

## Submission on the Mitigation Work Programme

Georgia, Liechtenstein, Monaco, and Switzerland are pleased to share views on the Mitigation Work Programme (MWP), in response to the call for submissions from Decision FCCC/PA/CMA/2022/L.17, para. 12.

### 1. Expectations for the MWP

Decision FCCC/PA/CMA/2022/L.17 confirms that the objective of the MWP shall be to urgently scale up mitigation ambition and implementation in this critical decade in a manner that complements the global Stocktake.

According to the IPCC sixth Assessment Report, limiting warming to 1.5°C (>50%) with no or limited overshoot or to 2°C (>67%) requires peaking global GHG emissions between 2020 and at the latest before 2025, and assuming immediate action. Rapid and deep GHG emissions reductions need to follow throughout 2030, 2040 and 2050. Without a strengthening of policies beyond those that are implemented by the end of 2020, GHG emissions are projected to rise beyond 2025, leading to a median global warming of 3.2. The Sharm el-Sheikh Implementation Plan has reiterated the request to Parties that have not yet done so to revisit and strengthen the 2030 targets in their nationally determined contributions as necessary to align with the Paris Agreement temperature goal by the end of 2023. It has also urged Parties that have not yet done so to communicate, by CMA5, long-term low greenhouse gas emission development strategies towards just transitions to net zero emissions by or around mid-century. Switzerland looks forward to the launch of the work under the MWP as soon as possible, in a manner than reflects the urgency of decreasing emissions. 2023 will be key in setting the pace for the MWP.

The MWP represents a step change in how the UNFCCC process operates on Mitigation. The MWP should support Parties in implementing their NDCs and enhance the ambition of their NDCs. The MWP must support Parties in their efforts to strengthen policies beyond those that are implemented. It must also support global peaking of GHG emissions at the latest before 2025. Therefore, we hope to see a focus on front-loading climate action within the next few years. We have to make the most of 2023 and aim for at least 4 dialogues this year.

The MWP can help articulate the elements of the transitions and transformations across all sectors in the short term for climate action that will make 1.5 possible in the long-term, with a strong focus on an actionable list of solutions that Parties can apply to enhance mitigation ambition and implementation. As per its mandate scope, the MWP draw from the work of the IPCC, namely the IPCC WG III Report's concrete findings and recommendations particularly specific systems transformations and mitigation strategies, enabling conditions and opportunities in sectors, including cost-effectiveness of actions to address the 2030 ambition gap.

Finally, the MWP should help support the implementation and build on the political commitments taken by Parties through the latest Cover Decisions, namely the Glasgow Climate Pact at COP26 and the Sharm el-Sheikh Implementation Plan at COP27.

### 2. Topic selection

Important criteria for topic selection include:

- Selecting sectors/areas of work with the **highest emission abatement potential**, or with both a high **urgency** to act and a high **impact**. This criteria responds to the mandate, which is to urgently scale up mitigation ambition and implementation in this critical decade;
- The **relevance of the sector across many geographic regions** (for global dialogues);
- Selecting sectors/areas that have been identified as important areas of work through **political commitments** (ex: COP Cover Decisions, etc);
- Selecting sectors/areas where solutions have a **high replication potential**, namely due to their practicality and economic feasibility;

- Selecting sectors/areas that are aligned with the **recommendations of the best available science** on how to close the emissions gap.

Guided by the above criteria, we support placing a focus during the first year of the MWP on the topic of **energy transition**. The rationale for this topic selection is based on the four criteria and explained below.

**1) Reflecting the sense of urgency: warming cannot be limited to well below 2°C, let alone 1.5°C, without rapid and deep reductions in energy system**

Globally, GHG emissions continue to rise across all sectors and subsectors. According to the IPCC sixth Assessment Report<sup>1</sup>, energy represents the largest share in world emissions. In 2019, 34% (20 GtCO<sub>2</sub>-eq) of global GHG emissions came from the energy sector, for 24% (14 GtCO<sub>2</sub>-eq) from industry, 22% (13 GtCO<sub>2</sub>-eq) from agriculture, forestry and other land use (AFOLU), 15% (8.7 GtCO<sub>2</sub>-eq) from transport and 5.6% (3.3 GtCO<sub>2</sub>-eq) from buildings.

Limiting warming to well below 2°C, let alone 1.5°C, will require substantial energy system changes over the next 30 years. In scenarios limiting warming to 1.5°C with no or limited overshoot, and with action starting in 2020), net energy system CO<sub>2</sub> emissions fall by 87–97% in 2050, and net CO<sub>2</sub> and GHG emissions fall by 35–51% and 38–52% respectively by 2030. This will require drastic efforts to reduce fossil fuel consumption, increase production from low- and zero-carbon energy sources, and increase use of electricity and alternative energy carriers.

To date, **energy demands and energy sector emissions have continued to rise**. From 2015 to 2019, global final energy consumption grew by 6.6%, CO<sub>2</sub> emissions from the global energy system grew by 4.6%, and total GHG emissions from energy supply rose by 2.7%. Methane emissions, mainly fugitive emissions from oil, gas, and coal, accounted for 18% of GHG emissions in 2019. Coal electricity capacity grew by 7.6% between 2015 and 2019, as new builds in some countries offset declines in others. Total consumption of oil and oil products increased by 5%, and natural gas consumption grew by 15%. Declining energy intensity in almost all regions has been balanced by increased energy consumption.

**Investments in fossil fuel infrastructure are rising, with a high risk of lock-in of emissions.** If the existing investment plans in coal and other fossil fuel infrastructure are realized, the remaining carbon budget available to limit global warming to 1.5°C with no or limited overshoot will already be exceeded<sup>2</sup>. The IPCC identifies that many aspects of the energy system, namely physical infrastructure; institutions, laws, and regulations; and behaviour, are resistant to change or take many years to change. The foreseen policy changes could lead to stranded assets worth trillions of dollars. Coal assets are most vulnerable over the coming decade; oil and gas assets are more vulnerable toward mid-century.

**Annual subsidies for fossil fuels continue to rise, due to the current energy crisis and high fuel prices.** Annual subsidies for fossil fuels doubled in 2021 to nearly USD 700 billion, slowing progress towards global community climate goals<sup>3</sup>. There is an urgent need to eliminate fossil fuel subsidies, in line with previous political commitments taken by Parties to the Paris Agreement at COP26, COP27, and also highlighted by G20 members. The MWP can support these efforts by helping elevate best practices to phase out fossil fuel subsidies at the domestic level, showcasing policy alternatives, as well as by showcasing efforts to better track fossil fuel subsidies worldwide. Removing fossil fuel subsidies can free resources that can be used by a country government to e.g. provide better social welfare or additional social benefits.

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<sup>1</sup> Climate Change 2022: Mitigation of Climate Change. Working Group III Contribution to the IPCC Sixth Assessment Report

<sup>2</sup> Assuming variations in historical patterns of use and decommissioning, estimated future CO<sub>2</sub> emissions from existing fossil fuel infrastructure alone are 660 (460–890) GtCO<sub>2</sub> and from existing and currently planned infrastructure 850 (600–1100) GtCO<sub>2</sub>. (Climate Change 2022: Mitigation of Climate Change. Working Group III Contribution to the IPCC Sixth Assessment Report).

<sup>3</sup> OECD and IEA, [Support for fossil fuels](#)

**2) Energy transition is a relevant topic across all geographic regions. The transition will have important consequences for investment patterns.**

Evidence of rapid energy transitions exists, but only at sub-global scales. There is a need to replicate those solutions across all regions.

**Importantly, efforts are still needed to ensure decent access to energy for all.** Providing access to modern energy services universally would increase global GHG emissions by, at most, a few percent. The additional energy demand needed to support decent living standards for all is estimated to be well below current average energy consumption. More equitable income distributions can reduce carbon emissions, but the nature of this relationship can vary by level of income and development (IPCC WG III). According to the IPCC, the low-carbon energy transition will shift investment patterns and create new economic opportunities. Total energy investment needs will rise over the next decades, if warming is limited to 2°C or lower. These increases will be far less pronounced, however, than the reallocations of investment flows that are likely to be seen across sub-sectors, namely from fossil fuels (extraction, conversion, and electricity generation) without CCS and toward renewables, nuclear power, CCS, electricity networks and storage, and end-use energy efficiency. A significant and growing share of investments between now and 2050 will be made in emerging economies. Therefore, it is important to ensure a just and equitable energy transition across all geographic regions.

A conducive and ambitious policy environment and investment friendly framework conditions will be key to achieve the energy transition. Additional drivers of a successful energy transition include technology transfer and cooperation, intentional policy and financial support, and harnessing synergies among technologies within a sustainable energy system perspective. A fast global low-carbon energy transition supported by finance from all sources to facilitate low-carbon technology adoption in developing, and particularly in least-developed countries, can facilitate achieving climate objectives (IPCC WG III).

Finally, there is a need to better understand the barriers to low-carbon energy transition, within and across regions.

**3) Work on energy as part of the MWP can support the commitments taken by Parties to accelerate energy transition**

Parties have taken a number of commitments within the UNFCCC, with a view to accelerating energy transition. At COP27, Parties emphasized in the Sharm el-Sheikh Implementation Plan “the urgent need for immediate, deep, rapid and sustained reductions in global greenhouse gas emissions across all applicable sectors, including through increase in low-emission and renewable energy, just energy transition partnerships and other cooperative actions” (para. 12). They further recognized “that the unprecedented global energy crisis underlines the urgency to rapidly transform energy systems to be more secure, reliable, and resilient, including by accelerating clean and just transitions to renewable energy during this critical decade of action” (para. 13). Finally, they stressed “the importance of enhancing a clean energy mix, including low-emission and renewable energy, at all levels as part of diversifying energy mixes and systems, in line with national circumstances and recognizing the need for support towards just transitions” (para 14). The decision further “calls upon Parties to accelerate the development, deployment and dissemination of technologies, and the adoption of policies, to transition towards low-emission energy systems, including by rapidly scaling up the deployment of clean power generation and energy efficiency measures, including accelerating efforts towards the phasedown of unabated coal power and phase-out of inefficient fossil fuel subsidies, while providing targeted support to the poorest and most vulnerable in line with national circumstances and recognizing the need for support towards a just transition” (para. 28).

At COP27 in Sharm el-Sheikh, many Parties asked for a concrete follow-up to the call from the Glasgow Climate Pact (2021) to phase down unabated coal and phase out inefficient fossil fuel subsidies. Many Parties were disappointed that the Sharm el-Sheikh Implementation Plan did not build on this commitment, nor offer proper institutional follow-up. The MWP can offer an appropriate space to concretely follow-up on these commitments, as well as to track and discuss efforts ongoing in other fora.

Work conducted on energy transition under the MWP in 2023 can feed into the launch of the work programme on just transition for discussion of pathways to achieving the goals of the Paris Agreement, established under the Sharm el-Sheikh Implementation Plan at COP27.

**4) Solutions exist that need proper follow up, and have high replication potential, namely due to their practicality and economic feasibility.**

According to the IPCC, multiple low-carbon technologies have shown rapid progress, namely in terms of cost, performance, and adoption, enhancing the feasibility of rapid energy transitions. The rapid deployment and cost decrease of modular technologies like solar, wind, and batteries have occurred much faster than anticipated by experts and modelled in previous mitigation scenarios. Prices have dropped rapidly over the last five years for several key energy system mitigation options, notably solar photovoltaics (PV), wind power, and batteries. Namely, global wind and solar PV capacity and generation have increased rapidly. In addition, the political, economic, social, and technical feasibility of solar energy, wind energy and electricity storage technologies has improved dramatically over the past few years.

However, further efforts are needed to ensure the rapid deployment of low-carbon technologies. Namely, electricity systems powered predominantly by renewables will be increasingly viable over the coming decades, but it will be challenging to supply the entire energy system with renewable energy. The MWP can help better understand how to achieve greater integration across the energy system, and how to adopt a broad-based approach across the energy sector.

In addition, a broad range of climate policies require further dissemination, including instruments like carbon pricing, which play an increasing role in GHG emissions reductions.

Finally, there is still a lack of bankable projects in energy, especially in developing countries. The MWP's investment dialogues should help match investors with project specialists (see Chapter 5).

Examples of energy sector solutions identified in the IPCC's Sixth Assessment Report Working Group III report include:

- a substantial reduction in overall fossil fuel use, minimal use of unabated fossil fuels, deep reduction of methane emissions by 2030 and use of CCS in the remaining fossil fuel system through decommissioning and reduced utilisation of existing fossil fuel-based power sector infrastructure, retrofitting existing installations with CCS, switches to low-carbon fuels, and cancellation of new coal installations without CCS;
- electricity systems that emit no net CO<sub>2</sub> through deployment of solar energy, wind energy, lithium-ion batteries and other energy storage;
- widespread electrification of the energy system including end uses;
- development of energy carriers such as sustainable biofuels, low-emissions hydrogen, and derivatives in applications less amenable to electrification;
- energy conservation and efficiency;
- greater physical, institutional, and operational integration across the energy system;
- policy packages tailored to national contexts and technological characteristics and comprehensive policies addressing innovation systems;
- public R&D, funding for demonstration and pilot projects, and demand-pull instruments such as deployment subsidies to attain scale;
- digital technologies and barriers such as weaker enabling conditions in developing countries, including limited finance, technology development and transfer, and capacity.

### **3. Specific topics of interest**

Based on the above reasoning, we would like to suggest the following specific areas of focus for the MWP Global Dialogues:

1. **Avoid the lock-in of emissions:** how to avoid further investments in all fossil-fuel dependent infrastructure:
  - a. Eliminating investments in fossil-fuel infrastructure, including addressing security of supply implications;
  - b. Accelerating the phase out of fossil fuel subsidies:
    - i. Presentation of existing methodologies, accelerating efforts to harmonize the measurement and tracking of fossil fuel subsidies worldwide, including presentation of existing methodologies;

- ii. Replacing and phasing out fossil fuel subsidies domestically: presentation of best practices and opportunities for further action, including opportunities to redirect resources towards social welfare benefits;
  - c. Accelerating the phase out of coal to low-emission and climate resilient energy sources;
    - i. Best practices in transitioning from coal, including just transition practices.
  - d. Managing the risk of stranded assets related to fossil fuel infrastructure.
- 2. **Accelerate the deployment of renewable energy and low-carbon technologies:**
  - a. Opportunities to accelerate the deployment of, and addressing barriers to scale up renewables, including hydropower, solar power, and wind energy;
  - b. Opportunities to accelerate the deployment of carbon capture and storage and negative emission technologies, noting that the primary priority should be placed on urgently reducing emissions.
- 3. **Energy efficiency:**
  - a. Best practices and scalable solutions to improve energy efficiency across sectors.
- 4. **Closing the gap to the 1.5°C:**
  - a. Support efforts to enhance NDCs to keep the 1.5°C objective in reach;
  - b. Review long-term low emission development strategies to align them with net zero, supporting countries aim for net-negative emissions;
  - c. Support efforts to build credible net zero pledges, for countries and non-party stakeholders.

#### 4. Organizing purpose-driven Global Dialogues

The MWP Global Dialogues should be organized in a manner that can inform solutions for implementing and enhancing current NDCs and LTS.

In order to facilitate fruitful discussions, we are pleased to share the following reflections on the organization of the Global Dialogues under the MWP:

- **The co-chairs should make the most of our time available under the MWP:** work under the MWP should start rapidly in spring 2023, taking advantage of the fact that there are fewer international meetings at this time. We expect at least four dialogues to be convened under the MWP in 2023.
- **Opportunities for global, as well as regional, hybrid dialogues should be explored accordingly,** in order to ensure inclusivity of discussions on issues of a global nature. Hybrid dialogues could be held alongside each Regional Climate Week, focusing on issues of regional relevance and placing an emphasis on (but not limiting the participation to) key actors from the region.

In addition to the Global Dialogues to take place alongside the SBs and COP28, further dialogues could be organized as follows:

- 1) One global dialogue alongside the HLPF, which will review SDG 7 on Energy, in New York in July 2023;
  - 2) One global dialogue alongside the SCF Forum on Just Transition;
  - 3) One or two regional dialogues alongside the Regional Climate Week in spring and autumn 2023;
- **To ensure meaningful conversations and connections take place,** each dialogue and investment-related event should take place across a minimum of 2 to 3 days, and every effort should be made for participants to attend in person. Ideally, investment-focused events should take place alongside all dialogues.

- The first two days could be dedicated to the selected topic of interest, focusing on key solutions to close the mitigation gap to 1.5°C, informed by the best available science. The co-chairs are invited to provide relevant recommendations, solutions, best practices, and case studies, to ensure solutions-oriented exchanges among Parties and Non-Party Stakeholders.
  - A third day could be dedicated to the investment-focused events (see Chapter 5).
- **In addition, the MWP Global Dialogues should provide a space to showcase successful solutions and innovations with a high emission abatement potential and a high potential for replication, across all sectors, at the beginning of each Global Dialogue.** These presentations can help drive a positive competition among practitioners to have their solutions spotlighted internationally. Once the topics have been selected, the co-chairs should ensure relevant case studies, investable projects and stakeholders are identified to build practical, solutions-focused conversations. We support the idea of commissioning a study of global mitigation potential.
  - **The participation of the relevant experts and practitioners should be ensured.** Discussions under the MWP should be solutions and action oriented, bringing together the most relevant stakeholders and expertise on climate solutions, together with those experts responsible for domestic implementation in the relevant sectors and areas of work of interest.
  - **The effective participation of non-party stakeholders should be ensured.** As per its mandate, the MWP should facilitate an open and inclusive space for Parties and non-party stakeholders to create a common understanding of the transformational pathway needed to reach the objectives of the Paris Agreement, and to stimulate investment that enhance mitigation ambition and implementation action for current NDCs. The co-chairs of the MWP should work with the High-Level Champions across the organisation of the dialogues and investment-focused events, to ensure effective involvement of non-Party stakeholders, and to share experiences and lessons learnt from their own activities (e.g. Regional Finance Forums and Implementation Labs).
  - **The MWP should serve as tracking and accountability platform for initiatives and voluntary commitments,** through presentations and reporting from Parties and especially non-party stakeholder commitments, including those taken outside the realm of the UNFCCC.
  - **Outputs of discussions under the Global Dialogues should be synthesized in an action-oriented manner, easily digestible by policy makers.** The outcomes of the MWP and the concepts, solutions, actions, guidelines, and other elements that are to be captured in the dialogues, can be complementary to the functional purpose of the Global Stocktake in driving acceleration across this decade to keep 1.5 alive and achieve the Paris Agreement temperature goal. Solutions from the MWP are to be presented back to the High-Level Ministerial Roundtable in a format that focuses on concrete next steps and actionable recommendations that Parties can take on.
  - **Synergies with other relevant processes,** including the annual High-Level Ministerial Roundtable, the Just Transition Work Programme, work on Article 2.1.c of the Paris Agreement, etc. should be explored.

## 5. Investment-focused events

We are looking forward to the first investment-focused events, to be conducted on the margins of the MWP dialogues. According to the mandate in Decision FCCC/PA/CMA/2022/L.17, paragraph 11, these investment-focused events are to “consider the costs of mitigation implementation, with a view to unlocking finance, including for just transitions, overcoming barriers to access to finance and identifying investment opportunities and actionable solutions informed by nationally determined contributions to help public and private financiers, investors and international climate finance providers direct finance flows towards supporting areas of opportunity to enhance mitigation in this critical decade”.

The investment-focused events provide a key opportunity to strengthen collaboration between countries and with non-party stakeholders, with a view to achieving rapid emission reductions. The investment-focused events can build a better collective understanding of the investment architecture and assistance available for the MWP themes.

For the investment-focused events to be successful, it is paramount that the right people be at the table. The co-chairs of the MWP should pay particular attention to bringing the right participants: instead of climate negotiators, it is important that representatives from governments, which are in charge of building a countries project pipeline and climate investment plan, participate alongside with public and private investors, project developers and intermediaries, who have the capacity to link up public and private investors who can share best practices e.g. related to blended finance.

The investment-focused events should showcase real world examples and best practices, that have the capacity to be replicated in other regions or sub-regions.

We would support coupling on of the investment-focused events in 2023 with the SCF Forum “Financing the Just Transition”, due to take place in 2023.