

G7 Climate, Energy and Environment Ministers' Communiqué

April 16, 2023, Sapporo

We, the G7 Ministers of Climate, Energy and the Environment, met on 15th - 16th April 2023 in Sapporo.

We condemn Russia's illegal, unjustifiable, and unprovoked war of aggression against Ukraine, violation of the Charter of the United Nations (UN) and disregard to the impacts that its war is having on people worldwide. We condemn Russia's attempts to use energy and food as tools of geopolitical coercion and reiterate our commitment to supporting those most affected by Russia's weaponization of energy and food. We are deeply concerned about the devastating impacts of Russia's war of aggression against Ukraine including on the environment, provoking an unprecedented global energy crisis characterized by high-energy prices, market volatility and disruptions to energy supply; inflation causing real economic impacts on people's lives; a spike in the world's grain and fertilizer prices which increased food insecurity and malnutrition. We stand ready to support the sustainable and resilient recovery and green reconstruction of Ukraine, including by sharing our experience, knowledge and expertise regarding war-related debris and pollution management, ecosystem and water systems restoration, replanting of forests and shelterbelts, decontamination of mined forests and lands, restoration of the protected wetlands and marine areas impacted by the war. We will continue to help Ukraine repair and restore its critical energy and environmental infrastructure deliberately destroyed by Russia, and emphasize our strong support for the creation of clean and resilient energy infrastructure in Ukraine.

I. Climate, Energy, and Environment Joint Section

- 1. Global challenges we face:** We are facing the unprecedented triple global crisis of climate change, biodiversity loss and pollution that are mutually reinforcing and intrinsically linked, as well as an ongoing global energy crisis of unprecedented scale which has worsened economic and social disruptions, health threats and environmental damage, including those caused or exacerbated by Russia's war of aggression against Ukraine. Consequences of these challenges are already negatively impacting many regions and countries. To address these challenges through multilateral cooperation, we are steadfast in our commitment to the Paris Agreement, keeping a limit of 1.5 °C global temperature rise within reach through scaled up action in this critical decade, and to the full, swift and effective implementation of the historic Kunming-Montreal Global Biodiversity Framework (GBF) adopted at the 15th Conference of the Parties to the Convention on Biological Diversity (CBD-COP15) with its mission to halt and reverse biodiversity loss by 2030, and welcome the landmark international legally binding instrument on the conservation and sustainable use of marine biological diversity of areas beyond national jurisdiction (BBNJ). Recognizing the current global energy crisis and economic disruptions, we reaffirm our commitment to accelerating the clean energy transition to net-zero greenhouse gas (GHG) emissions by 2050 at the latest and recognize the importance of

promoting an efficient diversification of supply sources to enhance energy security and energy affordability. We underscore our commitment to implementing immediate, short- and medium-term action in this critical decade.

2. **Green transformation:** We will globally advance and promote a green transformation, working together to realize transformation of our economies to reach GHG net zero by 2050 at the latest, in order to keep a limit of 1.5 °C temperature rise within reach and enable climate resilient, circular, pollution-free, and nature positive economies, and to halt and reverse biodiversity loss by 2030, in an integrated manner, ensuring inclusive, socially and environmentally sustainable economic growth and development, and energy security.
3. **Leveraging synergies:** We commit to leveraging synergies and preventing trade-offs as we pursue actions to address climate change, biodiversity loss, pollution, land degradation, energy crisis, to accelerate the clean energy transition, resource efficiency and circular economy and to achieve the UN 2030 Agenda and its Sustainable Development Goals (SDGs).
4. **Urgent action at all levels:** We call for urgent and enhanced action at all levels across all sectors to achieve the transformation towards net zero, circular and nature positive economies. We recognize the need to mobilize and implement all available measures and tools including legislations, economic and fiscal policies and market-based and voluntary approaches to realize the full potential of reducing emissions of GHGs, including methane from waste, agricultural and energy sectors, globally towards net zero by 2050, halting and reversing biodiversity loss by 2030, mainstreaming climate-risk and nature-related risk into investment decisions and decision making, reducing pollution, and improving resource efficiency and circularity to achieve sustainable consumption and production. Together with the G20 Presidency and other members and countries, we also promote and encourage sustainable choices to achieve a transformation of consumption and production patterns across all relevant sectors, including in fashion and tourism, and substantially reduce waste generation. Moreover, we will take concrete actions at all levels working with all countries, in particular G20 partners and developing and emerging countries, to address the triple crisis and an ongoing global energy crisis.
5. **Science:** We stress the importance of the best available science and evidence as well as Indigenous knowledge in policy-making. We welcome with the utmost consideration the contributions of the Intergovernmental Panel on Climate Change (IPCC) and its Sixth Assessment Report (AR6), the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES), the UN Environment Programme (UNEP) and its Global Environment Outlook, the International Resource Panel and other relevant international science and policy panels and their reports and call for continued collaboration and interaction among these scientific communities. We acknowledge the vital role of science in identifying solutions that allow us to understand the changes taking place in our climate and environment and to urgently reverse negative trends.
6. **Innovation:** We emphasize the importance of research, development and demonstration (RD&D) of technologies designed and integrated to address the triple crisis, the energy crisis and other related issues and to achieve sustainable development, and the need to

deploy both existing and emerging solutions. While noting innovations alone will not be sufficient to achieve our climate and environment goals, we also recognize that further ambitious climate, clean energy, and other environmental actions can be implemented not only through technological innovations in energy and industrial sectors, but also by promoting innovation in all areas including government, business and consumer choices.

- 7. Sustainable value chains:** We stress our commitment to transforming global value chains towards net-zero, climate-resilient, pollution-free, more circular and nature positive ones, while also ensuring their security, and respect for human rights and in line with the relevant international guidelines in the field of responsible business conduct, such as the Organisation for Economic Co-operation and Development (OECD) Guidelines for Multinational Enterprises and the UN Guiding Principles of Business and Human Rights. It is therefore vital to increase security, sustainability, diversification, transparency and traceability of value chains globally, including by reducing reliance on insecure or monopolistic energy supply chains in a way that protects the environment and climate and respects human rights. We urge businesses to contribute to the achievement of the 2030 Agenda and its SDGs throughout their value chains, including by analyzing risks, implementing the GBF, disclosing information and implementing targets and plans related to environmental aspects such as climate change mitigation and adaptation, resource efficiency and circular economy approaches, nature conservation and halting and reversing biodiversity loss and forest loss by 2030, and pollution reduction and prevention. To this end, we commit to strengthening our efforts to implement and promote a mix of effective binding and non-binding policy measures that incentivize sustainability and resilience in value chains including, as appropriate, through effective domestic due diligence regulation, the enhancement of transparency and reporting throughout supply chains and strengthening green public procurement, while considering the need to avoid disproportionate burdens and costs for small and medium-sized enterprises (SMEs). We commit to supporting businesses, particularly SMEs, through sharing best practices and encouraging engagement with stakeholders in the value chains, among other things. We also commit to supporting capacity building in developing countries including building governance measurement and disclosure systems for GHGs and other environmental impacts with an aim to increasing resilience to climate change and environmental degradation.
- 8. Critical minerals and raw materials:** We stress the vital importance of strengthening critical minerals and materials supply towards realizing a net-zero economy and ensuring that critical minerals and materials supply chains follow the highest possible environmental, social and governance standards with full respect of human rights. To minimize environmental and social footprints, alleviate pressure on primary supply, and strengthen the supply and the circularity along supply chains, we are fully committed to maintain products containing critical minerals and raw materials in the economy as long as possible. We also commit to increasing domestic and international critical minerals and materials recovery and recycling from electronics, mine tailings, and other recoverable and recyclable materials where national recovery and recycling capacity complies with strong environmental standards and achieves economically efficient and safe recovery and recycling with a view to protecting human health and the environment. We will employ a nature positive approach, that prevents biodiversity loss and supports nature conservation with the aim at delivering net-positive benefits to the natural environment.

In pursuing such objectives, we will facilitate discussions to ensure smooth, environmentally sound and efficient international recovery and recycling while promoting an enabling environment including through strengthening environmental regulatory frameworks in a transparent manner and capacity building especially in developing countries to minimize associated environmental footprints. We support research and development on critical minerals and raw materials to reduce our reliance on them, including increasing efficiencies, and enabling their substitution with more sustainable alternatives.

9. **Nature-based Solutions:** We welcome and support the UN Environment Assembly (UNEA) 5/5 resolution on Nature based solutions (NbS) for sustainable development, which established a multilaterally agreed definition of NbS and we commit to a full and constructive engagement in the inter-governmental consultations which have been convened by the executive director of the UNEP on NbS under UNEA. Recognizing that conservation, protection, restoration and sustainable use and management of land and forests, terrestrial, freshwater, coastal and marine ecosystems including blue carbon contribute to halting and reversing biodiversity loss, climate change mitigation and adaptation in terms of preserving and enhancing carbon sinks, reducing disaster risk, and making other important contributions to people, we stress the crucial importance of NbS, including in urban areas, which deliver multiple benefits including for climate, biodiversity and human well-being. We therefore commit to strengthening their deployment and implementation, including through research and capacity building, and to sharing effective measures, such as guidelines for the concrete implementation of NbS, and will search for effective synergies with relevant issues including disaster risk reduction and human well-being. In this context, we reiterate our commitment made in the G7 2030 Nature Compact, to increase our finance contributions for NbS through to 2025. We also commit to promoting better measurement and monitoring, management and restoration of the marine and coastal ecosystems which store carbon, enable resilience and provide habitat for marine species.
10. **Forests and land degradation:** We reiterate our commitment to halting and reversing forest loss and land degradation by 2030, recognizing that deforestation, forest degradation and ecosystem conversion are global threats to our climate, biodiversity, food security and livelihoods. Agricultural expansion is the driver of around 90 percent of global deforestation. We are committed to conserving forests and other terrestrial ecosystems and accelerating their restoration, as well as promoting sustainable forest management and wood use including by combating illegal logging to achieve net-zero, resilient, circular and nature positive economies, and will work with relevant international organizations including the Food and Agriculture Organization, the UN Forum on Forests and the International Tropical Timber Organization to promote sustainable forest management and timber use. We will work together, and with high ambition partners, to deliver integrated solutions to support conservation, protection, and restoration of high carbon, high biodiversity ecosystems, with an initial focus on forests including by launching country packages, as appropriate. We are also committed to increasing our support towards sustainable supply chains that decouple agricultural production from deforestation and forest and land degradation, recognizing the importance of demand-side measures. We commit to continuing our efforts to reduce risk of deforestation and forest and land degradation linked to the production of relevant commodities and

enhance cooperation with various stakeholders on this issue. We will, if appropriate, develop further regulatory frameworks or policies, which may include the introduction of due diligence requirements for commodities associated with the risk of deforestation and forest degradation. We restate our commitment to achieving land degradation neutrality and will take action to tackle land degradation, desertification and drought, in line with SDG 15.3 and our common objective under the G20 Global Land Initiative.

- 11. Water:** Welcoming the successful UN Water Conference, we commit to working towards integrated, cross-sectoral, stakeholder-inclusive and fully transparent management and governance of fresh water resources at all levels, including through transboundary cooperation where relevant, which contributes to sustainable and climate resilient use and reuse of water resources, disaster risk reduction, conservation and restoration of water-related ecosystems and their multiple services, pollution prevention, food security and nutrition, water, sanitation and hygiene and access to safe water for all. We emphasize the importance of conserving, protecting and restoring water related ecosystems, including river basins, aquifers and lakes and the necessity to integrate water into adaptation efforts.
- 12. Ocean:** We remain committed to taking actions for the implementation of the G7 Ocean Deal, and will act decisively and work urgently towards clean, healthy and productive ocean and seas with resilient marine and coastal ecosystems which are essential for all life on earth and for our efforts to address climate change, halt and reverse biodiversity loss and combat pollution in line with the SDGs. We reaffirm our commitment to the UN Decade of Ocean Science for Sustainable Development (2021-2030) and welcome the Lisbon Declaration adopted at the UN Ocean Conference held in 2022. Aware of the evident Ocean Climate nexus, we reiterate our commitment to the Ocean and Climate change dialogue under the United Nations Framework Convention on Climate Change (UNFCCC) encouraging a more structured follow up to such dialogues for 2023.
- 13. Food:** With deep concern about Russia's war of aggression against Ukraine which further intensifies pressure on global agriculture and food systems, we commit to continued domestic and international transformation to sustainable, resilient, and productive agricultural and food systems, including through reducing food loss and waste, promoting sustainable agricultural productivity growth, organic farming, and utilizing agroecological and other innovative approaches, to achieve the SDGs and global food security and nutrition, as well as our biodiversity and climate goals.
- 14. Finance:** Noting the significant amount of resources required to address the triple crisis we are facing, we stress the importance of mobilizing financial resources from all sources, private and public, national and international. In this regard, we reaffirm our existing commitments on public finance and highlight the importance of promoting private investments, blended finance and innovative finance, aligning financial flows domestic and international with our objectives to tackle climate change, biodiversity loss and pollution and to advance resource efficiency and circular economy, and addressing barriers faced by marginalized people and underrepresented groups to accessing finance. We stress the key role of International Financial Institutions (IFIs) including Multilateral Development Banks (MDBs) in mobilizing finance and call on them to mainstream climate and environment issues in their policies, investments, operations and governance.

Recognizing that climate change, biodiversity loss and pollution are intrinsically linked, we also highlight the importance of increasing the quality of funding and using existing funds and facilities in an efficient and effective manner. We continue to support the work programme of the International Sustainability Standards Board to develop a global baseline for sustainability reporting standards, and its future work beyond climate, which could include expansion to nature and biodiversity. We welcome the organization of the “Summit for a New Global Financing Pact” by France in Paris in June that will support enhancing resilience to climate change and environmental degradation of vulnerable countries and encourage the green transition of developing and emerging economies.

15. **International assistance and coordination:** With regard to our international cooperation in climate, energy, environment and disaster risk reduction, we will further explore ways to coordinate among G7 members to facilitate the transitions to achieve climate-resilient, nature-positive and sustainable development priorities and prospects of developing countries, guided by the 2030 Agenda for sustainable development, leaving no one behind. We commit to align our development assistance with our international climate and biodiversity objectives.
16. **Government actions:** Recognizing the critical role of government in leading by example and catalyzing economy-wide changes through our actions, we commit to leading efforts globally to work towards aligning government actions with our climate, energy, biodiversity, pollution reduction and other environmental objectives, including by achieving net-zero emissions from government operations by no later than 2050 and greening our public procurement.
17. **Subnational actions:** Acknowledging the vital role of subnational actors in realizing the transformation toward net-zero, climate-resilient, circular, and nature positive economies, furthering socioeconomic opportunities based on local capacity, needs and individual environmental conditions, we resolve to catalyze support for actions by subnational actors, encourage sharing best practices and promote city-to-city cooperation.
18. **Environmental crimes:** We are committed to continuing our efforts to strengthen international and transboundary cooperation to effectively prevent and combat environmental crimes such as wildlife trafficking, including illegal wildlife trade, trafficking in timber and timber products, hazardous and other waste, and precious metals, gemstones and other minerals, illegal mining, illegal logging, and crimes which could be associated with illegal unreported and unregulated (IUU) fishing. We reaffirm to continue to raise awareness about these crimes within multilateral environmental fora and develop global responses against them.
19. **Inclusion:** Acknowledging that the transition toward net-zero, circular and nature positive economies will involve all members of society, including workers and local communities, we affirm our commitment to ensuring the transition is just and inclusive, leaving no one behind. We stress the importance of the roles played by all of society, including businesses and industries, workers and labor unions, youth and children, persons with disabilities, women and girls, Indigenous Peoples, racial and ethnic minorities and marginalized populations, in facilitating the transformation. We note that robust public engagement and participation are also critical for achieving environmental justice and social and

economic sustainability in line with the 2030 Agenda and its SDGs. We are therefore committed to working closely with all segments of society and support their active involvement, consultation, leadership and meaningful participation in decision-making and leadership roles. We recall the UN General Assembly's resolution 76/300 on the human right to a clean, healthy and sustainable environment.

- 20. Indigenous Peoples:** Respecting the rights of Indigenous Peoples as outlined in the UN declaration on the Rights of Indigenous Peoples and their unique knowledge and experiences, we stress the importance of Indigenous Peoples' leadership and engagement in addressing climate change, clean energy transition, biodiversity loss, pollution, nature conservation and other environmental issues.
- 21. Gender equality:** We place gender and LGBTQIA+ equity at the heart of our efforts to tackle the triple crisis and to accelerate clean energy transition. We acknowledge with concern that women and girls are often disproportionately affected by the impacts of the triple crisis, and recognize their critical role as leaders and agents of change. We commit to accumulate further knowledge on these impacts and to address them in partnership with women and girls, and call for the collection and use of more sex-disaggregated data in support of this. We recognize that taking all appropriate measures for the empowerment of women and girls as well as LGBTQIA+ persons contributes to creating an innovative and inclusive workforce, equipped with the knowledge and skills needed for tackling the triple crisis and clean energy transition. We are committed to their full, equal and meaningful participation and leadership at all levels of action, engagement, policy and decision making related to climate, energy and environment issues.
- 22. Just transition:** We emphasize the need to support a national level just transition of workforce and to create decent work and quality jobs for all in our efforts to address the triple crisis. In this regard, we also champion activities to support all groups of society, including underrepresented and vulnerable groups. To this end, we will further promote our continuous efforts to support and prepare workers and communities, including through inclusive social dialogue, skills development and transfer, social protection, education, reskilling and training, at local, regional and national levels, in line with the International Labour Organization (ILO)'s 2015 Guidelines for a Just Transition. Recognizing that just transition is a key element for increased ambition in climate, energy and environmental action at the national level, we will work constructively toward a UNFCCC-COP28 decision on the work programme on just transition which catalyzes climate ambition and action and underscores the importance of supporting workers and impacted communities and maximizing socioeconomic benefits as part of the transition to net-zero GHG economies for all countries.

II. Environment

(1) Biodiversity

- 23. The Kunming-Montreal Global Biodiversity Framework:** We strongly welcome the historic achievement of the adoption of the Kunming-Montreal GBF at CBD-COP15 in December 2022. It provides an ambitious path forward to address the unprecedented and alarming rates of biodiversity loss which jeopardizes sustainable economic development

and human health and well-being. We are committed to the swift and full implementation of the Framework through whole-of-government and whole-of-society approaches, including women, youth and Indigenous Peoples. We commit to mainstreaming biodiversity within and across all sectors. In this regard, for those G7 members Party to the CBD, we commit to revise, update and submit our National Biodiversity Strategies and Action Plans (NBSAPs) aligned with the GBF and its goals and targets, or to communicate national targets reflecting, as applicable, all the goals and targets of the GBF in 2023 or sufficiently in advance of CBD-COP16, towards the swift and effective implementation of the framework. We call on all other Parties to the CBD to also do so and reiterate the importance of domestic resource mobilization to support such efforts. We will support more than 150 developing countries in revising or updating their NBSAPs and establishing national biodiversity finance plans, by providing effective tools such as manuals for incorporating an integrated approach in cooperation with international organizations and other entities, and through our collective commitments to support resource mobilization and strengthen other means of implementation to developing countries. We will work with CBD Parties towards finalizing the mechanisms for planning, monitoring, reporting and review, including the sets of indicators of the monitoring framework.

24. **Nature positive economies:** As nature and biodiversity sustain our economies, livelihoods and well-being and health, we reaffirm the importance of driving the transition to nature positive economies, decided upon in the G7 2030 Nature Compact adopted in 2021, including realizing transformative changes. We call on businesses to progressively reduce negative and increase positive impacts on biodiversity, reduce their biodiversity-related risks and to ensure sustainable patterns of production. As governments, we will take appropriate action in line with Target 15(a) of the GBF. Building on the G7 2030 Nature Compact, and other relevant commitments, we will discuss and identify actions to support and advance a transition to nature positive economies. Hence, we establish the G7 Alliance on Nature Positive Economy, as annexed, as a forum to share knowledge and create information networks, on a voluntary basis, in collaboration with the private sector and civil society, Taskforce on Nature-related Financial Disclosures (TNFD), jurisdictions that already established disclosure requirements and relevant international organizations and relevant partners. The Alliance will focus on mainstreaming of biodiversity in all sectors. We look forward to the publication of the final TNFD Framework in September 2023 and urge market participants, governments and regulators to support its development, which can play a key role in achieving the GBF Target 15. We commit to regular publication of national environmental-economic accounts guided by the UN System of Environmental-Economic Accounting, including its Central Framework and Ecosystem Accounting and other relevant tools, and will promote their use in economic and financial decision-making, alongside relevant data, indicators and monitoring frameworks. We are working to include environmental-economic statistics and natural capital accountings in our core national economic statistics.
25. **30 by 30:** We reaffirm our commitment to achieving the target of effectively conserving and managing at least 30 percent of terrestrial and inland water areas, and at least 30 percent of marine and coastal areas by 2030 (30 by 30) nationally and globally. We will promote the designation of protected areas and other effective area-based conservation measures (OECMs), while considering connectivity between individual ecosystems, in line with national circumstances. We will share best practices of protected areas and OECMs

with other countries to achieve the GBF target of 30 by 30. We support the development of the High Ambition Coalition for Nature and People towards a collaborative and operational platform to support the implementation of the 30 by 30 target. While achieving the quantitative target of at least 30 percent by 2030, we will improve the quality of biodiversity conservation and protection by strengthening management of protected areas and OECMs, including monitoring and assessment of the impact of conservation activities. Moreover, we commit to the global target to place under effective restoration by 2030 at least 30 percent of areas of degraded terrestrial, inland water, and coastal and marine ecosystems, in order to enhance biodiversity and ecosystem functions and services, ecological integrity and connectivity. We are committed to substantially increasing the area of natural ecosystems globally by 2050.

26. **Invasive alien species:** Invasive alien species (IAS) are identified as one of the five direct drivers of global biodiversity loss in the IPBES Global Assessment Report, and their negative impact has been intensifying globally. In order to accelerate the implementation of the Target 6 of the GBF, we will act upon the key findings and useful scientific information to be provided by the IPBES invasive alien species assessment report to be finalized at IPBES-10. Recognizing the need for enhanced international cooperation to cope with increasing intentional and unintentional transport of IAS across borders, we will hold the G7 workshop on IAS to discuss necessary measures, including information sharing at national and subnational levels, technology development, and private sector engagement, and develop a set of recommendations.
27. **Data, information and knowledge:** Recognizing the importance of the best available data, information, evidence and knowledge including traditional knowledge of local communities and Indigenous Peoples with free, prior and informed consent, to promote nature conservation, and sustainable use of biodiversity, we will utilize and share such data, information, evidence and knowledge for implementing the GBF and other environmental agreements more effectively.
28. **Resource mobilization:** We reiterate our commitment to substantially increase our national and international funding for nature by 2025. To implement the GBF, especially to achieve our collective ambition to halt and reverse biodiversity loss by 2030, we commit to substantially and progressively increasing the level of financial resources from all sources, in an effective, timely and easily accessible manner, including domestic, international, public and private resources, leveraging private finance, stimulating innovative schemes, optimizing co-benefits and synergies with climate financing, enhancing the role of collective actions by all stakeholders, and enhancing the effectiveness, efficiency and transparency of resource provision and use, and call on others to do the same. In particular, we invite non-Developmental Assistance Committee (DAC) members and countries taking part in South-South cooperation to contribute to international biodiversity financing efforts and report this to the OECD DAC, noting and welcoming the contributions of countries that already do so. We ensure our international development assistance does no harm to nature by 2025, and delivers positive outcomes overall for people, climate and nature and aligns with the GBF. We also commit to aligning all relevant fiscal and financial flows with the GBF and call on all countries and financial institutions, in particular MDBs and, where appropriate, IFIs, to do the same. We are all concerned about incentives, including subsidies, harmful to biodiversity, and call upon all

relevant organizations to collaborate with us, including by assisting in identifying such incentives. Those G7 members Party to the CBD commit to identifying such incentives by 2025. They also commit to eliminating, phasing out or reforming those incentives and scaling up positive incentives for the conservation and sustainable use of biodiversity at the latest by 2030, taking initial steps without delay, and call on all countries and financial institutions, in particular MDBs, to do the same. We will dedicate a significant amount of our climate finance to maximize co-benefits and synergies in addressing climate change and the biodiversity crisis, as appropriate, recognizing that Nature-based Solutions can deliver mitigation, while offering significant benefits for adaptation, and encourage others to do the same. We also commit to supporting the implementation of the CBD-COP15 Decisions related to resource mobilization, including the establishment of the Kunming-Montreal Global Biodiversity Framework Fund (GBF Fund) within the Global Environment Facility (GEF). We call upon the GEF to further reform its operations to ensure adequacy, predictability, and the timely flow of funds including by establishing easy and effective access modalities. We will work together for the successful launch of the GBF fund at the GEF Assembly in Vancouver in August 2023, noting the importance of financial contributions from all sources to capitalize the new fund. We call on MDBs and, where appropriate, IFIs and philanthropy to identify and report investments in their portfolio that contribute to achieving the objectives of the Convention and the goals and targets of the GBF, to align their portfolios and financial flows with the objectives of the Convention, and support the delivery of the goals and targets of GBF by 2030, to increase biodiversity funding, through leveraging financial resources from all sources and deploying a full suite of instruments, including new and innovative approaches, and to simplify access to financial resources for biodiversity, as soon as possible and in line with the MDB joint statement on nature, people and planet.

29. **One Health approach:** We commit to strengthening and fostering the cooperation between relevant ministries in implementing the One Health approach, to sustainably balance and optimize the health of people, animals and ecosystems, and reduce health threats resulting especially from climate change, biodiversity loss and its drivers such as land use change, in particular, but not limited to, zoonotic diseases spillover, including through relevant organizations' related decisions and initiatives, and addressing the collective need for clean water, energy and air, safe and nutritious food, taking action on climate change, and contributing to sustainable development. We also continue to encourage the work of the One Health High Level Expert Panel as well as of the Quadripartite, in particular in the implementation of their One Health Joint Plan of Action. We will continue to address antimicrobial resistance, in line with the One Health approach, with our relevant ministerial colleagues, with responsibility for health, food and farming and medicines regulators, where independent of governments, as appropriate, to develop and agree on international standards and strive to fill knowledge gaps ahead of the UN High-Level Meeting on Antimicrobial Resistance (AMR) in 2024.
30. **Ocean:** We recognize the global outstanding importance of protection, conservation, restoration, and sustainable use of the marine ecosystems, the oceans and seas. We welcome the conclusion of the negotiations on an international legally binding instrument under the UN Convention on the Law of the Sea (UNCLOS) on the conservation and sustainable use of BBNJ. We highlight the importance of this international legally binding instrument for strengthening governance of the areas beyond national jurisdiction. We

call for its early entry into force and implementation for the conservation and sustainable use of marine biological diversity of the areas beyond national jurisdiction. We will implement area-based management tools (ABMTs) including Marine Protected Areas (MPAs) to effectively conserve, manage and sustainably use marine biological diversity, strengthen cooperation and coordination in the use of the tools, and protect, conserve, restore and maintain marine biological diversity and ecosystems, which will contribute to effectively conserving, managing or protecting at least 30 percent of the coastal and marine areas by 2030 with well-connected and equitably managed networks of ecologically representative MPAs and OECMs. We commit to conserving and protecting global marine biological diversity and sustainably using its resources based on the best available scientific evidence. In this context, we reconfirm our commitment under Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR) to adopt, as a matter of urgency, proposals to designate MPAs in Eastern Antarctica, the Weddell Sea and the Western Antarctic Peninsula, based on the best available scientific evidence. We will continue to actively engage in the development of a regulatory framework on deep seabed mineral exploitation under International Seabed Authority (ISA) that ensures effective protection for the marine environment from harmful effects which may arise from such activities, as required under the UNCLOS. We reaffirm taking a precautionary approach to potential mining of marine minerals in the Area. A robust knowledge basis on the deep sea marine environment and on the risks and potential impacts of deep sea mining operations, that is able to demonstrate the environment is not seriously harmed, is critical for considering our consent in the ISA council, and is a precondition for any future mining permits. We reconfirm our commitment to ending IUU fishing including through promoting the swift acceptance of the World Trade Organization (WTO) Agreement on Fisheries Subsidies by G7 members and call on all WTO members to strive for its early entry into force and to engage constructively in the negotiations on outstanding issues. We also call for the global ratification and effective implementation of the Food and Agriculture Organization (FAO) Agreement on Port State Measures (PSMA). We also encourage non-Parties to the PSMA to join it. We emphasize the importance of effective monitoring of transshipment activities, taking into account consistent with the recently adopted FAO Voluntary Guidelines for Transshipment. We also commit to promoting the sustainable management of fisheries resources and ensure that fishing is compatible with the conservation targets of marine biodiversity (including both habitats and species).

(2) Circular Economy/Resource Efficiency

- 31. Addressing the triple crisis through enhanced circularity and resource efficiency:** Highlighting the importance of decoupling economic growth from environmental degradation and primary resource use, we emphasize that enhancing resource efficiency and circularity along value chains, guided by scientific data and findings, reduces primary resource use and supports our efforts to address the triple crisis. We will strive for our economies to become more circular and resource efficient through enhancing a wide range of policy measures and cooperation with the private sector for increasing circularity along value chains through various approaches, which can include, inter alia, enhancing the design of products taking into account full lifecycle approaches, lifecycle assessments and extended producer responsibility schemes as appropriate. We will work together to make use of the potential of resource efficiency and circular economy for meeting our ambitious climate and environment goals.

- 32. Collaboration under the G7 Alliance on Resource Efficiency:** We commend the G7 Alliance on Resource Efficiency for its work including holding relevant meetings and workshops. We request the Alliance to build on the Berlin Roadmap and strengthen collaboration and action among G7 members on specific activities listed in the Roadmap including on climate, biodiversity, and pollution benefits through increased resource efficiency and circularity in the identified high-impact value chains. While reaffirming our commitment to reducing primary resource use and minimizing waste, we will increase our efforts towards net-zero emissions by 2050 from the waste sector, including food loss and waste, and look forward to relevant workshops by the Alliance.
- 33. Circular Economy and Resource Efficiency Principles:** Businesses can play a significant role through their value chains to advance resource efficiency and circular economy approaches. Recognizing their critical role, we adopt the Circular Economy and Resource Efficiency Principles (CEREP) as annexed, to encourage companies to establish initiatives and strengthen actions on circular economy, to promote engagement with the public and the financial sector, and to promote their voluntary circular economy and resource efficiency actions aiming to enhance resilience and competitiveness, and support sustainable and inclusive economic growth and job creation. We look forward to engagement and collaboration with the B7 and other private sector stakeholders for the utilization of the principles and fostering public-private partnerships.
- 34. Promoting transparency on circularity along entire value chains:** Increasing our efforts to enhance resource efficiency and circularity to minimize negative environmental impacts, which contributes to enhancing the resilience and autonomy of our economies, and recognizing the urgent need to reduce primary resource use, we stress the importance of measuring circularity and environmental impacts, and sharing and utilizing data along entire value chains to enable further collaboration between manufactures and recyclers, among other actors, for enhancing the 3Rs (reduce, reuse, and recycle) and other value retention processes. Recognizing that better coordination among G7 members would increase the effectiveness of such a system, we will collaborate through the G7 Alliance on Resource Efficiency to facilitate discussions and coordination on measuring circularity and sharing and utilizing the information on circularity along entire value chains as well as on comparable metrics.
- 35. International cooperation:** We will enhance international cooperation in bilateral and multilateral fora including the G20 Resource Efficiency Dialogue, facilitating collaboration to increase resource efficiency and circularity in our economies and beyond the G7 in order to address climate change, biodiversity loss and pollution. We recognize the need to support low and middle-income countries to increase resource efficiency and circularity in their economies while also addressing the urgent need of environmentally-sound materials, chemicals and waste management through financial and technical cooperation as well as through private investments. Recognizing the key role played by MDBs and other financial institutions in mobilizing finance for enhancing resource efficiency and circularity as tools to meet our environmental goals as well as mainstreaming this agenda, we call upon them to integrate resource efficiency and circular economy approaches with their portfolios to ensure coherent action and enhance synergies.

(3) Pollution

- 36. Resolve to tackle pollution:** As one part of the triple crisis, addressing pollution is a crucial element for realizing sustainable development. We commit to working towards a pollution-free planet for the health and well-being of our people and the environment. We therefore commit to reducing pollution risks and the negative impact of pollution from all sources to levels that are not harmful to nature and people. In particular, the G7 members who are Party to the CBD are committed to implementing the Target 7 of the GBF by 2030.

i. Plastic pollution

- 37. G7 target on plastic pollution:** We are committed to end plastic pollution, with the ambition to reduce additional plastic pollution to zero by 2040. With this in mind, we are determined to continue and step up our actions based on a comprehensive lifecycle approach, promoting sustainable consumption and production of plastics, increasing their circularity in the economy and environmentally sound management of waste. These actions include, as appropriate: addressing single-use plastics, non-recyclable plastics as well as plastics with harmful additives through measures such as phasing out when possible and reducing their production and consumption; applying tools to internalize attributable costs of plastic pollution; and addressing the sources, pathways and impacts of microplastics. In so doing, we will continue to robustly engage with and involve partners and stakeholders. These actions would build on, as appropriate, the G7 Ocean Deal, the Osaka Blue Ocean Vision, the G20 Implementation Framework for Actions on Marine Plastic Litter, the Ocean Plastics Charter, the G20 Action Plan on Marine Litter and the G7 Action Plan to Combat Marine Litter, and we encourage and support other countries to do the same. Acknowledging that key contributors include inadequate prevention and management of land-based sources as well as sea-based sources such as abandoned, lost and otherwise discarded fishing gear (ALDFG), we will continue to support International Maritime Organization (IMO) negotiations on fishing gear marking and reporting of ALDFG. We will strengthen scientific and technical knowledge on plastic pollution including through reporting and monitoring, and will promote existing and innovative technologies and approaches along the plastic value chain that contribute to ending plastic pollution. Reaffirming the importance of cooperation, coordination, and complementarity, among relevant regional and international conventions and instruments, we underline ongoing efforts to prevent and reduce plastic pollution in the sea under the Regional Seas Conventions and Action Plans. We will work closely with major economies and stakeholders by sharing best practices and lessons learned through various existing forums and initiatives.
- 38. End plastic pollution: towards an international legally binding instrument:** We welcome the launch of negotiations in the intergovernmental negotiating committee (INC), whose first session was held in November 2022, to develop an international legally binding instrument on plastic pollution, including in the marine environment. We underline the need for inclusive and effective participation by governments, partners and stakeholders including as appropriate, regional organizations, local governments, businesses, academia and scientists, NGOs, citizens, local communities and Indigenous Peoples, recognizing that such participation can be facilitative for the effective development of the instrument. We

are committed to engaging in constructive and inclusive dialogue and collaboration throughout the process, and notably at the upcoming second session which will be held in Paris in May 2023. In this regard, we are also committed to playing an active and constructive role to make substantial progress in the negotiations and bring us closer to specifying the key provisions of an ambitious international legally binding instrument on plastic pollution, including both binding and voluntary approaches, based on a comprehensive approach that addresses the full lifecycle of plastics. In order to support the achievement of the objectives of the instrument we expect the INC to consider, inter alia, a combination of obligations, measures and voluntary approaches, enhancing transparency along the value chain, as well as monitoring and reporting and periodical assessments, having in mind the negative impacts of plastic pollution to the environment and our economy and its related risks to human health as well as the important role played by plastics in society. We look forward to the completion of the final text of the international legally binding instrument by the end of 2024. We will work toward enhancing our international cooperation to end plastic pollution worldwide, recognizing the need to mobilize financial support from a wide variety of sources, both public and private, domestically and internationally.

ii. Air Pollution

- 39. Addressing air pollution through broader international cooperation:** We acknowledge that air pollution is the leading environmental risk factor for human health and contributes to negative impacts on ecosystems, and that addressing air pollution results in multiple benefits to the economy, ecosystems, climate, and human health. Recognizing that air pollution does not stop at national borders and can impact regions in different ways, we are committed to enhancing broader cooperation, including regional cooperation on air quality around the world.
- 40. Actions to facilitate inter- and intra-regional cooperation:** We remain committed to facilitating air quality monitoring, sharing data and information, and capacity-building related to the implementation of abatement strategies to reduce emissions of pollutants that affect health and the environment such as ground-level ozone, particulate matter and pollutants contributing to acidification and eutrophication of ecosystems. We welcome the activities based on international frameworks, such as the Task force for International Cooperation on Air Pollution (TFICAP), the Acid Deposition Monitoring Network in East Asia (EANET), the UN ESCAP Regional Action Program on Air Pollution and the UNECE Convention on Long-range Transboundary Air Pollution.

iii. Chemicals

- 41. Sound management of chemicals and waste:** We recognize the need to achieve the sound management of chemicals and waste in addressing the global pollution crisis, with a view to substantially reducing the potential for adverse impacts on human health and the environment from their mismanagement, including impacts on biodiversity. In this context, we look forward to adopting an ambitious instrument to address the sound management of chemicals and waste beyond 2020 at the Fifth International Conference on Chemicals Management to be held in Bonn in September 2023. We remain committed to the establishment of a Science-Policy Panel in close cooperation with relevant

multilateral agreements and international organizations to contribute further to the sound management of chemicals and waste and to prevent pollution, following the development of proposals by the ad-hoc Open-Ended Working Group convened under UNEA resolution 5/8. We commit to further actively preventing chemical pollution, or where not feasible, minimizing its associated risks, including when caused by releases of endocrine disrupting chemicals or by substances whose persistence in the environment is particularly of concern, such as per and polyfluoroalkyl substances (PFAS) of significant concern. We are greatly concerned about lead pollution. We will continue to take action domestically and work with other countries to reduce lead in the environment.

- 42. Implementation of Basel, Rotterdam, Stockholm and Minamata Conventions:** G7 members that are Parties to the respective Conventions underscore our continued commitment to implementing and taking measures under the Basel, Rotterdam, Stockholm and Minamata Conventions, respectively, at international and national levels. Furthermore, we welcome the launch of the process for the first effectiveness evaluation of the Minamata Convention on Mercury and commit to contributing to the process by providing scientific data and information to support the evaluation.
- 43. Addressing chemical pollution in developing countries, including lead pollution and exposure:** We reaffirm our commitment to contributing to addressing pollution in developing countries by supporting capacity building for sound management of chemicals and waste through multilateral financial mechanisms, and regional and bilateral technical assistance. Such support may include actions to minimize lead pollution and exposure, including human exposure, regionally and globally and to strengthen international cooperation on key sources, while taking into account the relevant elements of the report of the G7 Workshop on Lead in November 2022. To that end, reiterating our commitment last year, we welcome the second experts meeting co-hosted by Germany, the USA and the EU to further elaborate concrete actions to reduce lead pollution and exposure and will continue to identify ways to strengthen international cooperation on lead with existing international initiatives and instruments.

III. Climate and Energy

Current Climate and Energy Crises and Accelerating implementation

- 44. Climate crisis:** We emphasize our strong concern, amplified by the latest finding of the IPCC AR6, at the accelerating and intensifying impacts of climate change. Rapid and far-reaching transitions across all sectors and systems are necessary to achieve immediate, deep, rapid, and sustained reductions in global GHG emissions, and secure a livable and sustainable future for all. Adaptation options that are feasible and effective today will become constrained and less effective with increasing global warming. Informed by science, we -the G7- commit to continue our leadership role, working with all committed partners to take immediate and concrete actions to drive down emissions to keep a limit of 1.5°C temperature rise within reach and build resilience to climate impacts globally. We call on actors at all levels to collectively work to transform our economies throughout all sectors in this critical decade, to close the still substantial gap between the current global emissions trajectories as well as the current Nationally Determined Contributions (NDCs) and the level of ambition and implementation needed to keep a limit of 1.5°C temperature

rise within reach, to peak global GHG emissions as soon as possible by 2025 at the latest, and to achieve net-zero emissions by 2050 at the latest. We highlight the increased urgency to reduce global GHG emissions by around 43 percent by 2030 and 60 percent by 2035, relative to the 2019 level, in light of the latest findings of the IPCC.

- 45. Implementation of the Paris Agreement:** We reaffirm our unwavering commitment to strengthening the implementation of the Paris Agreement, including through delivery of the commitments set out in the Glasgow Climate Pact and the Sharm el-Sheikh Implementation Plan. To this end, we reaffirm our commitment to scaled-up urgent, ambitious, and inclusive actions in this decade to drastically reduce emissions to keep a limit of 1.5°C temperature rise within reach, to enhance resilience and adaptive capacity to the impacts of climate change, and to make financial flows consistent with the goals of the Paris Agreement. Furthermore, we will make efforts to encourage and enable non-Party stakeholders to enhance actions towards achievement of the Paris Agreement's long-term goals. We will also make efforts to strengthen international cooperation and collaborative initiatives between Parties and non-Party stakeholders.
- 46. Mitigation:** We will lead by example in implementing and enhancing strong, ambitious, and effective mitigation actions in this critical decade, in order to keep a limit of 1.5 °C temperature rise within reach. We reiterate our commitment made in Berlin last year to rapidly implement domestic mitigation measures aimed at achieving our NDC targets and to increase our ambition including, for example, by adopting or strengthening sectoral targets, by developing non-CO2 sub targets, or by adopting stringent implementation measures. We will continue to communicate our progress over the course of the year in the lead up to the UNFCCC-COP28. We remain steadfast in our previous commitments and goals, including those reflected in sectoral initiatives, and will work towards a successful UNFCCC-COP28. Whilst mindful of our leadership role as the G7, we recognize the critical role of all major economies in limiting increases in global temperature over this critical decade and subsequent decades, and in this context, we underscore that every major economy should have significantly enhanced the ambition of its NDC since the Paris Agreement; already peaked its GHG emissions or indicated that it will do so no later than 2025; and in particular, included economy-wide absolute reduction targets and that cover all GHGs in its NDC. In this context, we call on all Parties - especially major economies - whose 2030 NDC targets or long-term low GHG emission development Strategies (LTs) are not yet aligned with a 1.5°C pathway and net zero by 2050 to revisit and strengthen the 2030 NDC targets and update their LTs as soon as possible and well before UNFCCC-COP28, and commit to net zero by 2050. Furthermore, we call on all Parties to commit at UNFCCC-COP28 to peak global GHG emissions immediately and by no later than 2025. In relation to the global stocktake (GST), the outcome regarding mitigation should inform Parties' NDCs and LTs in this decade and beyond to give clear direction for the next round of NDCs to be communicated by 2025. These should be submitted well ahead of UNFCCC-COP30, reflecting economy-wide absolute reduction targets including all GHGs, sectors and categories, and significantly enhanced ambition that aligns with keeping a limit of 1.5 °C temperature rise within reach, and should also include their revisited and strengthened 2030 targets. In terms of the Sharm el-Sheikh mitigation ambition and implementation work programme, we emphasize the importance of a solution-focused discussion with key stakeholders that derives concrete actions to enhance ambition and investment strategies in this critical decade, by prioritizing sectors, emission sources and

gases with high mitigation potential and by delivering clear outcomes that will enable transformational change. We emphasize the importance of options for scaled-up mitigation actions to act as an input to the high-level ministerial roundtable on pre-2030 ambition via the annual report of the mitigation work programme, with the view to adopting an ambitious UNFCCC-COP28 decision on the further actions that we will collectively take in this critical decade to keep a limit of 1.5 °C temperature rise within reach. We call on Parties for clear follow up, including through the mitigation work programme, on the sectoral commitments made at UNFCCC-COP26 and UNFCCC-COP27 and encourage further sectoral action to close the gap to 1.5°C.

47. **Global Stocktake:** The GST is a critical moment in the five-year ambition cycle of the Paris Agreement and must enhance the collective ambition of action and support towards fulfilling the Paris Agreement's long-term goals. We commit to actively contribute to securing ambitious outcomes of the first GST and building political momentum on the need for the world to step up climate action in this critical decade and beyond, and call on the UNFCCC-COP28 Presidency and the High Level Committee to drive a political process towards this end. Furthermore, the outcomes of the GST should result in a decision at UNFCCC-COP28 that includes enhanced, immediate and ambitious actions across mitigation, adaptation, means of implementation and support, including making finance flows consistent with a pathway to low GHG emissions and climate resilient development. This includes identifying opportunities, best practices, and solutions at the local, national, and regional levels, to ensure that we are collectively on-track towards the goals of the Paris Agreement.
48. **Energy crisis:** We highlight with concern that the current energy crisis, distinguished by high energy prices, market volatility and disruptions to energy supply chains driven by Russia's war of aggression against Ukraine impacts all economies, and creates disproportionate harm in poorer communities in all countries. This crisis emphasizes the urgency to accelerate clean energy transition and transform our energy systems towards more inclusive, sustainable, clean, secure and affordable ones, and the vital importance of reducing our dependency on fossil fuels, mobilizing and diversifying additional necessary investment in the energy sector consistent with the goals of net-zero emission by 2050 at the latest and keeping the goal of 1.5 °C temperature rise within reach, and strengthening forums for communication and cooperation between producing and consuming countries with a view to stabilizing energy markets. The energy crisis also underlines the critical needs to promote a wide range of measures including policies, sustainable technologies and financing.
49. **Energy security and clean energy transitions:** In order to address the current energy crisis and achieve our common goal of net-zero emissions by 2050, we highlight the real, urgent need and opportunity to increase energy security and accelerate clean energy transitions at the same time by diversifying supply, sources and routes including by rapidly deploying clean, safe, sustainable and affordable energy and enhancing energy efficiency significantly. We emphasize that an accelerated clean energy transition towards net-zero is key to improving security, stability and affordability of global energy supply. We underline our commitment, in the context of a global effort, to accelerate the phase-out of unabated fossil fuels so as to achieve net zero in energy systems by 2050 at the latest in line with the trajectories required to limit global average temperatures to 1.5°C above

preindustrial levels, and call on others to join us in taking the same action. In view of the emerging need for net-zero and circular industrial supply chains in the transformation towards a 1.5 °C pathway, we recognize the opportunities associated with decarbonized, sustainably and responsibly produced non-combustion feedstocks, and are committed to supporting our workers and communities in this transformation. While acknowledging various pathways according to each country's energy situation, industrial and social structures, and geographical conditions, we highlight that these should lead to our common goal of net zero. In this regard, we reaffirm the importance of realizing simultaneously safety, energy security, economic efficiency, and environment (S+3E). In addition to this, we emphasize the importance of countering geopolitical risks, including with respect to critical minerals, for the clean energy transition. To this end, we commit to holistically address energy security, the climate crisis and geopolitical risks.

Transforming overarching systems to realize emission reduction and economic growth

- 50. Realizing a green market:** We highlight the necessity to appropriately design and implement policy approaches informed by accurate emissions and economic data, consistent with international mutually-accepted upon rules, standards, and best practices, to support the diffusion of green goods and services, while taking into consideration technological development. We note the importance of combining both supply-side and demand-side measures that effectively reduce emissions, such as market-based measures, carbon pricing, regulatory approaches, investment in clean and sustainable technologies, and green procurement. In pursuing such measures, we emphasize the pivotal role of both private and public actors.
- 51. Perspective to realize emission reduction throughout the value chain:** We stress the importance of and prioritize continuous efforts by various entities to make immediate, rapid and sustained GHG emissions reductions for themselves and throughout the value chains to keep a limit of 1.5 °C temperature rise within reach. We encourage more positive climate action, including in the private sector, and encourage entities to commit to GHG net-zero emissions for themselves and throughout the value chains. We recognize the work of the United Nations high-level expert group on the Net Zero Emissions Commitment of non-state entities, including in particular for the credibility of private net zero pledges. There is also value in acknowledging the contribution of a certain entity to emission reductions of other entities by providing decarbonization solutions in a given system, in other words "avoided emissions". (see annex "Conclusions regarding the Industrial Decarbonisation Agenda" part B) We note the World Business Council For Sustainable Development's first version of the guidance on avoided emissions in March as a private sector contribution to the discussion, and that a trusted mechanism may mobilize financial resources to accelerate the deployment of solutions. We stress that claims on the environmental performance of various entities should be reliable, comparable and verifiable to empower consumers, companies and investors to accelerate efficient emission reductions and reduce the risk of inappropriate use in line with the principles decided in the conclusions of the G7 Industrial Decarbonisation Agenda (IDA).
- 52. Carbon markets and Carbon pricing:** We reaffirm the crucial role of carbon markets and carbon pricing as key measures in promoting a transformation to net zero, driving cost-efficient emission reductions, enhancing the alignment of financial flows with the long-

term goals of the Paris Agreement, and facilitating sustainable economic growth. We highlight the importance of designing and implementing such measures in a way that leaves no one behind in the transformation to net zero. The IPCC report states that equity and distributional impacts of carbon pricing instruments can be addressed by using revenue from carbon taxes or emissions trading to support low-income households, among other approaches. We will work together, and with partners beyond the G7, to expand the ambitious use of carbon markets and carbon pricing.

- 53. Demand side actions:** Findings from the Synthesis Report of the IPCC AR6 state that demand-side measures and new end-use service provision can reduce global GHG emissions in end-use sectors by 40–70 percent by 2050 compared to the baseline scenarios, and that socio-cultural options, behavior and lifestyle changes supported by policies, infrastructure, and technology can help end-users shift to low-emissions-intensive consumption, with multiple co-benefits. In order to advance demand-side changes including in infrastructure use, design, and use of buildings, end-use technology adoption, and consumer preferences, it is crucial to increase consumers' awareness and support their choices through providing appropriate guidance for industry and stakeholders as well as better emissions-related information, appropriate regulations, and price signals. We will expand policy measures to promote the development of low- and zero-emissions products and services, and the achievement of energy savings including through digitalization and increasing incentives designed to influence consumer preferences. To draft highly effective and socially-just measures, it is crucial to cooperate with businesses, subnational governments, social associations, youth, and citizens to share their knowledge and experience. Therefore, we establish the "G7 platform for net-zero and well-being in life", and aim to accelerate public-private partnerships for innovation that contribute to incentivizing sustainable consumer choices and preferences that are in line with our climate objectives. We will support others by sharing our experiences and best practices on low- and zero-emission products and services, and demand-side policies.
- 54. Innovation:** The International Energy Agency (IEA) estimates in its Net Zero by 2050 roadmap for the global energy sector that while most of the reductions in CO₂ emissions through 2030 come from technologies already on the market today, almost half of the emissions reductions needed to meet global net-zero emissions by 2050 will come from technologies that are yet to be commercialized at a large scale. We therefore highlight the need to accelerate technological commercialization and innovation for driving decarbonization while supporting economic growth and the creation of good-paying jobs. We also recognize the supporting role that governments can play in facilitating and de-risking private sector investments in innovation for the transition, including through establishing predictable policy and regulatory environments the development of lead markets, and other mechanisms to stimulate demand for emerging net-zero products, as well as through joint funding of RD&D-projects. We recognize that these investments will reduce the costs of zero emissions technologies at scale, which will further enable all countries to pursue net-zero GHG emissions by 2050 at the latest. We also underline the important role of start-ups and small and medium enterprises (SMEs) to contribute to innovations and technologies for net-zero.
- 55. Aligning and mobilizing finance flows:** We will continue to scale up sustainable finance

and redouble our efforts to make private and public, domestic and international finance flows consistent with a pathway towards low GHG emissions and climate resilient development in line with Article 2.1.c of the Paris Agreement. We highlight the need for corporates to implement their net-zero transition, in line with the temperature goal of the Paris Agreement, based on credible corporate climate transition plans. We recognize that transition finance can support such efforts so long as it is in line with keeping a limit of 1.5°C temperature rise within reach, avoids carbon lock-ins, and is based on effective emissions reduction, as described in such documents as the OECD Guidance on Transition Finance and other global best practices. In addition, we recognize the need to significantly increase the mobilization of private finance through strong enabling environments, sustainable finance policies and regulations, and innovative financial frameworks and tools or public-private cooperation, such as blended finance. We welcome and encourage the development of tools, such as sustainable finance taxonomies, in order to enable investment decisions to align with climate change objectives, including work to develop such taxonomies by some G7 members.

56. **Climate-related financial disclosures:** In order to accelerate sustainable finance, it is essential to enhance disclosures of climate-related information including transition plans in line with the Paris Agreement targets, focusing on own emission reductions. We urge the implementation of mandatory climate-related financial disclosures that provide consistent and decision-useful information for market participants and call for more partners beyond the G7 to join in this effort. We highlight the importance of the work of the International Sustainability Standards Board (ISSB) to develop a practical, flexible and interoperable global baseline building on the Task Force on Climate-Related Financial Disclosures (TCFD) framework that can also be incorporated in more ambitious disclosure requirements, and support jurisdictions' consideration of the ISSB standards as they implement climate and other sustainability disclosure rules.
57. **Carbon markets and Article 6 of the Paris Agreement:** We underscore the role that high integrity carbon markets can play in achieving net-zero emissions by 2050, in enhancing the implementation and ambition of 2030 NDCs, including beyond their current levels, in order to keep a limit of 1.5°C temperature rise within reach. While stressing that measures to avoid and reduce emissions and to increase removals remain imperative, and that use of carbon markets cannot be a substitute for the deep emissions cuts necessary, utilization and design of high integrity carbon markets with robust safeguards can play an important role in mobilizing public and private sector finance, including results-based climate finance, unlocking social and environmental co-benefits, deploying clean, safe, and sustainable decarbonization technologies, as well as investing in NbS. The implementation of Article 6 guidance and rules of the Paris Agreement, including for crediting under the 6.4 mechanism, authorization, accounting, reporting, review and tracking, and infrastructure, provides a robust framework for carbon markets under the Paris Agreement to ensure environmental integrity and promote sustainable development. In order to promote the development of carbon markets while ensuring their environmental integrity, we adopt the "Principles of High Integrity Carbon Markets" as annexed, and will facilitate their implementation in carbon credit markets, including by sharing experiences through discussions of the Carbon Market Platform. To strengthen capacity building for robust and ambitious implementation of Article 6 of the Paris Agreement, we stress the importance of the UNFCCC secretariat's role in implementing a capacity building program to assist

interested Parties with the development of institutional arrangements including for reporting, and with ensuring that their cooperative approaches support ambition. We underline the importance of supporting host countries in their development of national strategies for implementing Article 6 of the Paris Agreement. Furthermore, we will collaborate to promote international coordination among various initiatives related to capacity building, including through the “Paris Agreement Article 6 Implementation Partnership”. For providing sustained activities at the Partnership, we welcome Japan’s initiative to establish the “Article 6 Implementation Partnership Center”, in this regard as a secretariat for the Partnership in supporting capacity building towards implementing Article 6 of the Paris Agreement.

- 58. Collective action:** We reaffirm the critical importance of collective action, and engagement with other developing and emerging countries, particularly within the G20, to accelerate emission reduction, including by supporting their transition to net-zero GHG emissions through various and practical pathways taking into account national circumstances. In particular, we recognize the significant role of sectoral, issue and regional-specific initiatives to this transition, including those that support efforts to develop, demonstrate and deploy clean and renewable energy solutions and other efforts for innovation. We welcome overarching initiatives such as, the Breakthrough Agenda, the Climate Club, Clean Energy Ministerial (CEM), and Mission Innovation (MI), and their achievements: For the Breakthrough Agenda, signatory countries shared the view on 2023 priority actions across the power, road transport, steel, hydrogen, and agriculture breakthroughs and we recognize the progress made towards launching the Buildings Breakthrough and Cement Breakthrough. For CEM/MI, the Global Clean Energy Action Forum (GCEAF), a joint convening of the 13th CEM and the 7th MI ministerial, was held in Pittsburgh last September, where discussions were held to promote RD&D in clean energy, looking forward to advancing discussion in the 14th CEM and the 8th MI ministerial in India this year. We welcome sector/issue specific initiatives such as the Global Methane Pledge, International Aviation Climate Ambition Coalition’s Declaration, International Energy Efficiency Hub, International Partnership for Hydrogen and Fuel Cells in the Economy(IPHE), the NDC Partnership, and ZEV Transition Council, and recognize the Cities Climate Finance Leadership Alliance (CCFLA), Climate Investment Fund’s Industry Decarbonization Program, Energy Management Action Network (EMAK), First Movers Coalition, the Global Alliance for Buildings and Construction (Global ABC), Global Carbon Pricing Challenge, Global Climate Action Partnership Industrial Deep Decarbonisation Initiative (IDDI), International Methane Emissions Observatory (IMEO), the Joint Declaration from Energy Importers and Exporters on Reducing Global GHG Emissions from Fossil Fuels, Leadership Group for Industry Transition (LeadIT), Minerals Security Partnership, MOU on Zero Emission Medium and Heavy Duty Vehicles, The Oil & Gas Methane Partnership 2.0 (OGMP2.0), the Powering Past Coal Alliance (PPCA), and the Super-efficient Equipment and Appliance Deployment initiative, Net Zero Government Initiative and the Greening Government Initiative. We welcome regional and global outreaching initiatives such as Just Energy Transition Partnerships (JETPs) and welcome progress achieved on JETPs, with South Africa with the adoption of the Investment Plan, as well as with Indonesia and Vietnam, launched respectively at the G20 Bali Summit and in December 2022. We are committed to continuing efforts to swiftly implement JETPs. We take note of initiatives carried out both individually and in partnership with others that are intended to support decarbonization and energy transition in countries around

the world, such as Asia Zero Emissions Community (AZEC) initiative, 2050 Pathways Platform, and Net Zero World (NZW), and underscore the importance of actions taken through such initiatives being aligned with a 1.5°C pathway.

- 59. Climate Club:** We look forward to advancing the open, cooperative and inclusive Climate Club, established by G7 leaders, in collaboration with international partners. The Climate Club will support global efforts to decarbonize our economies by advancing the enabling conditions for substantial sectoral industry decarbonization. Within the agreed scope of the Climate Club, we look forward to making decarbonized industrial production the default business case over time, inter alia, by establishing lead markets and by providing a platform for voluntary cooperation and partnerships.
- 60. Carbon leakage:** While increased ambition in mitigation policies is urgently necessary, the risk of carbon leakage may increase with more divergent climate policy ambition among other factors. We recognize that emission intensity is an important factor for the implementation of instruments to address the risk of carbon leakage. In addition, we highlight such instruments should adequately take into account the diverse range of climate mitigation policy approaches each country deploys such as regulations, tax policies, carbon markets and carbon pricing, maintain consistency with WTO rules and principles, support trade relations and contribute to global emission reduction. To the extent feasible, we will work to reduce potential international frictions, including by sharing our assessment of leakage risks and strategies to mitigate them.
- 61. Methane:** We stress the urgency to take further actions to reduce methane emissions by 2030. We reaffirm our commitment to taking domestic actions and working with other countries towards collectively reducing global anthropogenic methane emissions by at least 30 percent below 2020 levels by 2030, in line with the Global Methane Pledge. We highlight the importance of taking progressive actions especially in waste, agriculture, and energy sectors, establishing national action plans, policies, and regulations to reduce methane emissions, and the importance of continuous improvement of emissions measurement, reporting, and verification to inform national emissions inventories, including collecting, reconciling, and verifying anthropogenic methane emissions data at a global level. We recognize that the fossil energy sector must achieve the fastest and deepest emissions reductions in order to keep a limit of 1.5°C temperature rise within reach and reduce the likelihood of reaching climate tipping points. We will work with the relevant stakeholders to develop an internationally aligned approach for measurement, monitoring, reporting, and verification of methane and other GHG emissions to create an international market that minimizes GHG emissions across oil, gas, and coal value chains, including by minimizing flaring and venting, and adopting best available leak detection and repair solutions and standards. This internationally aligned approach would aim to improve the accuracy, availability, and transparency of emissions data at the cargo, portfolio, operator, jurisdiction and basin level, including consideration of accepted protocols and tools such as independent verification that can support robust data collection and reporting. We will also support the development of policies, measures, and industry efforts to reduce methane and other GHG emissions from fossil energy production, consumption, and international trade. Working with development finance partners, we will endeavor to increase support for methane abatement in developing countries.

- 62. HFCs and other non-CO2 climate pollutants:** We call upon all countries who have not already done so to ratify the Kigali Amendment to the Montreal Protocol. We will continue the phase-down of hydrofluorocarbon (HFC) production and consumption at least in line with the Kigali Amendment. We will support robust action through the Montreal Protocol Multilateral Fund for early action to reduce HFC consumption and to promote improved energy efficiency for the HFC phase-down. We will simultaneously address the refrigerant choice and energy efficiency of equipment, while maintaining safety of the equipment, in order to further reduce HFC emissions and to maximize the benefit of newly-introduced energy-efficient heating and cooling systems. Apart from the Montreal Protocol, we also highlight the importance of advancing proper lifecycle management of fluorocarbons, in particular addressing fluorocarbons banks, including refrigerants contained in equipment. We will also focus on concerted efforts on mitigating nitrous oxide (N₂O) emissions, including striving to reduce N₂O emissions from industry, such as those from adipic acid, nitric acid, and fossil fuel combustion, taking into account the applicability of its alternatives and measures, by implementing low cost and available technologies, and increasing fertilizer use efficiency which limits N₂O emissions and helps combat fertilizer shortages. We will take various measures to reduce emission and leakage of sulfur hexafluoride (SF₆), especially in the power sector within G7 and beyond, such as reducing and considering to phase out the use of SF₆ in new applications, taking into account the availability and applicability of its alternatives, and ensuring proper maintenance and the end of life management of existing SF₆ switchgear by regulations or standards. We will pursue opportunities within our countries and in collaboration with one another to develop technologies for distribution and transmission that will aid further SF₆ phase-out. We will also take actions of reducing emission and leakage of other potent warming substances including black carbon as these substances have high global warming potentials and their mitigation is critical to keep a limit of 1.5°C temperature rise within reach.

Transition of Energy Sector

- 63. Energy efficiency:** We highlight the role of energy efficiency as the "first fuel" as a key pillar in the global energy transition towards net-zero GHG emissions in 2050. We emphasize the value of energy efficiency and energy savings across all sectors in enhancing energy security, access and affordability; reducing GHG emissions and mitigating environmental impacts; and creating economic growth and reducing energy poverty. We recognize the need for efforts on the demand side to reduce energy consumption, building on successful measures we have already taken in response to the current energy crisis including, information campaigns, influencing and responding to consumer preferences, demand flexibility measures and promoting energy-efficient equipment and solutions, while addressing possible rebound effects. We call on the IEA to assess the impacts demand reduction measures have already had in response to current pressures to identify and share best practices, and make recommendations. Furthermore, we recognize the importance of effective and efficient regulatory frameworks and share the view on the need to leverage public and private financing to promote both technological and non-technological solutions. We underline the need for 'energy efficiency first' to be recognized as a driving principle for our actions to ensure that energy efficiency and energy savings are duly taken into consideration in policy,

planning and investment decisions. We also note that energy efficiency regulations, such as vehicle fuel efficiency regulations, building codes, minimum energy performance standards, energy performance certificates, and energy reporting systems for large scale consumers continue to gain momentum. These measures will leverage further efforts to decarbonize energy demand, with strategic approaches including electrification, fuel switching, grid flexibility, digitalization of energy demand information and disclosure of energy and climate related information. We welcome the IEA's analysis on this evolution of energy efficiency regulatory frameworks in alignment with demand side decarbonization targets and will share this information with governments, including those of emerging economies, to support strengthened energy efficiency policies. In this effort, we note that the IEA projects that a global acceleration of primary energy intensity improvements of 4 percent per year until 2030 is needed to be consistent with its Net Zero Scenario.

64. **Renewable Energy:** We reiterate the importance of significantly increasing the pace and scale of deployment of renewable energy in the decarbonization of our economies as effective means of enhancing our energy security through diversifying energy supply, reducing the dependency on fossil fuels, and achieving the goal of net zero by 2050 at the latest whilst driving economic growth and creating jobs. As demonstrated by the IEA, we recognize that the energy crisis has significantly accelerated investments in and deployment of renewable energy, driven by energy security concerns and climate ambition. We will drastically increase electricity generated by renewable energies, as well as the use of renewables in heating, cooling and the transportation and industrial sectors promoting the active role of prosumers and citizens energy communities. We note with concern the findings of the International Renewable Energy Agency (IRENA) World Energy Transition Outlook 2023 that existing renewable power deployment rates globally are insufficient to keep 1.5°C within reach. The G7 contributes to expanding renewable energy globally and bringing down costs by strengthening capacity including through a collective increase in offshore wind capacity of 150GW by 2030 based on each country's existing targets and a collective increase of solar PV to more than 1TW by 2030 estimated by the IEA and IRENA through means such as each country's existing targets or policy measures. We will accelerate the deployment of renewable energies such as solar, onshore/offshore wind, hydropower, geothermal, sustainable biomass, biomethane, tidal using modern technologies, as well as investing in the development and deployment of next-generation technologies and developing secure, sustainable and resilient supply chains. Specifically, we will promote improvement in innovative technologies such as perovskite solar cells and floating offshore wind power, wave energy and in international standards of evaluation methods for introducing new technologies under international coordination. We will ask the IRENA to prepare analysis on innovation and sustainability of floating offshore wind. We will also steadily improve system flexibility including through grid reinforcement, stand-alone systems and mini-grids and modernized utilization of energy storage systems including battery storage, and demand side management. We welcome the IEA's report focusing on the impacts of seasonal and annual variability of renewable energy and measures to respond, which should be recognized as significant progress in the deployment of renewable energy.
65. **Clean energy supply chains:** Meeting international energy and climate goals requires the global deployment of clean energy to grow significantly. We recognize that the importance

of avoiding undue dependencies in global clean energy supply chains including various manufacturing processes as well as key raw materials production, which can bring vulnerabilities and potential challenges for the energy transition. To achieve the common goal of net-zero emissions by 2050 at the latest, we emphasize the importance of scaling up investments into the manufacturing and installation of clean energy technologies such as electrolyzers, heat pumps and batteries, and diversifying clean energy supply chains in a way that ensures they are resilient, affordable, and sustainable, while being consistent with internationally recognized labor standards and respecting human rights. We recognize these efforts offer economic opportunities such as investments and job creations, and environmental opportunities to reduce GHG emission through industrial activities in countries whose energy mix is less-carbon intensive. Recognizing the significant increase of the end of life products relating to clean energy technologies, we stress the important role of product design with a view to enhancing the circularity of value chains of clean energy technologies as a contribution to security of supply.

66. **Power systems:** Recognizing the need to urgently curtail greenhouse gas emissions in this critical decade, we recall the 2022 G7 Leader's Communiqué and reaffirm our commitment to achieving a fully or predominantly decarbonized power sector by 2035, and prioritizing concrete and timely steps towards the goal of accelerating the phase-out of domestic unabated coal power generation in a manner consistent with keeping a limit of 1.5°C temperature rise within reach and urge others to join us. To implement this commitment, we will aim to take effective measures such as accelerating necessary energy transition policies, facilitating research and development on related clean technologies, and creating new jobs and retraining affected workers in order to ensure a just transition. We recognize the need to end the construction of new unabated coal-fired power generation as identified in the IEA's Coal in Net Zero Transitions report in 2022 as one of the primary actions to be taken in line with the IEA net zero by 2050 scenario. We call on and will work with other countries to end new unabated coal-fired power generation projects globally as soon as possible to accelerate the clean energy transition in a just manner. In doing so, we reaffirm the importance of national energy security, affordability and resilience and underscore the need to tackle energy poverty and the importance of providing support for affected workers, regions and communities. We will invite IEA with support from relevant organizations, such as the ILO to report on the various actions to accelerate the phase-out of domestic unabated coal power in a manner consistent with a just transition.
67. **Low-carbon and renewable hydrogen and its derivatives such as ammonia:** We recognize low-carbon and renewable hydrogen and its derivatives such as ammonia should be developed and used where they are impactful as effective emission reduction tools to advance decarbonization across sectors and industries, notably in hard-to-abate sectors in industry and transportation. We also note that some countries are exploring the use of low-carbon and renewable hydrogen and its derivatives in the power sector to work towards zero-emission thermal power generation if this can be aligned with a 1.5°C pathway and our collective goal for a fully or predominantly decarbonized power sector by 2035, while avoiding N₂O as a GHG and NO_x in general as a regional air pollutant and precursor to tropospheric ozone. Some countries also consider to utilize hydrogen for the conversion of electricity surplus from renewable energy. We affirm the importance of taking action to reduce the cost gap between low-carbon and renewable hydrogen and its

derivatives and fossil fuels, including RD&D, and enabling infrastructure. We will enhance our efforts to develop the rule-based, transparent global market and supply chains based on reliable international standards and certification schemes while adhering to environmental and social standards, in particular with regard to water use conflict in diverse ways including liquefied hydrogen and liquid organic hydrogen carriers, and promote organic collaboration between supplier and consumer countries to reduce costs. We will build the enabling environment to encourage safety use of hydrogen, promote relevant regulations, safety codes, and standards in order to accelerate deployment and emissions reductions from hydrogen use. We affirm the importance of developing international standards and certification including for a GHG calculation methodology for hydrogen production and mutual recognition mechanism for carbon intensity-based tradability, transparency, trustworthiness and sustainability. We welcome the IEA report “Towards hydrogen definitions based on their emissions intensity” as a contribution to the discussion towards reliable international standards and certification schemes on expanding low-emission hydrogen and its derivatives and fostering common understanding. We note with appreciation that the International Partnership for Hydrogen and Fuel Cells in the Economy (IPHE) has advanced progress of the hydrogen standards and certification action. We also stress that countries producing low-carbon and renewable hydrogen for export and domestic use should fully benefit from and advance its development.

- 68. Carbon Management:** The immediate, sustained, and rapid reduction of GHG emissions remains our top priority. To achieve net zero, the deployment of carbon dioxide removal (CDR) processes with robust social and environmental safeguards, such as strengthening natural sinks, Bioenergy with Carbon Dioxide Capture and Storage (BECCS), Direct Air Carbon Dioxide Capture and Storage (DACCS), have an essential role to play in counterbalancing residual emissions from sectors that are unlikely to achieve full decarbonization. Actions on furthering large-scale deployment of carbon capture technologies can lead to additional learning-by-doing cost reductions and improve economic growth. We recognize the need for monitoring and analyzing the potential for and expanding geologic storage infrastructure and planning for CO₂ transport, including the potential for regional Carbon dioxide Capture and Storage (CCS) hubs in line with social acceptance. We will co-operate to promote development of export/import mechanisms for CO₂. We recognize the need to develop systems or incentives that enhance utilization of CO₂ and the value of CO₂ through utilization. Considering the evolving nature of these technologies, we recognize that CCU/carbon recycling and CCS can be an important part of a broad portfolio of decarbonization solutions to achieve net-zero emissions by 2050, and Carbon dioxide Capture, Utilization(CCU)/carbon recycling technologies, including recycled carbon fuels and gas (RCFs) such as e-fuels and e-methane, also can reduce emissions with existing infrastructure from industrial sources that cannot be avoided otherwise by displacing fossil-derived commodities and by using CO₂. The IPCC reports that enablers of CDR include accelerated RD&D, improved tools for risk assessment and management, targeted incentives and development of accepted methods for Measurement, Reporting, and Verification (MRV) of carbon flows. We will accelerate international cooperation to promote harmonization of MRV of CDR and exchanges including through collaborative workshops among industry, academia, and government on CCU/carbon recycling technologies, such as RCFs.

- 69. Natural gas and LNG:** We recognize that Russia's war of aggression against Ukraine impacts energy markets and supply security globally, and has intensified competition in securing resources. High energy prices and inflation have had a negative environmental, economic and social impact on the economies and people's lives all over the world, especially in developing countries, through preventing them from securing affordable energy supply they need and increasing the price of fertilizer and food. In this particular context, and recognizing the primary need to accelerate the clean energy transition through energy savings and gas demand reduction, investment in the gas sector can be appropriate to help address potential market shortfalls provoked by the crisis, subject to clearly defined national circumstances, and if implemented in a manner consistent with our climate objectives and without creating lock-in effects, for example by ensuring that projects are integrated into national strategies for the development of low-carbon and renewable hydrogen. We reaffirm the G7's commitment to achieve net-zero emissions throughout the entire fossil fuel extraction and production chain by 2050. We recognize the need to coordinate plans to mitigate the risks associated with the unpredictability of Russia's exports of gas. We note the importance of continuing to monitor of the situation. We recognize the success of demand reduction measures and supply source diversification, during this recent period. We welcome the outcome of the February 2023 IEA Ministerial Meeting on Gas Markets and Supply Security and expect that the IEA's functions and role in gas security will be further strengthened through dialogue between gas producing and consuming countries taking into account longer-term perspectives.
- 70. Nuclear energy:** Those countries that opt to use nuclear energy recognize its potential to provide affordable low-carbon energy that can reduce dependence on fossil fuels, to address the climate crisis and to ensure global energy security as a source of baseload energy and grid flexibility. They commit to maximizing the use of existing reactors safely, securely, and efficiently, including by advancing their safe long-term operation, in addressing the current energy crisis. They take note of their Leaders' assessment in 2022 that the development and deployment of advanced nuclear technologies including small modular reactors within the next decade will likely contribute to more countries around the world adopting nuclear power as part of their clean and secure energy mix. They also commit to contribution to initiatives from international organizations enabling third countries to develop regulatory and financial frameworks for these technologies, and support of robust, mutually beneficial partnerships together with strengthening the related financial tools. They also commit to support the development and construction of nuclear reactors, such as small modular and other advanced reactors with advanced safety systems in line with IAEA safety standards and nuclear security guidance in each country and third countries, building robust and resilient nuclear supply chains including nuclear fuel, and maintaining/strengthening nuclear technology and human resources, under the cooperation among like-minded countries with shared values, as well as working with reliable partners to reduce dependence on Russia and to ensure security of supply by a continuous supply diversification efforts. We recall the G7 Leaders' commitment to evaluate measures to reduce reliance on civil nuclear-related goods from Russia and to assist countries seeking to diversify their supplies. With this in mind, we support the establishment of a working group to explore further cooperation. The G7 underlines that the highest standards of nuclear safety and security are important to all countries and their respective publics.

- 71. Response to accident of Fukushima Daiichi Nuclear Power Station:** Taking note that the International Atomic Energy Agency (IAEA) has reported on progress in the situation at Fukushima Daiichi Nuclear Power Station over the past years, we welcome the steady progress of decommissioning work at the site and Japan's transparent efforts with IAEA based on scientific evidence. We support the IAEA's independent review to ensure that the discharge of Advanced Liquid Processing System (ALPS) treated water will be conducted consistent with IAEA safety standards and international law and that it will not cause any harm to humans and the environment, which is essential for the decommissioning of the site and the reconstruction of Fukushima. We also recognize the step by step progress of environmental restoration for the affected area offsite of the TEPCO's Fukushima Daiichi Nuclear Power Station, while Japan is working with the IAEA expert group to discuss the challenge of recycling of removed soil and its final disposal. We encourage Japan to proceed with these ongoing initiatives in an open and transparent manner, in close communication with the international community.
- 72. Critical Minerals:** We reaffirm the growing importance of critical minerals for the clean energy transition and the need to prevent economic and security risks caused by vulnerable supply chains, monopolization, lack of diversification of existing suppliers of critical minerals. We affirm that strong environmental, social and governance (ESG) standards are vital for creating responsible and resilient critical minerals supply chains, ensuring local communities' benefit, advancing innovation and competitiveness, and respecting human dignity as well as human rights, while minimizing environmental footprints. We are committed to supporting open, transparent, rules- and market-based trade in critical minerals with traceability, opposing market-distorting measures and monopolistic policies on critical minerals, and promoting dialogues between extraction, producer and consumer countries. As the key enabler to overcome our challenges, we are committed to implement the "Five-Point Plan for Critical Mineral Security" as annexed.
- 73. Fossil fuel subsidies:** We stress that fossil fuel subsidies are inconsistent with the goals of the Paris Agreement. Phasing out inefficient fossil fuel subsidies is a key component of delivering on Article 2.1.c of the Paris Agreement. We reaffirm our commitment to the elimination of inefficient fossil fuel subsidies by 2025 or sooner, and reaffirm our Leader's previous calls for all countries to do so. We will report on progress towards the achievement of our commitment in 2023, building on the ongoing work at the G20, UN, OECD and its subsidies inventory, and other relevant fora to facilitate greater transparency on inefficient fossil fuel subsidies globally, strengthen our action as necessary and consider options for developing joint public inventories of fossil fuel subsidies. We will also take steps to increase cooperation, discussion, and sharing best practices on eliminating inefficient fossil fuel subsidies and enhancing transparency at the international level.
- 74. International fossil fuel finance:** We recall our commitment to align official international financing with the goals of the Paris Agreement as reflected in Article 2.1.c, and to achieve deep global emissions reductions in the 2020s, as well as in the 2030s and 2040s. Reaffirming that advancing national security and geostrategic interests is crucial, and further reaffirming that accelerating the international clean energy transition and phasing out continued global investment in the unabated fossil fuel sector is essential to keep a limit of 1.5 °C temperature rise within reach, we highlight that we ended new direct government support for unabated international thermal coal power generation by the end

of 2021 and public support for the international unabated fossil fuel energy sector in 2022, except in limited circumstances clearly defined by each country consistent with a 1.5°C warming limit and the goals of the Paris Agreement. We will each provide an update on our approach to implementation by the end of 2023. We therefore call on other major economies, the MDBs and bilateral development finance institutions (DFIs), multilateral funds, public banks, and relevant agencies to also adopt these commitments. We note with concern the large scale of private finance still supporting non-Paris aligned activities especially in the fossil fuel sector. We commit to promoting the increased international flow of public and private capital towards the Paris Agreement aligned investments.

- 75. Gender Equality and Diversity in energy sector:** We recognize that creating an innovative and inclusive workforce, equipped with the knowledge and skills needed for a net-zero future-ready sector, means empowering women, and other marginalized groups, to ensure they become active participants in the energy sector. We reaffirm our commitment to the Equal by 30 Campaign launched in 2018 to work towards gender equality and diversity in the clean energy sector by 2030. We highlight the set of Equal by 30 strengthened commitments adopted by the G7 in 2021, and the report on progress released by the 2022 G7 Presidency, will aim to ensure that we hold ourselves accountable, make efforts towards our ambition on equality, diversity and inclusion in the sector, and use the Equal by 30 platform to highlight the leadership of G7 members in this area. To better assess the gender impacts of our actions, we will increase our efforts to collect better gender-disaggregated data and cooperate with gender Equality Advisory Council, the Clean Energy Ministerial, IEA and IRENA to work with us on tracking our progress.

Decarbonizing Industry /Transport /Building Sector

- 76. Industrial decarbonization:** Following from the launch of the IDA in 2021 and its development in 2022 that identified the toolbox of potential policy measures, we underline the key importance of decarbonizing the industrial sector to keep a limit of 1.5°C temperature rise within reach. We reiterate the importance of decarbonizing industry, recognizing that our efforts follow various pathways in transitions to net-zero emissions by 2050, considering country and industrial sub-sector specific circumstances. We underline the importance of evaluating industrial decarbonization on a lifecycle basis, and affirm that relevant measurement standards and data collection should be developed. Acknowledging the importance of accelerating innovation through effective RD&D and deployment through scaling-up of near-zero technologies, we encourage the acceleration of market development for low and near- zero emission materials by public and private sectors. We highlight the work of international initiatives on industry decarbonization and welcome collaboration and global outreach of these initiatives beyond the G7.
- 77. Advancing the G7 Industrial Decarbonization Agenda in steel sector:** Building on the joint actions taken last year through the IDA's work and welcoming the report by the OECD on "The Heterogeneity of Steel Decarbonisation Pathways" and the report by the IEA on "Emissions Measurement and Data Collection for a Net Zero Steel Industry," we decide to start working on implementation of the proposed new Global Data Collection Framework for steel production and product emissions, which will advance industrial transitions through improved tracking, benchmarking and potential standards. We also recognize the five existing methodologies in the IEA report to inform initial work of emission

measurement methodologies on steel decarbonization at production-level and product-level. (see annex “Conclusions regarding the Industrial Decarbonization Agenda” Part A). We continue working on the details within the IDA framework of Japan’s 2023 G7 Presidency and will actively engage in relevant forums such as the IEA’s Working Party on Industrial Decarbonisation and in consultation with other initiatives and organizations for further works and extend this framework beyond the G7.

- 78. Biomanufacturing:** We take note that biomanufacturing, which utilizes engineered microorganisms under contained use to produce various kinds of products, including materials, fibers, and fuels from recycled resources and CO₂, as an emerging technology that could, under certain circumstances and provided that appropriate measures are put in place, provide solutions to climate change and other issues such as resource shortages. We will advance cooperation on these technologies.
- 79. Road sector:** We reaffirm our commitment to a highly decarbonized road sector by 2030. Noting that the global vehicle stock is over 15 times more than the new sales vehicles, we recognize the critical importance of swiftly and substantially reducing GHG emissions from the global fleet. We recognize the range of pathways that G7- and beyond-G7 members are adopting to approach this goal. We are committed to the goal of achieving net-zero emissions in the road sector by 2050, and underline that a transition over the coming decade to infrastructure and a vehicle fleet that supports zero emissions transport (e.g., zero emission vehicles (ZEV) and associated infrastructure, and sustainable carbon-neutral fuels) is critical. While we are pursuing various pathways to achieve this transition, each of us is committed to pursuing policies and investments to ensure that our efforts to decarbonize our vehicle fleet are in line with trajectories required for keeping a limit of 1.5°C temperature rise within reach and are consistent with environmental and climate integrity. In this context, we highlight the various actions that each of us is taking to decarbonize our vehicle fleet, including such domestic policies that are designed to achieve 100 percent or the overwhelming penetration of sales of light duty vehicles (LDVs) as ZEV by 2035 and beyond; to achieve 100 percent electrified vehicles in new passenger car sales by 2035; to promote associated infrastructure and sustainable carbon-neutral fuels including sustainable bio- and synthetic fuels. We note the opportunities that these policies offer to contribute to a highly decarbonized road sector, including progressing towards a share of over 50 percent of zero emission LDVs sold globally by 2030. Noting the findings of Energy Technology Perspective 2023 by IEA on effectively reduced emissions through holistic policies since 2000, we note the opportunity to collectively reduce by at least 50 percent, CO₂ emissions from G7 vehicle stock by 2035 or earlier relative to the level in 2000 as a halfway point to achieving net zero and to track the progress on our efforts and emission reductions from vehicle stock as well as the penetration of ZEVs, charging infrastructure, and sustainable carbon-neutral fuels on a yearly basis. Towards the decarbonization along the lifecycle of vehicles, we will work with an aim for harmonization of rules related to a framework of lifecycle GHG emission and will explore harmonized methods to ensure that battery materials supply chains are traceable, sustainable and support battery recycling. Towards the utilization of hydrogen and the decarbonization of fuels, we will assess developments in technologies such as FCEVs, PHEVs, low-carbon and sustainable carbon-neutral fuels including biofuels and synthetic fuels. Furthermore, we commit to promote a modal shift to sustainable transport mobility and support the transition of our industrial bases and to provide

ambitious investment to research, and to further develop and scale up the technologies needed to support a rapidly growing global market for sustainable mobility. Building on these actions and respective situation, we will contribute to rapid and steady GHG reduction beyond-G7 members.

- 80. International shipping:** We reaffirm our commitment to strengthen global efforts to achieve GHG lifecycle zero emissions from international shipping by 2050 at the latest. We commit to support this target and introducing intermediate targets for 2030 and 2040 for the revised IMO GHG reduction strategy during the upcoming IMO's 80th session of the Marine Environment Protection Committee (MEPC80), in line with efforts to limit the temperature increase to 1.5°C above pre-industrial levels. We commit to work for the development and adoption of mid-term measures by 2025 to achieve these targets consisting of regulatory signals and incentives to accelerate the transformation of shipping such as the introduction of zero-emission ships in the early stage, while recognizing the importance of a just and equitable transition that leaves no one behind. As part of other multilateral cooperation, we pledge to support the establishment of at least 14 green shipping corridors involving G7 members by the middle of this decade and pledge to support the establishment of green corridors worldwide in order to promote the reduction of GHG emissions through the uptake of zero- and near-zero emission vessels and fuels and the development of decarbonized ports.
- 81. International aviation:** We commit to accelerate global efforts to achieve the International Civil Aviation Organization (ICAO) 's Long-Term Global Aspirational Goal (LTAG) of net-zero emissions in international aviation by 2050 including by building on the momentum of ICAO's Carbon Offsetting and Reduction Scheme (CORSIA) which is the only global market based measure applying to CO₂ emissions from international aviation. To achieve this goal, we will work across sectors and make an effort for promoting and introducing sustainable aviation fuel (SAF), including at the upcoming Conference on Aviation and Alternative Fuel (CAAF/3) to be held under the auspices of ICAO, introduce new technologies into aircraft, equipment and airport infrastructure, and improve operations to help decarbonize the aviation sector. In addition, we commit to contribute to the implementation of CORSIA and its periodic reviews at ICAO, and commit to make an effort to enhance capacity building for countries to engage in CORSIA in order to deepen and its contribution to the Paris Agreement temperature goal.
- 82. Buildings:** Noting the importance of decarbonizing buildings' lifecycles in combatting climate change, we recommit to advancing targets to reduce buildings' emissions across their whole lifecycle in line with keeping a limit of 1.5 °C temperature rise within reach. We highlight the need for improved and climate-adapted building design, enhancing building energy efficiency, including through supporting measures, regulations and international collaboration so that new and renovated near-zero emission and climate resilient buildings are on the path to reach the 2050 net-zero goal. Actions will include improved energy efficiency; fuel switching, electrification and provision of heating and cooling services using renewable energy sources; sustainable consumer choices and the increased digitalization efforts to improve flexibility in building energy management. We will promote reaching zero carbon ready/zero emission new buildings, ideally by 2030 or sooner. We aim to accelerate the phaseout of the installation of new fossil fuel heating systems and the transition to cleaner technology including heat pumps. We also recognize

the importance of improved use of sustainable low-carbon materials including wood and end use equipment by using a whole lifecycle buildings approach in design and considering the circularity in the renovation and construction of buildings, as well as decarbonizing the production of conventional materials.

Enhancement of resilience and support for climate actions especially for the most vulnerable people

- 83. Adaptation:** We recognize with utmost concern the findings in IPCC AR6 that adaptation progress is unevenly distributed across regions and mostly fragmented and small in scale, and that risks are increasing with every increment of warming. We underline the importance of enhancing action and support towards achieving the global goal on adaptation (GGA) as established by the Paris Agreement to advance effective implementation of adaptation actions through development and implementation of national adaptation plans (NAPs) and strategies, and monitoring and evaluation of the progress through the adaptation policy cycle under different natural and social conditions. We welcome the outcome of UNFCCC-COP27 to initiate the development of a GGA framework under the Glasgow Sharm el-Sheikh work programme. We encourage all levels of government to work together with partners and stakeholders in a concrete, inclusive, and systematic approach with the aim to facilitate locally led adaptation (LLA) including formulation and implementation of local and regional adaptation plans to meet their local priorities, including efforts that build climate resilience of food, water, infrastructure, and public health systems, against extreme weather events such as heavy rains and heat waves, paying particular attention to marginalized groups that are more vulnerable to these impacts. Within this scope, we promote the development of good multi-level governance adapted to diverse national contexts. We particularly emphasize that LLA would contribute to global efforts towards achieving the GGA by incorporating different local circumstances, knowledge, needs, and priorities into global adaptation actions. We reiterate our support particularly to the most vulnerable developing countries, including Least Developed Countries (LDCs) and Small Island Developing States (SIDS) to enhance progress that contributes to achieving the GGA, such as the development and implementation of NAPs and other strategies to foster greater resilience.
- 84. Loss and damage:** We emphasize our extreme concern at the scale of impacts that are already resulting in economic and non-economic loss and damage associated with the adverse effects of climate change and being felt globally, and particularly by the most vulnerable. Noting the growing risk of loss and damage caused by increased hazards, exposure and vulnerability to both extreme and slow onset events, we recognize the need to increase support for a wide range of measures to avert, minimize, and address loss and damage. Noting that disaster risk reduction response recovery is one of the priorities that should be urgently enhanced, and in order to support those developing countries that are particularly vulnerable to the adverse effects of climate change and to improve their access to the currently available support, we have developed an inventory of our existing and committed support for one aspect of measures to avert, minimize and address loss and damage namely the “G7 Inventory on Climate Disaster Risk Reduction, Response and Recovery” as annexed. We will work to ensure this inventory serves to help vulnerable countries access support, and to identify opportunities to scale up high impact initiatives. We look forward to a fully operational Santiago Network, to catalyze

technical assistance for the implementation of approaches to avert, minimize, and address loss and damage at the local, national, and regional levels in developing countries that are particularly vulnerable to the adverse effects of climate change. We support and call on all other major economies to support the UN Secretary General's initiative, "Early Warnings for All", and its action plan developed by World Meteorological Organization which aims to provide people around the world with early warning systems within five years through capacity building support to help install weather observation equipment and improve data quality.

- 85. Support for the implementation of the Paris Agreement:** Recognizing the need to support ambitious LTSs, NDCs, and NAPs, we will enhance our technical and capacity building support to developing and emerging countries in updating and implementing LTSs, NDCs, and NAPs, and submitting the first biennial transparency reports in a timely way. We support developing countries in their efforts to make climate risk-informed decision-making by supporting scientific research on climate change impact, adaptation, and loss and damage including slow onset events and non-economic loss, by sharing observation data on climate change and impact assessment data, and by assisting capacity building of policymakers and technical staff in the most vulnerable developing countries, in collaboration with partners and relevant institutions in the region.
- 86. International collaboration on subnational climate actions:** Cities account for approximately 70 percent of global GHG emissions, and subnational governments are at the forefront of making global efforts to address climate change as well as of adapting to its impacts. The latest IPCC report stated that government actions at subnational, national, and international levels, with civil society and the private sector, play a crucial role in enabling and accelerating shifts in development pathways towards sustainability and climate resilient development. Therefore, recognizing the vital role of subnational governments in collaboration with other stakeholders and partners to advance climate and energy actions based on local needs and environmental conditions, we work closely with subnational governments in driving energy transitions including providing them access to relevant national climate and energy data, facilitating international city-to-city collaboration and knowledge sharing. We hereby establish "G7 Roundtable on Subnational Climate Actions" as annexed for G7 members to share national policies and programs promoting subnational climate actions both domestic and across borders, seeking co-benefits and exploring international cooperation. We will continue to work with G7 ministers responsible for urban development on net-zero and resilience agenda. We look forward to facilitating a dialogue with the U7 at the Roundtable and disseminating its outputs to G20.
- 87. Climate finance:** Urgent, transformative change is required in order to bridge the investment gap needed to keep a limit of 1.5 °C temperature rise within reach and protect those vulnerable to climate change. We reaffirm our commitments to the developed country Parties' goal of jointly mobilizing USD 100 billion annually in climate finance by 2020 through to 2025, in the context of meaningful mitigation actions and transparency on implementation. We will work together with other developed country Parties to deliver on the Climate Finance Delivery Plan Progress Report's collective actions and recommendations, in order to fully meet the goal in 2023. We recognize the significant role of public funds and underline the need to enhance the mobilization of increased

climate finance from a wide variety of sources including private ones, instruments, and channels in light of the scale of global investments needed for transformative change of all economies to help ambitious NDCs and LTSs to keep a limit of 1.5 °C temperature rise within reach, and to increase the ability to adapt to the adverse effects of climate change and foster climate resilience. We also welcome discussions on an ambitious and fit-for-purpose new collective quantified goal that contributes as a global effort, from a wide variety of sources, public and private, to reaching the goals of the Paris Agreement including the goal stated by Article 2.1.c of the Paris Agreement as part of a global effort. As an essential step forward in addressing climate change, we are committed to accelerating our own efforts to make financial flows consistent with a pathway towards low GHG emissions and climate resilient development, in line with Article 2.1.c of the Paris Agreement. We highlight the need to align financial flows with the goals of the Paris Agreement as reflected by its Article 2.1.c as an overarching goal to collectively place ourselves on the low GHG emissions and climate resilient development trajectory, as well as to more efficiently use financial resources for greater impact. We look forward to continuing to engage with all partners to deliver a substantial outcome on Article 2.1.c at UNFCCC-COP28/the Paris Agreement-CMA5, building on the Sharm el-Sheikh dialogue, that creates a dedicated space for Parties to engage on this goal in an ongoing manner to advance global efforts in this regard, and will include detailed information on the implementation in UNFCCC reporting. Recognizing the critical role of the G7 and that developed country parties should take the lead in mobilizing climate finance, we underscore the need for all countries and stakeholders, who have the capabilities and are not yet among the current providers of international climate finance, to contribute to global efforts in this regard. We highlight the importance of improving access to climate finance, with a specific focus on poor and the most vulnerable countries, particularly LDCs and SIDS.

88. **Green Climate Fund:** We welcome the ongoing second replenishment process for the Green Climate Fund (GCF) and highlight its critical importance. We reaffirm the need for robust G7 pledges for financial contribution, and urge others to do the same, and underscore the need to broaden the GCF's contributor base by encouraging all potential contributors, to engage strongly in an ambitious second replenishment. Through the second replenishment process and development of a new Updated Strategic Plan for 2024-2027, we will work to ensure that the GCF continues to promote the paradigm shift towards low-emission and climate-resilient development pathways by using ambitious, cost-effective, and transformative climate investments; by accelerating innovative solutions and de-risking investments both for mitigation and adaptation; and by supporting the update and implementation of developing countries' NDCs, LTSs, NAPs and other climate change national strategies and plans as well as the alignment of financial flows with the goals of the Paris Agreement, and to ensure the contribution of the GCF to keep a limit of 1.5 °C temperature rise within reach.
89. **Adaptation finance:** We will continue to accelerate efforts to respond to the Glasgow Climate Pact's call to developed country Parties to at least double their collective provision of climate finance for adaptation to developing country Parties from 2019 levels by 2025. We also urge MDBs to commit to ambitious adaptation finance targets, announcing revised and enhanced 2025 projections. We commit to working alongside other contributors to scale up the provision, mobilization and delivery of adaptation finance

including through working together with our recipient partners to improve the access to and effectiveness of adaptation finance, and encouraging non-G7 countries and other contributors to enhance provision and mobilization including private finance for adaptation. We are working with partner contributors to scale up from USD 20 billion in 2019 to USD 40 billion in 2025 according to Climate Finance Delivery Plan Progress Report and in line with the OECD methodology and reporting mechanism, in the context of achieving a balance between mitigation and adaptation in the provision of scaled-up financial resources, recalling Article 9.4 of the Paris Agreement.

- 90. Funding arrangements for responding to loss and damage:** Noting the increasing urgency of enhancing efforts to avert, minimize, and address loss and damage associated with the adverse effects of climate change, we will actively work to successfully implement the decision at UNFCCC-COP27/the Paris Agreement-CMA.4 to establish new funding arrangements, including a fund for assisting developing countries that are particularly vulnerable to the adverse effects of climate change in responding to loss and damage, in the context of Article 8 of the Paris Agreement. We look forward to recommendations from the Transitional Committee on the operationalization of the new funding arrangements, including a fund, in order for such arrangements to deliver at the scale and urgency required, and we underline the importance of identifying and expanding sources of funding from a wide variety of sources including innovative ones, and acknowledge the need to ensure that such arrangements build on and are informed by information on the current landscape of institutions, the gaps within that current landscape, the priority and the most effective ways to address the priority gaps, as well as potential sources of funding. We will focus on developing countries that are particularly vulnerable to the adverse effects of climate change, and ensure coordination and complementarity with existing funding arrangements and initiatives within and outside the UNFCCC/the Paris Agreement. We strongly support the joint V20 and G7 initiative Global Shield against Climate Risks that is a key initiative within the mosaic of funding arrangements to avert, minimize and address loss and damage associated with the adverse effects of climate change.
- 91. Private sector's role to meet adaptation needs and to contribute to averting, minimizing and addressing loss and damage:** We recognize the essential role of the private sector to invest in enhancing adaptation actions and averting, minimizing and addressing loss and damage, alongside public sector efforts, and the need to strengthen this role in order to improve the range of funding arrangements available to respond to loss and damage. Private sector actions and investments can contribute to increasing resilience of infrastructure and global value chains, as well as providing consumers with essential products or services needed to adapt and manage the adverse effects of climate change in various areas, such as agricultural production, water purification, and insurance. We will encourage improving enabling environments to better manage physical climate risks in infrastructure and investment decisions, and working on markets for enhancing the use and effectiveness of disaster risk finance, early action and preparedness, and engage with private sector actions to enhance resilience, including by investing in early warning systems, providing climate information services, and improving the climate resilience of global value chains for essential goods, which complement public sector efforts to protect vulnerable people and ecosystems on which they depend.
- 92. MDBs:** Emphasizing UNFCCC-COP27 outcomes, we call on MDBs and IFIs to reform MDB

processes, practices and priorities, including to scale up funding, to simplify access to climate finance, to expand the provision of innovative financial instruments such as guarantees, and to use their existing funds more strategically, in order to follow up on existing climate commitments, to further strengthen ambitious climate action, and to ensure the full alignment of all their financing activities including indirect and policy-based finance with the goals of the Paris Agreement. We emphasize the importance of implementation of the MDB's Capital Adequacy Framework review recommendations and welcome the ongoing work of the G7 Finance Ministers in this regard. We encourage MDBs to define a new vision and commensurate operational model, channels and instruments that are fit for purpose of adequately addressing the global climate emergency. We call upon MDBs to immediately set out plans to mobilize private finance and to increase their adaptation finance, in line with their respective mandates, and strategically de-risk investments in view of co-sharing risks with the private sector, including through country-led processes and platforms. We urge MDBs to ensure a transparent and inclusive reform process. We call upon MDBs, IFIs and the private sector to enhance the mobilization of public and private finance for climate in emerging markets and developing economies. We encourage MDBs to deploy a full suite of instruments, from grants to guarantees and non-debt instruments, taking into account the challenges that vulnerable countries are facing in relation to climate impacts and debt burdens, and to address risk appetite, with a view to substantially increasing climate finance. It also includes support for appropriate regulatory reforms via development policy operations.