

Environmental Integrity Group

Submission on the Global Stocktake consideration of outputs component

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The Environmental Integrity Group (EIG)¹ is pleased to submit its views on the elements for the consideration of outputs component, taking into consideration the indicative draft structure of the CMA5 Decision on the Global Stocktake, contained in the informal note by the co-chairs of the contact group.

I. INTRODUCTION

According to Article 14 of the Paris Agreement, the CMA shall periodically take stock of the implementation to assess the collective progress towards achieving the purpose of this Agreement and its long-term goals. The outcome of the Global Stocktake shall inform Parties in updating and enhancing, in a nationally determined manner, their actions and support in accordance with the relevant provisions of this Agreement, as well as in enhancing international cooperation for climate action (paragraph 14.3).

Therefore, concrete success factors for the Global Stocktake include:

- a) Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
- b) Increasing the ability to adapt to the adverse impacts of climate change and foster climate resilience and low greenhouse gas emissions development, in a manner that does not threaten food production; and
- c) Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate-resilient development.

The Global Stocktake should seek to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, strengthening environmental integrity.

II. KEY CONSIDERATIONS

1. An effective Global Stocktake

The Global Stocktake will be an important litmus test for the effectiveness of the Paris Agreement. It is not only the first Global Stocktake, it is the most important, because it is the last chance to avoid overshoot of 1.5°C and to bring the world onto a climate resilient development pathway.

The EIG would like to express its gratitude to the co-facilitators of the technical dialogue, with the support of the Secretariat, for their tremendous work in conducting the three technical dialogues and in summarizing outputs in summary reports, taking into account equity and the best available science and an overarching factual synthesis.

The factual synthesis report tells the story of humankind's efforts to tackle the unique civilizational challenge that is climate change. While the Paris Agreement has led to contributions that significantly reduce forecasts of future warming, the world is not on track to meet the long-term goals of the Paris Agreement.

The factual synthesis report clearly points to the interlinkages between the various pillars of climate action. According to the IPCC, effective climate policy aimed at reducing the risks of climate change to natural and human systems involves a portfolio of diverse adaptation and mitigation actions.

¹ Comprised of Georgia, Liechtenstein, Monaco, Mexico, the Republic of Korea, and Switzerland

Transparency is central to the Paris Agreement, as are credible, accountable and transparent actions by Parties and non-party stakeholders.

The EIG is looking for a Global Stocktake that clearly lays out the gaps in implementation, drawing from the technical assessment, and that clearly sets out what it will take to preserve humankind from the worst consequences of climate change. The Global Stocktake must clearly highlight the **systemic transformations** needed to reach the objectives of the Paris Agreement. It must point to the **concrete near-term actions and solutions** that countries and non-party stakeholders can implement to reach these objectives. A sectoral approach using the sectors as defined in IPCC AR6, can make it easier for parties as well as non-party stakeholders to take up these recommendations. Finally, the success of the Global Stocktake will be judged by the concrete actions that it sets out. Therefore, a **concrete follow-up** is key to the success of the Global Stocktake.

2. Note about the chapter C.3

At SB58 in Bonn, Parties could not agree on how to reflect the chapter C2. For the EIG, Article 2.1.c includes all financial flows, including traditional climate finance under Article 9 of the Paris Agreement.

For the EIG, discussions on Finance, regardless of the wording of Chapter C.3, should focus on **how we will give ourselves the means to reach our objectives**, both by ensuring that all financial flows serve the purposes of the Paris Agreement, and by unlocking means of implementation and support. The wording conferred to Chapter C.3, as well as the conceptual differences and relationships between Article 2.1.c and Means of Implementation and Support, should not distract us from focusing on reaching an ambitious outcome. The EIG is pleased to give the assurance that **the Global Stocktake will have to speak to both how to align all financial flows with the objectives of the Paris Agreement, and means of implementation and support.**

Regarding Article 2.1.c, the EIG would like to share the following observations:

- It will not be possible to shift from the billions to the trillions required to implement the goals of the Paris Agreements, without ensuring that all financial flows contribute to our objectives. We need traditional climate finance, but also private finance, and all financial flows, including subsidies, etc to support our objectives.
- The Global Stocktake can facilitate a discussion on how to accompany a just energy transition. Parties have adopted a new work programme (the Just Transition Work Programme) to explore this issue.

III. ELEMENTS FOR THE CONSIDERATION OF OUTPUTS COMPONENT

The EIG foresees the following elements for the consideration of outputs component, taking into consideration the indicative draft structure of the CMA 5 Decision on the Global Stocktake, contained in the informal note by the co-chairs of the contact group.

A. Preamble

- a. Recalling Article 14 of the Paris Agreement;
- b. Recalling Decision 19/CMA.1;
- c. Recalling Article 4.9 of the Paris Agreement, according to which each Party shall communicate a nationally determined contribution (NDC) every five years in accordance with decision 1/CP.21 and any relevant decisions of the Conference of the Parties serving as the meeting of the Parties to this Agreement and be informed by the outcomes of the Global Stocktake referred to in Article 14 to the Paris Agreement;
- d. Recalling Article 7.1, where Parties establish the global goal on adaptation of enhancing adaptive capacity, strengthening resilience and reducing vulnerability; Article 7.9, according to which each Party shall, as appropriate, engage in adaptation planning processes and the implementation of actions, including the development and enhancement of relevant plans, policies and/or contributions and Article 7.10 where each party should submit and update periodically an adaptation communication;
- e. Reference to the IPCC and best available science in AR6.

B. Context and cross-cutting considerations

- a. The Paris Agreement has successfully set the world in motion, but the pace of action is much too slow to achieve the purpose of the Paris Agreement and its long-term goals;
- b. There is a rapidly narrowing window to raise ambition and implement existing commitments in order to limit warming to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
- c. Significant changes have been witnessed since the negotiations and adoption of the Paris Agreement, namely changing patterns of emissions and capacity;
- d. Emphasizing linkages between objectives 2.1.a, 2.1.b, and 2.1.c of the Paris Agreement;
- e. To strengthen the global response to the threat of climate change in the context of sustainable development and efforts to eradicate poverty, governments need to support systems transformations (based on recommendations of the IPCC AR6) that mainstream climate resilience and low GHG emissions development;
- f. Recalling that equity and the best available science will be considered in a Party-driven and cross-cutting manner, throughout the Global Stocktake;
- g. Noting the leadership of those countries who have the most to contribute to the achievement of the Paris Agreement goals;
- h. A fact-based Global Stocktake requires understanding evolving patterns of past, current, and future emissions, as well as evolving patterns of capacity;
- i. Transparency is a fundamental pillar of the Paris Agreement, the Global Stocktake should recognize both the progress and challenges in transparency;
- j. Recognition of the fundamental interconnections between the climate system and nature, including oceans, the cryosphere, and biodiversity, as recalled in the preamble of the Paris Agreement. Acknowledgement of the adoption of the Kunming-Montreal Biodiversity framework and the BBNJ, which represent a good foundation for ambitious climate action. Urge Parties to increase synergistic actions to address climate change and the biodiversity and ocean crisis

- and to consider nature-based solutions and ecosystems-based approaches in their updated national climate goals and in the implementation of these goals, including but not limited to nationally determined contributions, long-term strategies and adaptation communications;
- k. Recall the Paris Agreement noting “the importance of ensuring the integrity of all ecosystems, including oceans, and the protection of biodiversity”. In line with article 4.1(d) of the Convention, and recognizing “the importance of the conservation and enhancement, as appropriate, of sinks and reservoirs of the greenhouse gases referred to in the Convention”;
 - l. Recall that Parties should, when taking action to address climate change, respect, promote and consider their respective obligations on human rights, the right to health, the rights of indigenous peoples, local communities, migrants, children, persons with disabilities and people in vulnerable situations and the right to development, as well as gender equality, empowerment of women and intergenerational equity;
 - m. Recognizing the need to protect human rights, enhance a gender and intersectional perspective and intergeneration equity for the implementation of the Paris Agreement;
 - n. Underline the importance of international cooperation on climate action;
 - o. Underline the central contribution of non-party stakeholders, noting the need to strengthen transparency and accountability of actions;
 - p. Recognizing the cost of inaction: according to the IPCC AR6, mitigation options costing USD100 tCO₂-eq⁻¹ or less could reduce global GHG emissions by at least half the 2019 level by 2030. Global GDP continues to grow in modelled pathways, and the global economic benefit of limiting warming to 2°C is reported to exceed the cost of mitigation.

C. Collective progress towards achieving the purpose and long-term goals of the Paris Agreement, including under Article 2, paragraph 1 (a-c), in the light of equity and the best available science, and informing Parties in updating and enhancing, in a nationally determined manner, action and support

C.1 Mitigation

1.1 Submit enhanced NDCs with 2035 climate targets aligned with the 1.5°C objective well ahead of COP30, considering the recommendation of IPCC AR6 to reduce GHG emissions globally by 43% by 2030 and by 60% by 2035 compared to 2019 levels, and reach net zero CO2 emissions by 2050 globally, calling on all Parties to apply common time frames

- a. Assessment of collective progress: Emissions are not in line with modelled global mitigation pathways consistent with the temperature goal of the Paris Agreement, and there is a rapidly narrowing window to raise ambition and implement existing commitments to limit warming to 1.5 °C above pre-industrial levels. Net anthropogenic GHG emissions have increased since 2010 across all major sectors globally. Total net anthropogenic GHG emissions have continued to rise during the period 2010–2019, as have cumulative net CO2 emissions since 1850.² Based on current NDCs, the gap to emissions consistent with limiting warming to 1.5 °C in 2030 is estimated to be 20.3–23.9 Gt CO2 eq³. The Paris Agreement provides for the progression, including by stating the expectation that each Party's successive NDCs will represent its highest possible ambition, reflecting its common but differentiated responsibilities and respective capabilities, in the light of different national circumstances, and will be informed by the outcomes of the Global Stocktake. Progression may involve, among other options, more rapid reductions through adopting more stringent targets and more comprehensive forms of targets.⁴
- b. Key recommendations: NDCs should collectively reflect the ambition required to limit warming to 1.5°C: at least 43% GHG emissions reductions by 2030 and 60% by 2035, relative to 2019 levels. Parties should submit ambitious economy-wide NDCs that cover all sectors and greenhouse gas emissions, adopting absolute emission reduction targets.
- c. Tracking the achievement: NDC Synthesis reports, LT-LEDS Synthesis reports
- d. Supporting initiatives: NDC Partnership, UNDP Climate Promise

1.2 Aim for global peaking of emissions by 2025

- a. Assessment of collective progress: At COP 21 in Paris, Parties agreed to aim to reach global peaking of GHG emissions as soon as possible, recognizing that peaking will take longer for developing country Parties. According to the IPCC AR6, global GHG emissions need to peak between 2020 and 2025 to limit warming to the Paris Agreement temperature goal. Emissions have peaked in developed and some developing countries, but global emissions have not yet peaked. All Parties need to undertake rapid and deep reductions in GHG emissions in the decades after peaking.
- b. Key recommendations: All Parties need to undertake rapid and deep reductions in GHG emissions in the decades after peaking. Limiting global warming to 1.5 °C with limited or no overshoot implies a reduction of around 43%, 60% and 84% in global GHG emissions below the 2019 level by 2030, 2035 and 2050 respectively, as assessed by the IPCC. In these scenarios, the median time frame for reaching net zero CO2 emissions globally is in the early 2050s, and net zero GHG emissions by the early 2070s⁵.

² IPCC AR6 WGIII SPM

³ FCCC/PA/CMA/2022/4.

⁴ Technical Dialogue Synthesis Report

⁵ Technical Dialogue Synthesis Report

- c. Tracking the achievement: IPCC AR7 WGIII, UNEP Emissions Gap Report, NDC Synthesis Reports, LT-LEDS Synthesis reports
- d. Supporting initiatives: NDC Partnership, UNDP Climate Promise, Global Greenhouse Gas Watch (G3W)

1.3 Invite all those that haven't done so to strengthen their 2030 NDCs, and invite all Parties to revisit NDCs in line of new available science

- a. Assessment of collective progress: Global emissions in 2030 associated with the implementation of NDCs announced prior to COP26 are lower than the emissions implied by the original NDCs. Global GHG emissions in 2030 associated with the implementation of NDCs announced prior to COP26 would make it likely that warming will exceed 1.5°C during the 21st century. Likely limiting warming to below 2°C would then rely on a rapid acceleration of mitigation efforts after 2030⁶.
- b. Key recommendations: Parties that haven't done so since the adoption of the Paris Agreement to revisit their 2030 NDC targets. Parties to further revisit their NDCs following the publication of new IPCC findings.
- c. Tracking the achievement: NDC Synthesis reports, LT-LEDS Synthesis reports
- d. Supporting initiatives: NDC Partnership, Global Greenhouse Gas Watch (G3W)

1.4 Strengthen near-term action and domestic measures to implement NDCs

- a. Assessment of collective progress: More ambition is needed in domestic mitigation measures in NDCs to realize existing and emerging opportunities, in order to halve global emissions by 2030. In many countries, policies have enhanced energy efficiency, reduced rates of deforestation and accelerated technology deployment, leading to avoided and in some cases reduced or removed emissions. Growing numbers of laws and executive orders have impacted global emissions and were estimated to result in 5.9 GtCO₂-eq yr⁻¹ less emissions in 2016 than they otherwise would have been⁷. As reported in their latest NCs and BRs, almost all developed country Parties have national climate legislation or policies in place, with half having national climate legislation. Developing countries have also started integrating climate change into their sustainable development plans and legal frameworks, with some having done so as early as 1992. Approximately 51 per cent of developing country Parties that have submitted NCs or BURs have established a national climate framework comprising a national climate strategy, plan or policy, while only a few developing country Parties have put in place national legislation on climate change or a sectoral plan⁸. Therefore, much more ambition is needed in domestic mitigation measures in NDCs to realize existing and emerging opportunities, in order to halve global emissions by 2030⁹.
- b. Key recommendations: Strengthen near-term action to aim for peaking of emissions by 2025
- c. Tracking the achievement: IPCC Reports, NDC Synthesis Report, UNEP Emissions Gap Report
- d. Supporting initiatives: NDC Partnership

1.5 Encourage Parties to provide clearer information on fairness and ambition in the light of their national circumstances-in their NDCs

- a. Assessment of collective progress: A promising way to operationalize equity in mitigation issues is for Parties to provide clearer information on fairness and ambition in the light of their national

⁶ IPCC AR6 WGIII SPM

⁷ IPCC AR6 WG III

⁸ Synthesis report on the state of greenhouse gas emissions by sources and removals by sinks and mitigation efforts undertaken by Parties, including the information referred to in Article 13, paragraph 7(a), and Article 4, paragraphs 7, 15 and 19, of the PA (unfccc.int)

⁹ Summary report of TD 1.2

circumstances in their NDCs¹⁰. All countries are expected to explain in their NDCs how their NDCs are fair and ambitious in the light of their national circumstances. The vast majority of countries (98 per cent) have already done so voluntarily, although such information is mandatory for second NDCs¹¹. Many different frameworks and criteria for assessing fairness and ambition exist, though none of them have universal support. Parties could consider recent initiatives such as the Global Greenhouse Gas Watch (G3W) initiative to support the provision of actionable information to the UNFCCC Parties. The WMO Global Greenhouse Gas Watch aims to establish internationally coordinated monitoring of greenhouse gas fluxes.

- b. Key recommendations: Encourage Parties to provide clearer information on fairness and ambition in the light of their national circumstances in their NDCs.
- c. Tracking the achievement: NDC information necessary for clarity, transparency and understanding
- d. Supporting initiatives: Global Greenhouse Gas Watch (G3W)

1.6 Reinforce emission reduction efforts to avoid global warming exceeding 1.5°C, noting that any potential case of overshoot should launch a political dialogue to consider the strengthening of NDCs

- a. Assessment of collective progress: According to the IPCC, if global warming transiently exceeds 1.5°C in the coming decades or later (overshoot), then many human and natural systems will face additional severe risks, compared to remaining below 1.5°C. Depending on the magnitude and duration of overshoot, some impacts would cause release of additional greenhouse gases and some would be irreversible, even if global warming is reduced. Risks to human systems would increase, including those to infrastructure, low-lying coastal settlements, some ecosystem-based adaptation measures, and associated livelihoods, cultural and spiritual values. Projected impacts are less severe with shorter duration and lower levels of overshoot¹². There is overconfidence about the ease of avoiding overshooting, namely in the amount of CO₂ removal required for overshoot due to uncertainty in peak warming, in technological ability of scaling up permanent CO₂ removal technologies, and in effectiveness of CO₂ removal in reversing global warming¹³. Recognition is needed of the rapid and accelerating changes occurring in the cryosphere and the ocean, which signal the risk of reaching tipping points and the urgent necessity to reduce greenhouse gas emissions to avoid overshooting 1.5°C. Even temporary overshoot of 1.5°C would lead to additional permanent losses, beyond adaptation limits from irreversibly higher sea-level rise and reduced freshwater availability. Based on the pace of documented global impacts due to climate change and based on the most recent science, including the IPCC AR6, global temperature rise of 2°C is no longer compatible with the goals of the United Nations Framework Convention on Climate Change (Article 2). Paris Agreement commitments should therefore focus on 1.5°C exclusively and as a matter of extreme global urgency.
- b. Key recommendations: As nations continue to pursue efforts to limit the global temperature increase to 1.5 °C above pre-industrial levels, and overshoot increases risks to people and planet, Parties should spare no effort to prioritize early action to stringently reduce emissions, noting that any potential case of overshoot should launch a political dialogue to consider the strengthening of NDCs.
- c. Tracking the achievement: IPCC AR7
- d. Supporting initiatives: See other mitigation recommendations

¹⁰ https://unfccc.int/sites/default/files/resource/GST_SR_23c_Addendum_Final_02230417.pdf.

¹¹ Technical Dialogue Synthesis Report

¹² IPCC AR6 WG II SPM

¹³ Rogelj J, Geden O, Cowie A, Reisinger A et al., 2021, Net-zero emissions targets are vague: three ways to fix, *Nature*, Vol: 591, Pages: 365-368, ISSN: 0028-0836

1.7 Invite the leadership of those who have the most to contribute to the achievement of the Paris Agreement

- a. Assessment of collective progress: Regional contributions to global GHG emissions continue to differ widely. Variations in regional, and national per capita emissions partly reflect different development stages, but they also vary widely at similar income levels. The 10% of households with the highest per capita emissions contribute a disproportionately large share of global household GHG emissions. At least 18 countries have sustained GHG emission reductions for longer than 10 years¹⁴. Current estimates of the historical emissions causing climate change up to today shows that developed countries and developing countries have emitted historically analogous quantities of greenhouse gases, while recognizing that more population lives in developing countries and per capita emissions are unequal. According to the latest IPCC report, developed countries are responsible for 45% of global cumulative historical CO₂ emissions, taking into account LULUCF. G20 countries represent jointly around 80% of global emissions. Parties further recognize the special circumstances of SIDS and LDCs.
- b. Key recommendations: Parties to be invited to contribute to emission reduction efforts in a manner that reflects their past, current, and future responsibility as well as their capacity. Invite the United Nations Secretary General to convene countries that have the most to contribute to the achievement of the Paris Agreement, ahead of the 2025 NDC submissions, in order to galvanize momentum around ambitious NDCs.
- c. Tracking the achievement: NDC Synthesis reports, LT-LEDS Synthesis reports
- d. Supporting initiatives: NDC Partnership

1.8 Call for the regular submission of Biennial Transparency Report under the Enhanced Transparency Framework

- a. Assessment of collective progress: Under the MRV arrangements under the Convention (decision 1/CP.16), developed country Parties have communicated quantified economy-wide emission reduction targets, while developing country Parties implement NAMAs in the context of sustainable development, supported and enabled by technology transfer, finance and capacity-building. Although developing country Parties were not required to set targets, some Parties have voluntarily reported this information in their BURs. As of 31 January 2022, 43 of 44 developed country Parties had submitted BR4s. However as at 31 January 2022, only 78 of 154 developing country Parties had submitted their first BUR, 36 their second BUR, 21 their third BUR and 10 their fourth BUR¹⁵. A substantial delay in the submission of BURs can be seen in some large developing countries (excluding SIDS and LDCs).
- b. Key recommendations: Encourage Parties to prioritize the development of Biennial Transparency Reports under the Enhanced Transparency Framework. Encourage efforts to build capacity towards the development of their Biennial Transparency Reports under the Enhanced Transparency Framework. Encourage developing country Parties to prepare and submit project proposals in order to receive financial support from the Global Environment Facility for preparing their biennial transparency reports and improve their reporting and transparency systems. Urge international organizations to strengthen support for developing countries lacking capacity for preparing their biennial transparency reports.
- c. Tracking the achievement: NDC Synthesis Reports
- d. Supporting initiatives: Arrangements of the Global Environment Facility for providing financial support to developing country Parties for preparing their first and subsequent biennial transparency reports, facilitate programmatic approaches, support Parties to improve their reporting and transparency systems and build long-term institutional capacities for transparency.

¹⁴ IPCC AR6 WG III SPM

¹⁵ Synthesis report on the state of greenhouse gas emissions by sources and removals by sinks and mitigation efforts undertaken by Parties, including the information referred to in Article 13, paragraph 7(a), and Article 4, paragraphs 7, 15 and 19, of the PA (unfccc.int)

1.9 Increase the deployment of clean energy capacity globally by 2030, and welcome efforts to triple the deployment of renewable energy¹⁶

- a. Assessment of collective progress: Achieving net zero CO₂ and GHG emissions requires systemic transformations across all sectors, phasing out high-emission systems and technologies while scaling up low- and zero emission alternatives, and implementing both supply- and demand-side measures.
- b. Key recommendations: Reaching this target will require expanding and upgrading the electricity grids to integrate increasing clean energy sources, incentivizing the deployment of clean energy technologies and/or setting clean energy targets or mandates based on national circumstances, and addressing impediments including removing incentives for fossil fuels, addressing regulatory barriers to the deployment, scale up, and use of clean energy technologies, including grid infrastructure and storage, speeding up permitting processes, scaling up grid investments, accelerating storage technologies and ensuring access to adequate finance for developing countries. Addressing barriers implies namely addressing massive scale of investment needed including for upgrading infrastructure (e.g. grid expansion) and battery storage; lack of skilled workforce with technical capacity in installing and maintaining clean energy systems and battery storage; negative impacts of climate change on the availability and potential of clean energy; and supply chain vulnerabilities due to small and weak local industry base to produce clean energy infrastructure.
- c. Tracking the achievement: IEA and IRENA reports
- d. International cooperation, supporting initiatives: Just Energy Transition Partnerships, Mission Innovation, Sustainable Energy for All, the Clean Power Breakthrough, Energy Transition Accelerator

1.10 Increase the annual rate of energy efficiency improvements across sectors by 2030 globally, including by ramping up electrification, noting recommendations to double energy efficiency by 2030¹⁷

- a. Assessment of collective progress: The pace of global energy intensity improvements noticeably slowed in the second half of the last decade. Based on International Energy Agency (IEA) analysis, there is potential for the annual energy intensity improvement rate to double from its current level, so as to ensure prosperity and sustainable economic growth and in order to be in line with global climate goals. According to the IPCC AR6, mitigation options like energy efficiency are technically viable, are becoming increasingly cost effective, and are generally supported by the public. This enables deployment in many regions.
- b. Key recommendations: Ramping up annual energy efficiency progress from 2.2% today to over 4% annually by 2030 could harbor a number of social and economic benefits, including creating jobs, expanding energy access, reducing energy bills, decreasing air pollution, and diminishing countries' reliance on fossil fuel imports. Therefore, increase the annual rate of energy efficiency improvements across sectors by 2030 globally, including by ramping up electrification, noting recommendations to double energy efficiency by 2030.
- c. Tracking the achievement: Domestic energy consumption
- d. Supporting initiatives: IEA Sønderborg Action Plan, Global Commission for Urgent Action on Energy Efficiency, G20 Voluntary Action Plan on Doubling the Rate of Energy Efficiency Improvement by 2030'

¹⁶ Microsoft Word - New Delhi Leaders' Declaration Final Adoption (g20.org)

¹⁷ IEA (2023), Energy Efficiency: The Decade for Action, IEA, Paris <https://www.iea.org/reports/energy-efficiency-the-decade-for-action>, License: CC BY 4.0

1.11 Accelerate decarbonization 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 and end new direct public support for the international unabated coal sector

- a. Assessment of collective progress: Projected cumulative future CO₂ emissions over the lifetime of existing and currently planned fossil fuel infrastructure without additional abatement exceed the total cumulative net CO₂ emissions in pathways that limit warming to 1.5°C. The continued installation of unabated fossil fuel infrastructure will 'lock-in' GHG emissions.
- b. Key recommendations: Aligning future CO₂ emissions from the power sector with the Paris Agreement objectives requires decommissioning and reduced utilization of existing fossil fuel-based power sector infrastructure, switches to low-carbon fuels, and cancellation of new coal fossil fuel plants without CCS (IPCC AR6). This involves canceling new coal power projects and accelerating the retirement of existing coal plants. Existing coal plants would need to retire 10 to 25 years earlier than the historical average operating lifetime to achieve this goal. Completing all planned projects would further reduce the viable lifetime of all plants by 5 to 10 years. Phasing out coal in the next few decades will present economic, social, and security challenges, which will vary across regions based on existing coal infrastructure, availability of alternatives, economic development, and technological and institutional lock-in.
- c. Tracking the achievement: Parties are invited to describe their efforts to phase out fossil fuels as part of their NDCs.
- d. Supporting initiatives: Beyond Oil and Gas Alliance, Powering Past Coal Alliance

1.12 Reduce methane emissions by 30% by 2030 from the 2020 level

- a. Assessment of collective progress: Deep GHG emissions reductions by 2030 and 2040, particularly reductions of methane emissions, lower peak warming, reduce the likelihood of overshooting warming limits and lead to less reliance on net negative CO₂ emissions that reverse warming in the latter half of the century (IPCC AR6 WGIII). Global methane emissions from energy supply, primarily fugitive emissions from production and transport of fossil fuels, accounted for about 18% of global GHG emissions from energy supply in 2019.
- b. Key recommendations: Reduce methane emissions by 30% by 2030 from the 2020 level.
- c. Tracking the achievement: Parties are due to report on their efforts to reduce methane emissions as part of their emissions inventory
- d. Supporting initiatives: Global Methane Pledge, Global Methane Hub, Climate and Clean Air Coalition

1.13 Encourage modal shift in transportation systems, and increase the share of zero-emission vehicles, including electric vehicles (EVs) and hydrogen vehicles, with measures to promote demand and facilitate the deployment

- a. Assessment of collective progress: Demand-side options and low-GHG emissions technologies can reduce transport sector emissions in developed countries and limit emissions growth in developing countries. Demand-focused interventions can reduce demand for all transport services and support the shift to more energy efficient transport modes. Electric vehicles powered by low-emissions electricity offer the largest decarbonisation potential for land-based transport, on a life cycle basis. Many mitigation strategies in the transport sector would have various co-benefits, including air quality improvements, health benefits, equitable access to transportation services, reduced congestion, and reduced material demand.
- b. Key recommendations: Global transport-related CO₂ emissions need to fall by 59% by 2050 relative to modelled 2020 emissions to limit warming to 1.5°C with no or limited overshoot, but with regionally differentiated trends.
- c. Tracking the achievement: Parties are invited to describe their efforts to reduce transport emissions in their NDCs

- d. Supporting initiatives: Zero-Emission Vehicle (ZEV) Alliance, United Nations Sustainable Mobility for All Initiative, Global Fuel Economy Initiative (GFEI), Electric Vehicle Initiative (EVI), Transport Decarbonization Alliance, Partnership on Sustainable, Low Carbon Transport (SLoCaT)

1.14 **Reduce the carbon intensity of building operations, minimize embodied emissions, and increase the rate of building retrofits to 3.5% by 2040, aiming for all new and existing assets to be net zero across their life cycles by 2050**

- a. Assessment of collective progress: By 2050, bottom-up studies show that up to 61% (8.2 GtCO₂) of global building emissions could be mitigated. Sufficiency policies that avoid the demand for energy and materials contribute 10% to this potential, energy efficiency policies contribute 42%, and renewable energy policies 9%. The largest share of the mitigation potential of new buildings is available in developing countries while in developed countries the highest mitigation potential is within the retrofit of existing buildings. The 2020–2030 decade is critical for accelerating the learning of know-how, building the technical and institutional capacity, setting the appropriate governance structures, ensuring the flow of finance, and in developing the skills needed to fully capture the mitigation potential of buildings.
- b. Key recommendations: Reduce the carbon intensity of building operations, minimize embodied emissions, and increase the rate of building retrofits to 3.5% by 2040, aiming for all new and existing assets to be net zero across their life cycles by 2050.
- c. Tracking the achievement: Parties are invited to describe their efforts to reduce buildings emissions in their NDCs
- d. Supporting initiatives: Global Alliance for Buildings and Construction (Global ABC), Global Environment Facility (GEF) Sustainable Cities Program, UN Environment Programme (UNEP) and International Energy Agency (IEA) Energy Efficiency in Buildings Program (EEBP), Urban Sustainability Framework (USF), Energy Efficiency in Buildings and Appliances (IEA-EBC), C40 Cities Climate Leadership Group

1.15 **Scale up Nature-Based Solutions and/or Ecosystem-Based Approaches¹⁸ as important drivers of mitigation ambition, and implement the targets of the Kunming-Montreal Global Biodiversity Framework**

Sub-item 1.15.1 **Halt and reverse forest loss and land degradation by 2030**

- a. Assessment of collective progress: In 2019 AFOLU accounted for 13 Gt CO₂ eq (22%) of global GHG emissions. Around half of net AFOLU emissions result from land-use change: predominantly CO₂ from deforestation. Despite a decline in deforestation since 2000, the rate remains high, with 95% of global deforestation occurring in the tropics but incentivized by consumers globally.
- b. Key recommendations: Halt and reverse deforestation by 2030, namely set zero net deforestation targets, adopt policies to conserve and restore land carbon stocks and protect natural ecosystems, in order to unlock large-scale CO₂ absorption.¹⁹ Develop strategies for conservation and restoration of ecosystems generating resilient communities, livelihoods, and landscapes, as a contribution to carbon storage and sequestration. Ensure inclusive decision making and the inherent rights of Indigenous Peoples and local communities, including processes to ensure free prior and informed consent, as integral to the protection and restoration of ecosystem sinks and reservoirs. Strengthen Indigenous Peoples, local communities and small farmers land and tenure rights. Strengthen the overall importance of transparency in relation to climate mitigation pledges that involve land, in

¹⁸ According to the IPCC AR6 WGII, Ecosystem based Adaptation (EbA) is recognised internationally under the Convention on Biological Diversity (CBD14/5). A related concept is Nature-based Solutions (NbS), which includes a broader range of approaches with safeguards, including those that contribute to adaptation and mitigation. The term 'Nature-based Solutions' is widely but not universally used in the scientific literature.

¹⁹ Technical Dialogue Synthesis Report

Nationally Determined Contributions and elsewhere, due to the potential impact on livelihoods and biodiversity.

- c. Tracking the achievement: Parties are invited to describe their efforts to halt and reverse deforestation and protect ecosystems in their NDCs
- d. Supporting initiatives: Kunming-Montreal Global Biodiversity Framework, Race to Resilience, UN 'System of Environmental Economic Accounting - Ecosystem Accounts' (UNSEEA-EA), the Land Use Breakthrough, Glasgow Leaders' Declaration on Forest and Land Use, Forest and Climate Leaders' Partnership, Green Gigaton Challenge, High Ambition Coalition for Nature and People, FACT Dialogue, Tropical Forest Alliance, UN Decade on Ecosystem Restoration (2021-2030), Forest Declaration Platform, Science Based Targets Initiative and its Forest, Land and Agriculture Guidance, Finance Sector Deforestation Action, Business for Nature

Sub-item 1.15.2 **Preserve and restore ocean and coastal ecosystems and scale-up ocean-based mitigation solutions, including blue carbon**

- a. Assessment of collective progress: Reaching net zero emissions will require protecting natural ocean-based sinks²⁰. Recent research has highlighted the ocean's potential to not be just a 'victim' of the climate crisis, but also a 'solution' to tackle climate change. However, efforts are yet to be done to realize the full potential of ocean-based climate actions to reduce, sequester, and store greenhouse gas emissions. It is crucial that sustainable ocean action is accelerated immediately if we are to address the current dual ocean and climate crises, as well as unlock the full range of benefits; from healthy and resilient marine and terrestrial systems, to improved income and livelihoods for coastal communities. The Convention recognizes the ocean as a major carbon sink that needs to be enhanced and conserved. In addition to this, blue carbon has been identified as one of the most promising nature-based solutions to climate change and can be found in many coastal countries. This has been referred on the IPCC's 2013 Wetlands Supplement and in the related National GHG Inventories, but much more can be done also in other ecosystems that offer great mitigation potential.
- b. Key recommendations: The ocean offers a diverse set of mitigation actions that could also be considered for the outputs of the Global Stocktake, including efforts on decarbonizing the energy sector through offshore renewable energy and the reduction of emissions from the shipping sector. Finally, develop strategies for conservation and restoration of blue carbon ecosystems generating resilient communities, livelihoods, and landscapes, as a contribution to carbon storage and sequestration.
- c. Tracking the achievement: Parties are invited to describe their efforts to protect ocean and coastal ecosystems in their NDCs
- d. Supporting initiatives: Kunming-Montreal Global Biodiversity Framework, UNFCCC annual Ocean and Climate Change Dialogue, High-Level Panel for a Sustainable Ocean Economy, Race to Resilience, UN 'System of Environmental Economic Accounting - Ecosystem Accounts' (UNSEEA-EA), Green Gigaton Challenge, High Ambition Coalition for Nature and People, FACT Dialogue, UN Decade on Ecosystem Restoration (2021-2030), Business for Nature

1.16 **By 2030 foster climate resilient, sustainable agriculture that increases yields and agroforestry, expands sustainable production systems, ensures food security and reduces agricultural greenhouse gas emissions by 20%, and halve the share of food production lost and per capita food waste relative to 2017**

- a. Assessment of collective progress: According to the IPCC, food systems contribute between an equivalent to 21-37% of total anthropogenic emissions. The IPCC emphasizes the need for a food system approach that evaluates the synergies and tradeoffs of food system response options for

²⁰ Technical Dialogue Synthesis Report

food security, climate change adaptation, and mitigation, in order to maximize co-benefits and avoid adverse side effects. The IPCC also highlights that both demand-side and supply-side mitigation options have significant potential for reducing emissions from the food system²¹. Quantified emission reductions in agricultural projects are limited to date, and reductions in emissions have often resulted from policy innovations outside of the climate space or market trends.²²

- b. Key recommendations: The IPCC recommends several approaches to reduce emissions in the field of agriculture. These include: 1. Adoption of farming system approaches such as agroecology, conservation agriculture, integrated production systems, and organic farming. These practices have the potential to sequester significant amounts of soil carbon and reduce emissions from on-field practices like rice cultivation, fertilizer management, and manure management. 2. Implementation of sustainable land management approaches, which can lead to significant synergies between adaptation and mitigation in agriculture. 3. Reduction of nutrient inputs and cattle numbers, which has been observed to decrease agricultural N₂O and CH₄ emissions, namely in Europe. 4. Policy efforts and subsidy programs that promote sustainable development in agriculture and practices that reduce GHG emissions, such as the subsidy program implemented in Brazil in 2010.
- c. Tracking the achievement: work under the Koronivia Joint Work on Agriculture
- d. Supporting initiatives: work under the Koronivia Joint Work on Agriculture

1.17 Increase sustainable consumption and circular economy policies

- a. Assessment of collective progress: Increasing the sustainability of consumption will be essential to meeting the objectives of the Paris Agreements. Households in the top 10% income bracket, for example, contribute upwards of 45% of GHG emissions globally, while the bottom 50% accounts for 15% at most. Shifting consumption patterns, particularly among the world's wealthiest, could slash emissions by 40-70% by 2050 when compared with current climate policies.
- b. Key recommendations: A portfolio of policies can help drive these changes, such as increasing taxes on high-emissions consumption and subsidizing more sustainable behaviors like walking or cycling. Circular economy policies and initiatives can also significantly reduce unnecessary consumption of materials, especially in heavy industry sectors such as steel.
- c. Tracking the achievement: BTRs, 2030 Agenda SDG 12, Sustainable Development Goal Report
- d. Supporting initiatives: ActNow campaign, among many other global, national or local campaigns

1.18 Tourism and climate change

- a. Assessment of collective progress: According to UNWTO/ITF research, released in December 2019 at COP25, CO₂ emissions from tourism are forecasted to increase by 25% by 2030 from 2016 levels. Therefore, the need to scale up climate action in tourism remains urgent.
- b. Key recommendations: Promote sustainable tourism
- c. Tracking the achievement: UNWTO reports
- d. Supporting initiatives: The Glasgow Declaration: A Commitment to a Decade of Climate Action in Tourism

1.19 Urge all Parties to fulfil their obligations under the Paris Agreement so as to ensure the protection of human rights, and to include human rights-based approaches, including respect for the rights of Indigenous Peoples, and measures to enhance social equity

- a. Assessment of collective progress: Climate change greatly impacts the world's most vulnerable communities and social groups, whether in developed or developing countries, and exacerbates

²¹ IPCC AR6 WGII Chapter 04 and IPCC AR6 WGIII Chapter 12

²² IPCC AR6 WGII Chapter 08, IPCC AR6 WGIII Chapters 04, 07

existing inequalities²³. Moreover, the IPCC confirms in its AR6 Summary for Policymakers that “adaptation and mitigation actions that prioritize equity, social justice, climate justice, rights-based approaches, and inclusivity, lead to more sustainable outcomes, reduce trade-offs, support transformative change and advance climate resilient development.” (C.2.5). Additionally, all Parties to the Paris Agreement have international human rights obligations, and have confirmed in the context of the Paris Agreement to respect, promote and consider those in the context of climate action. The continued reliance on fossil fuel production has contributed to inequality, human rights violations. The failure to effectively integrate human rights in the preparation, content, and implementation of NDCs is hampering ambitious and just policies.

- b. Key recommendations: Respect, protect and consider human rights obligations, including the rights of Indigenous Peoples, and adopt intersectional approaches in the planning, design, implementation and monitoring and evaluation of all relevant planning documents and processes related to the implementation of the Paris Agreement. Ensure meaningful and effective public participation in the planning, design, and implementation of all relevant planning documents and processes related to the implementation of the Paris Agreement. Enhance the protection of environmental human rights defenders in the context of climate action.
- c. Tracking the achievement: Parties are invited to describe their efforts to respect and protect human rights in their NDCs, as part of the information necessary for clarity, transparency, and understanding.
- d. Supporting initiatives: Human rights mechanisms, OHCHR toolkit for integrating human rights in NDCs, and many other resources

C.2 Adaptation

2.1 Reiterate the importance of limiting global temperature rise to 1.5°C, to prevent the need for adaptation

- a. Assessment of collective progress: See Mitigation chapter
- b. Key recommendations: Limiting global warming “to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels” is the fundamental precondition for successful adaptation.
- c. Tracking the achievement: See Mitigation chapter
- d. Supporting initiatives: See Mitigation chapter

2.2 By 2030, ensure that all countries have National Adaptation Plans which address the country specific key risks of climate change, and submit Adaptation Communications

- a. Assessment of collective progress: According to the 2022 UNEP Adaptation Gap Report, at least 84 percent of Parties have established national adaptation plans, strategies, laws and policies, while 50 percent of Parties have two or more planning instruments in place. Collectively, there is increasing ambition in plans and commitments for adaptation action and support, but most observed adaptation efforts are fragmented, incremental, sector-specific and unequally distributed across regions.²⁴
- b. Key recommendations: Parties and non-Party stakeholders need to put in place durable, long-term reforms that integrate climate change risks into all aspects of planning, decision-making and implementation²⁵. Support parties in performing climate change risk assessments to identify key risks and in developing National Adaptation Plans addressing these key risks. Applying the

²³ Technical Dialogue Synthesis Report

²⁴ Technical Dialogue Synthesis Report

²⁵ Technical Dialogue Synthesis Report

precautionary principle, Parties should consider also high emissions scenarios when developing long-term national adaptation plans. Parties should further consider reflecting their progress in mainstreaming the adaptation cycle to undertake more ambitious adaptation actions when periodically updating these Adaptation Communications²⁶. Recognize also the efforts of some Parties in incorporating an adaptation component in their NDC, which allows them to reflect their commitments to address their vulnerability and protect their territory, including their biological, social and cultural diversity.

- c. Tracking the achievement: Number of NAPs and Adaptation Communications submitted, Reports about the publication of the different instruments.
- d. Supporting initiatives: Global Adaptation Center, Adaptation Research Alliance²⁷

2.3 [Placeholder for inputs from the GlaSS regarding metrics for adaptation]

The Global Goal on Adaptation (GGA)—established under Article 7.1 of the Paris Agreement to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change— is part of the Global Stocktake in which Parties to the Paris Agreement will assess the collective progress toward achieving it. The ongoing work under the Glasgow-Sharm-el-Sheikh work programme on the GGA aims to find ways to operationalize the GGA.

2.4 **By 2027, ensure universal coverage of early warning systems, connected to longer-term risk management systems, and supported by effective risk communication and public stakeholder dialogue to prompt informed action, and by 2030 universal coverage of climate services in priority climate-sensitive sectors (agriculture and food security, health, disaster risk reduction, energy, and water)**

- a. Assessment of collective progress: Early warning systems are a key element of the natural hazards prevention next to protective measures such as risk-based spatial planning or (nature-based) protection infrastructures. Despite the urgent need, only half of the countries worldwide report having adequate hazards or multi-hazards early warning systems. There are large gaps in the global observing system necessary to generate these forecasts, and even fewer have regulatory frameworks that connect early warnings to emergency plans. Early warning systems have proven to be an effective way to adapt to climate change by providing a cost-effective and reliable way of protecting lives and livelihoods from natural hazards such as floods, heatwaves, or storms. According to the Global Commission on Adaptation, giving just 24 hours' notice of an impending hazardous event can reduce damage by 30 percent²⁸.
- b. Key recommendations: Extend early warning systems to all countries and make information about multi-hazards available at all scales, including to local communities. Introduce regional, and local coordination units, which would serve as focal points for stakeholders and Parties enabling a swift response to climate induced risks and impacts, building on an impact inventory as a tool for risk assessment and monitoring, reporting and learning, across the adaptation implementation cycle²⁹.
- c. Tracking the achievement: Work of the Global Commission on Adaptation, WMO and UNDRR
- d. Supporting initiatives: Early Warnings for All initiative, co-led by the World Meteorological Organization (WMO) and the United Nations Office for Disaster Risk Reduction (UNDRR), with support from the International Telecommunication Union (ITU) and the International Federation of Red Cross and Red Crescent Societies (IFRC) and other partners, Global Commission on Adaptation

²⁶ Technical Dialogue Synthesis Report

²⁷ Inputs and suggestions welcome

²⁸ Early Warnings for All | World Meteorological Organization (wmo.int)

²⁹ GST TD 1.3 Summary Report GST_TD1.3 Summary Report_15_August_Final.pdf (unfccc.int)

2.5 Mainstream adaptation action into all areas of policy planning, in particular into vulnerable sectors, and strengthen national legal and governance frameworks around adaptation, ensuring multilevel coordination

- a. Assessment of collective progress: Across the adaptation cycle, progress is being made in mainstreaming climate-related risks in decision-making. However, sustained and enhanced action is needed to fully implement NAPs and planning processes over time towards implementing durable changes that reduce risks equitably for the most vulnerable³⁰. As at 31 August 2022, at least 84 per cent of Parties have at least one adaptation planning instrument (a plan, strategy, law or policy) in place³¹.
- b. Key recommendations: Mainstream adaptation action into all areas of policy planning, in particular into vulnerable sectors, and strengthen national legal and governance frameworks around adaptation, ensuring multilevel coordination. Use each iteration of the adaptation cycle as an opportunity to understand progress and strengthen efforts on the basis of experience³².
- c. Tracking the achievement: Work under the Nairobi Work Programme
- d. Supporting initiatives: Work under the Nairobi Work Programme

2.6 Improve the assessment of the effects of planned and implemented adaptation measures to avoid maladaptation and to ensure that future adaptation measures are more effective, dedicated and fit-for-purpose

- a. Assessment of collective progress: There is increased evidence of maladaptation across many sectors and regions. Maladaptive responses to climate change can create lock-ins of vulnerability, exposure and risks that are difficult and expensive to change and exacerbate existing inequalities. Actions that focus on sectors and risks in isolation and on short-term gains often lead to maladaptation if long-term impacts of the adaptation option are not taken into account. The implementation of these maladaptive actions can result in infrastructure and institutions that are inflexible and/or expensive to change. Biodiversity and ecosystem resilience to climate change typically are decreased by maladaptive actions, which also constrain ecosystem services.³³ Moreover, adaptation to +1.5°C bears the risk that long-term measures and strategies are not adapted to scenarios of higher temperature.
- b. Key recommendations: Avoid maladaptation by long-term, multi-sectoral planning and implementation of robust, flexible and no-/low-regret measures adaptation actions with benefits to many sectors and systems. To minimize maladaptation, multi-sectoral, multi-actor and inclusive planning with flexible pathways encourages low-regret and timely actions that keep options open and ensure benefits in multiple sectors. Maladaptation is also minimized by planning that accounts for the time it takes to adapt, the uncertainty about the rate and magnitude of climate risk and a wide range of potentially adverse consequences of adaptation actions³⁴. Invest and broaden support for fit-for-purpose data and climate services, as well as capacity-building for utilizing them; institutional arrangements; insufficient quality of existing monitoring, and evaluation and learning systems³⁵.
- c. Tracking the achievement: Parties are invited to describe their efforts in their NAPs and Adaptation Communications.
- d. Supporting initiatives: The work of constituted bodies within the UNFCCC, including the AC, LEG and SCF, especially on identifying methods and tools for reviewing the adequacy and effectiveness of adaptation and support, as well as work outside of the UNFCCC

³⁰ Technical Dialogue Synthesis Report

³¹ See UNEP. 2022. Adaptation Gap Report 2022: Too Little, Too Slow – Climate Adaptation Failure Puts World at Risk. Nairobi: UNEP. <https://www.unep.org/resources/adaptation-gap-report-2022>.

³² Technical Dialogue Synthesis Report

³³ IPCC AR6, WG II, SPM

³⁴ IPCC AR6, WG II, SPM

³⁵ GST TD 1.3 Summary Report GST_TD1.3 Summary Report_15_August_Final.pdf (unfccc.int)

2.7 Strengthen resilience and adaptation to climate change in the agriculture sector

- a. Assessment of collective progress: The IPCC reports highlight several challenges to adapting to climate change in the agriculture sector. These challenges include impacts on agricultural production and productivity, risks to food security and the economy, persistent barriers and limitations associated with investments and knowledge gaps, and the likelihood of climate change outpacing adaptation in certain regions. Additionally, the rate and extent of climate change are critical as agriculture is climate-dependent and sensitive to changes in climate parameters. Hard limits to adaptation may occur if climate hazards intensify to the point where water supply cannot meet agricultural demands.
- b. Key recommendations: Effective adaptation options, together with supportive public policies enhance food availability and stability and reduce climate risk for food systems while increasing their sustainability. Effective options include cultivation improvements, agroforestry, community-based adaptation, farm and landscape diversification, and urban agriculture. Agroecological principles and practices, ecosystem-based management in fisheries and aquaculture, and other approaches that work with natural processes support food security, nutrition, health and well-being, livelihoods and biodiversity, sustainability and ecosystem services³⁶. Science-based recommendations include: integrate non-climatic drivers into adaptation pathways to reduce climate impacts across food systems; adopt climate-smart agriculture technologies that enhance synergies between productivity and mitigation; provide pertinent information for farmers through climate information services; implement index insurance to build resilience by protecting farmers' assets in the face of major climate shocks, promoting access to credit, and adopting improved farm technologies and practices; increase agricultural and livelihood diversification, agroecological and conservation agriculture practices, aquaculture, on-farm engineering, and agroforestry to increase resilience and sustainability of food systems; and invest in climate information services, institutional capacity building, secure land tenure, and strategic financial investment to overcome barriers to adaptation faced by smallholder farmers. An integrated approach for adaptation planning is key, that combines climate information services, capacity building, Indigenous and local knowledge systems, and strategic financial investment as a flexible and cost-effective solution for addressing food security challenges³⁷.
- c. Tracking the achievement: Parties are invited to describe their efforts in their NAPs and Adaptation Communications, [Placeholder on the Sharm el-Sheikh joint work on implementation of climate action on agriculture and food security]
- d. Supporting initiatives: The Food and Agriculture Organisation (FAO), the CGIAR Research Program on Climate Change, Agriculture, and Food Security (CCAFS), The Global Alliance for Climate-Smart Agriculture, The 4 per 1000 Initiative, the Global Resilience Partnership, The African Green Revolution Forum (AGRF),

2.8 Urges all Parties to strengthen equity, inclusivity and rights-based approaches in adaptation planning, to enhance adaptation outcomes for the most vulnerable, in line with the best available science

- a. Assessment of collective progress: The IPCC confirms in its AR6 Summary for Policymakers that “adaptation and mitigation actions that prioritise equity, social justice, climate justice, rights-based approaches, and inclusivity, lead to more sustainable outcomes, reduce trade-offs, support transformative change and advance climate resilient development.” (C.2.5). Additionally, all Parties to the Paris Agreement have international human rights obligations, and have confirmed in the context of the Paris Agreement to respect, promote and consider those in the context of climate action.

³⁶ IPCC AR6 WGII SPM

³⁷ IPCC AR6 WGII Technical Summary

- b. Key recommendations: Respect, protect and consider human rights obligations, including the rights of Indigenous Peoples, and adopt intersectional approaches in the planning, design, implementation and monitoring and evaluation of all relevant planning documents and processes related to the implementation of the Paris Agreement. Ensure meaningful and effective public participation in the planning, design, and implementation of all relevant planning documents and processes related to the implementation of the Paris Agreement.
- c. Tracking the achievement: Parties are invited to describe their efforts to respect and protect human rights in their NAPs and Adaptation Communications
- d. Supporting initiatives: resources developed by OHCHR and human rights institutions

2.9 Scale-up Nature-Based Solutions and Ecosystem-Based Approaches, as important drivers of adaptation ambition, and implement the targets of the Kunming-Montreal Global Biodiversity Framework

Sub-item 2.9.1 Halt and reverse forest loss and land degradation by 2030

- a. Assessment of collective progress: In 2019 AFOLU accounted for 13 Gt CO₂ eq (22%) of global GHG emissions. Around half of net AFOLU emissions result from land-use change: predominantly CO₂ from deforestation. Despite a decline in deforestation since 2000, the rate remains high, with 95% of global deforestation occurring in the tropics but incentivized by consumers globally. Halting and reversing deforestation and land degradation by 2030 can provide adaptation benefits in the near term across all forested regions.
- b. Key recommendations: Set zero net deforestation targets and adopt policies to conserve and restore land carbon stocks and protect natural ecosystems, in order to unlock significant adaptation co-benefits.³⁸ Strengthen Indigenous Peoples, local communities and small farmers land and tenure rights.
- c. Tracking the achievement: Parties are invited to describe their efforts to halt and reverse deforestation and protect ecosystems in their NAPs and Adaptation Communications
- d. Supporting initiatives: Kunming-Montreal Global Biodiversity Framework, Race to Resilience, UN 'System of Environmental Economic Accounting - Ecosystem Accounts' (UNSEEA-EA), the Land Use Breakthrough, Glasgow Leaders' Declaration on Forest and Land Use, Forest and Climate Leaders' Partnership, Green Gigaton Challenge, High Ambition Coalition for Nature and People, FACT Dialogue, Tropical Forest Alliance, UN Decade on Ecosystem Restoration (2021-2030), Forest Declaration Platform, Science Based Targets Initiative and its Forest, Land and Agriculture Guidance, Finance Sector Deforestation Action, Business for Nature

Sub-item 2.9.2 Preserve and restore ocean and coastal ecosystems, including blue carbon ecosystems, and scale-up ocean-based adaptation solutions

- a. Assessment of collective progress: Coastal and marine solutions for adaptation have the potential to protect vulnerable coastal communities and ecosystems from the impacts of climate change (i.e. extreme weather events, coastal erosion, sea-level rise), increasing their resilience and providing key ecosystem services to populations such as sustainable blue food production.
- b. Key recommendations: Develop strategies for conservation and restoration of blue carbon ecosystems (mangroves, seagrasses, salt marshes). Across the adaptation cycle, mainstream climate-related risks, taking into consideration oceans and coastal ecosystems³⁹.
- c. Tracking the achievement: Parties are invited to describe their efforts in their NAP and Adaptation Communications
- d. Supporting initiatives: Kunming-Montreal Global Biodiversity Framework, UNFCCC Ocean and Climate Change Dialogue, High-Level Panel for a Sustainable Ocean Economy, Race to

³⁸ Technical Dialogue Synthesis Report

³⁹ Technical Dialogue Synthesis Report

Resilience, UN 'System of Environmental Economic Accounting - Ecosystem Accounts' (UNSEEA-EA), the Land Use Breakthrough, Green Gigaton Challenge, High Ambition Coalition for Nature and People, FACT Dialogue, UN Decade on Ecosystem Restoration (2021-2030), Forest Declaration Platform, Business for Nature

Sub-item 2.9.3 **Climate change impacts in desertification processes**

- a. Assessment of collective progress: According with UNCCD by 2050, droughts will affect more than three quarters of the world's population. While 84% of all terrestrial ecosystems are threatened by change and the intensification of wildfires. Take also into account the IPCC Special report: special report on climate change and land.
- b. Key recommendations: Reinforce policies to prevent desertification
- c. Tracking the achievement: Work done under the UNCCD
- d. Supporting initiatives: International Drought Resilience Alliance

2.10 **Tourism and climate change**

- a. Assessment of collective progress: While tourism stakeholders generally focus on coping with short-term weather events rather than longer-term climate risks, they exhibit high adaptive capacity by diversifying their activities⁴⁰.
- b. Key recommendations: Equitable access to resources and the recognition and inclusion of all stakeholders during policy planning and implementation are important for effective tourism-based adaptation⁴¹. Social networks, resources, past experiences, understanding of environmental conditions, and remittances can contribute to their ability to adapt to climate change impacts.
- c. Tracking the achievement: UNWTO reports
- d. Supporting initiatives: The Glasgow Declaration: A Commitment to a Decade of Climate Action in Tourism

2.11 **Climate change and Health**

- a. Assessment of collective progress: According with the WHO climate change affects the social and environmental determinants of health: clean air, safe drinking water, sufficient food and secure shelter. Between 2030 and 2050, climate change is expected to cause approximately 250'000 additional deaths per year, from malnutrition, malaria, diarrhea and heat stress. Developmental benefits of mitigation actions include significant benefits, for example through health benefits from lowered air pollution⁴².
- b. Key recommendations: Mainstream climate change adaptation into health policies
- c. Tracking the achievement: WHO work
- d. Supporting initiatives: [Placeholder for outcomes and initiatives launched at COP28 Health Day], framework for the GGA being developed under the Glasgow–Sharm el-Sheikh work programme on the GGA

⁴⁰ IPCC AR6 WGII

⁴¹ IPCC AR6 WGII

⁴² Technical Dialogue Synthesis Report

C.3 Making finance flows consistent with a pathway towards low greenhouse gas emissions and climate resilient development, including Means of Implementation and Support

3.1 Welcome the progress towards achieving the goal of mobilizing jointly USD 100 billion per year to address the needs of developing countries in the context of meaningful mitigation actions and transparency on implementation and urge developed country Parties to achieve the goal as soon as possible

- a. Assessment of collective progress: Climate finance has been increased substantively since 2010, when the USD 100bn goal was set. Developed country parties have made significant progress in mobilizing and providing finance to support climate action in developing countries. However, the Global Stocktake should clearly also state the concern that the USD 100bn goal has so far not been met. Developed country parties are confident that the USD 100bn goal will be met in 2023 according to the Climate Finance Delivery Plan⁴³. Scaling-up and aligning global financial flows for climate action in line with the Paris Agreement goals entails unlocking trillions of dollars to support the global transition, critically through the strategic use of public international finance, which remains a prime enabler for action in developing countries⁴⁴.
- b. Key recommendations: Developed country Parties should continue to increase the mobilization and provision of financial support to developing country parties to implement the Paris Agreement. Request developed country Parties and encourage other Parties to submit ambitious biennial communications of indicative quantitative and qualitative information, as applicable, including, as available, on projected levels of public financial resources to be provided to developing country Parties in 2024.
- c. Tracking the achievement: The report of the SCF on progress towards achieving the goal of mobilizing jointly USD 100 billion per year to address the needs of developing countries in the context of meaningful mitigation actions, which will be prepared in 2024, 2026 and 2028, provides the necessary vehicle to track the collective progress made.
- d. Supporting initiatives: Climate Finance Delivery Plan, GCF and GEF replenishment processes, reform of the global financial architecture, etc.

3.2 Urge Parties, sub-national governments and private sector actors to make financial flows consistent with a low-emission and climate resilient development to achieve the global goal on adaptation and the keeping global warming well below 1.5°C

- a. Assessment of collective progress: Scaling-up and aligning global financial flows for climate action in line with the Paris Agreement goals entails unlocking trillions of dollars to support the global transition, critically through the strategic use of public international finance, which remains a prime enabler for action in developing countries⁴⁵. Several public and private initiatives have been launched but so far it is challenging to track the collective progress they have generated. An overview of activities is captured in the SCF work on mapping the available information relevant to Art. 2.1c) of the Paris Agreement, but due to a lack of common indicators and methodologies it remains challenging to assess their contribution to the collective progress made. There should also be enhanced capacity building for developing countries to facilitate the implementation of Art. 2.1c) in their economies and create the necessary enabling environments.
- b. Key recommendations: Parties, sub-national governments and private sector actors should make all their financial flows consistent with a low-emission and climate resilient development. The potential measures range from green budgeting exercises to a call for private sector commitments to net-zero emissions. To track the collective progress made in this regard, it is also essential that

⁴³ Climate Finance Delivery Plan: Meeting the US\$100 Billion Goal - Canada.ca

⁴⁴ Summary Report of TD 1.2

- a common set of metrics and methodologies is developed. These stakeholders should also be encouraged to transparently report upon their actions.
- c. Tracking the achievement: The SCF's Biennial Assessment and Overview of Climate Finance Flows could be used to track the achievement
 - d. Supporting initiatives: Science-based Target initiative, GFANZ, NZDPU, etc.

3.3 Call upon multilateral development banks, international finance institutions, climate funds, and other multilateral and bilateral cooperation agencies to increase concessional finance, including grants and other relevant climate finance instruments for developing countries, particularly for innovative financial mechanisms for adaptation actions and to better track their adaptation finance

- a. Assessment of collective progress: Grants continue to be a key instrument for adaptation finance. In 2017–2018 grants accounted for 64% and 94% of the face value of bilateral adaptation finance reported to OECD and of adaptation finance from multilateral climate funds, respectively. During the same period, 9% of adaptation finance flowing through MDBs was grant-based. These figures indicate no change since 2015–2016. Mitigation finance, by contrast, had 30% of bilateral flows, 29% of multilateral climate fund approvals and 3% of MDB investments taking the form of grants⁴⁶ Grants are important but not the only effective instrument. It is key that MDBs, IFIs, Climate Funds, multilateral and bilateral cooperation agencies use a suite of financial instruments when deploying their concessional finance. The use of other financial instruments, besides grants and loans, remains very limited, but latest research shows that instruments such as guarantees or credit lines have a much higher potential to mobilize additional private resources also for adaptation. The tracking of adaptation finance is not as well established as the tracking of mitigation finance and the use of blended finance instruments for adaptation remains limited.
- b. Key recommendations: Promote concessional financing to deliver transformative climate adaptation actions by innovative financial mechanisms such as non-debt instruments, and philanthropic funding. Call for MDBs, IFIs, climate funds, and bilateral agencies to work with governments and businesses to incentivize vehicles for long-term adaptation solutions, including via blended finance. Promote interlinkages between adaptation and mitigation when setting up adaptation measures to generate co-benefits in both areas. Further call upon MDBs and DFIs to increase the share of climate finance provided in the form of grants and highly concessional instruments, especially for the design, implementation and monitoring of climate projects that do not generate returns for the private sector to engage. Advance in the replenishment of multilateral channels that support climate action in developing countries. Develop tools and methodologies to better appraise and track climate finance for adaptation action, including in the form of grants and other concessional instruments. Incentivize vehicles for long-term adaptation solutions, including via blended finance. Promote interlinkages between adaptation and mitigation when setting up adaptation measures to generate co-benefits in both areas.
- c. Tracking the achievement: SCF's Biennial Assessment and Overview of Climate Finance Flows
- d. Supporting initiatives: Coalition of Finance Ministers for Climate Action, Coalition for Climate Resilient Investment (CCRI), UN4NAP, Green Climate Fund Productive Investment Initiative for Adaptation to Climate Change, Project Preparation Facility and Private Sector Facility, the GEF Challenge Program for Adaptation Innovation and the World Bank's Global Practice for Urban, Disaster Risk Management, Resilience and Land and other adaptation finance and blended finance focused initiatives and activities.

⁴⁶ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

3.4 Reiterate the 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, in the context of achieving a balance between mitigation and adaptation in the provision of scaled-up financial resources, recalling Article 9, paragraph 4, of the Paris Agreement

- a. Assessment of collective progress: Support for mitigation remains greater than support for adaptation. Mitigation finance constitutes the largest share of climate-specific financial support through bilateral channels reported by Annex II Parties, at 66%. However, the share of adaptation finance increased from 15% in 2015–2016 to 20% in 2017–2018, as it grew at a higher rate than mitigation finance⁴⁷. So far the call to doubling adaptation finance has not yet been achieved, but the current numbers⁴⁸ show a positive trend.
- b. Key recommendations: Developed country Parties and others in a position to do so should continue to move towards a balance in adaptation and mitigation finance in accordance with Art. 9 of the Paris Agreement.
- c. Tracking the achievement: The SCF's Biennial Assessment and Overview of Climate Finance Flows and the SCF Report on the Progress towards the USD 100bn goal
- d. Supporting initiatives: See initiatives and activities mentioned in the Climate Finance Delivery Plan Progress Report focused the Action Area 2 – increasing finance for adaptation⁴⁹

3.5 Urges Parties, multilateral development banks (MDBs), and Non-Party Stakeholders in particular financial institutions (IFIs), to significantly increase by 2030 the proportion of investments in renewable energy

- a. Assessment of collective progress: Estimates of global climate finance flows increased by 16% in 2017–2018 compared with 2015–2016, reaching an annual average of USD 775 billion per year. The growth was largely driven by further investment in renewable energy, aided by lower technology costs, as well as investments in sustainable transport infrastructure, including electric vehicles⁵⁰. Although flows are increasing, they remain relatively small in the context of investments needed to fulfil a pathway towards low GHG emissions and climate-resilient development, which are typically USD 1.6–3.7 trillion per year in the energy sector alone⁵¹.
- b. Key recommendations: Call upon the international financial system to support capital flows toward renewables energy, as part of their current reform. Create the necessary enabling environments and leveraging public and private financing to foster greater investments in support to the development and deployment of renewable energy and renewable energy technologies, with particular focus in developing countries. Redirect funding from fossil fuel subsidies and investments, carbon pricing instruments, to finance the creation and implementation of national Just Energy Transition funds and plans. Call on relevant stakeholders to shift investments of public and private capital toward renewable energy to reduce the risks of stranded assets in the fossil fuel industry and/or avoid lock-in of long-lived carbon intensive assets. Call upon the largest energy consumers and emitters, such as the G7 countries, to lead the way, strengthening existing policies, regulations, and investment plans by 2030, while facilitating funds, knowledge, and technology transfer to developing countries—for instance through Just Energy Transition Partnerships.
- c. Tracking the achievement: The SCF's Biennial Assessment and Overview of Climate Finance Flows
- d. Supporting initiatives: Net Zero Asset Owner Alliance (NZAOA), IRENA Coalition for Action, Glasgow Financial Alliance for Net Zero (GFANZ)

⁴⁷ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

⁴⁸ Refer to SCF adaptation finance doubling report here.

⁴⁹ Climate finance delivery plan progress report: advancing the ten collective actions - Canada.ca

⁵⁰ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

⁵¹ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

3.6 Increase efforts to phase out and rationalize inefficient fossil fuels subsidies as part of economy-wide just transition plans, and strengthen reporting in that regard

- a. Assessment of collective progress: Financial flows and stocks in GHG-intensive activities remain worryingly high. Fossil fuel investments amounted globally to USD 977 billion in 2017–2018, while fossil fuel subsidies amounted to USD 472 billion in 2018. Fossil fuel corporate capital expenditure at risk of becoming stranded amounted to USD 50 billion in 2018⁵².
- b. Key recommendations: All Parties should consider ways to phase-out and rationalize fossil fuel subsidies to facilitate the urgently needed transition towards a low-emission and climate resilient future. Ideally Parties would also consider using the freed-up public resources (due to the phase-out and rationalization of fossil fuel subsidies) for climate action.
- c. Tracking the achievement: The SCF's Biennial Assessment and Overview of Climate Finance Flows also builds on all data sources related to fossil fuel investments and builds on the IEA data related to this.
- d. Supporting initiatives: Friends of Fossil Fuel Subsidy Reform (FFFSR), Powering Past Coal Alliance (PPCA), Beyond Oil and Gas Alliance (BOGA)

3.7 Urge MDBs, IFIs and private investors to revise and adjust their investment plans and portfolios in order to significantly increase their investments in decarbonization and resilience projects by 2030 and gradually continue increasing them to align with the temperature and resilience goals of the Paris Agreement

- a. Assessment of collective progress: The need for the multilateral development banks and other international financial institutions to evolve in the light of emerging global challenges has been identified to scale up action on mitigation and adaptation to meet the goals of the Paris Agreement⁵³.
- b. Key recommendations: Call upon MDBs and IFIs to align all operations, internal incentives, and investments with the 1.5°C objective by 2025, at the latest. Call upon MDBs and IFIs to adopt core definitions and mechanisms to ensure Paris alignment at the system level. Call upon MDBs and IFIs to create fiscal relief in developing countries and new de-risking mechanisms and approaches in consultation with leading private financial institutions or alliances to enable successful calibration for mobilizing private investment for climate solutions at scale. Strengthen mandates and incentives to deliver transformative and scaled-up climate action. Scale up public finance and investments, particularly for low-carbon infrastructure, in addition to de-risking instruments in MDBs and IFIs and optimize the risk-taking by development banks to invest in decarbonization and resilience technologies, policies and measures in developing countries. MDBs and IFIs should support the development of the necessary enabling environments for public and private investments in decarbonisation and resilience projects, i.e., through policy and regulatory support.
- c. Tracking the achievement: tbc
- d. Supporting initiatives: Bridgetown Initiative, MDB Reform, etc.

3.8 Call on Parties, MDBs, IFIs, and private investors to strengthen reporting of efforts to make all financial flows consistent with pathways towards low greenhouse gas emissions and climate resilient development

- a. Assessment of collective progress: Financial flows in GHG-intensive activities remain concerningly high. Fossil fuel investments globally amounted to USD 977 billion per year on average in 2017–2018, while fossil fuel subsidies amounted to USD 472 billion in 2018. Fossil fuel corporate capital expenditure at risk of becoming stranded amounted 8 to USD 50 billion in 2018, while investments with deforestation risks amounted to USD 43.8 billion in 2017–2018, and net agriculture subsidies

⁵² Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

⁵³ Technical Dialogue Synthesis Report

- amounted to USD 619 billion per year on average from 2017 to 2019⁵⁴. Efforts relevant to Article 2, paragraph 1(c), occur across all types of actors within the financial sector, including investors, banks and regulators. Investors and asset managers representing USD 6.6 trillion and USD 43 trillion in assets under management, respectively, and banks representing USD 38.6 trillion in financial assets have pledged to align lending and investment portfolios with net zero emissions by 2050⁵⁵. Assessing the real-economy impact and the risk of greenwashing remains a challenge. Many actors in the financial sector operate at a number of steps removed from real-economy activities, through stock or bond trading, portfolio allocations, or microprudential supervision, which have little direct effect on real-economy investment decisions related to banks lending to projects, corporations approving capital expenditure plans or governments announcing support incentives⁵⁶.
- b. Key recommendations: Develop reporting guidelines under the Paris Agreement, and encourage non-state actors to move towards common standards and enhance transparency, strengthen work on methodologies to assess the consistency of financial portfolios with pathways towards low emission and climate resilient development, and strengthen efforts to avoid greenwashing
 - c. Tracking the achievement: SCF's Biennial Assessment and Overview of Climate Finance Flows (specific chapter on Art. 2.1c)
 - d. Supporting initiatives: GFANZ, Climate Data Steering Committee, NZDPU, Coalition of Finance Ministers for Climate Action, ISSB, International Platform for Sustainable Finance, Network for Greening the Financial System, etc.

3.9 Strengthen the CMA's work on Article 2.1.c of the Paris Agreement, including by the creation of a dedicated agenda item

- a. Assessment of collective progress: The Sharm el-Sheikh dialogue is the first engagement of Parties related to the implementation of Art.2 1.c and there is a lack of common understanding of the article and its implementation. There are also currently no common metrics and methodologies to track the collective progress towards this goal. The synthesis of views of the SCF regarding ways to achieve Art. 2.1c including options for approaches and guidelines for implementation also showed the significant divergences between Parties, indicating the need to arrive at a common understanding and discuss and agree to common approaches. The creation of a new agenda item to discuss the implementation of Art. 2.1c would provide this space for discussion among Parties.
- b. Key recommendations: Create a dedicated agenda item on matters related to Art. 2.1c) in the CMA agenda
- c. Tracking the achievement: tbc
- d. Supporting initiatives: Sharm el-Sheikh Dialogue on Art. 2.1c) and its complementarity with Art. 9

3.10 Encourage all Parties with the capacity to do so to provide or continue to provide financial resources to assist developing country Parties with respect to both mitigation and adaptation in accordance the Paris Agreement

- a. Assessment of collective progress: Developed country Parties and other Parties with the capacity to do so are providing support for climate action in developing country Parties but the needs outweigh the support provided by far. Therefore, there is an urgent need for support by all Parties with the capacity to do so.
- b. Key recommendations: Parties with the capacity to do so should communicate indicative quantitative and qualitative information on the climate finance they intend to provide and mobilize. They should also be encouraged to report the climate finance provided and mobilized in accordance with Art. 13 of the Paris Agreement.

⁵⁴ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

⁵⁵ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

⁵⁶ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

- c. Tracking the achievement: SCF's Biennial Assessment and Overview of Climate Finance Flows, Biennial Transparency Reports, Biennial Communications on Climate Finance.
- d. Supporting initiatives: UNCTAD's South-South Cooperation for Climate Adaptation and Sustainable Development, UN's South-South Cooperation in Sustainable Development and Climate Change Challenges, etc.

3.11 Significantly increase funding for ocean-based climate solutions

- a. Assessment of collective progress: SDG 14 is the least funded of all Sustainable Development Goals despite the tremendous contribution it can bring to the achievement of climate objectives.
- b. Key recommendations: Develop strategies to channel more funds towards ocean-based climate solutions given their potential to create impact and drive ambition towards climate mitigation and adaptation goals.
- c. Tracking the achievement: Reporting under SDG14
- d. Supporting initiatives: UNFCCC Ocean and Climate Change Dialogue, High-Level Panel for a Sustainable Ocean Economy

3.12 Address barriers to the development and transfer of technologies

- a. Assessment of collective progress: Achieving systemic transformations in pursuit of the 1.5 °C degree goal requires rapid deployment and adoption of cleaner technologies and accelerated innovation and development of new technologies, with growing access to these supported by appropriate enabling frameworks and international cooperation⁵⁷. The provision of support for technology development and transfer has increased significantly. Developed country Parties have more than doubled their support for technology transfer activities since 2012–2013. While sources of funding for supporting implementation of technology transfer activities were in most cases public, Parties reported on the increasing role of public–private partnerships in undertaking technology transfer activities. For mitigation, the most commonly reported categories of barrier to the development and transfer of the prioritized technologies reported by developing country Parties were economic, financial and technical. Within the economic and financial category, most Parties identified lack of, or inadequate access to, financial resources as the main barrier. In the technical category, many Parties identified system constraints, insufficient expertise, and inadequate standards, codes and certification as the main barriers. For adaptation, almost all Parties reported the following categories of barrier to the development and transfer of prioritized technologies: economic and financial; policy, legal and regulatory; institutional and organizational capacity; and human skills. Within the first two categories, Parties identified lack of, or inadequate access to, financial resources and insufficient legal and regulatory frameworks as the main barriers⁵⁸.
- b. Key recommendations: Make better use of the TEC and the CTCN to support Parties to address the barriers identified. Encourage Parties to define their technology related needs i.e. by preparing and submitting a Technology Needs Assessment (TNA); encourage the Operating Entities of the Financial Mechanism to continue the support for the preparation of TNAs by developing countries; encourage Parties to provide technology transfer and support for enhanced climate action in developing country Parties
- c. Tracking the achievement: Number of TNAs submitted, BTR chapter on technology transfer provided, mobilized, needed and received
- d. Supporting initiatives: Climate Technology Initiative, Emerging Climate Technology Initiative, etc.

⁵⁷ Summary report of TD 1.2

⁵⁸ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

3.13 Expand Capacity Building

- a. Assessment of collective progress: Capacity-building is foundational to achieve broad-reaching and sustained climate action and requires country-led and needs-based effective cooperation to ensure capacities are enhanced and retained over time at all levels⁵⁹. Some progress has been made on enhancing the capacity of developing country Parties at the systemic, institutional and individual levels for implementing the Paris Agreement. Developing countries have increasingly developed and refined policies, regulatory frameworks, laws, institutional capacities, technical skills and knowledge for adaptation and mitigation action and transparency. Progress has been achieved through the enhanced support provided for capacity building by developed countries, South–South cooperation, and endogenous resources of developing countries, as well as by bodies established under the Convention that serve the Paris Agreement, including the PCCB. However, many developing country Parties continue to face significant capacity gaps and have urgent needs for enhancing capacity at the national, subnational and local levels to implement the Paris Agreement. Most developing country Parties identified capacity-building as a prerequisite for achieving their NDC targets, with many specifying capacity-building needs for formulating policies, integrating mitigation and adaptation into sectoral planning processes, accessing finance, and generating and providing the necessary information for clarity, transparency and understanding of NDCs.⁶⁰
- b. Key recommendations: Parties to indicate capacity building needs in their BTRs,
- c. Tracking the achievement: BTR chapter on capacity building provided, needed and received
- d. Supporting initiatives: activities of the Paris Committee on Capacity Building (PCCB) 382 network members⁶¹

C.4 Efforts related to loss and damage

4.1 Reiterate the importance of limiting global temperature rise to 1.5°C to avert loss and damage, and improve understanding of how to avoid and respond to tipping points

- a. Assessment of collective progress: Impacts will increase for every fraction of a degree of global warming. Near-term actions that limit global warming to close to 1.5 °C would substantially reduce projected loss and damage to human and natural systems, compared with higher warming levels⁶². Even temporary overshoot of 1.5°C leads to additional permanent losses, beyond adaptation limits from slow onset events such as irreversibly higher sea-level rise, the melting of glaciers, and reduced freshwater availability for drinking, ecosystems, agriculture and industry, including across densely populated regions.
- b. Key recommendations: Limiting warming to the Paris Agreement global temperature goal would significantly reduce the risks and impacts of climate change compared with higher warming levels. Greater understanding is needed of how to avoid and respond to tipping points and more knowledge, understanding, support, policy and action are needed to comprehensively manage risks and avert, minimize and address loss and damage⁶³.
- c. Tracking the achievement: See Mitigation chapter
- d. Supporting initiatives: See Mitigation chapter

⁵⁹ Summary report of TD 1.2

⁶⁰ Synthesis report on the information identified in decision 19/CMA.1, paragraph 36 (d) (unfccc.int)

⁶¹ Members | PCCB Network | UNFCCC

⁶² Technical Dialogue Synthesis Report

⁶³ Technical Dialogue Synthesis Report

4.2 Reinforce efforts to avert, minimize, and address loss and damage, including through comprehensive risk management and harnessing synergies between adaptation, disaster risk management, emergency assistance, reconstruction, rehabilitation and other relevant approaches

- a. Assessment of collective progress: Increasing impacts from climate change are being observed, and risks are being compounded and cascading with projections of increased warming. Currently, risk management approaches are not sufficiently comprehensive and not deployed broadly enough to make countries and communities more resilient to the adverse effects of climate change and to reduce the scale of both economic and non-economic losses and damages.⁶⁴ Prevention remains the most effective and efficient way to respond to loss and damage. But also efforts during and after rapid and slow onset events unfold are required and not keeping pace with rising loss and damage.
- b. Key recommendations: It is fundamental to step up mitigation efforts to avert loss and damage, keeping the 1.5°C temperature limit alive, and to act preventively to minimize loss and damage to the extent possible by deploying comprehensive risk management approaches. This includes, notably, disaster risk reduction (incl. amongst other early warning), mainstreaming risk management and climate resilience, adaptation, anticipatory action as well as broader risk-informed resilient sustainable development that reduces exposure and vulnerabilities (through poverty eradication, education, biodiversity protection, etc). As much loss and damage can't be averted, different approaches to address both economic and non-economic loss and damage need also to be intensified, including through post-disaster rehabilitation and reconstruction and by building back better. Efforts need not only to increase in volume but also their quality should be improved. In this regards, solid environmental and social risk management, gender-responsiveness as well as conflict-sensitivity are required. It is key that the most vulnerable groups, including in conflict-affected areas, are being reached and empowered.
- c. Tracking the achievement: Operationalization and action by the loss and damage fund, funding arrangements and the Santiago Network.
- d. Supporting initiatives: Loss and damage fund, other funding arrangements and the Santiago Network.

4.3 National governments, sub-national governments, the private sector, philanthropies and others as appropriate are urged to provide support for activities averting, minimizing and addressing loss and damage associated with the adverse effects of climate change, notably through the loss and damage fund, other funding arrangements or the Santiago Network.

- a. Assessment of collective progress: resources deployed to assist developing countries that are particularly vulnerable to the adverse effects of climate change in responding to economic and non-economic loss and damage associated with the adverse effects of climate change, including extreme weather events and slow onset events, are insufficient.
- b. Key recommendations: Provide resources to the loss and damage fund to be operationalized, other funding arrangements and the Santiago Network. With the expectation that the loss and damage funding arrangements will be operationalized at COP28, countries can also use the Global Stocktake as an opportunity to provide and mobilize support. Besides contributions by different types of contributors, the new loss and damage fund should be enabled to receive contributions from innovative sources, such as a “fossil fuel extraction tax”, a global CO2 tax or an “international shipping levy” which constitute effective ways to leverage additional resources to avert, minimize and address loss and damage from emission intensive sectors based on the polluter-pays principle.
- c. Tracking the achievement: Capitalization of the new loss and damage fund, of other funding arrangements and the Santiago Network.
- d. Supporting initiatives: Loss and damage fund, other funding arrangements and the Santiago Network

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4.4 Strengthen coordination, complementarity and synergies between different funding arrangements, including the fund, for responding to loss and damage associated with the adverse effects of climate change

- a. Assessment of collective progress: There are diverse ongoing efforts to coordinate efforts to avert, minimize and address loss and damage, for example by the humanitarian system or amongst climate funds working on adaptation. At COP27 and CMA4 parties agreed to find ways to enhance coherence, coordination and synergies among funding arrangements. In this regard, a Transitional Committee is working on recommendations.
- b. Key recommendations: Strengthen as appropriate existing mechanisms that endeavor to increase coordination, coherence and synergies between funding arrangements. In addition, at the global level, key agencies involved in averting, minimizing and addressing loss and damage could meet periodically at the margins of COP meetings to coordinate and harness synergies. Most importantly, coordination, coherence and collaboration must happen at the country and local levels according to diverse contexts (no one size fits all) and with national and local ownership. At those levels, the new loss and damage fund, other funding arrangements and the Santiago Network can support coordination mechanisms. Wherever possible, this should happen with existing national or local mechanisms, rather than reinventing wheels.
- c. Tracking the achievement: CP/CMA decisions on coordination and complementarity in the realm of loss and damage, and their implementation.
- d. Supporting initiatives: Loss and damage fund, other funding arrangements and the Santiago Network

4.5 Recognize the progress that was achieved in strengthening the institutional architecture around loss and damage, and operationalize the Santiago Network to deliver technical assistance to developing countries and the loss and damage fund

- a. Assessment of collective progress: The Executive Committee for the Warsaw International Mechanism for Loss and Damage associated with Climate Change Impacts has developed knowledge products and tools for comprehensive risk management and the Santiago Network for averting, minimizing and addressing loss and damage associated with the adverse effects of climate change is awaiting to be operationalized to catalyze demand-driven technical assistance, including of relevant organizations, bodies, networks and experts, for the implementation of relevant approaches to averting, minimizing and addressing loss and damage in developing countries that are particularly vulnerable to the adverse effects of climate change.⁶⁵ Through 2/CMA.4 and 2/CP.27, CP and CMA decided to establish a fund for responding to loss and damage whose mandate includes a focus on addressing loss and damage.
- b. Key recommendations: Operationalize the Santiago Network, including by selecting a host organization, and the loss and damage fund. Ensure that the different elements of the institutional architecture work in complementarity, harnessing synergies and opportunities to work together, amongst them and with other funding arrangements.
- c. Tracking the achievement: Operationalization of the Santiago Network and the loss and damage fund. CP/CMA decisions on coordination, complementarity and collaboration
- d. Supporting initiatives: Loss and damage fund, other funding arrangements and the Santiago Network

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C.5 Efforts related to response measures

5.1 Promote economic diversification, as a key strategy to address the impacts of response measures, with various options that can be applied in different contexts

- a. Assessment of collective progress: Informed approaches can address negative impacts of response measures and promote positive synergies within LT-LEDS, including through economic diversification. Economic diversification is one of the strategies to address negative impacts of response measures and promote positive synergies. Opportunities for such diversification include green industrialization, the greening of supply chains and diversifying to related and unrelated products⁶⁶.
- b. Key recommendations: Adopt and implement measures for economic diversification. Understand the positive impacts including co-benefits of phasing down all unabated fossil fuels and the negative environmental and social impacts of dependency on fossil fuels.
- c. Tracking the achievement: Work of the KCI
- d. Supporting initiatives: Work of the KCI

5.2 Support efforts to design transition processes inclusively and with a right based approach in order to make it “just”, and thereby increase the support for climate action

- a. Assessment of collective progress: Not applicable yet
- b. Key recommendations: Adopt and implement just transition principles through collective and participatory decision-making processes to reduce the disruptive consequences of rapid systems transformations^[1]. Promote knowledge sharing on experiences, lessons learned and best practices in order to guide policy makers and private actors on how to implement sustainable and just solutions to the climate crisis.
- c. Tracking the achievement: Annual Ministerial Roundtable on Just Transition
- d. Supporting initiatives: Internationally agreed guidelines such as the United Nations Guiding Principles on Business and Human Rights (UNGPs), the OECD Guidelines for Multinational Enterprises and the 2015 on Just Transition are important references for the discussion within the UNFCCC framework

D. Enhancing international cooperation for climate action

- a. Call on Parties, multilateral development banks, and international financial institutions to strengthen international cooperation towards the support for the formulation and implementation of NDCs, namely the NDC Partnership or UNDP Climate Promise, as well as towards the support for the formulation and implementation of NAPs and Adaptation Communications;
- b. Invite the private sector to put forward voluntary commitments in the field of climate action;
- c. Strengthen accountability and follow-through for climate action by governments, non-state actors and international institutions;
- d. Invite contributions by the High-Level Champions;
- e. Encourage national, regional, and thematic stocktakes to be held in 2024 to help translate COP28 outcomes from the global level and assist countries in developing their next NDCs by 2025.
- f. Encourage the expansion of Just Energy Transition Partnerships (JETPs), based on the lessons learnt of previous partnerships, and call for further innovative partnerships;
- g. Recognize the special circumstances of SIDS and LDCs.

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^[1] Technical Dialogue Synthesis Report

E. Guidance and way forward

E.1 Guidance for NDCs

- a. Call for emission reductions that are aligned with 1.5°C, considering the recommendation of IPCC AR6 to reduce GHG emissions globally by 43% by 2030 and by 60% by 2035 compared to 2019 levels;
- b. Call on Parties to adopt economy-wide NDCs, covering all sectors and gases, and absolute emission reduction targets;
- c. Call for NDCs that support peaking by 2025;
- d. Call on all Parties to apply common time frames;
- e. Call for Parties to integrate net zero objectives as part of their LT-LEDs;
- f. Call on all countries to report on progress in energy transition as part of their NDCs, in particular efforts to phase down unabated coal and phase out inefficient fossil fuel subsidies;
- g. Call on Parties to provide clearer information on fairness and ambition in the light of their national circumstances in their NDCs;
- h. Call on Parties to describe how their NDCs are aligned with the 1.5°C objective;
- i. Highlight opportunities, challenges, and best practices for enhanced implementation of current NDCs;
- j. Call on Parties to indicate how the Global Stocktake has informed NDC updates upon submission, as per the information necessary for clarity, transparency, and understanding.

E.2 Guidance for Adaptation Communications

- a. Encourage the development of Adaptation Communications, as a way of sharing experiences and informing support;
- b. Invite Parties to apply the Adaptation Communications guidance developed by the Adaptation Committee.

E.3 Guidance for Science

- a. Invite the IPCC to continue to provide relevant information to Parties;
- b. Call for further research to better understand which impacts are reversible and which are irreversible. In particular, more understanding is needed on how to avoid and respond to tipping points, such as glacier melt, melting permafrost (which also risks releasing large amounts of CH₄) and forest dieback⁶⁷. Calls on the scientific community, and particularly the IPCC, to address knowledge gaps, in particular on the risks and impacts related to threshold in viability, namely through a better understanding of tipping points in the global climate system, and their consequences for adaptation and mitigation action, as well as to assess future regional and global impacts from the cryosphere and oceans;
- c. Strengthen biocultural heritage and traditional knowledge of the indigenous peoples;
- d. Give due consideration to the recommendations of the 2018 IPCC Special Report on the Ocean and Cryosphere in a Changing Climate, the three IPCC Working Group Reports, and the 2023 IPCC AR6 Synthesis Report;
- e. Support efforts to address the gaps between current efforts and science-based pathways that can prevent the crossing of additional, essentially permanent thresholds – especially in the cryosphere – in the coming five-year period;
- f. Continue to address closing existing gaps in the global climate observing system, particularly in developing countries;
- g. Further build on existing and new initiatives in support of Parties such as the Early Warnings for All Initiative (EWA) and the WMO coordinated Global Greenhouse Gas Watch (G3W).

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E.4 Mandates for other processes

[Placeholder: The Global Stocktake outcome should give guidance to pertinent processes within and outside the UNFCCC in a manner to urgently reduce emissions and put the world on a pathway to 1.5°C. The Global Stocktake can namely guide the work under the Mitigation Work Programme, the 2.1.c Dialogue, as well as the Work Programme on Just Transition.]

E.5 Way forward

- a. Strengthen capacity building and technical assistance programme for NDC development in line with the invitation to improve NDCs;
- b. Build a political process and enhance trust across all Parties towards the substantial enhancement of NDCs in 2025. All Parties, and especially those that have the most to contribute to emission reductions, should be brought together to share in advance, by the end of 2024, reflections on their NDCs in 2025. A dialogue should be set in place to build trust among Parties and encourage each other to step up ambition collectively, with a view to filling the gap to the 1.5°C. Such a dialogue could run from 2023 to 2025, to accompany Parties in their process of defining their NDC enhancement;
- c. Recall the invitation to Parties to present their nationally determined contributions, informed by the outcome of the Global Stocktake, at a special event held under the auspices of the Secretary-General of the United Nations;
- d. Invite the UNSG to convene in particular those countries who have the most to contribute to the achievement of the 1.5°C objective;
- e. Mandate a space for Parties to discuss and exchange experiences on the formulation and development of their NDCs, through a dedicated workshop or specific agenda item;
- f. Encourage national, regional, and thematic global stocktakes to help inform NDCs and other national commitments;
- g. Call on the COP28 Presidency and COP29 Incoming Presidency to work together to ensure a robust follow-up to the Global Stocktake outcome, and invite them to identify where the follow up the first Global Stocktake under the Paris Agreement should take place;
- h. Acknowledge the role of non-State actors in the follow-up of the Global Stocktake outcome;
- i. Invite Parties and relevant organizations to submit to the UNFCCC Secretariat, by 1 February 2024, information on their experience, and lessons learned, through the conduct of the first Global Stocktake;
- j. Request the UNFCCC Secretariat to prepare report on lessons learned from the conduct and areas for further work to be taken into account for the second Global Stocktake;
- k. Call for incoming presidencies to work together, coordinate their agendas better, focusing on urgent needs to achieve the Paris goals;
- l. Call on the UNFCCC Executive Secretary to lead efforts to review the agenda of the CMA, with a view to rationalizing the agenda.