fund (UAE)

Program which finances renewable energy projects across the Caribbean for Small Island Developing States (SIDs). The Fund has two key objectives: (1) increase the use and resilience of renewable energy applications in the region; and (2) expand technical experience in designing, implementing, and managing renewable energy projects. Concrete collaboration of USD 50 million provided by the UAE.

20. Asia Energy Transition Initiative (Japan)

Provide a variety of support for realizing energy transitions in Asia: (1) Support drawing roadmaps for energy transitions; (2) Asian version of transition finance; (3) USD 10 billion finance support (e.g. renewable energy, energy efficiency, LNG); (4) Technology development and deployment, utilizing the achievement of 2 trillion yen fund (e.g. Offshore wind power generation, Fuel-ammonia, Hydrogen); (5) Capacity building of decarbonization technologies, and knowledge sharing through Asia CCUS network through capacity building of decarbonization technologies and energy transitions for 1,000 people in Asian countries.

21. Africa-EU Green Energy Initiative (Global Gateway) (EU)

This initiative, announced at the EU-African Union summit in February 2022, will promote investments to achieve three overarching priorities: (1) increase the share of renewable energy generation in Africa's energy mix; (2) increase the number of African people who have access to affordable, reliable, and sustainable energy; and (3) enhance energy efficiency. Work is already ongoing on several projects such as the Angola-Namibia electricity transmission link, the structural rehabilitation of the Kariba dam in Zambia, the Tetetou hydropower plant or the development of Namibia's renewable hydrogen production capacity.

22. Papua New Guinea Electrification Partnership (Australia, Japan, United States)

Comprising of several projects to support Papua New Guinea's target of interconnecting 70 percent of the population by 2030. A number of projects under the Partnership are being considered for funding. One example is Australia's AUD 86 million financing package for the Laitim Hauslain project to improve national power infrastructure. This investment will connect 30,000 to 40,000 households, schools and clinics in Morobe and East New Britain provinces in Papua New Guinea to electricity.

23. Green hydrogen initiatives (Japan, Australia)

Japan and Australia commit to jointly support initiatives that will help drive the transitions to net zero emissions under "Japan-Australia Partnership on Decarbonisation through Technology" announced on 13 June 2021. Under the initiatives, Japan and Australia cooperate to expand the green hydrogen market and build an international supply chain in the Indo-Pacific, notably in island countries. Demonstration projects are deployed, including to transport green hydrogen produced in Australia to Indonesia, as well as to the Republic of Palau, based on the "Joint Action Plan for Strengthening Pacific Bonds and for Mutual Prosperity" adopted in the 9th Pacific Islands Leaders Meeting (PALM9).

24. Australia-Asia Power Link (AAPowerlink, APPL) (Australia)

Sun Cable's Australia-Asia PowerLink (AAPowerLink), is a proposed renewable energy infrastructure system. The system would incorporate the world's largest solar array and storage system, and intercontinental transmission, to deliver renewable electricity to Darwin and Singapore. The AAPowerLink is also forecast to potentially inject a total of USD 2.5 billion into the Indonesian economy over the life of the project.

25. Green Powered Future Mission (China)

Co-led by China, Italy and UK, Green Powered Future Mission is a public-private partnership of 17 members from Mission Innovation countries (including G20 countries like Australia, India, Brazil, Canada, Germany, Japan, and Saudi Arabia), private sector companies and international organizations, aiming to demonstrate that by 2030, power systems in different geographies and climates can effectively integrate up to 100% variable renewable energies in terms of generation mix and maintain a cost-efficient, secure and resilient system. Two flagship projects are underway: one is launching 5 large-scale demonstration projects in 5 continents (Asia, Australia, Europe, North America, and South America); the other is launching multilateral research program by Q1 2023.

26. G20 Sustainable Finance Roadmap Monitoring Exercise (G20 Sustainable Finance Working Group)

The G20 Sustainable Finance Roadmap articulates the G20's sustainable finance priorities across five focus areas to help guide the work of relevant G20 workstreams, member states, international organizations, and other international networks and initiatives. The G20 Sustainable Finance Working Group is conducting an annual monitoring exercise to capture the progress in addressing priorities identified in the Roadmap. The monitoring exercise is to encompass information gathering on achievements made on all 19 Actions detailed in the Roadmap. This results in a robust annual report that provides a more granular view of the ongoing sustainable finance work should allow jurisdictions and international organizations alike to more efficiently coordinate, seek out potential partners, and identify where further work is needed. The SFWG plans to critically evaluate the results of this exercise and use it as key input to guide the group's future work and identify particularly useful progress to highlight or directly leverage. The Sustainable Finance Working Group was launched by the Italian G20 Presidency in 2021.

II. PRIVATE SECTORS, INTERNATIONAL ORGANIZATIONS, AND NGOS

A. Health

1. **Be Healthy Be Mobile (ITU)**

The initiative delivers evidence-based health information to promote healthy behaviors, support prevention and management of diseases, and improve health literacy. It has contributed to 17 programmes in 15 countries, among others by helping governments design and integrate digital health services into Africa existing health systems. A number of countries have been benefiting from the initiative and is potentially expanding to other countries, especially developing countries.

2. **Enhancing the provision of personal protective equipment in Africa (UNIDO)**

The project aims at improving the supply of quality-assured, locally manufactured PPE (personal protective equipment), hand sanitizer and disinfectants to reduce the incidence of COVID-19 transmission in Africa and improve the response capacity of national healthcare systems on the continent (medical equipment, specifically ventilators and related equipment, may also be included dependent on inception phase outcomes).

3. **Expansion of Local Vaccine Production through Facilitation of Technology and Investment Partnerships (UNIDO)**

The proposal aims to enhancing local vaccine production through establishment of viable and sustainable vaccine manufacturing capacity in a system of regional hubs covering the world.

4. **Second 100 Initiative (MPP)**

Aims to achieve the licensing, technology transfer and regulatory filing of products developed and approved for any future pandemic disease in geographically distributed low- and middle-income countries (LMICs), within 100 days of regulatory authorization of the originator products. The initiative will complement the UK initiated the 100DM.

5. **Vaccine Delivery Innovation (GAVI)**

Strengthening supply, delivery, and distribution of vaccine in LMICs has been one of critical challenges to enhance equitable and universal access to effective vaccines.

6. **INITIATE² (WFP, WHO)**

INITIATE² brings together emergency response actors, as well as research and academic institutions, to develop innovative and standardized solutions and the related training, in support of readiness and response capabilities in health emergencies. It will look at providing the most advanced medical care available at the outset of an infectious disease outbreak. The final prototype is expected to be ready to be tested in a large-scale simulation exercise by December 2022.

7. **Reverse Linkage project between Institut Pasteur, Dakar and laboratories in Sub-Saharan Africa (IsDB)**

The main objective of this Regional Reverse Linkage Project is to: (i) develop the human capacities of the national public health laboratories; and (ii) equip the laboratories with the required medical equipment. In addition, the project will provide the laboratories with access to an E-learning platform, technical guidelines, and operational protocols to help accelerate action and easy detection of COVID-19 cases and other communicable diseases.

B. Digital Economy

- 1. The establishment of United Nations Global Pulse Asia-Pacific (UN Global Pulse)**
A regional hub that works at the intersection of digital innovation and human sciences to inform and strengthen digital transformation in the region. Its vision is to catalyze inclusive development and growth as well as post-pandemic recovery in the Asia Pacific region.
- 2. Socio-Economic Study on the Gender Aspects in E-Commerce (UNCTAD)**
Enhance knowledge and understanding of policymakers and other stakeholders in G20 countries of the gender aspects of e-commerce and offer a forum for discussion to make related policies and regulatory frameworks more gender responsive.
- 3. Digital Futures Programme (UNWTO)**
The initiative supports Small and Medium-sized Enterprises (SMEs) in the area of tourism sector's recovery to unleash digital technologies in creating jobs and enhancing future resilience. The programme provides online trainings to uptake the use of digital technologies and tools to increase competitiveness for SMEs in eight tourism subsectors.
- 4. Public Application for Travelers (UNWTO)**
The application ensures transparent, official, updated information to all travelers on travel restrictions and requirement. The application would play a critical role in enhancing travelers' confidence and promoting seamless travel across countries. Furthermore, the tool could be used and or/ and adapted to any future situations/crises that lead into border or other mobility restrictions thus contributing to enhance travel safety, security, and resilience.
- 5. EQUALS Global Partnership (ITC)**
It is intended to close the gender digital divide. Founded by the International Trade Centre, the ITU, UN Women, GSMA and the UN University, EQUALS now boasts over 100 partners (governments, international organizations, NGOs, private sector, etc.) with powerful scaled-up initiatives in 3 key areas: access, skills, leadership.
- 6. Global Trade Helpdesk (ITC)**
It simplifies market research for MSMEs by integrating trade and business information into a single online portal. MSMEs can compare demand for their products across markets, explore tariffs and other market access conditions, access details about buyers, navigate domestic export processes, and find business partners. The initiative is jointly led by ITC, UNCTAD and the WTO and draws on information and services from across 11 organizations.
- 7. Digital Regulation Tools and Training (ITC)**
It aims to provide practical guidance and best practice for policymakers and regulators across the globe. The content provides an update on the basics of ICT regulation in light of the digital transformation sweeping across sectors and also includes new regulatory aspects and tools for ICT regulators to consider when making regulatory decisions.
- 8. Participation of G20 developing countries in the WIPO Academy Pilot Project: "Model Capacity Building Program for IPTIs on IP Commercialization and Monetization for MSMEs in the context of post-COVID economic recovery" (WIPO)**
Capacity building for IP users most impacted economically during the pandemic, including MSMEs, local communities, and women entrepreneurs. The pilot project—initially to be implemented with Latin American IPTIs—will include the design and execution of a model capacity-building program for IPTIs on 'IP Commercialization and Monetization for MSMEs' in the context of post-COVID economic recovery with two phases:
 - Phase 1: Skills-based training modules targeting MSMEs from domestic sectors that are key for post-COVID economic recovery;

- Phase 2: Mentoring to provide tailored support to selected participants, with a minimum quota for businesses from local communities and women entrepreneurs.

9. Smart Island/Smart Village (ITU)

A programme that adopts an innovative approach to deliver connectivity and scalable and sustainable services to disadvantaged island communities. It aims at transforming rural and coastal communities and improving their well-being and livelihood by connecting them to a range of digitally enabled services. Pilot project of this initiative has been implemented in Niger and being developed in Egypt and Pakistan.

10. D-8 Capacity Building Programme for Digital Transformation (UN DESA)

UNDESA is set to launch a capacity building programme with D-8 on the role of digital government in implementing the 2030 Agenda. The programme will be the first peer and mutual learning among D-8 members. UN DESA, in cooperation with the G20, offers to conduct similar project with participants from small states and countries.

11. Connecting the cultural heritage of small island states (WIPO)

Pilot project to allow access to museums and libraries digitally related to the digitalization process for collections and the local educational curriculum, and to test interest in facilitating the creation of a network of similarly situated institutions located in small island states. WIPO stands ready to set up the framework of the project.

12. IP and technology transfer initiatives (WIPO)

Training to key role players (funders, developers, managers, and users of IP) identified as potential beneficiaries for IP and technology transfer initiatives. Focus will be on countries' Technology and Innovation Support Centers and Technology Transfer Offices in general.

13. Supports for incubators (WIPO)

Initiative to work with startup incubators to develop and implement a support program to enhance access and usage of the IP systems. It will provide training on using the IP skills package while at the same time working with selected startups in developing their IP skills.

14. Enhancing capacity for data collection on creative industries (WIPO)

Data collection and analysis related to creative industries, especially in developing countries, are critical to develop program for enhancing skills, empowering countries, and building a critical mass of professional expertise. The ultimate goal would be to support the production of internationally comparable solid data according to a standardized framework, with clear indicators for the national decision-making process.

15. Southeast Asia Smart Cities Alliance on Technology Governance (WEF)

An expansion of the existing G20 Global Smart Cities Alliance launched under the 2019 G20 presidency in Japan.

C. Energy Transition

1. Support Green Innovation (WIPO)

An initiative related to Energy Transition as well as Environment and Sustainability by providing information about – and facilitating access to – cleaner and more efficient technologies, assisting in building feasible business models, supporting innovators and structuring acceleration projects. WIPO GREEN is currently leading a project for the treatment and valorization of liquid waste generated from palm oil production.

2. Energy Transition Partnership (ETP) (UNOPS)

A multi-stakeholder platform that aims to accelerate energy transition in Southeast Asia and deliver the Paris agreement targets on climate change by bringing together government donors, philanthropies and Southeast Asian (“SEA”) Governments. It improves coordination and dialogue to accelerate energy transition by addressing impediments to renewable energy, energy efficiency, and sustainable infrastructures.

3. Expansion of the OECD Platform on Financing SMEs for Sustainability (OECD)

It aims to bring together public and private financial institutions, as well as other actors in the sustainable finance ecosystem, from around the world to exchange knowledge and good practices on how to accompany SMEs through the green transition and enable them to obtain the finance needed to green their business models and operations.

4. Developing financing solutions to accelerate net-zero transition in emerging and developing economies (OECD)

A concrete project with a step-by-step approach to assist emerging and developing economies to develop financing and market solutions to accelerate their clean energy transition, with an application to net zero transition for industries. The project would convene an annual G20 Clean Energy Investment Dialogues, beginning with an inaugural dialogue in 2022. The project is both an extension of existing project with Indonesia and Thailand on industry’s net zero transition and a new initiative that would provide a high-level forum to concretely mobilize finance towards energy transition.

5. Fenik Evaptainers, Electric Pressure Cookers for Schools (EPC4S) Lesotho, and H2Grow (WFP)

Fenik Evaptainers and EPC4S Lesotho identifies and enables innovators from WFP and external ventures to scale their high impact solutions to achieve zero hunger. H2Grow is a hydroponics initiative bringing locally adaptable and affordable hydroponic solutions to vulnerable communities facing the challenges of dry terrain and climate change around the world. Starting in Lesotho, the programs will be expanded to other African countries.

6. SKAI, Optimus, and plugPAY (WFP)

- SKAI is at an advanced stage that explores game-changing innovations and new technologies such as artificial intelligence, blockchain, autonomous vehicles, edge computing and robotics to support humanitarian and development assistance.
- Optimus is part of the graduated projects, which engages and supports a network of graduates to showcase their achievements, share their lessons learned on bringing projects to scale, and promote innovation scaling work.
- plugPAY is part of the Sprint Programme, which identifies and enables innovators from WFP and external ventures to scale their high impact solutions to achieve zero hunger.

7. Renewable Energy Cooperation Program to Power Africa (RE CPA) (IsDB)

The components of the program are articulated around the electricity supply spectrum, which involves all activities, services and actors required to generate, transport, distribute and commercialize electricity to the consumers and ensure proper operation and maintenance (O&M) of the assets to sustain the power supply.

III. OTHER POTENTIAL PROJECTS

A. Food Security and Nutrition:

1. Strengthening Food Security in Small Island Developing States (SIDS) of the Pacific through the Development of Regional Agriculture Training Center and Dem farm in Fiji Under the South-South Triangular Cooperation (SSTC) Framework (Indonesia)

This initiative has been proposed to invite collective actions and provide concrete contribution from G20 members in strengthening more resilient and sustainable agri-food systems and accelerating SDGs achievement in SIDS in the Pacific region, particularly in the context of the post-COVID-19 pandemic. Under long-standing bilateral cooperation, the Indonesian Government and the Government of Fiji have agreed to establish Regional Agricultural Training Center (RATC) and Demonstration Farm in Raki-raki, Fiji, within the scheme of the SSTC. The program is the first multi-year Indonesia flagship initiative in the agriculture sector that will be financed under the new-established Indonesian AID.

2. School Meals Coalition (multi-countries)

Launched by WFP at the UN Summit on Food Systems in September 2021, it aims at providing nutritious meals at school to every child by 2030. The project intends to scale up domestic and international financing for school feeding and social protection, anchored in one of the three goals of the Coalition (reaching the 73 million children not reached prior to the pandemic). The School Feeding Coalition could benefit from the support of the G20 to engage more partners to promote the fight against malnutrition for children in school, especially at a time when the current crisis compounds global food insecurity, often hitting the most vulnerable and children in the first place. Argentina, Brazil, China, the EU, France, Germany, Japan, Spain, the United States, and Italy are members and support the initiative.

3. Global Rural Development Strategy (Saudi Arabia)

Developing targeted programs in rural areas by concentrating on youth and women for education, technology and knowledge sharing could create opportunities for sustainable rural development and improved quality of life. Increasing investments in rural infrastructure and technology customization in order to make sure the continuation of their contribution in the global food basket. Increasing productivity in new and emerging digital-based agriculture technologies in increasing yields, efficiency of water and other advantageous inputs.

4. Global Alliance for Food Security, GAFS (Germany, UK)

GAFS is a political alliance for like-minded countries/organizations to lend support to and leverage existing structures, mechanisms, and initiatives for global food security. This forum is intended to be a temporary platform to achieve maximum synergy and complementarity in mounting a short-term response over the next two years. GAFS will facilitate countries and organizations to share knowledge and information on the actions they are taking in order to enhance cooperation and collaboration at global, regional, and national level. GAFS will be open to all interested parties, including governments, international organizations, global and regional initiatives, civil society, and the private sector.

5. Food and Agriculture Resilience Mission (FARM) (France)

FARM constitutes a concrete roadmap to deliver on three crucial objectives, in line with the United Nations Global Crisis Response Group's recommendations: i) keeping the agricultural markets open and transparent; ii) enhancing solidarity towards the most impacted and vulnerable countries; and iii) investing in local sustainable production. With the support of relevant international organizations and especially WFP and IFAD, the FARM is envisaged to move forward with our G20 partners. Strong synergies are also foreseen in working on the implementation of FARM in close relationship with African Union partners.

6. Support to the Agriculture Market Information System (AMIS) (France, Canada, UK, Germany, Italy)

AMIS, set up by the G20 amidst the food crisis of 2011, remains the most efficient tool to enhance market transparency, through the information provided by its members on the availability of four major commodities: wheat, maize, rice, and soy. Together with its Rapid Response Forum (RRF), AMIS provides for an essential platform for political dialogue through which G20 partners can actively contribute to safeguarding food security as a global public good. France supports G20 partners working on a roadmap to develop AMIS into a full-fledged “Global food security board”. Canada announced that it would double its investments in the G20 AMIS initiative. This investment will give countries new information about fertilizers, seeds, and other inputs to help reduce price volatility, and fight global hunger.

7. Support and contribution to Agricultural Innovation Mission for Climate (AIM4C) (multi-countries)

AIM4C is a joint initiative launched by the UAE and the United States that seeks to increase investment for climate-smart agriculture and food systems innovation. Concrete collaboration of over USD 4 billion generated (2021-2025) and G20 partners are encouraged to join. UAE, Australia, Brazil, Canada, EU, Japan, Mexico, Turkey, the Republic of Korea, and United Kingdom, United States support the initiative.

8. Dialogue with Mediterranean Countries on Food Security (Italy).

Together with other G20 Members and International Organisations, the dialogue held on June 8th discussed possible solutions to the food crisis taking into account the critical issue of water scarcity. Italy is working with MDBs to implement concrete initiatives on the dialogue’s follow-up. The next edition of the Dialogue will be held in December 2022.

9. Global Food Security Response (EU, Canada)

To tackle the ongoing challenge of global food insecurity, the EU and its Member States adopted in June 2022 the Global Food Security Response. It involves actions along four strands: (1) assisting vulnerable populations with emergency relief, macro-economic and other support; (2) boosting output and resilience of local food and agricultural systems; (3) keeping food and agricultural trade flowing, including getting Ukraine’s grain and sunflowers exports to the markets through “Solidarity Lanes”; and (4) coordinating with other international actors. The initiative links up with broader international frameworks such as the Global Alliance on Food Security, the FARM initiative, and the UN Global Crisis Response group. The EU mobilized an additional EUR 600 million to counter the food crisis in the most vulnerable countries in Africa, the Caribbean, and the Pacific, which brings the total EU contribution for global food security to EUR 7.7 billion until 2024. In June 2022, Canada committed CAD 52 million to support for grain storage capacity and agro-lab equipment in Ukraine. Canada’s contribution will go through the UN’s Food and Agriculture Organization (FAO) who is working to provide essential grain storage solutions.

10. Food and Resilience Facility (EU)

In April 2022, in response to emerging global challenge of food insecurity in countries in the Middle East and North Africa, the EU put forward a Food and Resilience Facility worth EUR 225 million to address short- and medium-term needs of countries in this region. In the short term, the Facility aims to respond to commodity shortage emergencies, contribute to balance of payment stabilization, sustain local social protection and social safety net systems which are faced with an additional acute crisis. In the medium to long term, it will allow for tailored interventions to boost local agricultural systems and support the development of less input-intensive and more climate-relevant varieties, crops, and agricultural practices.

11. Reduction of Food Loss and Waste in the SEC Countries (Türkiye)

Reducing food loss and waste (FLW) in the context of national food systems and climate change. In the longer term, this will result in a reduction of the national contribution to climate change, and a mitigation of the pressure on national food systems for increased production demanded by population and income growth, urbanization and changing consumption preferences and patterns. Concrete collaboration of USD 1,500. It is an existing project involving Tajikistan, Türkiye, and Uzbekistan.

12. Improving national food safety systems and regional cooperation (Türkiye)

To strengthen food safety knowledge and capacities and improve collaboration between the different actors in order to provide an enabling environment for the development of the food safety culture. Concrete collaboration of USD 650,000. It is an existing project involving Azerbaijan, Kyrgyzstan, Moldova, Tajikistan, and Türkiye.

13. Support the transformation of Economic Cooperation Organization Food Security Coordination Centre (ECO-RCCFS) from a project-based organization to a self-sustainable institution in the Economic Cooperation Organization (Türkiye)

To strengthen ECO-RCC's capacity to provide systematic and useful support to its member states, so that member states acquire necessary advice, guidance, and information for improving their food security and nutrition policies and programmes. Concrete collaboration of USD 500,000. It is an existing project involving Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan, Uzbekistan, Afghanistan, Iran, Pakistan.

14. Black Sea Economic Cooperation Organization Regional Cooperation Centre for Sustainable Food Systems (BSEC-CSFS) (Türkiye)

Strengthening regional cooperation in the areas of food security and safety, improving institutional capacities, poverty alleviation, and sustainable natural resource management including aquatic resources. Concrete collaboration of USD 500,000. It is an existing project involving Albania, Armenia, Azerbaijan, Bulgaria, Georgia, Greece, Moldova, Romania, Russia, Serbia, Türkiye, Ukraine, North Macedonia.

15. The Coalition on Sustainable Productivity Growth for Food Security and Resource Conservation (SPG Coalition) (multi-countries)

The SPG Coalition is a voluntary coalition of action whose members aim to accelerate the transition to more sustainable food systems through a holistic approach to productivity growth that considers impacts and trade-offs among multiple objectives to optimize agricultural sustainability across social, economic, and environmental dimensions. Australia, Brazil, Canada, the EU, Türkiye, the UK, and the United States are coalition members.

16. Food Coalition (Italy)

Launched in 2020 by FAO on an Italian proposal, the Food Coalition is a multilateral and multisectoral mechanism made up of 33 member countries. The Coalition aims at mobilizing human and financial resources, both at public and private level, to carry out concrete actions to support those countries most affected by food crises. Italy is the main financier of the Food Coalition through a contribution of EUR 15 million.

B. Women Empowerment:

1. Women Together (Australia)

This Southeast Asian initiative promotes women's economic empowerment, women's leadership and women's and girl's rights with a focus on gender-based violence prevention. Women Together will complement existing gender equality programs including Pacific Women Lead and bilateral partnerships in the Pacific and Southeast Asia.

2. Support and contribution to Women Entrepreneurs Finance Initiative (We-Fi) (multi-countries)

We-Fi was launched as an intermediary fund in 2017 by the G20 in recognition of the vast potential of women entrepreneurs and the significant obstacles they face in developing countries. It brings together 14 donor countries and six multilateral development bank groups as Implementing Partners (IP). The Republic of Korea has contributed USD 10 million within a period of 4 years. We-Fi has already allocated USD 298 million from USD 376 million to its IPs, additional USD 983 million had been mobilized, active projects span 52 countries with 63% of funds committed to activities in low-income or conflict-affected situations, over 11,000 WSMEs had directly benefited, and up to 200,000 WSMEs overall are expected to be reached, including 7,000 women SMEs who had received USD 243 million in financing, We-Fi welcomes existing and new development partners. Germany, Australia, Canada, China, Denmark, Japan, the Netherlands, Norway, the Russian Federation, Saudi Arabia, Republic of Korea, the United Arab Emirates, the United Kingdom, and the United States support the initiative.

3. Support and contribution to Affirmative Finance Action for Women in Africa (AFAWA) (multi-countries)

AFAWA is implemented by the African Development Bank (AfDB) in collaboration with the African Guarantee Fund (AFD) with the aim of fostering female entrepreneurs' access to finance in Africa. Currently, AFAWA is present in 14 African countries, 24 financial institutions for a financial mobilization of over USD 420 million. Over 1860 women in Africa are now beneficiaries of the AFAWA Initiative, with the aim of impacting over 16,000 women entrepreneurs in Africa in 26 countries, following a 2021 project call. For 2022, the AfDB aims to raise USD 180 million in guarantees to unlock between USD 360-480 million to benefit 2000 women entrepreneurs. G20 support to AFAWA could foster scaling up the AfDB's ambition. France supports the initiative along with AfDB and We-Fi donors (please note number III.A.2. above).

4. Support to the Global Survivors Fund (GSF) for women and girls exposed to conflict-related sexual violence (France, EU)

GSF was launched in October 2019 by Dr Denis Mukwege and Nadia Murad, Nobel Peace Prize laureates 2018 to enhance access to reparations for survivors of conflict-related sexual violence around the globe, thus responding to a gap long identified by survivors. GSF acts to provide interim reparative measures in situations where states or other parties are unable or unwilling to meet their responsibilities. GSF advocates for duty bearers as well as the international community to develop reparations programmes, and guides states and civil society by providing expertise and technical support for designing reparations programmes. France as well as other countries such as the UK, Japan and the Republic of Korea financially support the activities of the Fund. The Fund has developed reparations programmes in DRC, Guinea, Iraq, in Türkiye for Syrian refugees and in CAR. The Fund has also developed a Global reparations study which focuses on the status of and opportunities for reparations for survivors of CRSV in over 20 countries around the world. The EU financially supports the Fund (EUR 2 million).

5. Empowering Women's Recruitment within Asia-GCC (UAE)

Collaboration among Abu Dhabi Dialogue (ADD) Member States to assess potential demand for female workers in technology-related and health sectors, and map best practices in recruitment and retention of women in these sectors.

6. Global Spotlight Initiative (EU, Mexico)

The Spotlight Initiative is a €500 million strategic partnership between the EU and the UN launched in September 2017 with the main objective to end violence against women and girls (VAWG). It deploys targeted, large-scale investments to empower, promote, and protect the rights of women and girls. It pursues a comprehensive and inclusive approach through

legislative reform, institutional strengthening, prevention and tackling gender stereotypes, support services to survivors, enhance data collection as well as support to women's organizations. The initiative is currently up and running in 26 countries in Africa, Asia, the Caribbean, Latin America, and the Pacific.

7. Leaving No One Behind: Greater Involvement and Empowerment of Rural Women in Turkiye and Central Asia (Türkiye)

To improve rural women's access to economic opportunities, and thus, improve their and their families' livelihoods. Concrete collaboration of USD 950,000.

8. Global Partnership for Action on Gender-Based Online Harassment and Abuse (multi-countries)

During the 66th United Nations Commission on the Status of Women, Australia, Denmark, the Republic of Korea, Sweden, the United Kingdom, and the United States launched the Global Partnership for Action on Gender-Based Online Harassment and Abuse (Global Partnership). The Global Partnership will bring together countries, international organizations, civil society, and the private sector to better prioritize, understand, prevent, and address the growing scourge of technology-facilitated gender-based violence. Australia, Canada, Germany, the United States, and the World Bank support the initiative.

9. Global Alliance for Care (Mexico, Canada)

Global Alliance for Care (GAC) is an initiative promoted by Mexico in diverse international fora since 2021. Mainly, it has been sponsored in the G20 Empower and Women 20 group by the Mexican National Institute for Women (INMUJERES). Currently, the GAC has more than 55 partners including G20 governments, private sector, philanthropic organizations, as well as civil society actors and international organizations, and is looking for expansion.

10. Supporting Women in Coping with COVID-19 and Recovering from Socio-Economic Impacts of the Pandemic (China)

This project was jointly launched by UN Women and the All-China Women's Federation. It aims at empowering women-led SMEs, providing women with tools and resources to recover from the impact of COVID-19, and prepare them better by building resilience to future shocks. The project has successfully benefited over 1,000 women entrepreneurs and 6,000 women employees in SMEs.

11. G20 Empower Playbook (Indonesia)

The G20 EMPOWER Playbook presents a broad spectrum of approaches to overcoming the challenges women face.

12. Support for Invest in Childcare, an Initiative of the World Bank Group (multi-countries)

This initiative invests in quality, affordable childcare in developing countries, a critical investment to build the next generation of human capital and place women at the center of an inclusive global economic recovery. The multi-donor fund was launched in April 2022 to scale up quality, affordable childcare in developing countries benefitting women's economic empowerment and early child development. It will catalyze at least USD 180 million in new funding in the next 5 years to support childcare in low and middle-income countries, providing wide returns for women, children, families, businesses, and economies. Canada and the United States support the initiative.

C. Climate and Environment Actions:

1. Fund for Climate Adaptation and Comprehensive Response to Natural Disasters (Mexico)

The Fund was established within the partnership of the Community of Latin American and the Caribbean States (CELAC) and with the guidance of the Economic Commission for Latin America the Caribbean (CEPAL). The project will be open to all parties, even further than existing Latin American G20 members, and is open to expansion/scaling-up within the G20.

2. Indo-Pacific Carbon Offsets Scheme (Australia)

The scheme will help partner fulfil their commitments under the Paris Agreement. It will support partner countries to establish: national climate policy frameworks, carbon accounting and reporting capacity and a pipeline of carbon offsetting projects.

3. Inclusive and Open Climate Club (Germany)

New initiative to foster real climate ambition and international cooperation in climate change mitigation. Open to all like-minded states (governments beyond G7 and G20, as well as emerging and developing countries).

4. Framework for the Circular Carbon Economy (Saudi Arabia)

Under the Saudi G20 Presidency, G20 leaders endorsed the Circular Carbon Economy (CCE) as a holistic inclusive, and pragmatic approach to managing emissions. It is necessary to adopt an effective framework that takes into account all technologies and means, and are assessed in light of appropriate national circumstances, capabilities and development priorities.

5. Glasgow Leaders' Declaration on Forests and Land Use (UK, the Republic of Korea, Canada, Germany, Italy)

The Declaration was signed at COP26 and commits endorsing countries to working collectively to halt and reverse forest loss and land degradation by 2030 while delivering sustainable development and promoting an inclusive rural transformation. The Republic of Korea joined the commitment at COP26.

6. Support to the Africa Great Green Wall Initiative: agro-ecological transitions, biodiversity, climate change and sustainable land management (France, EU)

Started by the African Union, and in partnership with the UN Convention to Combat Desertification (UNCCD), the Great Green Wall for the Sahara and the Sahel brings together African countries, the EU, and other international partners, under a common "Accelerator Strategy" structured around 6 objectives: restore 100 million hectares of degraded land; create 10 million jobs; sequester 250 million tons of carbon; improve food security for 20 million people; support the millions of people living in communities across the Sahel; provide access to 10 million smallholder farmers to agricultural technologies resilient to climate change. In January 2021, a package of USD 19 billion was also announced by a group of donors.

7. Blue Carbon Coalition (France)

Launched at the One Ocean Summit in February 2022 in Brest, and led by the Agence Française de Développement, the Blue Carbon Coalition aims to accelerate investments in coastal carbon sinks by gathering governments, non-governmental actors and private actors. The goal is to develop conservation models that benefit the livelihoods worldwide with a focus on LDCs, indigenous peoples and local communities. Accelerate and scale the development and implementation of blue carbon with the greatest impact for climate mitigation, risk management, and adaptation while supporting sustained investment in nature-based solutions that contribute to biodiversity protection and human wellbeing.

8. Mangrove Alliance for Climate (MAC) (UAE)

A global initiative that seeks to scale up and accelerate conservation, restoration, and growing plantation efforts of mangrove ecosystems. Member Countries will commit to plant, rehabilitate, and restore mangroves within their country and supporting others to do the same. The initiative will leverage and strengthen ongoing efforts and commitments of its Member Countries in science, research, coastal management and conservation, education and climate mitigation and adaptation efforts, by supporting all-inclusive evidence based national policy-development and enforcement.

9. NUclear TEChnology for Controlling Plastic Pollution (NUTEC Plastics) (IAEA)

Aims to highlight the unique peaceful contributions of nuclear technology to the global, regional, and national actions for the solution of plastic pollution. The IAEA partners with various stakeholders to develop and mainstream these new solutions, using its existing delivery mechanisms for both research and development, and building capacity in its Member States to tackle this global problem.

10. Restoring Landscapes and Water for Adaptation and Resilience (Spain)

It aims at promoting a better understanding, design, and implementation of restoration actions in countries at high risk of desertification, land degradation and drought in order to increase the resilience of their communities and ecosystems and their capacity to adapt to climate change. It will contribute to achieving land degradation neutrality (target 15.3 of goal 15 of the United Nations 2030 Agenda), as well as to the global goal of adaptation, by sharing and integrating knowledge, including the implementation of pilot projects, to promote landscape restoration with a long-term perspective in an innovative and integrative way.

11. Climate and biodiversity finance (Italy, Canada)

- a. To achieve the USD 100 billion climate finance goal, Italy has committed USD 1.4 billion annually over the next five years, including the launch of a dedicated Italian climate fund, with about USD 1 billion a year for five years.
- b. Canada is providing CAD 5.3 billion in international climate finance over five years (2021-26) to support developing countries to combat the dual crises of climate change and biodiversity loss, by allocating a minimum of 20% of its funding to projects that leverage nature-based climate solutions and projects that contribute biodiversity co-benefits. Canada will also adopt a nature-positive approach across all programming to ensure that its climate-related interventions do no harm to the environment and strive to contribute to positive biodiversity outcomes.
- c. Following through on its promise of enabling the participation of young citizens from around the world in the climate decision-making process, Italy has allocated 10 million euros to launch the “Youth4Climate Initiative”. The initiative, launched in partnership with UNDP, builds on the success of the Pre-COP26 Youth4Climate event. It aims at leveraging youth-led, innovative, and concrete solutions to accelerate climate action and sustainable development. It will hold an annual event to take stock and assess way forward to achieve the goals set by young people each year.

12. Circular fashion and textile (Italy)

Under the Italian Presidency, the G20 Resource Efficiency Dialogue adopted its Roadmap 2021-2023. The circularity of textile and fashion has been identified as one of the key topics for contributing to achieving the 2030 Agenda and its SDGs, in particular SDG 8 and SDG 12. Italy’s National Recovery and Resilience Plan (NRRP) provides for investments in projects to promote the circular economy in the field of separate collection of electronic, plastic and textile waste. It foresees an investment of EUR 600 million for “Circular economy flagship projects” of which EUR 150 million will be dedicated to infrastructures for the collection of pre-consumer and post-consumer waste textile fractions, modernization of plant engineering and construction of new recycling plants of the textile fractions.

13. Green Initiative for South East Asian Countries (EU)

This Team Europe initiative aims at promoting a lasting and sustainable transformation towards circular, climate-neutral and environmentally sustainable economies and resilient ecosystems in South East Asia. It includes activities to support: (1) Biodiversity and Sustainable Landscapes; (2) Clean, affordable and secure energy; (3) Circular economy; (4) Sustainable food systems; (5) Green and smart cities; and (6) Horizontal issues.

14. Latin America and the Caribbean Green Transition Initiative (EU)

The Team Europe initiative aims to support countries in Latin America and the Caribbean in their green transition. It includes activities to support: (1) decarbonization of economies and a more effective adaptation to the effects of climate change, (2) protection of biodiversity; and (3) promotion of circular economy and the reduction of pollution.

15. Green-Blue Alliance for the Pacific and Timor Leste (EU)

This Team Europe initiative was launched at the COP26 in Glasgow to promote climate action and sustainable management of natural capital in the Pacific countries and territories. It aims to contribute to achieving the goal of low carbon, resilient future in the region by 2050, and includes the following areas: (1) Climate mitigation; (2) Climate adaptation and resilience; (3) Public Finance Management/Financial Risk Management; (4) Integrated approaches to ecosystem management; (5) Sustainable management of oceanic and coastal fisheries; and (6) Reduction of human impact on the environment. The first projects are coming on stream.

16. BRIDGES - Boosting Restoration, Income, Development, Generating Ecosystem Services (Türkiye)

Supporting the restoration and sustainable management of dryland forests and agrosilvopastoral systems, promoting production, producing ecosystem goods and services. Concrete collaboration of USD 3,000. It is an existing project with Mauritania, Eritrea, Sudan.

17. Forest Restoration Improvement for Environmental Development and Sustainability (FRIENDS) (Türkiye)

Developing national capacities to successfully carry out large-scale restoration of forests and other woodlands by increasing knowledge for protection from destruction. Concrete collaboration of USD 2,000. It is an existing collaboration with Azerbaijan, Kazakhstan, Kyrgyzstan, Uzbekistan, Turkmenistan, Tajikistan.

18. Enhancing the Scientific Capacity of TUBITAK MAM in the Field of Smart Environmental Technologies for Climate Change Challenges (SMART4ENV) (Türkiye)

SMART4ENV is a new project involving Türkiye, Spain, Italy, Norway, Ireland with contribution of USD 1.5 million that aims to improve TUBITAK MAM research capacities, scientific reputation and networking channels while stimulating scientific excellence in key applications of Smart Environmental Solutions for climate mitigation and adaptation.

19. Coalition for Disaster Resilient Infrastructure (CDRI) (India)

CDRI promotes disaster resilience of infrastructure globally by working towards reducing economic losses and improving the well-being of communities in the face of calamities. The formation of the CDRI is the result of efforts by India and UNDRR and the call for action to reduce damage to critical infrastructure. India has provided seed money during its foundation. Concrete collaboration of USD 67 million with 39 member countries involved.

20. Developing Climate Disaster Risk Financing Framework and Parametric Insurance (India)

The project aims to alleviate economic damage caused by climate and extreme weather events through financing instruments for Fijians. To minimize the economic damage caused by future climate-related disasters, the project will develop index-based insurance and other

climate disaster risk financing instruments for individuals, businesses, and organizations in the Pacific. Concrete collaboration of USD 850,000. It is a new initiative involving Fiji, the UNCDF, UNDP, and the UN University-managed Munich Climate Insurance Initiative.

21. Climate Change Adaptation and Mitigation Package (Q-CHAMP) (Australia, India, Japan, United States)

Q-CHAMP captures cooperative efforts to advance action on climate change under three pillars: climate ambition; clean energy innovation and deployment, and climate adaptation, resilience, and preparedness. Each pillar has a clear focus on delivering practical outcomes between the four countries as well as across the Indo-Pacific, maximizing opportunities for economic prosperity through the pragmatic transition to net zero, and enhancing resilience.

22. Training on Capacity Building for Disaster Risk Reduction and Climate Change Adaptation for Member States of the Caribbean Community (CARICOM) and Central American Integration System (SICA) in 2023 (Indonesia)

The Indonesian Government hopes to build better awareness regarding early warning systems in CARICOM and SICA member countries that are susceptible to natural disasters as a result of climate change. Total value of the grant is approximately USD 277,140.24 which will be channeled through the CARICOM Secretariat and SICA Secretariat.

23. Inclusive Forum on Carbon Mitigation Approaches (OECD, Italy, Australia, UK)

The Forum will enable assessment and report on carbon mitigation efforts around the world to help ensure that more ambitious action on climate change is pursued in a way that is both effective and fair. The initiative aims to produce concrete action by fostering dialogue on the spillover effects of mitigation policies, on needs and potential approaches to curbing excessive negative spillovers, and on the best practice policy mixes.

24. Joint Research Scheme (the Global Biodiversity Research Partnership/GBRP) (South Africa)

The research will have specific research themes, including adoption and implementation of new technologies and innovations for the green and blue economy; biodiversity conservation and sustainable use, fair and equitable benefits of pharmaceutical biotechnology; development from indigenous biodiversity; impact of climate change adaptation and mitigation actions on biodiversity and socio-economic aspects of its utilization; as well as new and renewable energy to ensure access to affordable, reliable, sustainable, and modern energy for all. It aims to promote mobility of researchers, promote project and programmes on biodiversity data, sharing of research infrastructure, provide capacity building initiative through research stations with tailor-made programs for training and outreach, fellowship, and the provision of support for marine and terrestrial expedition/exploration.

25. Support for the Climate Data Platform (Climate Data Steering Committee) (United States)

International organizations, regulators, policymakers, and data service providers are collaborating on the creation and design of an open-data public platform that will collect, aggregate, and standardize net-zero climate transition data based on private sector climate commitments. Better information available to the market, regulators, climate scientists and civil society will help facilitate and scale the transition toward a net-zero global economy. The platform will provide financial institutions with the information they need to develop and execute on their transition plans, giving the world transparency and the ability to hold companies and financial institutions accountable to their commitments to building a net-zero economy.

26. Support and contribution to the IMF's Resilience and Sustainability Trust (RST) (multi-countries)

The IMF Board has established the RST at its Board meeting on May 1, 2022, to help low-income countries, eligible small states and vulnerable middle-income countries address longer-term structural challenges that pose macroeconomic risks, including those stemming from pandemics and climate change. The RST is expected to be fully operationalized by end-2022. It has received more than USD 40 billion pledges up to mid-2022.

D. Financing for Development:

1. Establishment of the Global Blended Finance Alliance (GBFA) (Indonesia, OECD)

The GBFA, to be launched on the margins of the G20 Summit, will seek to fill the SDG Funding Gap through interested financing stakeholders and to implement the G20 Blended Finance Principles, developed in the G20 DWG, across relevant sectoral areas. Various sources of funding, including governmental and multilateral organizations, philanthropies and foundations, and the private sector are considered for the GBFA.

2. Assistance for Sustainable Development, including sectors such as Agriculture, Capacity building, Connectivity, Construction, Health, Water and Power (India)

The projects, implemented by Government of India Lines of Credit (LOCs), are demand-driven and based on the national priorities of partner countries. The projects are aimed at socio-economic development and capacity building in the partner countries, and promote local opportunities and interests, focusing on delivering benefits like greater connectivity, improved infrastructure, and strong developmental cooperation in distinct sectors. A total of 566 projects covering various sectors including Agriculture, Capacity building, Connectivity, Construction, Health, Water and Power worth USD 23.62 billion are being supported.

3. Indian Technical and Economic Cooperation Programs (ITEC) (India)

Capacity building for partner countries through training programs revolving around exchange of expertise in technical, scientific, vocational, education, defense, management, administration, and other domains. It is an existing project in 160 countries in South Asia, Africa, Latin America, and the Caribbean regions.

4. IBSA Trust Fund (India)

IBSA Trust Fund has supported more than 39 South-South development projects in 35 partner countries, with a current outlay of over USD 44 million, covering issues of poverty relief, social equity, food security, education, skills and capacity building, gender, health, infrastructure, and youth employability among other. A multi-country project is being implemented in 10 countries through the International Solar Alliance.

5. India-UN Development Partnership Fund (India)

The India-UN Development Partnership Fund (Fund), established in 2017, has developed a portfolio of 65 development projects (49 completed or under implementation) in partnership with 49 developing countries, focusing on Southern-led, demand-driven developmental and transformational projects. The Fund responds directly to the national priorities and development objectives of partner countries, contributing financial resources and technical knowledge to support partner governments in achieving the Sustainable Development Goals. Concrete collaboration of USD 150 million as a multiyear pledge.

6. Group of Friends on the Global Development Initiative (GDI) (China)

The GDI aims to facilitate the implementation of the UN 2030 Agenda for Sustainable Development. Over 60 countries, including some G20 members, have joined the Group of Friends of the initiative at the UN.

7. Global Development and South-South Cooperation Fund (China)

China set up the Global Development and South-South Cooperation Fund, with an input of USD 4 billion, to support global development including the implementation of the 2030 Agenda for Sustainable Development in developing countries.

8. UN Peace and Development Trust Fund (China)

The UN Peace and Development Trust Fund (UNPDF) was established by China and the UN Secretariat. It aims to support the work of the UN, promote multilateral cooperation, and make new contributions to world peace and development. It has supported nearly 100 projects and benefited over 100 countries and regions in Asia, Africa, Latin America and Oceania.

E. Education:

1. Distance Learning (DL) courses (WIPO)

WIPO is promoting two courses: (1) WHO-WIPO-WTO Executive Course on Promoting Access to Medical Technologies and Innovation; and (2) Executive Course on Intellectual Property and Exports. WIPO hopes to promote these courses to universities, research centers, and trade support institutions in G20 developing countries.

2. Establish agreements with selected G20 academic institutions for the integration of WIPO courses within their curricula, and their accreditation by such institutions, taking into account their specializations. (WIPO)

Establishing agreements with G20 academic institutions for the WIPO courses will allow for better integration and sustainability of cooperation of these courses in national curricula. The DL Program of the WIPO Academy has already established agreements with universities from G20 countries for the accreditation of the General Course on Intellectual Property.

3. Madrasati International Project (Saudi Arabia)

Aims to enhance learning and skill acquisition to ensure digital content utilization. Madrasati enhances learning outcomes for formal subjects taught to students including sciences, mathematics, languages, Islamic studies, digital skills, art, social studies, and life skills. These subjects are taught across the different stages through a matrix of skills to which the learning outcomes are linked.

4. Support to the WHO Academy (France)

The WHO academy was officially presented in Lyon (France) in September 2021 by President Macron and Dr Tedros. It aims to become a state-of-the-art lifelong learning center providing the very latest innovations in adult learning to global health for health professionals, policy makers and members of civil society from around the world, particularly in pandemic preparedness and response. France supports further strengthening of the WHO Academy.

5. Support and contribution to Global Partnership for Education (UAE, United States, the Republic of Korea, Spain, UK, Italy)

The Global Partnership for Education is the world's largest fund dedicated to transforming education in lower-income countries by building stronger education systems to reach the most vulnerable girls and boys, improving teaching, and learning, and strengthening the resilience of education systems. In 2021, the UK and Kenya co-hosted the Global Education Summit in London and raised USD 4 billion dollars in donor pledges for GPE over the next five years. Concrete collaboration of USD 11 billion+ mobilized (since 2002). USD 100 million contribution by the UAE since 2018. The Republic of Korea has committed to contribute additional USD 15 million within a period of 4 years. Spain has committed to contribute USD 20 million within a period of 5 years. UK has pledged GBP 430 million for 2022-26. Italy has allocated EUR 25 million for the period 2021-2025.

6. Accessible and equitable digital learning for all (UNICEF, United States)

UNICEF is leading work on: (1) data and advocacy; and (2) national action to make digital learning solutions more equitable and effective. The following direct outcomes are expected: (a) Increased global visibility of equity and effectiveness gaps of national digital learning platforms; (b) Increased global availability of pro-equity policy and programme tools for national governments; (c) Tailored technical assistance received in 47 countries; (d) Learning Passport planned or implemented in 46 countries; (e) Digital language learning for refugees, migrants and linguistic minorities implemented in 14 countries.

7. International Union of Pure and Applied Chemistry (IUPAC) Summer Schools on Green Chemistry (Russia)

In 2018, PhosAgro started to support the International Union of Pure and Applied Chemistry (IUPAC) Summer Schools on Green Chemistry. Since 2018, more than 450 young professionals and 60 experienced excellent lecturers from 70 countries participated in four sessions of the IUPAC Postgraduate School on Green Chemistry. Over the last 4 sessions PhosAgro has allocated more than USD 50,000 to provide 100 scholarships to support potentially prospective young scientists.

8. Green Chemistry for Life (Russia)

PHOSAGRO, UNESCO and IUPAC Partnership in Green Chemistry aims to address global challenges of sustainable growth focusing on financial and scientific support to promising young scientists worldwide. The project is designed to support scientists involved in the development of innovative technologies in accordance with the principles of green chemistry, which will help solve environmental problems, improve energy efficiency and management of natural resources. PhosAgro's contribution of USD 2.5 million by 2022.

9. Novigado - Active Learning and Innovative Teaching in Flexible Learning Spaces (Türkiye)

Novigado is to support schools and related stakeholders in the transition from a conventional and teacher-centered classroom into teaching practices that promote active learning with the support of ILE and use of ICT. Concrete collaboration of EUR 331,470 (1 December 2019 – 31 May 2022). It involves Poland, Türkiye, Belgium, France, Portugal.

10. Design FILS - Designing Future Innovative Learning Spaces (Türkiye)

Design FILS provides the implementation of the scenarios in flexible learning spaces through strengthening teachers' skills in developing interdisciplinary learning scenarios. Concrete collaboration of EUR 245,754 (1 September 2019 – 31 August 2022). It involves Türkiye, Belgium, Portugal, Spain, Austria, Czechia.

11. EDUSIMSTEAM - Fostering STEAM Education in Schools (Türkiye)

EDUSIMSTEAM is mainly aimed at teachers and students in K-12 schools to gain STEAM methodology through teacher trainings, online platform, curriculum, learning scenario studies, policy-making documents, etc. Together with all the studies and project outputs to be carried out for this purpose, it is desired to form the transnational dimension of STEAM as an innovative policy in education throughout the partner countries in EU. Concrete collaboration of EUR 497,175.36 (1 January 2020 – 30 June 2023).

12. MGC ICCR Scholarships (India)

50 ICCR scholarships are offered per year to students from MGC countries to pursue diploma and degree courses in history and culture, tourism, IT, Vocational Training, engineering, management, teachers' training, film direction, etc.

13. Scheme for Promotion of Academic and Research Collaboration (SPARC) (India)

The SPARC Initiative aims to promote joint research proposals and facilitating academic and research collaborations between Indian Institutions and foreign institutions from 28 countries. This initiative envisages that culmination of joint research proposals would lead to solving problems of national and/or international relevance.

F. Tourism and Creative Economy/SMEs:

1. Cooking up a more dynamic economy – how food and the food value chain can boost developmental regionalism (UNCTAD)

A proposal of 1.5-year project to conduct workshops, research and studies, as well as seminars and policy recommendations in national and regional level to address issues on food, food processing, and food-related creative industries, and the development of an intra-regional-food related value chain. UNCTAD will initiate the project in Algeria, Egypt, Jordan, Libya, Morocco, Palestine, Syria, Tunisia, and potentially also Türkiye.

2. Sustainable Tourism Multi-Donor Trust Fund with the World Bank for the period of 2022-2029 (Saudi Arabia)

Through a multi-lateral effort under the leadership of the World Bank, UNWTO, and Saudi Arabia, the Tourism Community Initiative has been developed into a first-of-its-kind Multi-Donor Trust Fund (MDTF) that will support timely and innovative activities to close the financing and knowledge gaps in the tourism sector and help build forward better. The MDTF will focus on boosting three thematic areas in tourism. Namely, People (jobs, communities), Places (green and inclusive destinations and assets), and Policies and Markets (institutions and partnerships). The MDTF will be established before Q2 2022, last for at least seven years, and likely start disbursements by Q1 2023. Aimed to reach a capitalization of USD 500 million by 2029, Saudi Arabia has committed USD 100 million as a founding donor.

G. Agriculture:

1. Sowing Life/SL (Mexico)

A strategy to deal with the phenomenon of migration in Central America and the Caribbean by supporting agriculture producers. SL is an existing project of the Mexican Agency for International Cooperation for Development (AMEXCID). It is open to expansion/scaling-up within the G20. The project will be open to all parties, even further than North and Latin American G20 members.

2. Clean Water and Sanitation Solutions (Saudi Arabia)

Provide quick simple and /or nature-based clean water and sanitation solutions for 10 million people in rural regions in developing countries through G20 supported initiative financing.

3. Support to the promotion of sustainable soil management in the framework of the Global Soil Partnership (III) (Russia)

This project builds on the achievements of the two previous phases of the project “Support to the promotion of sustainable soil management in the framework of the Global Soil Partnership (GSP)”. The project includes three Outputs: Output 1 focuses on creating and strengthening an enabling environment for the formulation of national policies or strategies in line with the Voluntary Guidelines for Sustainable Soil Management and the Fertilizer Code in Eurasian countries and the adoption of SSM practices aimed at increasing carbon sequestration, conserving soil biodiversity, and addressing soil salinity. Output 2 supports the organization of the World Soil Day (WSD), including the development of awareness-raising material for 2021 and 2022 and the awarding of the Glinka World Soil Prize (GWSP) on WSD in 2021 and 2022. Output 3 aims to scale up SSM practices at national, regional and global levels by establishing pilot projects for carbon sequestration to address climate

change mitigation and adaptation, and to implement the Fertilizer Code, the findings of the reports on soil biodiversity, soil pollution and salt-affected soils, in order to boost soil productivity and halt soil degradation.

4. Implementation of Sustainable Soil Management through the Soil Doctors programme and the Global Soil Laboratory Network (Russia)

Since 2018, PhosAgro has been actively participating in the FAO Global Soil Partnership initiatives, contributing to raise awareness of the importance of sustainable soil management and create strategies to address soil degradation and pollution. FAO and PhosAgro are currently developing a global network of soil laboratories comprising 800 laboratories in 150 countries. The total contribution to the project as of July 2022 accounts to AUD 2.4 million.

5. Using Soil Maps to Promote Efficient Use of Fertilizers (FAO)

Looks to establish a self-sustaining, government-managed national soil database to become a public good to be used by public policies, private sector and farmers. The goal is to publish the country's total land mass for which soil information is available. It also aimed to provide accurate soil management information system and advice to smallholder farmers to enhance crops productivity and yields.

6. Integrated natural resources management in drought-prone and salt-affected agricultural production landscapes in Central Asia and Türkiye - GEF/FAO Regional Project CACILM-2 (Türkiye)

To scale up integrated natural resources management (INRM) in drought-prone and salt-affected agricultural production landscapes in the Central Asian countries and Türkiye. This will be done through scaling up of sustainable management practices that minimize pressures and negative impacts on natural resources that reduce risks and vulnerability and, enhance capacity of rural communities to cope with or adapt to drought and salinity. In particular, adoption of integrated landscape management approaches and INRM practices should help stabilize and even reverse trends of soil salinization, reduce erosion, improve water capture and retention, increase the sequestration of carbon, and reduce loss of agrobiodiversity, thereby reducing the desertification trend in terms of extent and severity. Concrete collaboration of USD 10,875,000. It is an existing project involving Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan, Uzbekistan.

7. Improving the efficiency of small ruminants production for reduction of the GHG emission intensity (Türkiye)

To increase capacity at national and sub-regional level to analyse the small ruminant's production systems and make them more efficient, in a gender-sensitive manner, in each participating country and in the Central Asian sub-region as a whole. Concrete collaboration of USD 1.1 million. It is an existing project involving Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan, Uzbekistan.

8. Strengthening regional collaboration and national capacities for management of wheat rust diseases and resistance breeding in Central Asia and Caucasus (CAC Rust) (Türkiye)

Contributing to prevention and management of wheat rust diseases by facilitating regional collaboration and strengthening national capacities on surveillance, race analysis, integrated disease management and development of disease-resistant varieties. Concrete collaboration of USD 1.067 million. It is an existing project involving Azerbaijan, Kazakhstan, Kyrgyzstan, Tajikistan, Türkiye, Turkmenistan, Uzbekistan.

9. SHEP approach (Japan)

Smallholder Horticulture Empowerment & Promotion (SHEP) approach have developed in Kenya through technical cooperation project by JICA which started from 2006 and succeeded in increasing farmers' income. SHEP is an approach which realizes "Market-Oriented

Agriculture" and converts farmers mind from "grow and sell" to "grow to sell". In Kenya, with this approach, the project achieved doubling income of 2,500 smallholders only within 2 years (2007-2009). In recent years, the SHEP approach has been practiced in Africa, Asia and Latin America.

10. International Cooperation Initiative on Global Food Security (China)

International Cooperation Initiative on Global Food Security is an initiative put forward by China during G20 Foreign Ministers' Meeting in July 2022. The Initiative aims to address the current food security crisis via actions including: support the central role of the UN; not impose export restriction on humanitarian food purchases by the WFP; facilitate the entry of Russian, Ukrainian and Belarusian agricultural products and inputs into the international market; ensure emergency measures taken by countries for food trade be short-term, transparent, targeted and appropriate, and conform to the rules of the WTO; support the cooperation on agricultural science and technology innovation among countries; reduce food loss and waste; help developing countries enhance their capacity for food production, storage and loss reduction. China would like to cooperate with other G20 members and the international community to implement this Initiative so as to safeguard the global food security.

H. Employment:

1. Youth Building the Future/YBF (Mexico)

A program for young people without study or work options to gain labor experience to get a job or improve their employability in Central America and the Caribbean. YBF is an existing project of the Mexican Agency for International Cooperation for Development (AMEXCID). It is open to expansion/scaling-up within the G20. The project will be open to all parties, even further than North and Latin American G20 members.

2. Strengthening skills for a Just Transition (OECD)

Building on the joint OECD-ILO work in the Employment and Education Working Groups to update the G20 Skills Strategy for the digital and green transformations, and the discussions of the ETWG webinar series, the OECD can provide substantive and targeted policy support on the just transition and skills for the low-carbon future. The OECD's Clean Energy Finance and Investment Mobilisation (CEFIM) programme can also provide capacity strengthening trainings and workshops to strengthening the enabling environment for clean energy investments, which could be leveraged through the G20.

3. Ship to Shore Rights South East Asia (SEA) (ILO)

A multi-country project that seeks to promote regular and safe labour migration and decent work for all migrant workers in the fishing and seafood processing sectors in Southeast Asia. Technical assistance towards sustainable blue economy through decent work in fishing and seafood supply chains. Cooperation to develop MOUs for the protection of migrant fishers. Project period: 1 August 2020 to 31 July 2024.

4. Implementation of the updated G20 Skills Strategy (ILO)

Implementation that will include: (1) Anticipating and matching skills with jobs in the context of digitalization and green transition; (2) Strengthening governance of future-ready skills and lifelong learning systems; (3) Management of training institutions and digitalization of skills systems. Field level implementation: in 5 selected countries. Per country Direct Recipients of capacity building over 6 years: 500 persons from 50 institutions.

5. Global Accelerator on Jobs and Social Protection for a Just Transition (ILO)

This initiative has the potential to tie together efforts of the G20 energy transitions, environment, employment, and development working groups in a way that would reduce siloes and bring about comprehensive change. The Accelerator aims to galvanize within the international system a more robust and effective level of support to an initial group of 30 developing countries and small island states over the next four years for the integrated national planning and financing of these critical social dimensions of their low-carbon energy transitions. Fully aligned with the G20 Roadmap for Stronger Recovery and Resilience, the Global Accelerator is being designed as a vehicle for the more networked and efficient form of multilateral cooperation on this critical aspect of climate action. It is a new initiative, announced by the UN Secretary General in September 2021. It is in the process of being established, with the ILO as Secretariat. At the initial stage, it will be implemented in around 10 selected pathfinder countries and quickly extended to another 20 countries.

6. Alliance for entrepreneurship in Africa (France)

The Alliance for Entrepreneurship in Africa (AforE) is an international, project-driven platform aimed at boosting the development of private sector participation and entrepreneurship in Africa with the goal of promoting dynamic, competitive, and inclusive economies across the continent. The Alliance supports investments in micro, small and medium-sized enterprises (MSMEs) by developing and scaling up instruments that accelerate growth and competitiveness. The Alliance recognizes the importance of tailoring development approaches to the unique needs of Africa's MSMEs. The G20's mobilization through the Alliance for Entrepreneurship in Africa could be decisive in ensuring that a growing number of public and private actors join forces.

7. G20 Entrepreneurship Roundtable (China)

The G20 Entrepreneurship Research Center was established in 2017 as a deliverable of the G20 Hangzhou Summit. To implement the G20 Entrepreneurship Action Plan, the center has convened five sessions of G20 Entrepreneurship Roundtable for deepening information exchange and sharing best practices among G20 members. The 6th G20 Entrepreneurship Roundtable co-hosted with the G20 Indonesian Presidency takes place in October 2022.

8. Multilateral Partnership for Organizing, Worker Empowerment, and Rights (M-POWER) (United States)

A partnership among governments, trade unions, civil society, and international organizations to empower workers and support freedom of association. M-POWER will include more than USD 200 million in investments in technical cooperation programming, coordination on international engagement, cutting-edge research, and strategic communications. It will involve a number of G20 members as partners and will have a global reach.

I. Sustainable Infrastructure

1. Sustainable Infrastructure Programme in Asia (SIPA) (OECD)

The programme aims to help selected Central and Southeast Asian countries scale up energy, transport, and industry infrastructure investments, and shift them towards infrastructure projects consistent with low-emission, resilient development pathways and the Sustainable Development Goals.

2. Fast-Infra (France)

Following its launch during the One Planet Summit in 2019, the private sector has been designing the FAST-Infra Sustainable Infrastructure Label (SI Label) as a globally applicable label for projects demonstrating significant positive sustainability performance. FAST-Infra is designed to enable developers and operators to show the positive impact of an infrastructure asset, relying on the G20 QII as core standards and attract investors seeking assets which positively contribute to sustainable outcomes. The SI Label is designed to enable transformation of sustainable infrastructure into a mainstream, liquid asset class.

3. The “G20 Platform on SDGs Localization and Intermediary Cities (G20 PLIC)” (Italy, OECD, UN Habitat)

The Platform operates as an open and inclusive space for peer dialogue, knowledge sharing, capacity building and consensus building to support local, national, and international actions in optimizing the development potential of intermediary cities and supporting their efforts in achieving the SDGs. PLIC builds on existing work and networks, supports synergies, and connects different outcomes to inform the G20 Development Working Group (DWG). Launched in November 2021 under the Italian G20 Presidency, the G20 PLIC is open to all interested parties within and beyond G20 membership.

4. Grants for Development (India)

Grants are provided to build capacities of developing nations and their institutions for governance and efficient delivery of public service, develop socio-economic infrastructure, secure lives, and promote livelihoods. Focus is on areas such as railway links, roads & bridges, ports, waterways, cross border-trade infrastructure, power generation and civil infrastructure, etc. Concrete collaboration of USD 3,4 billion with 39 projects completed and 41 under various stages of execution.

J. Sustainable Maritime Development

1. Capacity Building for Sustainable Fisheries and Aquaculture Management in Central Asia – FishCAP (Türkiye)

(i) To improve institutional capacity for sustainable management, planning, protection and development of aquaculture resources in a participatory manner, especially for youth and women in beneficiary countries; (ii) To improve skill and knowledge base in the inland aquaculture and culture-based fisheries for smallholder fish farms and commercial SMEs; (iii) To enhance frameworks for fish safety, quality assurance, processing, marketing, and international market access; (iv) To strengthen capacity for aquaculture research and educational opportunities, especially for youth and women; (v) To transfer best management practices, aquaculture business plans, technical knowledge and technology for fish farming.

2. Turkish National Integrated Marine Pollution Monitoring Program (DEN-IZ) (Türkiye)

Turkish National Integrated Marine Pollution Monitoring Program is covering all the seas of Türkiye; Marmara Sea and Turkish Straits, Mediterranean Sea, Aegean Sea and Black Sea with a large monitoring network of over 370 stations. The program is designed according to the Regional Marine Conventions that Türkiye is a part; Barcelona and Bucharest Conventions EU directives (MSFD and WFD). In the monitoring programme, microplastics are studied in sea water and sediment matrices. Collected microplastics are separated according to their types and colour, and their quantification and measurements are performed. Macro litter monitoring studies are performed at pilot scale in selected beaches. Concrete collaboration of USD 1,179,814. It is an existing initiative among neighbour countries to Mediterranean Sea, Aegean Sea, and Black Sea.

3. IOI-China Regional Center Training Course on Ocean Governance 2022 (China)

The training programme has been organized by the International Ocean Institute (IOI) in partnership with China to advance frontier research in ocean governance. This year's edition will be held in a hybrid format in Tianjin, China in September, covering legal, policy and technical training and thematic discussions. About 30 participants from Indonesia, Malaysia, Thailand, Singapore, etc. will attend the course.

4. 2nd Summer School on Ocean Macroturbulence and Its Role in Earth's Climate (China)

The summer school programme is hosted by China and World Climate Research Project (WCRP) every two years to provide training and facilitate exchanges among early career scientists with research interests in ocean and climate. This year's programme has been held in Qingdao, China in August in hybrid format, focusing on ocean macroturbulence and its role in earth's climate, which attracted approximately 40 participants all over the world.

5. The Global Reef R&D Accelerator Platform (Saudi Arabia)

The platform aims to strengthen the implementation of existing frameworks to reverse coral reef destruction within G20 member states. It is an innovative action-oriented initiative aimed at creating a global research and development programme to advance research, innovation and capacity building in all facets of coral reef conservation, restoration and adaptation. It will strengthen ongoing efforts and commitments made to enhance coral reefs conservation and stop their further degradation.

K. Others

1. Abu Dhabi Declaration Implementation (UAE)

A three-year Program that will strengthen the anti-corruption role of supreme audit institutions (SAIs) and enhance cooperation between them and anti-corruption (AC) bodies. Under the Program, UNODC will develop a practical guide on enhancing cooperation between SAIs and AC bodies, it will develop and deliver training programs for both authorities on a global scale. Concrete collaboration of USD 5.4 million (from 2021 to 2023), funded by the UAE.

2. Initiatives for Ukrainian refugees (Italy, Canada)

At the moment Italy allocated over 41 million euros of humanitarian aid, and has allocated additional EUR 23 million to support assistance to Ukrainian refugees in Ukraine and Moldova from UNHCR, OIM and UNICEF. Moreover, Italy has allocated 800 million euros to host Ukrainian refugees arriving in Italy (171.000 have arrived in Italy). Canada has committed USD 320 million in humanitarian assistance in 2022 to respond to the humanitarian crisis in Ukraine and neighboring countries, including over CAD 50 million to support the needs of Ukrainian refugees and host communities in countries neighboring Ukraine through experienced humanitarian partners, such as UNHCR, IFRC, WHO, and Canadian NGOs. In April 2022, Prime Minister Trudeau co-convened a "Stand Up for Ukraine" pledging event with European Commission President von der Leyen, which culminated a global social media rally raising over CAD 12.4 billion in pledges from around the world to support Ukrainian refugees and address the humanitarian crisis.

3. Exploring the establishment of a G20 network of Cultural Business Management Training Institutions (Italy)

The establishment of a G20 network of Cultural Business Management Training Institutions aims to strengthen the managerial capacities of cultural professionals, and to foster culture-driven economic and social development. At the first G20 Culture in Rome, the Ministers of Culture, in art. 24 of the Rome Declaration of July 30, 2021, agreed to explore its establishment. The "Fondazione Scuola dei beni e delle attività culturali", in cooperation with the Italian Ministry of Culture, is ensuring the follow-up of the initiative. It is currently in Phase 3 (Working Tables) where the project team is inviting the participant institutions to join thematic working groups, around three thematic areas: culture and sustainable local

development, community engagement for sustainable cultural heritage, and creative industries and entrepreneurship in the cultural sector. The G20 Network was presented at the G20 Culture in Indonesia, September 2022.

4. Falcone and Borsellino Programme (Italy)

It is an initiative of legal diplomacy and technical assistance in the field of justice and security, in favour of 33 Latin American and Caribbean countries, for combating corruption and transnational organized crime. It follows the methodology supported by the G20 ACWG 2017-2018 implementation plan.

5. Moldova Support Platform/MSP (Germany, EU, Canada, France)

First Moldova Support Conference was organized by Germany (France and Romania co-hosting) in Berlin on 5 April 2022. Second Moldova Support Conference scheduled to take place in July 2022 in Bucharest, organized by Romania (Germany and France co-hosting). In order to sustain Moldova's reform efforts in the long run, five thematic groups within the MSP were established, bringing together countries, IFIs and other stakeholders (such as UN specialized bodies, OSCE etc.) in order to give adequate support and answers based upon Moldova's needs. A Moldovan interlocutor available for each group. First meetings of the Groups at the Support Conference on 5 April 2022 in Berlin. Canada and Germany have co-chaired the group on refugees. The second Moldova Support Conference took place on 15 July 2022 in Bucharest. The third conference will be held on 21 November 2022.

6. Initiative of International Cooperation on Resilient and Stable Industrial and Supply Chains (China)

On 19 September 2022, China, Indonesia, and other countries jointly published the Initiative of International Cooperation on Resilient and Stable Industrial and Supply Chains, supported by Argentina, in Hangzhou, China. The initiative shows the commitment of participating countries to combining efforts with other countries to keep the global industrial and supply chains resilient and stable, which is crucial in ensuring the smooth recovery of the world economy. The initiative calls on all countries to join an equitable, inclusive, and constructive partnership for industrial and supply chains to make joint contributions.

7. Silk Road E-commerce Cooperation (China)

China has established Silk Road e-commerce cooperation with 23 countries, including G20 members such as Brazil and Argentina, for cooperation on policy exchanges, industry promotion, subnational cooperation, and capacity building in various fields, with a view to explore a new driver for trade and investment.

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