



**Environment and Climate
Sustainability Working Group
Issue Note**



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Introduction

1. The challenges and crises that have beset the world in recent years and difficulties in implementing the 2030 Agenda and its Sustainable Development Goals (SDGs) show no sign of abating. While the COVID-19 pandemic worsened the pre-existing crises of growing inequality and persistent hunger, the combined effects of climate change, biodiversity loss and extreme weather events are causing significant damage in several countries. While the gap between commitments undertaken in environmental regimes and their implementation must be addressed with urgency, bold action is also needed on these and other mounting challenges, such as the growing problem of waste generation and ocean pollution and acidification. A course correction is urgent, adamant, and depends on a renewed commitment to international cooperation.

2. It is thus vital to create initiatives that generate trust among countries, restore the primacy of multilateral processes, and the legitimacy of negotiated decisions. The G20 is the proper forum for this task, as it gathers the main world economies, represents two-thirds of the world's population and the equivalent of 80% of the world's GDP and carbon emissions. Each country, with its different backgrounds, can bring its unique point of view and experience to tackle these main challenges. These challenges must be analyzed through the lens of cooperation and a sense of urgency and fairness. The need to increase the means of implementation available for developing countries and to identify solutions that can effectively assist them in their path to sustainable development is a paramount and inevitable topic. The lack of adequate means of implementation would make the commitment to a just transition unfeasible in most countries.

3. Without duplicating other processes or negotiations, the G20 stands as a preferred forum for discussing well-established agreements aimed at resolving global and national issues, as well as for fostering discussions on topics yet to be solidified in formal multilateral negotiation fora. It should focus on practical endeavors where it can make a tangible impact and identify solutions that can be readily replicated in developing nations. Our message must be clear, resolute, and unified.



Priorities and Expected Results

1. Emergency and preventive adaptation to extreme climate events;
2. Payments for ecosystem services;
3. Oceans;
4. Waste and Circular Economy.

Priority 1: Emergency and preventive adaptation to extreme climate events

4. The increase in frequency and intensity of extreme weather events is one of the most evident impacts of climate change. Extreme temperatures, heavy precipitation, floods, droughts, extreme storms, as well as compound events¹, threaten the lives and livelihoods of our societies, reverse development gains, and produce negative, sometimes irreversible, ecological responses. Early action is essential for reducing projected losses and damages and shifting development pathways toward sustainability².

5. Both multilaterally agreed instruments and G20 declarations have acknowledged the need for policies and actions that address the adverse impacts of weather extremes. The Paris Agreement adopted under the UNFCCC highlights the importance of ensuring adequate adaptation responses as well as averting, minimizing, and addressing loss and damage associated with the adverse effects of climate change, including extreme weather events. Past G20s have encouraged resilience building to extreme weather events, including through incorporating measures to respond to climate-related impacts into national policies and plans. G20 countries are also supportive of the United Nations Secretary-General's call for 'early warnings for all' by 2027, understanding the potential of the initiative to climate resilience.

6. The Brazilian presidency believes an emphasis on emergency and preventive adaptation can provide impetus to global efforts towards risk reduction and resilience

¹<https://oceanexplorer.noaa.gov/facts/climate.html#:~:text=Ocean%20currents%20act%20much%20like,solar%20radiation%20reaching%20Earth's%20surface.>

² <https://www.ncei.noaa.gov/news/global-ocean-absorbing-more-carbon>

building through the development of guidelines for assessing vulnerabilities and preventing and responding to the impacts of extreme climate-related events, both inland and at coastal areas. The sequence of recent extreme climate events, from forest fires in Canada to floods in different areas of Brazil, demands further commitment and action in facing this task.

7. To fulfill this objective, we propose two lines of action. The first focuses on **emergency preparedness**. By fostering training, integration, and bolstering early warning systems, effective responses to extreme weather events can mitigate the social, environmental, and economic repercussions of current and future occurrences. The second line of action adopts a **structural approach, aiming to develop guidelines for integrating climate disaster risk reduction and sustainable adaptation measures**. This includes the formulation of plans and concrete adaptation actions, drawing inspiration from the efforts of countries that have faced extreme natural events such as earthquakes and hurricanes.

8. Building on the transformative promise of the 2030 Agenda for Sustainable Development and its Sustainable Development Goals (SDGs) to leave no one behind, vulnerable groups must be at the center of policies and institutional arrangements. As such, not only should their needs be included in climate risk assessments and adaptation initiatives, but their knowledge and experiences should also be integrated into adaptation planning and implementation.

9. Countries should therefore build upon a spirit of cooperation, linking social and economic needs and climate action to deliver vulnerability reduction, improved resilience, and, ultimately, a sustainable approach to climate-related emergencies to which we are all subjected.

Expected outcomes

- Development of G20 Principles for assessing climate risks and vulnerabilities at the country level;

- Establishment of a G20 Knowledge Exchange Arrangement on adaptation planning, implementation, monitoring, and evaluation;
- Development of a G20 framework for national and international investments in adaptation.

Priority 2: Payments for ecosystem services

10. Ecosystems worldwide provide a wide range of valuable and fundamental services for the balance of the planet and the maintenance of natural life. These include regulation of air, water and climate, soil health, pollination, and reduction of disease risk and biodiversity loss, as well as protection from natural hazards and disasters. They are also the home of indigenous peoples and local communities, providing economic livelihoods and non-measurable services of cultural, educational, recreational and spiritual nature, in which forests play a crucial role.

11. While ecosystems are vital for sustaining life, the fulfillment of multilaterally agreed goals and objectives for their protection is still a matter of concern. Despite some progress, none of the Aichi Biodiversity Targets agreed upon in the context of the Convention on Biological Diversity for the period 2011-2020 was fully achieved, according to the fifth edition of the Global Biodiversity Outlook and the Global Assessment Report on Biodiversity and Ecosystem Services of the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services. A recently published midpoint review of the Sustainable Development Goals has found only moderate progress on SDG 15 (“Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss”) and relates the fulfillment of this particular goal with a “better recognition of the tremendous value of nature”.

12. There is still a clear gap in the mobilization of resources and cooperation for the conservation and sustainable use of ecosystems. Promoting a deeper understanding of the benefits and values provided by nature could significantly contribute to the efforts by



countries to secure funding for conservation activities. In this context, Payments for Ecosystem Services (PES) mechanisms, which are based on the recognition of the benefits provided by nature, are increasingly being recognized as an excellent tool for leveraging resources for conservation.

13. PES mechanisms can serve multiple positive purposes. They may complement government and civil society measures aimed at environmental conservation, acting as positive incentives and prevention measures that support governmental command and control actions to combat environmental degradation. PES schemes may also help to guarantee livelihoods, in particular, to the most vulnerable communities. According to the IPBES Assessment on the Sustainable Use of Wild Species, an estimated 70 percent of the world's poor depend directly on wild species and on businesses fostered by them, and about 50,000 wild species are used for food, energy, medicine, materials and other purposes, through fishing, gathering, logging, and terrestrial animal harvesting globally, thus stressing how ecosystem conservation is instrumental in fighting poverty. In this sense, work on PES schemes in the context of the Environment and Climate Sustainability Working Group is aligned with the general priorities established for Brazil's presidency of the G20, in particular, social inclusion, and the combat to hunger and poverty.

14. Discussions at the G20 can serve as a catalyst for action at this critical moment, leading to the adoption of schemes in developing countries to leverage new and additional resources to scale up biodiversity conservation, restoration, sustainable use and management. The Kunming-Montreal Global Biodiversity Framework (GBF), adopted at the COP-15 of the Convention on Biological Diversity (CBD), has set out the ambitious target to mobilize USD 200 billion for biodiversity per year by 2030, which highlights the urgent need to develop innovative financial mechanisms. The GBF called for “stimulating innovative schemes such as payment for ecosystem services” in its Target 19 and the 2023 G20 Environment and Climate Ministerial Meeting outcome document reaffirmed the need for enhancing resource mobilization for the implementation of the GBF, including through payments for ecosystem services.

15. G20 discussion may encourage the implementation of PES mechanisms in other areas as well. In any case, even when focused on one particular area, these mechanisms provide multiple and interlinked benefits. For instance, PES mechanisms focused on forest conservation that actually recognizes multiple ecosystem services related to biodiversity, water provision, air quality, erosion control, as well as the socioeconomic benefits that forests provide to various production processes in different contexts, indigenous peoples, and local communities. It should be added that the positive effects of ecosystem services provided by nature might benefit a broader area and a much larger population, for instance, in distant urban areas, as some ecosystems have an impact on the weather or the provision of water resources in other regions.

16. The idea of conceiving and supporting mechanisms for the payment for ecosystem services should thus be a priority in our common agenda.

17. At the Environment and Climate Sustainability Working Group, a series of topics can be discussed with the objective of unlocking the full potential of PES programs. This can include the following questions: which ecosystem services can benefit from PES programs? How can the value of ecosystem services be better defined/measured/quantified/priced? How can we attract sufficient resources? How can the private sector – as well as other actors – have a larger role in PES mechanisms? How can we guarantee stable and predictable financing of these schemes? How should PES programs results be evaluated, bearing in mind the particular circumstances of each country and ecosystem? How can the growing linkages between ecosystems and urban areas be best explored in PES programs?

18. Alongside those topics, discussions could also bring up examples of environmental valuation methodologies, existing payment for environmental services (PES) strategies and models and alternative remuneration mechanisms for ecosystem services.



19. Brazil's presidency hopes to engage the active participation of civil society, business and academia in these discussions. The G20 ECSWG could develop, as a result, a toolkit to support countries in the development of PES schemes and models, with a special focus on the need to strengthen developing countries' project development and project management capacities. Priority should be given to PES schemes based on cost-effective and simplified procedures, as well as all other aspects that facilitate their implementation in developing countries.

20. Therefore, we invite G20 Members to consider these issues and, from a practical viewpoint, to bring ideas and proposals for PES schemes that can be effectively implemented in developing countries. Current cooperation projects implemented by G20 Members with developed and/or developing countries should be prioritized, as well as new projects between G20 Members, as they demonstrate the potential of international cooperation to implement PES schemes. Initiatives to support capacity building in developing countries to present relevant projects for financing, as well as other supportive measures, could also be highlighted by Members.

Expected outcomes

- Development of G20 principles with a view to creating innovative instruments that make it possible to finance nature conservation and ecosystemic services via direct benefits to those who preserve them; Development of a toolkit to support countries in the development of PES schemes and models development;
- Development of methodology to monitoring and evaluation impact.

Priority 3: Oceans

21. The oceans plays a fundamental role in weather and climate regulation, by storing solar radiation and distributing heat and moisture around the globe. Between 1994 and 2007, the oceans absorbed 34 billion metric tons of carbon released from the burning of fossil fuels – a fourfold increase of 2.6 billion metric tons per year when compared to the period starting from the Industrial Revolution in 1800 to 1994.

22. Maintaining healthy oceans is fundamental for tackling climate change, which is being felt more drastically and rapidly than expected. Corroborating the IPCC's prediction that marine heat waves and extreme El Niño and La Niña events will become more frequent, in 2023, the average sea surface temperatures had surpassed the highest levels seen in a key data record, with areas of sea surface temperature anomalies more than 3°C warmer than normal. The unprecedented global heat wave is a decisive event for many ecosystems. For instance, widespread degradation observed through coral bleaching has highlighted the vulnerability of hundreds of millions of people dependent on reef environments for livelihoods, well-being, and food security³.

23. The conservation and sustainable use of the oceans, seas, and coastal and marine ecosystems, through ecosystem-based approaches, can provide key solutions to climate adaptation and respond to loss and damage caused by the adverse effects of climate change, contributing, for instance, in ways to cope with extreme weather events and sea level rise⁴ and contribute as natural carbon sinks. Moreover, healthy oceans lay down the basis for a sustainable and resilient Blue/Ocean-based Economy that provides livelihoods, particularly in coastal areas. Similarly, it is crucial to support the conservation and restoration of mangroves, which help protect corals and reduce the effects of extreme events. The interconnectivity of our oceans reminds us of the need of integrated approaches and improved cooperation and coordination at the national, regional and global levels, in accordance with the United Nations Convention on the Law of the Sea, and the integrated management and sustainable development of the oceans and sea.

24. Coastal and marine habitats are our best natural defense systems in the fight against climate change. Additionally, some coastal ecosystems store up to five times more carbon per hectare than rainforests⁵. Thus, protecting the coastline and its ecosystems

³ Morrison, T. H.; Adger, N.; Barnett, J.; Brown, K.; Possingham, H. and Hughes, T. (2020). Advancing Coral Reef Governance into the Anthropocene. *One Earth* 2, January 24.

⁴ https://www.ipcc.ch/site/assets/uploads/sites/3/2019/12/SROCC_FullReport_FINAL.pdf

⁵ Kauffman J.B., Bernardino A.F., Ferreira T.O., Giovannoni L.R., de O. Gomes L.E., Romero D.J., Jimenez L.C.Z., Ruiz F. (2018) Carbon stocks of mangroves and salt marshes of the Amazon region, Brazil. *Biol. Lett.* 14: 20180208



provides significant co-benefits for the mitigation and a transformative adaptation to the effects of climate change.

25. Previous G20 presidencies made significant contributions to raising awareness about the importance of healthy oceans and deepening our knowledge about how we can contribute to its preservation and sustainable management. The G20 Partnership on Ocean-based Actions for Climate Mitigation and Adaptation (published by the presidency of Indonesia in 2022) and the document Protecting and Conserving the Ocean, promoting a Sustainable and Resilient Blue/Ocean-Based Economy (published by the presidency of India in 2023) provide key references on how to move forward on our common agenda.

26. The G20 presidency of Brazil will propose further reflection on how to promote healthy and sustainable oceans for our planet and its people. G20 can play an essential role in promoting capacity building and the development and transfer of marine technology to restore degraded areas and implement area-based management tools, including coastal and marine protected areas (MPAs), particularly for developing countries. There is also a need to support indigenous peoples, local communities and the ecosystems they depend on, and to strengthen institutional capacities for better management of marine resources.

27. After it enters into force, the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ) will provide a multilateral legal and institutional framework to ensure the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction, for the present and in the long term, in line with Sustainable Development Goal 14 of the United Nations Agenda 2030. G20 can promote the BBNJ Agreement's objectives and contribute to mobilizing resources for its implementation.

28. G20 may also provide space for the exchange of best practices on the development of comprehensive Marine Spatial Planning (MSP) processes in national jurisdictions. The MSP is a process of organizing and managing human activities in the ocean to achieve ecological, economic, cultural, and social objectives. It provides a foundation for ocean governance based on national jurisdictions and capacities and with a widespread participatory process. It involves identifying and mapping the different uses of the ocean and allocating suitable areas for these uses based on scientific, local and traditional knowledge, ecosystem approach, and socio-economic considerations.

29. The development of MSP is necessary to adopt a suitable, resilient, equitable, socially fair, and sustainable Blue/Ocean-Based Economy. It is crucial to engage stakeholders and empower individuals and communities, including indigenous people, with free, prior, and informed consent to participate in the planning and implementation processes and benefit from the economic opportunities provided by the Blue/Ocean-Based Economy.

Expected outcomes:

- Development of a toolkit to support countries in the development of MSP as a tool to best manage marine areas;
- Increase creation and full implementation of marine protected areas (MPAs) and other area-based conservation measures;
- Mapping all ocean-based uses and activities, including underrepresented and under mapped such as local fisheries, community-based tourism or aquaculture, among other, giving voice to all in the planning processes;
- Contribution to the elaboration of countries' NDCs including conservation of ocean and coastal zones as a way to collaborate with the global goal of reducing greenhouse gas emissions;
- Promote ratification and mobilize resources for the implementation of the BBNJ Agreement.

Priority 4: Waste and circular economy

30. Waste is one of the most visible faces of environmental degradation. Polluted air, water, and land have been historically at the root of environmental concerns and regulation, and multilateral environmental agreements (MEAs) on issues such as waste and chemical safety have been progressively adopted. Nonetheless, MEAs such as the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal - hailed as a potentially effective instrument to prevent illegal dump of waste in developing countries, particularly in Africa, when adopted in 1989 – are yet to be fully implemented. The establishment of the Science-Policy Panel to contribute further to the sound management of chemicals and waste and to prevent pollution, mandated by the United Nations Environment Assembly (UNEA)⁶, is still a work in progress.

31. In this context, an in-depth discussion on waste seems highly appropriate. It should build on the work of previous G20 presidencies and the momentum created by recent landmarks such as the adoption by the United Nations General Assembly of the resolution “Promoting zero-waste initiatives to advance the 2030 Agenda for Sustainable Development”⁷ and the adoption by the United Nations Habitat Assembly of a resolution on the World Cleanup Day⁸, as well as several UNEA resolutions.

32. The sound management of waste not only avoids harm to the environment and human health but also contributes to the creation of jobs, both formal and informal, particularly in developing countries. The socioeconomic aspects related to waste management are of crucial importance to workers in this value chain. Issues such as economic empowerment of workers, including waste pickers, health and safety concerns,

⁶ Resolution 5/8 adopted by the United Nations Environment Assembly on 2 March 2022: “Science-policy panel to contribute further to the sound management of chemicals and waste and to prevent pollution”: <<https://wedocs.unep.org/bitstream/handle/20.500.11822/39944/SCIENCE-POLICY%20PANEL%20TO%20CONTRIBUTE%20FURTHER%20TO%20THE%20SOUND%20MANAGEMENT%20OF%20CHEMICALS%20AND%20WASTE%20AND%20TO%20PREVENT%20POLLUTION.%20English.pdf>>

⁷ A/RES/77/161: <<https://www.undocs.org/A/RES/77/161>>.

⁸ HSP/HA.2/Res.3: <<https://unhabitat.org/resolution-23-world-cleanup-day-hspha2res3>>.

as well as the recognition of their contribution to the environment need to be equally highlighted.

33. Waste and pollution can be a cross border challenge, be it by nature – air or water pollution can travel rapidly – or by human action, through transboundary movement of waste. In any of these cases, international cooperation is needed, with a view to both finally protecting developing countries from waste dumping and assisting them to implement sound waste management solutions. In that context, cooperation should aim at promoting solutions that can be adapted to national priorities and circumstances. A broad array of options should be discussed, including extended producer responsibility, reverse logistics, ecodesign, circular economy, and other approaches that contribute to the sound management of waste.

34. By 2050, waste generation is expected to accelerate from 2.01 billion tons (2016) to 3.04 billion tons of municipal solid waste globally in 2050, while the total quantity of waste generated in low-income countries is expected to increase by more than three times by 2050 under a business-as-usual scenario⁹. Furthermore, solid waste disposal remains largely unformalized, with more than half of the world’s solid waste ending up in illegal dumps or uncontrolled landfills, without environmental protection, socioeconomic inclusion of waste pickers, or any value recovery of recyclable materials.

35. Such reality contributes to increasing emissions of greenhouse gases, especially methane from waste landfills and illegal dumps. An estimated 1.6 billion tonnes of CO₂-equivalent were emitted from solid waste management in 2016. Without improvements in the sector, by 2050, emissions from solid waste are expected to reach 2.6 billion tonnes of CO₂-equivalent.

⁹ What a Waste 2.0 A Global Snapshot of Solid Waste Management to 2050, World Bank, 2018. What a Waste 2.0 A Global Snapshot of Solid Waste Management to 2050, World Bank, 2018. What a Waste 2.0 A Global Snapshot of Solid Waste Management to 2050, World Bank, 2018. What a Waste 2.0 A Global Snapshot of Solid Waste Management to 2050, World Bank, 2018.

36. There is an urgent need to develop integrated solutions that enable a new cultural approach to waste management. This cultural shift should be anchored in the principles of reduce, reuse, and recycle, encouraging habits that minimize waste generation and pollution. By embracing innovative sustainable ideas and alternatives, we can enhance recyclability and forge a more sustainable path. The growth of electronic waste from high-technology products presents a significant challenge to developed countries, encouraging the development of environmentally sound management solutions which, in turn, will need to be extended to developing countries, who will increasingly face a similar environmental burden, as the consumption of these products becomes ever more popular.

37. In line with SDG 12, on sustainable consumption and production patterns, the G20 ECSWG should discuss the issue of recyclability, as well as the creation of new business models that promote circular economy. The G20 ECSWG should also engage in the consideration of important socioeconomic aspects, such as just transition across the value chain and, in particular, the securing of stable and adequate income for waste pickers and other workers, and fostering innovative solutions for the payment for the environmental services they provide.

38. The Brazilian G20 presidency does not intend to overlap or duplicate the efforts undertaken under the relevant multilateral environmental agreements, including those still under negotiation, such as the international legally binding instrument on plastic pollution, mandated by UNEA Resolution 5/14. The ECSWG should rather work as a platform for exchanging information and promoting best practices that can be replicated or adapted in developing countries.

39. We therefore invite G20 Members to engage in a discussion on solutions that promote waste reduction and sound management as well as a more circular economy. From a pragmatic viewpoint, Members are invited to bring actual projects and activities being implemented in a wide array of areas related to waste and circular economy. Without duplicating negotiations on the above mentioned legally binding instrument

mandated by UNEA Resolution 5/14 (“End plastic pollution”), innovative solutions addressing the lifecycle of plastics (such as production, design, recyclability, circularity and other aspects) are also welcome as countries are now focused on solutions to effectively tackle plastic pollution.

40. Solutions and projects showcased might be implemented by different stakeholders in countries and should be effectively replicable in developing countries. Current cooperation projects implemented by G20 Members with developed and/or developing countries should be prioritized, as well as new projects between G20 Members as they demonstrate the potential of international cooperation for reduction and sound management of waste. Initiatives to support capacity building in developing countries to present relevant projects for financing as well as other supportive measures could also be highlighted by Members.

41. Academic and scientific cooperation among institutions in different G20 Members could also be encouraged with a view to the establishment or strengthening of lasting partnerships in the field of R&D. The transfer or joint development of technologies and capabilities that allow developing countries to properly address the economic, social, and environmental challenges posed by waste management as well as promoting the shift from a linear to a circular economy based on low carbon and recycled products could be areas of priority in this discussion.

42. Brazil’s presidency hopes to engage the active participation of civil society, business and academia in these discussions. The G20 ECSWG could develop, as a result, an inventory of effective technologies and other solutions, including public policies that might be implemented, in particular, by developing countries. In this context, the working group should focus on solutions based on cost-effective and simplified procedures, as well as all other aspects that facilitate their implementation in developing countries.



Expected outcomes:

- Development of a G20 Inventory on technical and technological solutions for waste reduction and management and circular economy;
- Development of a compendium of good practices and successful experiences of the G20 aimed at the promotion and implementation of policies that create economic instruments and credits to encourage recycling actions, improvements in the rights of workers, including collectors, in the recycling and waste management sector;
- Development of Principles for an Inclusive Circular Economy.