

Unclassified

English - Or. English

15 November 2023

ENVIRONMENT DIRECTORATE  
INTERNATIONAL ENERGY AGENCY

## Towards an impactful Mitigation Work Programme under the UNFCCC

Sirini Jeudy-Hugo ([Sirini.Jeudy-Hugo@oec.org](mailto:Sirini.Jeudy-Hugo@oec.org)) and Sofie Errendal ([Sofie.Errendal@oecd.org](mailto:Sofie.Errendal@oecd.org)).

JT03531802

## OECD/IEA CLIMATE CHANGE EXPERT GROUP PAPERS

This series is designed to make available to a wider readership selected papers on climate change issues that have been prepared for the OECD/IEA Climate Change Expert Group (CCXG). The CCXG (formerly called the Annex I Expert Group) is a group of government delegates from OECD and other industrialised countries. The aim of the group is to promote dialogue and enhance understanding on technical issues in the international climate change negotiations. CCXG papers are developed in consultation with experts from a wide range of developed and developing countries, including those participating in the regular Global Forum on the Environment organised by the CCXG. The full papers are generally available only in English.

The opinions expressed in these papers are the sole responsibility of the author(s) and do not necessarily reflect the views of the OECD, the IEA or their member countries, or the endorsement of any approach described herein.

Comments on the series are welcome, and should be sent to:

OECD Environment Directorate, 46 Quai Alphonse le Gallo, 92100 Boulogne-Billancourt, France, or by e-mail to [env.contact@oecd.org](mailto:env.contact@oecd.org).

-----  
OECD/IEA Climate Change Expert Group Papers are published on  
[www.oecd.org/environment/cc/ccxg.htm](http://www.oecd.org/environment/cc/ccxg.htm)  
-----

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

This document has been produced with the financial assistance of the European Union.

The views expressed herein can in no way be taken to reflect the official opinion of the European Union.

### © Copyright OECD/IEA (2023)

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgement of OECD as source and copyright owner is given.

All requests for commercial use and translation rights should be submitted to [rights@oecd.org](mailto:rights@oecd.org) Applications for permission to reproduce or translate all or part of this material should be addressed to:

Head of Publications Service  
OECD, 2 rue André-Pascal, 75775 Paris Cedex 16, France  
or  
IEA, 31-35 rue de la Fédération, 75739 Paris Cedex 15, France

# Acknowledgements

The authors would like to thank Siemen van Londersele and Lorelei Charlot (OECD) for their research and substantive inputs to this paper, and OECD colleagues Jane Ellis, Marcia Rocha, Deger Saygin, Geraldine Ang, and IEA colleagues William Hall, Luca Lo Re and Nikoo Tajdolat for their comments, inputs and feedback on earlier drafts of the paper. The authors would also like to thank Jasmine Bascombe, Manuela Galan, Megan George (United Kingdom), Barakat Ahmed, Tarek Ben Mabrouk (African Development Bank Group), Prasoon Agarwal, Cassandra Etter-Wenzel, Franza Vincenzo (Clean Energy Ministerial), Toyo Kawabata, Nadia Mohammed, Binu Parthan (IRENA), Eleanor Webster (Mission Innovation), Lorane Collignon, Helena Gray, Chris Radojewski (Powering Past Coal Alliance), Bernd Hackmann, Vintura Silva (UNFCCC), and Simon Sharpe (UN Climate Change High-Level Champions Team) for their useful comments, inputs and views on earlier drafts of this paper. In addition, the authors would like to thank facilitators, presenters and attendees at the September 2023 CCXG Global Forum on the Environment and Climate Change, whose views and feedback helped shape the final paper.

The CCXG Secretariat would like to thank Australia (Department of Foreign Affairs and Trade), Belgium (Federal Public Service Health, Food Chain Safety, Environment), Canada (Environment and Climate Change Canada), the European Commission, Finland (Ministry of the Environment), Germany (Federal Foreign Office), Japan (Ministry of the Environment), Netherlands (Ministry of Economic Affairs and Climate Policy), New Zealand (Ministry for the Environment), Norway (Ministry of Climate and Environment), Republic of Korea (Ministry of Foreign Affairs), Sweden (Swedish Energy Agency), Switzerland (Federal Office for the Environment) and the United States (Department of State) for their direct funding of the CCXG in 2023, and Belgium, the OECD and IEA for their in-kind support of the CCXG in 2023.

Questions and comments should be sent to:

Sirini Jeudy-Hugo  
OECD Environment Directorate  
46 Quai Alphonse le Gallo  
92100 Boulogne-Billancourt  
France  
Email: [Sirini.Jeudy-Hugo@oecd.org](mailto:Sirini.Jeudy-Hugo@oecd.org)

All OECD and IEA information papers for the Climate Change Expert Group on the UNFCCC can be downloaded from: [www.oecd.org/environment/cc/ccxg.htm](http://www.oecd.org/environment/cc/ccxg.htm)

# Abstract

The Mitigation Work Programme (MWP) was established at COP26 to urgently enhance mitigation ambition and implementation in this critical decade. This paper explores how the MWP could build on and amplify relevant existing efforts, within and outside the UNFCCC, to trigger the rapid scale up of mitigation efforts required to keep the temperature goal of the Paris Agreement within reach. As a multilateral platform backed by the legitimacy and convening power of the UNFCCC, the MWP could help to raise awareness of available tools and solutions, build momentum behind relevant ongoing mitigation-related initiatives without being prescriptive, and deliver more effective, targeted mitigation efforts across all fronts in the near-term. This paper also outlines potential options for the annual decision on the MWP which provides an important opportunity to maintain attention on the need to urgently scale up mitigation efforts and encourages learning-by-doing. The annual MWP decision could be structured around different mutually supportive elements including lessons learned from the MWP's first year, follow-up from MWP activities and related mitigation commitments at previous COPs, synergies with other UNFCCC processes, and how to complement the global stocktake.

**JEL Classifications:** Q54, Q56, Q58, Q49, F53, O29, D63, H70, E22

**Keywords:** UNFCCC, climate change, Paris Agreement, Mitigation Work Programme, global dialogues, investment-focused events, international co-operation, non-Party stakeholders, just energy transition

# Résumé

Le programme de travail sur l'atténuation (PTA) a été établi à l'occasion de la COP26, en vue de relever sans délai le niveau d'ambition en matière d'atténuation et d'accélérer l'application des mesures correspondantes au cours de cette décennie cruciale. Ce document examine comment le PTA pourrait s'appuyer sur les efforts déployés au sein et en dehors de la CCNUCC et les amplifier, pour entraîner l'intensification rapide des efforts d'atténuation nécessaires pour que l'objectif de température de l'Accord de Paris reste réalisable. En tant que plateforme multilatérale, bénéficiant de la légitimité et du pouvoir de mobilisation de la CCNUCC, le PTA pourrait contribuer à mieux faire connaître les outils et solutions existants, à renforcer la dynamique en faveur des initiatives en cours en matière d'atténuation de manière non prescriptive, ainsi qu'à la fourniture à court terme et sur tous les fronts d'efforts d'atténuation plus efficaces et plus ciblés. Ce document présente également les possibilités envisageables en ce qui concerne la décision annuelle sur le PTA, qui représente une occasion importante de rappeler la nécessité d'intensifier d'urgence les efforts d'atténuation et favorise l'apprentissage par la pratique. La décision annuelle du PTA pourrait être structurée autour de différents éléments complémentaires, notamment les enseignements tirés de la première année de mise en œuvre du PTA, le suivi des activités menées au titre du PTA et des engagements connexes en matière d'atténuation pris lors des COP précédentes, les synergies avec les autres processus de la CCNUCC, et les moyens de compléter le bilan mondial.

**Classification JEL :** Q54, Q56, Q58, Q49, F53, O29, D63, H70, E22

**Mots clés:** CCNUCC, changement climatique, Accord de Paris, programme de travail sur l'atténuation, dialogues mondiaux, manifestations consacrées à l'investissement, coopération internationale, entités non parties, transition énergétique juste

# Table of contents

Acknowledgements	3
Abstract	4
Résumé	5
List of Acronyms	8
Executive summary	10
1. Introduction	12
2. Overview of MWP modalities and activities	13
2.1. Mandated outputs and activities under the MWP	13
2.2. Summary of MWP related activities and discussions in 2023	13
2.2.1. First global dialogue and investment-focused event	13
2.2.2. Informal consultations on the MWP at SB58	14
2.2.3. Second global dialogue and investment-focused event	14
3. Harnessing existing initiatives to enhance mitigation ambition and implementation	16
3.1. International collaboration, the High-Level Climate Champions, and the MWP	16
3.2. Existing initiatives and the MWP	17
3.2.1. Bringing in relevant initiatives to the MWP	19
3.2.2. Building on the work of relevant initiatives through the MWP	24
4. Potential implications for the structure and elements of a MWP decision	26
4.1. Possible options for the structure and elements of a MWP decision	26
4.1.1. Reflecting lessons learned from the first year of the MWP	26
4.1.2. Follow-up on MWP activities and related mitigation commitments	27
4.1.3. Supporting synergies with other processes under the UNFCCC	28
4.1.4. Complementing the GST as mandated	29
5. Conclusions	31
5.1. Harnessing existing mitigation-related initiatives	31
5.2. Potential options for structuring an annual MWP decision	32
References	35

## Tables

Table 5.1. Creating synergies between the MWP and ongoing mitigation-related initiatives	32
Table 5.2. Potential structure and elements of an annual CMA decision on the MWP	33

## Figures

Figure 2.1. Overview of activities under the MWP in 2023	13
Figure 3.1. Overview of existing international collaboration initiatives in the power sector	17
Figure 3.2. An overview of countries and NPS involved in the GPFM	23

## Boxes

Box 3.1. Improving co-ordination to decarbonise the energy sector in developing countries with the Energy Transition Council (ETC)	19
Box 3.2 Selected international activities and initiatives supporting a just energy transition	20
Box 3.3. Encouraging regional collaboration with clean energy corridors	21
Box 3.4. Engaging subnational governments and utilities to support the phase out of unabated coal	22
Box 3.5. Fostering innovation for power sector decarbonisation through the Green Powered Future Mission (GPFM)	23
Box 3.6. Facilitating peer-to-peer learning on low emitting energy systems	25

# List of Acronyms

<b>AREI</b>	Africa Renewable Energy Initiative
<b>CCU/CCS</b>	Carbon Capture, Utilisation and Storage
<b>CCXG</b>	Climate Change Expert Group
<b>CECCA</b>	Clean Energy Corridor of Central America
<b>CEFIM</b>	Clean Energy Finance and Investment Mobilisation programme
<b>CEM</b>	Clean Energy Ministerial
<b>CETP</b>	Clean Energy Transitions Programme
<b>CET Partnership</b>	Clean Energy Transition Partnership
<b>CMA</b>	Conference of the Parties serving as the meeting of the Parties to the Paris Agreement
<b>COP</b>	Conference of the Parties
<b>CTCN</b>	Climate Technology Centre & Network
<b>ETC</b>	Energy Transition Council
<b>EV</b>	Electric Vehicle
<b>GD</b>	Global Dialogue
<b>GPFM</b>	Green Powered Future Mission
<b>GST</b>	Global Stocktake
<b>IEA</b>	International Energy Agency
<b>IFCMA</b>	Inclusive Forum on Carbon Mitigation Approaches
<b>IFE</b>	Investment-focused Event
<b>IRENA</b>	International Renewable Energy Agency
<b>ISGAN</b>	International Smart Grid Action Network
<b>JETP</b>	Just Energy Transition Partnership
<b>JTWP</b>	Work Programme on Just Transition

<b>OECD</b>	Organisation for Economic Co-Operation and Development
<b>LEDS LAC</b>	Regional Platform for Latin America and the Caribbean on Low Emission Resilient Development
<b>MI</b>	Mission Innovation
<b>MRT</b>	Ministerial Round Table
<b>MWP</b>	Mitigation Work Programme
<b>NDC</b>	Nationally Determined Contribution
<b>NPS</b>	Non-Party Stakeholders
<b>PCCB</b>	Paris Committee on Capacity-Building
<b>PPCA</b>	Powering Past Coal Alliance
<b>RCW</b>	Regional Climate Week
<b>RGEI</b>	Regional and Global Energy Interconnection Initiative
<b>RRF</b>	Rapid Response Facility
<b>RTEM</b>	Regional Technical Expert Meeting
<b>SB</b>	Meeting of the UNFCCC Subsidiary Bodies
<b>SBI</b>	Subsidiary Body for Implementation
<b>SBSTA</b>	Subsidiary Body for Scientific and Technological Advice
<b>SDG</b>	Sustainable Development Goal
<b>SIDS LHI</b>	Small Island Developing States Lighthouses Initiative
<b>TEC</b>	Technology Executive Committee
<b>TEM</b>	Technical Expert Meeting
<b>TEP</b>	Technical Examination Process
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VRE</b>	Variable renewable energy
<b>WACEC</b>	West Africa Clean Energy Corridor
<b>WAPP</b>	West African Power Pool

# Executive summary

At the 26<sup>th</sup> Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC), Parties established the Mitigation Work Programme (MWP) to urgently enhance mitigation ambition and implementation in this critical decade. The modalities of the MWP include a cycle of global dialogues (GDs), investment-focused events (IFEs) and other dialogues focused on selected topics, summary reports, and presentations at annual ministerial roundtables (MRTs) on pre-2030 ambition. This cycle is to be repeated annually between 2023 and 2026, with Parties adopting annual decisions on progress in implementing the work programme, and a decision on the continuation of the MWP to be adopted in 2026.

Enhancing mitigation efforts at the pace and scale required over the next seven years to keep the Paris Agreement's 1.5°C goal within reach is not straightforward. While the MWP is a recently established process under the UNFCCC, fortunately it is not starting from scratch. There are already numerous initiatives underway in different sectors and parallel discussions in various international and regional fora, that provide a useful launch pad towards meeting the MWP objective. A key issue is how the MWP can successfully build on relevant efforts already underway to trigger the rapid scale up of mitigation action required in the near-term.

This paper explores how the MWP could be more impactful by catalysing ongoing efforts, both within and outside the UNFCCC process, that relate to enhancing mitigation efforts. This paper also outlines potential elements of the decision to be adopted at COP28 on progress in implementing the MWP. This paper focuses on selected international and regional initiatives that engage different Parties and non-Party stakeholders (NPS) and support the overall objective of the MWP, including its focus in 2023 on accelerating a just energy transition. The analysis does not aim to be exhaustive, rather it seeks to illustrate how the MWP could build on relevant initiatives to avoid duplicating work underway, amplify ongoing efforts and deliver enhanced mitigation efforts in the near-term.

In the current crowded landscape of activities related to enhancing mitigation action, the MWP provides a valuable opportunity to “connect the dots”. As a multilateral platform backed by the legitimacy and convening power of the UNFCCC, the MWP could help to raise awareness of available tools, platforms and solutions that could complement multilateral efforts. The MWP could help to build momentum behind relevant mitigation-related initiatives without being prescriptive, and deliver more effective, targeted efforts to support the objective of scaling up mitigation ambition and implementation in the near-term.

The MWP could “bring in” relevant initiatives related to the annual MWP topic by showcasing their achievements at GDs and IFEs. This could increase awareness of ongoing activities and could help increase the engagement of relevant actors in the MWP process. Showcasing the work of relevant initiatives through the MWP could in turn help to increase the impact of these initiatives. For example, sharing insights from relevant work streams under Mission Innovation (MI) could raise awareness of work that engages relevant actors and delivers concrete results on the ground, helping to crowd-in further voluntary support behind such efforts. Highlighting progress of relevant initiatives through the MWP could help maintain attention on some Parties efforts towards commitments agreed at previous COPs, such as phasing out unabated coal power and related efforts under the Powering Past Coal Alliance (PPCA).

The MWP could also “build on” the work of relevant initiatives to inform and focus discussions at MWP GDs and IFEs. Using relevant work by ongoing initiatives as a starting point, could help the MWP to better understand efforts already underway. For example, the Breakthrough Agenda’s landscape maps of activities in key emitting sectors, or insights from regional initiatives, such as the Africa Renewable Energy Initiative (AREI) and the Small Island Developing States Lighthouses Initiative (SIDS LHI), could help to inform MWP events. This would allow discussions under the MWP to focus on identifying potential overlaps/gaps in current activities and priority levers that could trigger accelerated mitigation action within and across sectors. Priorities identified via the MWP could in turn help to inform more targeted activities by relevant initiatives, e.g., to focus on current gaps such as just transition considerations.

The MWP is the main facilitative dialogue space at the UNFCCC level focusing on the need to urgently scale up mitigation efforts. The provision to adopt an annual decision on progress in implementing the MWP provides an opportunity to maintain attention on this key topic and encourages learning-by-doing. The annual decision could be structured around different procedural and technical elements, for example:

- *Lessons learned from the first year of the MWP:* The decision could recommend iterations to fine-tune and enhance the MWP process to reflect lessons learned. For example, the decision could invite the Secretariat to prepare a technical information paper to inform discussions and provide guidance on the scope and structure of the GD summary and annual reports to be produced. The decision could also invite the MWP co-chairs to consult with the High-Level Climate Champions on the annual selection of topics to create synergies between technical discussions under the MWP and efforts under the Action Agenda.
- *Follow-up on MWP activities and related mitigation commitments:* The decision could identify existing initiatives and available tools that can support the MWP objective and complement multilateral efforts. The decision could encourage/invite Parties to voluntarily engage in relevant initiatives in a non-prescriptive way. The decision could also reiterate and follow-up commitments made alongside the MWP at previous COPs. For example, the decision could invite MWP co-chairs to organise sessions at GDs for Parties to share how they are translating global commitments into national efforts and barriers faced, to support mutual learning and help build trust.
- *Supporting synergies with other processes under the UNFCCC:* The MWP decision could recognise the need to harness linkages and streamline processes under the UNFCCC that relate to the objective of the MWP. For example, the decision could propose back-to-back MRTs on pre-2030 ambition and just transition at subsequent COPs. The decision could also recommend agendas of MWP events and potential events under the work programme on just transition (JTWP) are iteratively designed so discussions feed into each other. In addition, the MWP decision could set out options to inform annual high-level MRTs on pre-2030 ambition, for example inviting presentations of progress by relevant mitigation-related initiatives identified under the MWP and updates on related commitments launched at previous COPs.
- *Complementing the global stocktake (GST) as mandated:* The MWP could inform technical discussions under the GST and be informed by the GST. For example, the decision could recommend GD sessions focus on mitigation-related knowledge gaps identified in the first GST (GST1) to inform discussions under the second GST (GST2). The decision could also recommend GD sessions provide a space for Parties to share experiences on the mitigation component of Nationally Determined Contributions (NDCs) to help countries enhance their NDCs in line with Article 4 of the Paris Agreement and informed by GST1.

Scaling up mitigation ambition and implementation at the pace and scale required to keep the Paris Agreement’s 1.5°C goal within reach is a significant task that requires an “all hands on deck” approach. The MWP could support this important effort by bringing together initiatives related to the annual MWP topic to help increase the impact of ongoing efforts and trigger enhanced mitigation actions across all fronts in this decisive decade.

# 1. Introduction

The need to rapidly scale up climate action to keep the global temperature goal of the Paris Agreement within reach is widely recognised (IPCC, 2023<sup>[1]</sup>), (UNFCCC, 2022<sup>[2]</sup>), (UNEP, 2022<sup>[3]</sup>), (IEA, 2023<sup>[4]</sup>). This sense of urgency and the need for accelerated action was reiterated at the 26<sup>th</sup> Conference of the Parties (COP26) in the Glasgow Climate Pact (UNFCCC, 2021<sup>[5]</sup>) and at COP27 in the Sharm el-Sheikh Implementation Plan (UNFCCC, 2022<sup>[6]</sup>). The incoming UAE Presidency aims to trigger a course correction with the first global stocktake (GST1) at COP28 in Dubai to accelerate solutions across the negotiations and the Action Agenda by 2030 (COP28 Presidency, 2023<sup>[7]</sup>).

Against this backdrop, a new work programme “to urgently scale up mitigation ambition and implementation in this critical decade”, hereafter referred to as the Mitigation Work Programme (MWP), was established at COP26 (UNFCCC, 2021<sup>[5]</sup>). The modalities of the MWP were agreed at the fourth Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA4) (UNFCCC, 2022<sup>[8]</sup>). Activities under the MWP began in 2023 and are expected to carry on until 2026, when a decision on the continuation of the MWP is to be adopted. Over the course of the MWP, annual decisions considering progress in implementing the work programme are to be adopted. These annual decisions provide an important opportunity to maintain political attention on the topic and encourage learning-by-doing.

The impact of the MWP in driving enhanced mitigation efforts in this critical decade depends on various factors. This includes how the process is conducted (Ellis, Lo Re and Errendal, 2023<sup>[9]</sup>) and to what extent it can successfully harness relevant existing efforts to trigger the needed scaling up of mitigation ambition and implementation. This paper explores how the MWP could accelerate ongoing efforts, within and outside the United Nations Framework Convention on Climate Change (UNFCCC) process, to deliver enhanced mitigation actions in the near-term. This paper also outlines the potential elements of a decision on the MWP to be adopted at CMA5 at COP28. This paper focuses on selected existing initiatives that engage Parties and non-Party stakeholders (NPS) and support the objective of the MWP and its focus in 2023 on accelerating a just energy transition. The initiatives explored seek to illustrate with a few examples how the MWP could concretely build on relevant existing mitigation-related initiatives in a non-prescriptive manner. This approach could potentially be applied to future topics selected under the MWP to avoid duplicating work underway, amplify ongoing efforts, and help to scale up mitigation efforts.

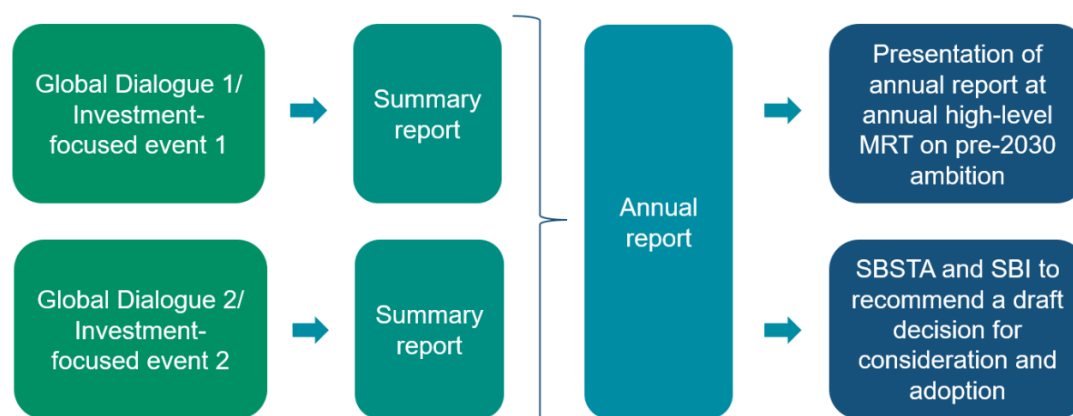
This paper is structured as follows: Section 2. provides a brief background to the MWP, including key modalities and an overview of MWP-related activities as of 20 October 2023. Section 3. explores opportunities for the MWP to build on and bring in relevant existing mitigation-related initiatives that engage different actors at the international and regional level. Section 4. sets out potential options for the possible structure and elements of a decision on the MWP at CMA5. Finally, Section 5. provides a synthesis of key findings and conclusions of the analysis.

## 2. Overview of MWP modalities and activities

### 2.1. Mandated outputs and activities under the MWP

The MWP was established at COP26 to “urgently scale up mitigation ambition and implementation in this critical decade” (UNFCCC, 2021<sup>[5]</sup>). The modalities of the MWP were agreed at CMA4 and include the organisation of at least two global dialogues (GDs) each year, investment-focused events (IFE) in the margins of the GDs and may include other dialogues in conjunction with existing events, such as regional climate weeks (UNFCCC, 2022<sup>[8]</sup>). MWP outputs include a summary report on each dialogue, an annual report based on the individual summary reports, and a presentation of the annual report by the MWP co-chairs to the high-level ministerial round table (MRT) on pre-2030 ambition. Furthermore, the Subsidiary Body for Scientific and Technological Advice (SBSTA) and the Subsidiary Body for Implementation (SBI) are mandated to consider progress in implementing the MWP and recommend a decision for adoption by the CMA (UNFCCC, 2022<sup>[8]</sup>). See overview in Figure 2.1.

Figure 2.1. Overview of activities under the MWP in 2023



Source: Authors based on Decision 4/CMA.4 (UNFCCC, 2022<sup>[8]</sup>).

### 2.2. Summary of MWP related activities and discussions in 2023

#### 2.2.1. First global dialogue and investment-focused event

The first global dialogue (GD1) and investment-focused event (IFE1) took place from 3-5 June 2023 in conjunction with the 58<sup>th</sup> meeting of the UNFCCC Subsidiary Bodies (SB58) in Bonn (UNFCCC, 2023<sup>[10]</sup>). The dialogue focused on the MWP topic in 2023 on “accelerating just energy transition” (UNFCCC,

2023<sup>[10]</sup>) and sub-topics relating to renewable energy, grid and energy storage, carbon capture utilisation and storage (CCU/CCS), and energy efficiency (UNFCCC, 2023<sup>[10]</sup>). Discussions explored opportunities, actionable solutions and technologies relating to each sub-topic as well as barriers, challenges, and financing issues for the just energy transition.

At GD1, participants highlighted the benefits of increasing deployment of renewables and energy efficiency measures while phasing out unabated fossil fuels. Participants noted the current concentration of renewables deployment in certain countries due to various finance, technology and capacity barriers as well as issues relating to smart grids, energy storage, and interconnectivity. Similar capacity, technology and finance challenges hinder progress in implementing energy efficiency measures. Participants expressed differing views on the deployment of CCU/CCS, noting such technologies must not be used to delay the transition to renewables. Participants also emphasised the need to strengthen exchanges of knowledge and experience through cross-border, regional and international co-operation, for instance through existing forums (e.g., Clean Energy Ministerial (CEM), Mission Innovation (MI)). Some participants highlighted the role of regional co-operation and regional dialogues in addressing region-specific challenges (UNFCCC, 2023<sup>[11]</sup>).

The IFE1 held in conjunction with GD1 explored solutions to accelerate a just energy transition. Discussions at IFE1 highlighted the need to address the unequal distribution of renewable energy investments across regions, and the role of finance from all sources (international, national, public and private) in doing so (UNFCCC, 2023<sup>[10]</sup>). Participants highlighted various region-specific challenges (UNFCCC, 2023<sup>[10]</sup>) and noted the importance of linking investments to Nationally Determined Contributions (NDCs) and long-term strategies (LTS).

### ***2.2.2. Informal consultations on the MWP at SB58***

Although the MWP did not feature on the adopted agenda of SB58, informal consultations among Parties provided an opportunity to share initial reflections following the first set of MWP events and were captured in an informal note by the SBI and SBSTA Chairs. Many Parties welcomed the start of activities under the MWP (UNFCCC, 2023<sup>[12]</sup>), while noting areas for improvement, including logistics and format to encourage better informed and more dynamic interactions among participants. Parties also highlighted the importance of having the right people in the room to facilitate focused discussions and identify actionable solutions as discussed in previous CCXG analysis (Ellis, Lo Re and Errendal, 2023<sup>[9]</sup>). To support more in-depth exchanges on region-specific issues, several Parties reiterated the importance of organising dialogues at the regional level, as already mandated in Decision 4/CMA.4 (UNFCCC, 2022<sup>[8]</sup>).

### ***2.2.3. Second global dialogue and investment-focused event***

The second global dialogue (GD2) and investment-focused event (IFE2) under the MWP focused on accelerating a just energy transition in transport systems and was held in Abu Dhabi from 15-17 October 2023. The meetings were organised in collaboration with the High-Level Climate Champions, the International Renewable Energy Agency (IRENA) and the NDC Partnership and held in conjunction with the World Investment Forum of the UN Conference on Trade and Development. In advance of GD2, the MWP co-chairs developed a technical non-paper setting out relevant information from the IPCC's Sixth Assessment Report and the UNFCCC's 2022 NDC Synthesis Report to help inform the discussions (UNFCCC, 2023<sup>[13]</sup>). The format of the events sought to encourage interactive discussions and included small discussion groups through world café sessions in GD2 and a pitch hub at IFE2 (UNFCCC, 2023<sup>[14]</sup>).

Discussions at GD2 focused on deploying and shifting to collective and non-motorised transport modes, energy and resource efficiency in the transport sector, electrification of vehicles, and shifting to low- or zero-carbon fuels. During the discussions, participants called for international co-operation and holistic approaches, for example on critical mineral supply chains, grid enhancements, infrastructure, technology

access, and e-waste management cycles, and highlighted the role of behavioural change. Participants also outlined transition barriers, mainly related to public, private, blended and innovative sources of finance, as well as a lack of access to technology and capacity building (UNFCCC, 2023<sup>[14]</sup>).

The IFE2 explored case studies on energy transition in the transport sector, how to move from project concepts to financing, structural barriers to clean energy investment, and regional opportunities for mobilising investment. Discussions included: sharing information on existing initiatives (e.g. IRENA's investment forums, NDC Partnership's NDC Investment Planning Guide); a pitch hub where selected project ideas were presented and received feedback from investors and policy makers; regional success stories and a matchmaking reception (UNFCCC, 2023<sup>[14]</sup>).

## 3. Harnessing existing initiatives to enhance mitigation ambition and implementation

This section explores how the MWP could tap into relevant mitigation-related initiatives to help increase the impact of ongoing efforts and avoid reinventing the wheel. The analysis focuses on selected initiatives that engage different Parties and NPS in activities that support the objective of the MWP and its selected topic in 2023 of accelerating a just energy transition. The analysis seeks to illustrate, with a few examples, how the MWP could harness relevant initiatives in a non-prescriptive manner, and how this approach could potentially be replicated for other topics selected under the MWP in the future.

### 3.1. International collaboration, the High-Level Climate Champions, and the MWP

Well-targeted international collaboration can support progress towards the goals of the Paris Agreement. As noted in the synthesis report of the first global stocktake (GST), “more effective international cooperation involving non-Party stakeholders is critically important in supporting countries’ efforts to accelerate progress” (UNFCCC, 2023<sup>[15]</sup>). How to make best use of the potential for international collaboration through the MWP is critical.

The High-Level Climate Champions<sup>1</sup> have a mandate to support certain MWP activities, including participation of NPS in GDs and organisation of IFEs (UNFCCC, 2022<sup>[6]</sup>) and have indicated their readiness to respond to this mandate (High-Level Climate Change Champions, 2023<sup>[16]</sup>) (UNFCCC, 2023<sup>[17]</sup>). The MWP co-chairs recognise the role of international co-operation, including with NPS, in addressing financial, technological, and capacity needs to accelerate a just energy transition (UNFCCC, 2022<sup>[18]</sup>). Experiences in other UNFCCC processes, e.g. Technical Examination Process (TEP) (UNFCCC, UNIDO and TEC, 2018<sup>[19]</sup>) (UNFCCC, 2020<sup>[20]</sup>), Talanoa Dialogue, GST, Implementation Labs under the Marrakech Partnership (High-Level Climate Change Champions et al., 2022<sup>[21]</sup>), could provide insights on how to effectively engage the High-Level Climate Champions and NPS in delivering the MWP.

Further engagement with the High-Level Climate Champions and NPS could help enhance the impact of the MWP. Submissions by some Parties highlight the role of the High-level Climate Champions in mobilising NPS, showcasing initiatives and sharing lessons (e.g. (UK, 2023<sup>[22]</sup>), (Switzerland on behalf of Georgia, Liechtenstein, Monaco, and Switzerland, 2023<sup>[23]</sup>), (Sweden and the EC on behalf of the EU and its Member States, 2023<sup>[24]</sup>), (Senegal on behalf of Least Developed Countries Group, 2023<sup>[25]</sup>). Some Parties also highlight opportunities for regional-level collaboration, e.g. through “speed networking” at regional IFEs to identify concrete partnering opportunities (UK, 2023<sup>[22]</sup>), leveraging regional initiatives

---

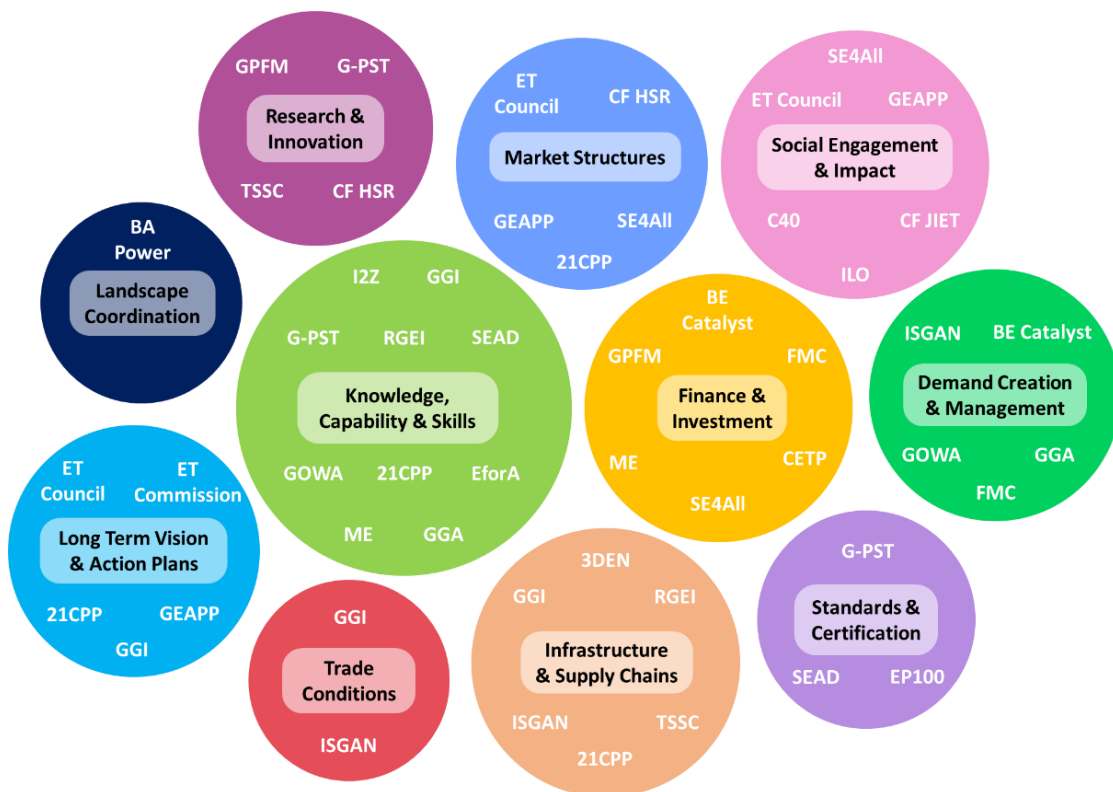
<sup>1</sup> At COP21, Parties appointed two High-Level Climate Change Champions to connect the work of governments with voluntary, collaborative actions by NPS and activate the “ambition loop” of mutually supporting/reinforcing efforts.

(Saudi Arabia on behalf of Saudi Arabia on behalf of Arab Group, 2023<sup>[26]</sup>), and discussions on region-specific challenges and opportunities (see section 2.2).

### 3.2. Existing initiatives and the MWP

There are several, parallel international collaboration initiatives covering different aspects of scaling up mitigation efforts, including accelerating a just energy transition (the 2023 focus of the MWP). These initiatives bring together groups of countries and NPS to voluntarily co-operate in different sectors. To illustrate this crowded landscape, Figure 3.1 provides a map of some initiatives in the power sector.

Figure 3.1. Overview of existing international collaboration initiatives in the power sector



Notes: Similar mappings are available for other Breakthrough sectors, e.g. road transport, hydrogen, steel, (Breakthrough Agenda, 2022<sup>[27]</sup>). Abbreviations in the figure are as follows: 21CPP - Clean Energy Ministerial’s 21st Century Power Partnership; 3DEN - International Energy Agency’s Digital Demand-Driven Electricity Networks Initiative; BA Power - UN Climate Change High-Level Champions’ Power Breakthrough; BE Catalyst - Breakthrough Energy Catalyst; C40 - C40 Cities’ Clean Energy Network; CETP - Clean Energy Transition Partnership; CF HSR - International Renewable Energy Agency’s Collaborative Framework on Enhancing Dialogue on High Shares of Renewables in Energy Systems; CF JIET - International Renewable Energy Agency’s Collaborative Framework on Just & Inclusive Energy Transition; EforA - Efficiency for Access Coalition; EP100 - Climate Group’s EP100; ET Commission - Energy Transition Commission; ET Council - Energy Transition Council; FMC - First Movers Coalition; GEAPP - Global Energy Alliance for People and Planet; GGA - Global Geothermal Alliance; GGI - Green Grids Initiative; GOWA - Global Offshore Wind Alliance; GPFM - Mission Innovation’s Green Powered Future Mission; G-PST - Global Power System Transformation Consortium; I2Z - Integrate to Zero; ILO - International Labour Organization; ISGAN - Clean Energy Ministerial’s International Smart Grid Action Network; ME - Mission Efficiency; RGEI - Clean Energy Ministerial’s Regional and Global Energy Interconnection; SEAD - Clean Energy Ministerial’s Super-Efficient Equipment and Appliance Deployment; SEforALL - Sustainable Energy for All; TSSC - Clean Energy Ministerial’s Transforming Solar Supply Chains.

Source: Authors based on (Breakthrough Agenda, 2022<sup>[27]</sup>) and forthcoming Breakthrough Agenda Power Sector Landscape Map (2023).

There are also various discussions and activities underway in international fora on issues related to accelerating mitigation efforts and a just energy transition. For example:

- UN High-level Political Forum and efforts to accelerate progress on Sustainable Development Goal 7 (SDG7) through voluntary Energy Compacts focusing on energy access.
- Workstreams and initiatives among groups of countries including the G20 (e.g. G20 Energy Transitions Working Group (G20, 2023<sup>[28]</sup>)) and G7 (e.g. Clean Energy Economy Action Plan, Climate Club focusing on industry decarbonisation (G7, 2023<sup>[29]</sup>)).
- Initiatives by international organisations, for example the OECD's Inclusive Forum on Carbon Mitigation Approaches (IFCMA) (OECD, 2023<sup>[30]</sup>) and the IEA's Clean Energy Transitions Programme (CETP) (IEA, 2023<sup>[31]</sup>).

The above is a selection among a wide plethora of activities underway by different institutions, initiatives, platforms, forums or structures relevant to the objective of the MWP and its 2023 topic of accelerating a just energy transition. This list is not meant to be exhaustive, but rather seeks to illustrate the complex landscape in which the MWP operates.

Despite a burgeoning number of initiatives and activities underway, more effective and strategic international co-operation, including on technology development, transfer and innovation, can support further progress towards the goals of the Paris Agreement (UNFCCC, 2023<sup>[15]</sup>). For example:

- Momentum behind existing initiatives could be strengthened, e.g. by expanding the membership of relevant sector-specific international initiatives to cover greater shares of the global market (IEA, IRENA and UN Climate Change High-Level Champions, 2023<sup>[32]</sup>).
- Efforts under some sectoral initiatives could be better targeted, e.g. on leverage points in each sector that could trigger positive tipping points (Systemiq, University of Exeter and Sharpe, 2023<sup>[33]</sup>) and lead to changes in the wider economy (Sharpe and Lenton, 2021<sup>[34]</sup>). For example, key leading car markets co-ordinating on the adoption and associated timelines of mandates for electric vehicles (EV) could send a strong signal to international markets and help trigger an EV transition in other countries/regions (Lam and Mercure, 2022<sup>[35]</sup>).
- International collaboration could be deepened to go beyond sharing best practices to include enhanced co-ordination in key areas, such as clean technology development, standards for measuring emissions and low-carbon products, and trade ( (IEA, IRENA and UN Climate Change High-Level Champions, 2023<sup>[32]</sup>); (Forner and Finch, 2023<sup>[36]</sup>)). For example, work by the G7 on a new Global Data Collection Framework for steel production and product emissions could help advance industrial transitions through improved tracking, benchmarking and potential standards (G7, 2023<sup>[37]</sup>). Similarly, enhanced international dialogue and collaboration on supply-chains of critical minerals and clean technology components could help avoid supply chain risks (Australia, 2023<sup>[38]</sup>) (Japan, 2023<sup>[39]</sup>). This could be complemented by technical and financial support to enable widespread deployment of available solutions ( (IEA, IRENA and UN Climate Change High-Level Champions, 2022<sup>[40]</sup>); (Forner and Finch, 2023<sup>[36]</sup>)).

In this crowded landscape, the MWP provides a useful platform, backed by the legitimacy and convening power of the UNFCCC, that could operate as a multilateral connector linking relevant sectoral initiatives related to the MWP topic each year to Parties' efforts to increase mitigation ambition (E3G, 2023<sup>[41]</sup>). As discussed below, the MWP and relevant initiatives could work together in a complementary, synergistic manner to enhance mitigation efforts in the near-term. Selected mitigation-related initiatives discussed below include: Breakthrough Agenda, Mission Innovation (MI), Clean Energy Ministerial (CEM), Powering Past Coal Alliance (PPCA), Energy Transition Council (ETC), Regional Climate Weeks (RCWs), Small Island Developing States Lighthouses Initiative (SIDS LHI), Africa Renewable Energy Initiative (AREI), Clean Energy Transition Partnership (CET Partnership), Clean Energy Corridors, West African Power Pool (WAPP), and the Clean Energy Finance and Investment Mobilisation (CEFIM).

### 3.2.1. Bringing in relevant initiatives to the MWP

Showcasing the achievements of mitigation-related initiatives at GDs and IFEs could help increase awareness of ongoing activities, tools, and matchmaking platforms relevant to the topic discussed under the MWP each year. For example, the ETC's matchmaking platform co-ordinates support for the energy transition (see Box 3.1), while the Zero Emission Vehicles Transition Council International Assistance Taskforce plays a similar role in the transport sector (IEA, IRENA and UN Climate Change High-Level Champions, 2023<sup>[32]</sup>). There are also various initiatives, tools and resources that could support the MWP's selected topic in 2023 of accelerating a just energy transition (see Box 3.2).

#### Box 3.1. Improving co-ordination to decarbonise the energy sector in developing countries with the Energy Transition Council (ETC)

The ETC is a multilateral matchmaking platform that co-ordinates support for clean energy projects (Ojemen, Sugioka and Heinrichs, 2023<sup>[42]</sup>). Since December 2020, the ETC has provided a valuable forum for developing countries to better access available financial and technical assistance, helping both providers and recipients navigate an increasingly complex landscape to help accelerate the delivery of projects in developing countries.

The ETC's Rapid Response Facility (RRF) provides technical, financial, political, and legal assistance on energy transition issues in partner countries. The RRF's knowledge sharing, financial and technical assistance, together with the ETC's co-ordination with recipient countries, has helped to provide robust strategies to improve the power sector in partner countries.

The MWP could showcase countries' experiences with the ETC in unlocking technical and financial assistance for project opportunities in the energy sector. For instance, Morocco used the ETC model to scale up clean energy whilst conducting a just phasedown of coal power. In addition, the ETC, with the help of the RRF, has supported the Moroccan government in delivering a resilient measurement system for energy efficiency, energy-saving insurance plans, scaling up the energy service companies market, implementing energy transition projects, and increasing government involvement in clean energy initiatives (Ojemen, Sugioka and Heinrichs, 2023<sup>[42]</sup>). The MWP could help disseminate such experiences and available support tools which may be useful to other countries.

Note: ETC involves 11 partner countries across Africa and Asia, 10 donor governments, and multiple institutions and philanthropies.  
Source: Box drafted by Luca Lo Re and Nikoo Tajdolat (IEA).

Sharing information on relevant activities and available tools through the MWP could be useful for other countries, even as non-members of existing initiatives. For example, workshops and events under the MI Think Tank aim to share knowledge and best practices on the successful design and implementation of clean energy innovation policies, programs, and collaborations with MI members and beyond (Mission Innovation, 2023<sup>[43]</sup>). Under the Power Breakthrough, the Electricity Transition Playbook will provide a universally accessible guide on different elements of an energy transition, which could be useful for countries beyond Breakthrough members (IEA, IRENA and UN Climate Change High-Level Champions, 2023<sup>[44]</sup>).

### Box 3.2 Selected international activities and initiatives supporting a just energy transition

Some ongoing initiatives, tools and resources are relevant for the MWP's selected topic in 2023 of accelerating a just energy transition. For instance, the PPCA's Just Transition Expert Group provides practical support to its members and other big coal users in addressing socio-economic barriers faced when phasing out coal by bringing together a range of expert partners and facilitating the sharing of best practices (PPCA, 2023<sup>[45]</sup>). Similarly, CEM's Empowering People Initiative provides a platform for members, partner institutions and companies to share best practices and integrate justice elements in technology-oriented initiatives under CEM (Clean Energy Ministerial, 2023<sup>[46]</sup>). The CEM Equality in Energy Transitions Initiative focusses on advancing women's participation in the clean energy sector and identifies role models within and beyond CEM members (Clean Energy Ministerial, 2023<sup>[47]</sup>).

Various toolkits and resources are available to support informed policymaking for a just energy transition. For example, the Climate Investment Funds' Just Transition Planning Toolbox (Climate Investment Funds, 2023<sup>[48]</sup>) and Just Transition Initiative Resource Library (Climate Investment Funds, n.d.<sup>[49]</sup>) provide in-depth analyses, case studies and policy guidance instruments to support just transition planning. Furthermore, the IEA's Global Observatory on People-Centred Clean Energy Transitions gathers best practices, case studies, and thematic reports to facilitate knowledge sharing and peer-learning on topics such as skills and inclusivity (IEA, 2023<sup>[50]</sup>).

There are also various partnerships being rolled out to support the just transition in emerging markets and developing economies (EMDEs). Notable examples are the Just Energy Transition Partnerships (JETPs), in which a group of donor governments support specific EMDEs in their nationally defined energy transition. Recent years have seen JETPs announced in South Africa, Indonesia, Viet Nam, and Senegal. While JETPs provide an innovative and welcome approach to supporting countries in their energy transitions, there remain areas for improvement, for example, in defining roadmaps and approaches to education, employment and local supply chains in transition plans (IEA, IRENA and UN Climate Change High-Level Champions, 2023<sup>[44]</sup>).

This box provides a snapshot of some activities relating to a just energy transition and is not meant to be exhaustive, but rather seeks to demonstrate the growing engagement of governments and NPS in this area. Showcasing such activities at GDs and IFEs could help raise awareness among countries of some available tools and resources related to the annual topic of the MWP without being prescriptive.

Source: Box drafted by Siemen Van Londersele (OECD).

Sharing concrete case studies, including challenges and region-specific concerns, through the MWP could help to replicate successful experiences in other regions. For example, the SIDS LHI<sup>2</sup> is an intra- and inter-regional collaboration initiative that provides a tailored approach to supporting a just and equitable energy transition in SIDS through partnerships at national, regional and global levels. AREI<sup>3</sup> is an initiative led by African governments in collaboration with international and regional partners, which through its work has insights into barriers to implementing renewable energy projects and how to overcome these in different African regions. The CET Partnership is a transnational strategic partnership focused on aligning and enhancing national and regional research, development and innovation programmes to foster clean energy

<sup>2</sup> The initiative was launched in 2014 in response to a call by SIDS leaders through the SIDS Accelerated Modalities of Action (SAMOA) Pathway. It is co-ordinated by IRENA and currently covers 40 SIDS located in the Caribbean, the Pacific, the Atlantic and Indian Ocean as well as in the South China Sea (IRENA, 2023<sup>[82]</sup>).

<sup>3</sup> AREI was launched at COP21 with the endorsement of the Committee of African Heads of State and Government on Climate Change (CAHOSCC) (AREI, 2017<sup>[102]</sup>).

transitions across Europe, working in collaboration with actors within and beyond the EU (CET Partnership, 2023<sup>[51]</sup>). Lessons and experiences from relevant regional initiatives, such as the SIDS LHI, AREI, CET Partnership, and clean energy corridors (see Box 3.3. ), could be shared through the MWP platform at dialogues held in conjunction with existing events such as RCWs.

### Box 3.3. Encouraging regional collaboration with clean energy corridors

IRENA-led clean energy corridors aim to implement networks of interconnected power transmission infrastructure to facilitate the integration and transmission of renewable energy in Africa, Central America and Asia. IRENA works with national governments, energy power operators and authorities within and outside each region to provide context-specific support (e.g., regional energy planning support, capacity building and information dissemination).

Sharing experiences with clean energy corridors through the MWP could provide useful insights to other countries/regions. For example, under the Clean Energy Corridor of Central America (CECCA), IRENA has provided support to Panama on how to optimise regulatory incentives to enable increased deployment of renewable energy. It has also provided trainings for grid operators on best practices for managing electricity systems with high shares of renewables and for regional power system operators on how to assess grid stability impacts of increasing renewable energy (IRENA and KEEI, 2021<sup>[52]</sup>).

The West Africa Clean Energy Corridor (WACEC) is a regional collaboration initiative aimed at improving energy access and renewable energy integration. Under WACEC, IRENA has initiated various activities in collaboration with other actors, e.g. the West African Power Pool (WAPP), to support long-term energy sector planning and increase renewable energy investments (IRENA and KEEI, 2021<sup>[52]</sup>). Insights from such experiences could be shared through the MWP. For instance, WAPP could share lessons from its work to develop generation and cross-border transmission infrastructure to create a regional electricity market with the aim of enhancing energy security, access and affordability (WAPP, 2023<sup>[53]</sup>) (WAPP, 2021<sup>[54]</sup>).

Source: Authors.

The MWP could provide an opportunity to showcase relevant work under other UN-led activities such as efforts to support SDG7. For example, since 2021, Energy Compact commitments have been adopted by governments and NPS setting out voluntary commitments of action to drive progress towards SDG7 (UN Energy, 2022<sup>[55]</sup>). Energy Compact commitments are meant to align with NDCs (UN Energy, 2022<sup>[56]</sup>). Sharing progress under the Energy Compacts through the MWP could help increase awareness of ongoing work relating to relevant issues such as energy access and could lead to more countries adopting Energy Compacts to support SDGs and NDCs.

Showcasing relevant activities underway at MWP events could help to crowd-in additional members behind existing initiatives without being prescriptive. For example, the PPCA engages governments and NPS to support the phase out of unabated coal (see Box 3.4). PPCA member countries (e.g. Canada, Chile, Denmark, Germany, UK) share expertise and experiences with prospective members through technical workshops (PPCA, 2023<sup>[57]</sup>), working groups in different regions (e.g. Asia, Latin America and Caribbean, China, Europe) (Personal Communication with PPCA Secretariat, 2023) and its Just Transition Expert Group (see Box 3.2). PPCA's technical diplomacy work also helps diffuse technical knowledge and expertise on coal phase-out among members and non-members (Blondeel, Van de Graaf and Haesebrouck, 2020<sup>[58]</sup>). Sharing experiences of members engaged in relevant initiatives such as the PPCA, including how their engagement has helped advance national priorities, e.g., to phase out coal,

scale-up renewables, could help crowd-in further voluntary support behind the initiative depending on countries' interests and national circumstances.

### Box 3.4. Engaging subnational governments and utilities to support the phase out of unabated coal

The PPCA established in 2017 at COP23, is a global initiative committed to accelerating the phase out of unabated coal power generation and the uptake of clean energy sources. The PPCA acts as a platform to share practical experiences and insights with the phase out of coal among members and prospective members (PPCA, 2022<sup>[59]</sup>). Among the 167 current members of the alliance are national governments, subnational governments, organisations and businesses (e.g., utilities, financial institutions, large energy consumers). Some of the subnational governments and utilities, located in countries that are not PPCA members (i.e., South Africa, Poland, Indonesia Australia, Philippines, Korea, Japan, USA), have a relatively high share of coal in their electricity mix. With the support of the PPCA, subnational governments are implementing phase-out policy measures tailored to their local conditions and jurisdictions, while engaging with respective national governments and other subnational entities to encourage them to consider similar actions (PPCA, 2023<sup>[60]</sup>).

Eastern Wielkopolska in Poland offers an interesting case of a subnational PPCA member. Despite its substantial coal reliance and coal mining activity, the region joined the alliance in 2021 and pledged to phase out coal by 2030 through an ambitious just transition approach (PPCA, 2022<sup>[61]</sup>). The region's primary utility and employer, the ZE PAK Group, also joined the PPCA and initiated the transition from coal to onshore wind, solar energy, and biomass. In the context of an inclusive transition process, in close collaboration with trade unions, the ZE PAK Group closed two coal-fired power plants in 2018 and 2020 and is converting a coal-fired plant into a biomass plant (Global Energy Monitor, 2023<sup>[62]</sup>). To address the local employment impact of these closures, the region aims to create new jobs by rolling out integrated hydrogen projects and various renewable energy projects by 2025 (Hetmanski, 2021<sup>[63]</sup>).

Another interesting subnational case is from the Philippines, where five provinces (Guimaras, Ilocos Norte, Masbate, Negros Occidental and Negros Oriental) and one city (Ormoc) are part of the PPCA. Most of these subnational governments have banned permitting for construction and operation of coal-fired power plants and are deploying large scale renewable energy projects (e.g., Negros Occidental (Gomez, 2019<sup>[64]</sup>) and Masbate (Rappler, 2018<sup>[65]</sup>)). These developments helped stimulate some actions at the national level. For example, in 2020, the national government announced a moratorium on new coal-fired power plants and announced a gradual shift away from coal usage at COP26 (CNN Philippines, 2021<sup>[66]</sup>). Since 2021 the national government has also been engaging with Indonesia and Viet Nam to co-ordinate a transition towards cleaner energy sources (Gotinga and Nirmala, 2021<sup>[67]</sup>).

Source: Box drafted by Siemen Van Londersele (OECD).

Showcasing work of relevant initiatives in MWP events could help increase engagement of other actors including NPS, highlight concrete actions underway and build confidence in available solutions. For example, MI brings together governments and NPS, including investors, to catalyse action and investment in research, development and deployment of clean energy solutions, with the aim of triggering tipping points in the cost and scale of these solutions. The initiative works through public-private innovation alliances, e.g. green powered future (see Box 3.5), (Mission Innovation, 2023<sup>[68]</sup>) and has spurred global co-operation in clean energy innovation (Myslikova and Gallagher, 2020<sup>[69]</sup>). For example, since its launch at COP21, MI members have leveraged USD1.6 billion towards 157 new international collaborations in clean energy innovation, supported nearly 1,500 innovations globally (Mission Innovation, 2021<sup>[70]</sup>), and increased clean energy innovation investments (Mission Innovation, 2020<sup>[71]</sup>).

### Box 3.5. Fostering innovation for power sector decarbonisation through the Green Powered Future Mission (GPFM)

The MI's GPFM was launched in 2021 with the aim to integrate variable renewable energies (VRE) in the country's generation mix by 2030 (Green Powered Future Mission, 2022<sup>[72]</sup>). The GPFM is a private-public partnership, co-led by China, Italy and the UK, that involves several countries and NPS (see Figure 3.2). The GPFM pools research and development activities to test and develop innovative solutions for affordable, reliable, flexible, and efficient energy generation. Pilots with large-scale demonstrations, replications and digital solutions are discussed in workshops. There is also a "toolbox" where member countries pick and customise solutions according to different geographies, infrastructures, and regulations. The GPFM has been nominated to accelerate the delivery of essential power sector solutions across multiple regions under the Power Breakthrough (IEA, IRENA and UN Climate Change High-Level Champions, 2023<sup>[44]</sup>).

Figure 3.2. An overview of countries and NPS involved in the GPFM



Source: (Green Powered Future Mission, 2022<sup>[72]</sup>).

The MWP could use the knowledge and experience developed in the GPFM to provide insights for power sector decarbonisation through 100% VRE integration, tailored to diverse country circumstances. The GPFM follows three research and development pillars to cover all power innovation needs and accelerate the shift in clean energy: (i) affordable and reliable VRE, (ii) system flexibility and market design, (iii) data/digitalisation for system integration. These pillars ensure innovations are resilient, cost-effective, delivered in various climates and have capacities for mass implementation.

Source: Box drafted by Luca Lo Re and Nikoo Tajdolat (IEA).

Showcasing progress under mitigation-related initiatives through the MWP could provide an opportunity to keep political attention on relevant initiatives and maintain momentum towards achieving their respective objectives. MWP summary dialogue reports and/or annual reports could highlight progress under relevant initiatives and mitigation commitments agreed at previous COPs related to the selected MWP topic each year. For example, showcasing progress under the PPCA through the MWP could help maintain attention on efforts by some Parties towards the commitment agreed at COP26 and support the PPCA's objective of phasing out unabated coal by 2030 for OECD countries and by 2040 for other countries (PPCA, 2023<sup>[73]</sup>). Similarly, annual progress reports under relevant sectoral Breakthroughs could be presented at the GD held before COP to help maintain attention on activities underway.

### 3.2.2. Building on the work of relevant initiatives through the MWP

Ongoing work by existing initiatives related to the annual MWP topic could help inform discussions at GDs and IFEs. For example, the landscape mapping of relevant international collaboration initiatives in each Breakthrough sector<sup>4</sup> (UNFCCC, 2022<sup>[74]</sup>) could provide a useful starting point for discussions under the MWP (see Figure 3.1 for a simplified map of initiatives in the power sector). Increasing understanding of efforts underway would allow discussions under the MWP to focus on identifying potential gaps and priorities. This could in turn help inform ongoing activities to ensure they are well-targeted and focus on gaps (e.g. energy access (Sagar, 2022<sup>[75]</sup>), access to finance, just transition) and the most impactful levers to trigger accelerated mitigation efforts within and across sectors.

Potential regional-level discussions under the MWP, e.g. in conjunction with RCWs,<sup>5</sup> Regional Finance Forums or other events, could increase awareness of region-specific barriers, provide opportunities for learning and foster collaborations and partnerships at the regional level (UNFCCC, 2021<sup>[76]</sup>) (UNFCCC, 2023<sup>[77]</sup>). Regional-level discussions have been organised under previous UNFCCC processes, e.g. Regional Technical Expert Meetings (RTEMs) on mitigation under the TEP focused on scalable, replicable policies and actions in different regions (UNFCCC, 2021<sup>[78]</sup>) and were organised in conjunction with RCWs (UNFCCC, 2019<sup>[79]</sup>) (UNFCCC, 2018<sup>[80]</sup>) (UNFCCC, 2018<sup>[81]</sup>). Showcasing regional initiatives, such as the SIDS LHI, AREI, and regional peer-learning opportunities (e.g. Box 3.6) could provide an opportunity to share lessons at the regional level (e.g. with renewable transitions in SIDS (IRENA, 2023<sup>[82]</sup>)); region-specific barriers (e.g. relating to finance (IRENA, 2023<sup>[82]</sup>)); and information on available technical assistance (e.g. capacity building workshops, project development support, policy guidance (IRENA, 2023<sup>[82]</sup>) (AREI, 2022<sup>[83]</sup>)).

Overlaps between ongoing work by mitigation-related initiatives and discussions under the MWP indicate potential opportunities for synergies. For example, at GD1 (see section 2.2.1) participants noted the importance of demonstrating and testing power system flexibility solutions; activities under the GPFM demonstrate how to integrate up to 100% VRE in different power systems while maintaining a cost-efficient, secure, and resilient system. Activities under CEM, such as the International Smart Grid Action Network (ISGAN) and the Regional and Global Energy Interconnection (RGEI) Initiative (Clean Energy Ministerial, 2023<sup>[84]</sup>) reflect some issues raised at GD1 on smart grids and interconnectors. Existing initiatives could thus provide potential avenues to take forward priorities identified under the MWP, e.g., by increasing awareness and crowding-in support for relevant work already underway in a non-prescriptive manner.

---

<sup>4</sup> Power, Road Transport, Steel, Hydrogen, Agriculture, Buildings, Cement (UNFCCC, 2022<sup>[74]</sup>).

<sup>5</sup> RCWs are held in Latin America and Caribbean (LACCW), Africa (ACW), Asia-Pacific (APCW) and the Middle East and North Africa (MENACW). Thematic tracks of RCWs are developed by the UNFCCC in collaboration with global and regional partners, the host country, and COP Presidency (UNFCCC, 2023<sup>[77]</sup>).

### Box 3.6. Facilitating peer-to-peer learning on low emitting energy systems

To meet the goals of the Paris Agreement, investments in clean energy in emerging and developing economies need to reach USD 1.7 trillion a year by 2030, from around USD 200 billion in 2022. All sources of finance (public, private, domestic, international) need to be mobilised rapidly. In this context, the OECD's CEFIM programme aims to strengthen domestic enabling conditions to attract finance and investments in renewable power, energy efficiency and industry decarbonisation in emerging and developing economies (OECD, 2023<sup>[85]</sup>). CEFIM currently supports Colombia, Egypt, India, Indonesia, the Philippines, South Africa, Thailand and Viet Nam in developing policies and instruments to scale up a pipeline of bankable clean energy projects, offering options tailored to each country's needs, including knowledge products, stakeholder dialogue and regional peer-learning. For instance:

- A regional peer-learning event organised by CEFIM and the Regional Platform for Latin America and the Caribbean on Low Emission Resilient Development (LEDS LAC) in December 2022 (OECD, 2022<sup>[86]</sup>) aimed to support mobilisation of finance and investment to implement bioenergy projects in the region. Bioenergy project developers, interested finance institutions, international co-operation agencies, donors, development partners, and other stakeholders used the event to facilitate matchmaking and bridge the gap between investment-ready bioenergy projects and clean energy financing.
- A regional peer-learning event organised by CEFIM with partner countries from South Asia and Southeast Asia (OECD, 2023<sup>[87]</sup>) in March 2023 focused on the implications of low-carbon hydrogen production on renewable energy systems. The event addressed the opportunities electrolytic hydrogen can bring for energy system transformation, discussed required policy instruments, and provided an opportunity for countries to share experiences and good practices.

Source: Box drafted by Deger Saygin (OECD).

## 4. Potential implications for the structure and elements of a MWP decision

### 4.1. Possible options for the structure and elements of a MWP decision

Decision 4/CMA.4 provides a mandate for the preparation of a decision “to consider progress, including key findings, opportunities and barriers, in implementing the work programme” (UNFCCC, 2022<sup>[6]</sup>). The decision is to be put forward for consideration and adoption by the CMA at each of its sessions throughout the duration of the MWP (2023-2026). The annual MWP decision will need to be “non-prescriptive, non-punitive, facilitative, respectful of national sovereignty and national circumstances” (UNFCCC, 2022<sup>[6]</sup>), while also supporting the objective of scaling up mitigation efforts in this decisive decade.

The provision for an annual decision on the MWP provides an important opportunity to maintain political attention on the urgent need to enhance mitigation ambition and implementation in the near-term (Ellis, Lo Re and Errendal, 2023<sup>[9]</sup>). The annual MWP decision also encourages a learning-by-doing approach to implementing the MWP so the process can improve over time.

The MWP decision could be structured around different elements covering both procedural (e.g., lessons learned) and substantive elements (e.g., follow-up, synergies with other processes, how to complement the GST as mandated). These potential elements are discussed below.

#### **4.1.1. Reflecting lessons learned from the first year of the MWP**

The MWP decision could include recommendations on potential iterations to refine the design and planning of events under the MWP to reflect lessons from experience in 2023. Incorporating lessons learned can help to improve future MWP cycles and maintain the effectiveness and relevance of the MWP process going forward. The decision could provide recommendations on the design of agendas at GDs and IFEs to facilitate a “focused exchange”, e.g., by including concrete case studies, replicable examples and lessons learned, framing discussions around *how* to address barriers, and identifying practical solutions. Agendas could link discussions between GDs and IFEs (Samoa on behalf of the Alliance of Small Island States, 2023<sup>[88]</sup>) and be designed iteratively to build on discussions at previous GDs and IFEs (Switzerland on behalf of the Environmental Integrity Group, 2023<sup>[89]</sup>) (US, 2023<sup>[90]</sup>) (Spain and the EC on behalf of the EU and its Member States, 2023<sup>[91]</sup>).

The MWP decision could reiterate the provision in Decision 4/CMA.4 to organise other dialogues alongside existing events, including RCWs. Potential regional dialogues under the MWP could build on previous experiences such as RTEMs under the TEP which were held alongside events in different regions, including RCWs, and organised in partnership with non-governmental organisations and the UN High-Level Climate Champions (Jedy-Hugo and Charles, 2022<sup>[92]</sup>). The RTEMs provided an opportunity to

examine specific finance, technology and capacity resources needed to scale up mitigation actions at the regional level. Regional level dialogues under the MWP held in conjunction with RCWs and other regional events could provide an opportunity for more focused discussions on regional-specific opportunities and challenges and facilitate engagement by relevant stakeholders.

To inform discussions at MWP events, the decision could invite the Secretariat to prepare a technical information paper considering submissions made by Parties, observers and other NPS on the topic of the GD. For example, the decision could invite the UNFCCC secretariat to prepare a technical information paper to be circulated ahead of each GD setting out the current state of play, latest science, available technologies, existing initiatives and best practices (UK, 2023<sup>[93]</sup>). This could build on the technical non-paper prepared for GD2/IFE2, which synthesised information from IPCC reports and the latest NDC synthesis report, to also include a summary of submissions made ahead of the GD. This could build on experiences under previous UNFCCC processes such as the TEP where the Secretariat prepared technical papers ahead of Technical Expert Meetings (TEMs) identifying mitigation benefits of actions, initiatives and options to enhance mitigation ambition in thematic areas discussed (UNFCCC, 2015<sup>[94]</sup>).

The MWP decision could provide guidance on the structure and scope of the MWP annual report and individual dialogue reports prepared by the UNFCCC secretariat under the guidance of the MWP co-chairs. This could mirror guidance provided on the Summary for Policy Makers under the TEP to include information on potentially scalable and replicable policies, practices and actions, options to support their implementation, and relevant collaborative initiatives (UNFCCC, 2016<sup>[95]</sup>). Similar guidance could be provided on the structure of the MWP annual report and individual dialogue reports, e.g., to include a section on relevant international initiatives related to the selected MWP topic, to include issues raised at the IFEs held in the margins of GDs, to identify available solutions. The MWP annual report could also be prepared to complement the annual Yearbook of Climate Action by the High-Level Climate Champions in certain areas, e.g., relevant collaboration initiatives.

The MWP decision could reiterate the mandate provided to the High-Level Climate Champions to support the organisation of GDs and IFEs and invite their engagement in other areas, e.g. active participation in GDs (Japan, 2023<sup>[39]</sup>) and supporting wide participation of NPS (Australia, 2023<sup>[38]</sup>). This could mirror the approach taken under previous UNFCCC processes. For example, under the Talanoa Dialogue, the High-Level Climate Champions provided guidance to ensure effective participation of NPS and informally convened dialogues in the margins of other meetings (High-Level Climate Change Champions, 2019<sup>[96]</sup>). Following the mid-term assessment of the TEP, the High-Level Champions became more involved in the process including in the selection of topics each year in consultation with the Technology Executive Committee (TEC) and the Climate Technology Centre & Network (CTCN) (UNFCCC, 2018<sup>[97]</sup>). The selected topics in turn helped to drive the plans and priorities of the Marrakech Partnership, including related coalitions, initiatives and activities (Jeudy-Hugo and Charles, 2022<sup>[92]</sup>). Building on this previous experience, the MWP co-chairs could be invited to consult with the High-Level Champions on the selection of topics to be discussed each year to help create synergies between technical discussions under the MWP and concrete efforts underway through the Action Agenda.

#### ***4.1.2. Follow-up on MWP activities and related mitigation commitments***

To follow-up on discussions held under the MWP over the year, the annual decision could highlight ongoing work, including by the UN High-Level Climate Champions and the Action Agenda, relating to the selected MWP topic. The MWP decision could recognise the role of such voluntary collaboration initiatives in supporting the MWP objective as a complement to multilateral efforts. The decision could also invite interested Parties to voluntarily engage in relevant initiatives to help scale up the ambition and implementation of their domestic mitigation efforts depending on their own national circumstances and priorities. This could build on calls at previous COPs, for example the Sharm el-Sheikh Implementation

Plan emphasised the need for “continued acceleration and collaboration” between Parties and NPS, including through initiatives such as the Breakthrough Agenda (UNFCCC, 2022<sup>[6]</sup>).

The annual MWP decision could invite relevant initiatives and processes to take forward work on gaps and priorities identified through the MWP process. This was an approach followed when strengthening modalities of the TEP under Decision 1/CP.21 (UNFCCC, 2016<sup>[95]</sup>), which requested the TEC and CTCN to inter alia provide regular updates during the TEMs on progress made in facilitating implementation of policies and actions previously identified during the TEP. Under the MWP, bodies such as the TEC, CTCN, the Paris Committee on Capacity-Building (PCCB) and others, could be invited to support implementation of identified opportunities and provide progress updates at subsequent MWP events. The decision could also invite the High-level Climate Champions and relevant initiatives related to the selected MWP topic each year to consider gaps and priorities identified under the MWP in planning and delivering their subsequent activities and support dissemination of MWP outputs among partners.

The decision could invite MWP co-chairs to organise a session at the GD in the following year to reflect how priorities identified under the MWP in previous years have been taken forward. These follow-up sessions could include updates from representatives from the High-level Climate Champions team and relevant initiatives on progress in taking forward priorities previously identified under the MWP. This could also build on existing partnerships, e.g. between the Breakthrough Agenda and COP Presidencies for COP26, COP27 and COP28 to leverage efforts under sectoral Breakthroughs to support the goals of the Paris Agreement and ensure continuity between successive COPs (UK Department for Business, 2023<sup>[98]</sup>).

The MWP was established as part of the broader mitigation outcome of the Glasgow Climate Pact and the Sharm el-Sheikh Implementation Plan, providing a hook to follow-up on related sectoral and other commitments made at previous COPs. The COP26 cover decision included a request to revisit 2030 targets in NDCs to align with the temperature goal of the Paris Agreement, to accelerate efforts to phase down unabated coal, phase out inefficient fossil fuel subsidies (UNFCCC, 2021<sup>[5]</sup>). The COP27 cover decision reiterated the request for Parties to revisit and strengthen 2030 targets in their NDCs to align with the temperature goal of the Paris Agreement (UNFCCC, 2022<sup>[6]</sup>).

The annual MWP provides an important opportunity to maintain attention on the urgency of scaling up mitigation efforts in the pre-2030 period. Following up on commitments at previous COPs, the annual MWP decision could reiterate calls for Parties to enhance their 2030 targets and scale up climate efforts in the near-term, and invite Parties to prepare new NDCs in line with Article 4 of the Paris Agreement and informed by the GST (UNFCCC, 2015<sup>[99]</sup>). The MWP decision could also reiterate relevant commitments in COP cover decisions, e.g., on scaling up renewables, phasing out coal, phasing out inefficient fossil fuel subsidies. Furthermore, the MWP decision could highlight other opportunities and actionable solutions to scale up mitigation efforts in the near-term, e.g. redirecting fossil fuel subsidies to other purposes such as supporting a just energy transition, further collaboration between Parties and NPS to accelerate deployment of clean technologies (UNFCCC, 2023<sup>[11]</sup>).

The annual decision could also invite the MWP co-chairs to organise sessions in future GDs that provide a space for Parties to exchange on their responses to relevant global commitments/targets, how these are being translated into national efforts and barriers and challenges faced. This could provide a valuable opportunity for mutual learning, helping to increase understanding of different approaches Parties are taking in response to global commitments, and can help to build trust.

#### **4.1.3. Supporting synergies with other processes under the UNFCCC**

There is currently a proliferation of work programmes, initiatives and processes under the Paris Agreement, which sometimes have overlapping mandates or themes. To ensure the MWP is efficient and impactful, it will be important that relevant processes under the UNFCCC relating to the overarching objective of the MWP are well linked, to maximise mutually beneficial synergies and ensure complementarity.

The MWP decision could take note of the various initiatives, work programmes and processes under the UNFCCC that relate to the annual topic and objectives of the MWP, recognising the need to harness linkages and streamline activities to ensure the MWP is impactful. For example, the MWP decision could set out potential synergies with the new work programme on just transition (JTWP) established at COP27 (Decision 1/CMA.4). The JTWP is to be implemented in a way that builds on and complements relevant workstreams, including the MWP (UNFCCC, 2022<sup>[6]</sup>). Taking into account discussions on the JTWP at COP28, the MWP decision could for example:

- Propose joint/back-to-back dialogues under the MWP and potential events under the JTWP (depending on the final modalities of the JTWP agreed at COP28);
- Propose back-to-back MRTs on pre-2030 ambition and just transition at subsequent COPs;
- Recommend the agendas of MWP events and potential events organised under the JTWP are iteratively designed so discussions can complement each other. For example, discussions under the MWP in 2023 on accelerating a just energy transition could feed into the work of the JTWP in subsequent years to focus on social, governance, and equity related aspects of issues discussed under the MWP (Canada, 2023<sup>[100]</sup>). Similarly, future work under the JTWP could inform discussions under the MWP going forward (UK, 2023<sup>[93]</sup>).

Decision 4/CMA.4 provides a mandate for the co-chairs to make a presentation of the MWP annual report at the annual high-level MRT on pre-2030 ambition (UNFCCC, 2022<sup>[6]</sup>). The high-level MRT provides an important political space for high-level engagement on scaling up mitigation ambition and implementation in this decisive decade. The MWP decision could set out further detail on how the MWP process could feed into the preparations of the high-level MRT, for example:

- Invite presentations of progress under relevant initiatives identified through MWP events at the high-level MRT, e.g. sectoral Breakthroughs related to the selected MWP topic, and progress updates on initiatives launched at previous COPs, e.g. PPCA, Just Energy Transition Partnerships (JETPs) (Sweden and the EC on behalf of the EU and its Member States, 2023<sup>[24]</sup>);
- Invite Parties to announce 1-2 key enhanced mitigation efforts, initiatives and coalitions at the MRT in response to the priorities identified under the MWP and commit to report back on progress at the subsequent MRT. This would follow a similar approach to the high-level events convened alongside COPs between 2016-2020 under the TEP which provided an opportunity to announce new or strengthened initiatives and coalitions, take stock of progress and provide regular opportunities for high-level engagement (UNFCCC, 2016<sup>[95]</sup>).

#### **4.1.4. Complementing the GST as mandated**

The MWP is meant to “complement” the GST (UNFCCC, 2022<sup>[6]</sup>). The MWP could both inform technical discussions under the GST and be informed by GST outcomes in a complementary manner to maximise synergies and avoid duplication. This two-way relationship is recognised in the synthesis report of the first GST, which notes that the GST can “inform ongoing processes and work programmes under the Paris Agreement, and those efforts can in turn inform assessments of collective progress under future GSTs” (UNFCCC, 2023<sup>[15]</sup>).

Discussions under the MWP could feed into and inform technical discussions under future GST cycles. Technical discussions under the first GST (GST1) were wrapping up as the first discussions under the MWP were starting. This timing suggests the MWP could play a more important role in informing the technical phase of the second GST (GST2). GST2 is expected to end in 2028, five years after GST1. Future GDs could thus provide a space for in-depth discussions on knowledge/information gaps identified through the GST1 process. The annual MWP decision could invite the MWP co-chairs to organise sessions at future GDs focusing on specific mitigation-related knowledge/information gaps identified through GST1 and bring together relevant experts and organisations to work together to close the identified gaps to help

inform technical discussions under GST2. The decision could also invite the Secretariat to submit MWP annual reports as inputs to the Information Collection and Preparation phase of GST2.

The MWP could also serve as a delivery vehicle/implementing arm of the GST1 to help take forward the GST outcome on mitigation in the 2024-2026 period. MWP GDs could for example be used as a platform to share experiences, knowledge and best practices on the mitigation component of NDCs to help countries increase the ambition and implementation of their NDCs. Targeted discussions under the MWP on the mitigation component of NDCs could help countries translate current NDCs into pre-2030 action and support preparations of new NDCs by 2025 “informed” by GST1 and reflecting their “highest possible ambition” as per Article 4.3 of the Paris Agreement (UNFCCC, 2015<sup>[99]</sup>). The annual MWP decision could invite the MWP co-chairs to organise sessions at GDs in 2024 to provide a space for Parties to share experiences and best practices on enhancing ambition of the mitigation component of their NDCs as well as challenges faced in current NDCs (UK, 2023<sup>[101]</sup>). Discussions under the MWP could also help to take forward GST1 outcomes that relate to enhancing international co-operation for climate action, for example by helping to amplify the impact of relevant voluntary collaboration initiatives.

## 5. Conclusions

The Mitigation Work Programme (MWP) under the United Nations Framework Convention on Climate Change (UNFCCC) was established to urgently scale up mitigation ambition and implementation in this critical decade. The modalities of the MWP were agreed at the fourth Conference of the Parties serving as the meeting of the Parties to the Paris Agreement (CMA4). Activities under the MWP began in 2023 and are expected to continue until 2026, when a decision on the continuation of the MWP is to be adopted. Over the course of the MWP, annual CMA decisions considering progress in implementing the work programme, including key findings, opportunities, and barriers, are to be adopted.

How impactful the MWP is in driving enhanced mitigation ambition and implementation in this decisive decade depends on various factors. These include how the process is conducted (as discussed in previous CCXG analysis<sup>6</sup>) and whether the MWP can amplify relevant ongoing mitigation-related efforts and focus attention on the urgent need to enhance mitigation efforts in the near-term.

### 5.1. Harnessing existing mitigation-related initiatives

There are several initiatives underway, both inside and outside the UNFCCC framework, that bring together different Parties and/or non-Party stakeholders (NPS) to voluntarily collaborate on activities relating to the objective of the MWP and its selected topic in 2023 of accelerating a just energy transition. There are also relevant mitigation-related discussions and activities underway in international fora including at the UN level (e.g., Energy Compacts), among groups of countries (e.g., G20 Energy Transitions Working Group, G7 Climate Club), and international organisations (e.g., OECD's Inclusive Forum on Carbon Mitigation Approaches (IFCMA), IEA's Clean Energy Transitions Programme (CETP)). This non-exhaustive list illustrates the complex and crowded landscape in which the MWP operates.

Despite a burgeoning number of parallel mitigation-related initiatives and activities at the international, regional, national, sub-national and local levels, further efforts are needed to meet the temperature goal of the Paris Agreement. Existing initiatives could be more targeted to ensure efforts are focused on priority levers that can trigger accelerated mitigation efforts within and across sectors. Some voluntary collaboration initiatives could also be deepened to move beyond sharing best practices towards voluntary co-ordination in key areas such as the development of clean technologies. This could be complemented by technical and financial support to enable widespread deployment of available solutions.

The MWP is backed by the legitimacy and convening power of the UNFCCC and could provide a useful platform to help “connect the dots” between relevant initiatives related to the MWP annual topic and Parties' efforts to increase mitigation efforts under the Paris Agreement. As summarised in Table 5.1, the MWP and relevant initiatives could work together in a complementary, mutually reinforcing manner to support the objective of scaling up near-term mitigation efforts. The MWP could help raise awareness of initiatives in different sectors; showcase available tools, resources and matchmaking platforms that could

---

<sup>6</sup> Ellis, J., L. Lo Re and S. Errendal (2023), "Making the Mitigation Work Programme fit for purpose: Options for forms, focus and information that would lead to successful implementation", OECD/IEA Climate Change Expert Group Papers, No. 2023/02, OECD Publishing, Paris, <https://doi.org/10.1787/26446ffc-en>.

complement multilateral efforts; and help to build momentum behind ongoing efforts in a non-prescriptive way. The MWP could also explore what is working well and what is currently not working in the landscape of existing initiatives and identify priority levers and gaps at the global level. This could in turn help inform more effective and targeted voluntary international collaboration efforts, e.g., to better consider social aspects of an energy transition, and provide potential avenues to take forward priorities identified in the MWP.

**Table 5.1. Creating synergies between the MWP and ongoing mitigation-related initiatives**

<b>Bring in relevant initiatives by showcasing their achievements through the MWP</b>	
<b>Potential role</b>	<b>Illustrative examples for accelerating a just energy transition</b>
Increase awareness of ongoing activities, available tools, and matchmaking platforms relevant to the annual MWP topic	<ul style="list-style-type: none"> <li>- Sharing information on available tools and matchmaking platforms, such as the Energy Transition Council's Rapid Response Facility, through the MWP could be useful for countries not currently involved in/aware of such resources, even as non-members.</li> <li>- Sharing case studies and lessons learned from relevant regional initiatives, such as the Small Island Developing States Lighthouses Initiative (SIDS LHI), the Africa Renewable Energy Initiative (AREI), and the Clean Energy Transition Partnership (CET Partnership), through the MWP could provide useful insights on region-specific concerns and help to replicate successful experiences.</li> </ul>
Crowd-in additional members behind existing initiatives, without being prescriptive	<ul style="list-style-type: none"> <li>- Sharing experiences of members engaged in initiatives, such as the Powering Past Coal Alliance (PPCA), through the MWP, including how this has helped advance national priorities could help crowd-in further voluntary support behind the initiative depending on countries' interests and priorities.</li> </ul>
Increase engagement of other actors, including NPS, highlight concrete actions underway, and build confidence in available solutions	<ul style="list-style-type: none"> <li>- Bringing in actors involved in Mission Innovation (MI) to the MWP could help showcase successful examples of public-private collaboration to catalyse clean energy solutions, help to build confidence in available solutions, and provide opportunities for learning by other countries.</li> </ul>
Maintain political attention on relevant initiatives over time and help meet their respective objectives	<ul style="list-style-type: none"> <li>- Showcasing progress under the Powering Past Coal Alliance (PPCA) at MWP events could help maintain attention on efforts by some Parties towards the commitment at COP26 to phase out unabated coal power and could maintain momentum towards the PPCA's objective.</li> </ul>
<b>Build on relevant initiatives to inform the MWP and take forward identified priorities</b>	
<b>Potential role</b>	<b>Illustrative examples for accelerating a just energy transition</b>
Work by existing initiatives could inform MWP discussions and help identify potential overlaps/gaps and priorities	<ul style="list-style-type: none"> <li>- The landscape mapping under sectoral Breakthroughs relevant to the annual MWP topic, could help to inform discussions at MWP events. This could allow the MWP to focus on identifying potential overlaps/gaps in current activities and priorities moving forward, including levers to trigger accelerated mitigation efforts within and across sectors.</li> </ul>
Synergies with existing initiatives could help to take forward priorities identified through the MWP	<ul style="list-style-type: none"> <li>- Ongoing activities under the Clean Energy Ministerial (CEM) and priority international actions under the Power Breakthrough reflect some of the issues raised by participants at the first MWP Global Dialogue (GD1). These overlaps indicate potential avenues to take forward priorities identified under the MWP, e.g. by crowding-in support for relevant work underway in a non-prescriptive manner, helping to inform more effective, targeted voluntary collaboration efforts.</li> <li>- Potential regional-level MWP dialogues held in conjunction with the UNFCCC's Regional Climate Weeks (RCWs), Regional Finance Forums or other regional events, could foster collaborations and partnerships at the regional level to address region-specific challenges and take forward relevant priorities identified under the MWP.</li> </ul>

Source: Authors.

## 5.2. Potential options for structuring an annual MWP decision

The provision to adopt an annual CMA decision on the MWP provides an important opportunity to maintain attention and build momentum on the urgent need to enhance mitigation efforts in the near-term. This annual decision also encourages a learning-by-doing approach to implementing the MWP to enable the process to improve over time.

The annual decision on the MWP could be structured around different mutually supportive elements covering both procedural and technical/substantive aspects. For example, potential elements of an MWP decision could relate to:

- *Lessons learned from the first year of the MWP*: Incorporating lessons from experience can improve future MWP cycles and help maintain the effectiveness and relevance of the process going forward.
- *Follow-up from MWP activities and related mitigation commitments at previous COPs*: Channels to follow-up key findings in MWP reports and related commitments adopted at COPs will be important to ensure relevant issues are carried forward.
- *Synergies with other processes and activities under the UNFCCC*: Given various initiatives, work programmes and processes under the UNFCCC that relate to the objective of the MWP, it will be important to harness linkages and streamline activities to ensure the MWP is impactful.
- *How to complement the global stocktake (GST) as mandated in Decision 4/CMA.4*: The MWP could both inform technical discussions of the second GST and be informed by the outcomes of the first GST so information would flow in both directions.

An overview of the potential structure and elements of an annual MWP decision are set out in Table 5.2.

**Table 5.2. Potential structure and elements of an annual CMA decision on the MWP**

Lessons learned from the first year of the MWP	
Potential elements	Examples
Recommend iterations to the design and planning of MWP activities	<ul style="list-style-type: none"> <li>- Invite the Secretariat to prepare a technical information paper to inform each GD, considering submissions made by Parties and NPS, and circulated in advance of the meeting.</li> <li>- Reiterate the provision to organise other dialogues alongside existing events, including Regional Climate Weeks, as an opportunity for in-depth exchanges on region-specific challenges and opportunities, to facilitate engagement with relevant stakeholders and foster regional collaboration.</li> <li>- Provide guidance on the scope and structure of MWP GD summary report and annual reports (e.g. to consider issues raised at the IFEs, set out available opportunities and actionable solutions, identify relevant initiatives related to the MWP annual topic).</li> <li>- Provide guidance on the focus of agendas at GDs and IFEs (e.g. to include concrete case studies, replicable examples, focus on <i>how to</i> address barriers, identify practical tools and solutions).</li> <li>- Invite the MWP co-chairs to consult with the High-Level Climate Champions on the selection of topics each year to create synergies between technical discussions under the MWP and efforts underway through the Action Agenda.</li> </ul>
Follow-up from MWP activities and related mitigation commitments at previous COPs	
Potential elements	Examples
Highlight relevant work through existing initiatives relating to the MWP annual topic	<ul style="list-style-type: none"> <li>- Identify existing voluntary initiatives, available tools, resources, and matchmaking platforms that can support the MWP objective and its selected annual topic as a complement to multilateral efforts.</li> <li>- Encourage/invite Parties to voluntarily engage in relevant ongoing initiatives to help advance domestic mitigation efforts depending on their national circumstances and priorities.</li> <li>- Invite MWP co-chairs to organise a session at the GD in the following year to reflect how priorities identified under the MWP in previous years have been taken forward.</li> </ul>
Invite relevant initiatives and processes to take forward work on gaps and priorities identified under the MWP	<ul style="list-style-type: none"> <li>- Invite the High-level Climate Champions and relevant initiatives related to the MWP annual topic to take gaps and priorities identified under the MWP into account in planning and delivering their subsequent activities.</li> <li>- Invite the High-level Climate Champions and relevant initiatives related to the MWP annual topic to provide updates at subsequent GDs and IFEs on progress in taking forward priorities previously identified under the MWP.</li> </ul>

Follow-up on relevant sectoral and other commitments from previous COPs	<ul style="list-style-type: none"> <li>- Reiterate calls for Parties to enhance their 2030 targets where they have not already done so and scale up climate efforts in the near-term.</li> <li>- Call on Parties to prepare new Nationally Determined Contributions (NDCs) in line with Article 4 of the Paris Agreement and informed by the outcome of GST1.</li> <li>- Reiterate relevant commitments from previous COPs, e.g., on scaling up renewables, phasing out fossil fuels, phasing out inefficient fossil fuel subsidies, and potential new commitments at COP28.</li> <li>- Invite MWP co-chairs to organise sessions in future GDs that provide a space for Parties to exchange on how they are translating global commitments/targets into national efforts. This could provide an opportunity for mutual learning, increase understanding of different approaches Parties are taking in response to global commitments, and help to build trust.</li> <li>- Identify other potential avenues to scale up mitigation efforts in the near-term, e.g., repurposing inefficient fossil fuel subsidies to support a just energy transition, enhance co-operation on clean technology development and deployment.</li> </ul>
<b>Synergies with other processes and activities under the UNFCCC</b>	
Potential elements	Examples
Map out potential synergies between the MWP and the new just transition work programme (JTWP)	<ul style="list-style-type: none"> <li>- Propose joint/back-to-back dialogues under the MWP and potential events organised under the JTWP (depending on final modalities of the JTWP expected to be agreed at COP28).</li> <li>- Recommend the agendas of MWP events and potential events under the JTWP are iteratively designed so discussions can feed into and complement each other.</li> <li>- Propose back-to-back ministerial round tables (MRTs) on pre-2030 ambition and just transition at subsequent COPs.</li> </ul>
Set out options to inform preparations and discussions at the annual high-level MRT on pre-2030 ambition	<ul style="list-style-type: none"> <li>- Invite presentations of progress by relevant sectoral initiatives relating to the annual MWP topic and initiatives launched at previous COPs.</li> <li>- Invite Parties to announce 1-2 key enhanced mitigation efforts at the MRT in response to priorities identified under the MWP and commit to report back on progress at the subsequent MRT.</li> </ul>
<b>How to complement the global stocktake (GST) as mandated in Decision 4/CMA.4</b>	
Potential elements	Examples
Consider how the MWP could inform technical discussions under future GSTs	<ul style="list-style-type: none"> <li>- Invite MWP co-chairs to organise sessions at future GDs to focus on specific mitigation-related knowledge/information gaps identified in GST1, bringing together relevant experts and organisations to work to close the gaps and inform technical discussions under GST2.</li> <li>- Invite the UNFCCC Secretariat to submit MWP annual reports to the information collection and preparation phase of GST2.</li> </ul>
Consider how the MWP could serve as a delivery vehicle/ implementing arm of the GST1 outcome on mitigation in 2024-2026	<ul style="list-style-type: none"> <li>- Invite MWP co-chairs to organise sessions at GDs in 2024 for Parties to share experiences and best practices on enhancing ambition of their NDCs in line with provisions in Article 4 of the Paris Agreement and informed by GST1.</li> <li>- Targeted discussions under the MWP on the mitigation component of NDCs could help countries translate current NDCs into pre-2030 action and support preparations of new enhanced NDCs by 2025.</li> </ul>

Source: Authors.

# References

- AREI (2022), *Agenda AREI Events*, [83]  
[https://www.arei.info/docs/rub18ssr5/African\\_Development\\_Bank\\_Day\\_2\\_of\\_FinanceinCommon2022\\_starts\\_with\\_Two\\_Sides\\_of\\_the\\_Same\\_Coin\\_SDGs\\_Human\\_Rights\\_calb301238.pdf](https://www.arei.info/docs/rub18ssr5/African_Development_Bank_Day_2_of_FinanceinCommon2022_starts_with_Two_Sides_of_the_Same_Coin_SDGs_Human_Rights_calb301238.pdf).
- AREI (2017), *Africa Renewable Energy Initiative, Progress report, January 2017*, [102]  
[http://www.arei.org/wp-content/uploads/2017/01/AREI-Progress-report-Jan-2017\\_ENG.pdf](http://www.arei.org/wp-content/uploads/2017/01/AREI-Progress-report-Jan-2017_ENG.pdf).
- Australia (2023), *MWP Submission (25.09.2023)*, [38]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309251850---Australia%20MWP%20Submission%20September%202023.pdf>.
- Blondeel, M., T. Van de Graaf and T. Haesebrouck (2020), "Moving beyond coal: Exploring and explaining the Powering Past Coal Alliance", *Energy Research & Social Science*, Vol. 59, p. 101304, <https://doi.org/10.1016/j.erss.2019.101304>. [58]
- Breakthrough Agenda (2022), *Breakthrough Agenda Landscape Maps for Initiatives*, [27]  
<https://climatechampions.unfccc.int/wp-content/uploads/2022/11/Breakthrough-Agenda-Landscape-Mapping-for-Initiatives-2.pdf>.
- Canada (2023), "MWP Submission (31.05.2023)", [100]  
[https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202306031315---SUBMISSION%20BY%20CANADA\\_Sham%20el-Sheikh%20mitigation%20ambition%20and%20implementation%20work%20programme.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202306031315---SUBMISSION%20BY%20CANADA_Sham%20el-Sheikh%20mitigation%20ambition%20and%20implementation%20work%20programme.pdf).
- CET Partnership (2023), *Clean Energy Transition Partnership*, <https://www.cetpartnership.eu> [51]  
 (accessed on 17 October 2023).
- Clean Energy Ministerial (2023), *Clean Power*, [84]  
<https://www.cleanenergyministerial.org/sectors/clean-power/>.
- Clean Energy Ministerial (2023), *Empowering People Initiative*, [46]  
<https://www.cleanenergyministerial.org/initiatives-campaigns/empowering-people-initiative/>.
- Clean Energy Ministerial (2023), *Equality in Energy Transitions Initiative*, [47]  
[https://www.cleanenergyministerial.org/initiatives-campaigns/equality\\_initiative/](https://www.cleanenergyministerial.org/initiatives-campaigns/equality_initiative/).
- Climate Investment Funds (2023), *Planning Toolbox*, <https://cif.org/just-transition-toolbox/home>. [48]
- Climate Investment Funds (n.d.), *Just Transition Initiative Resource Library*, [49]  
<https://justtransitioninitiative.org/resource-library/>.

- CNN Philippines (2021), "PH, over 40 countries agree to phase out coal-fired power", *CNN*, [66]  
<http://www.cnnphilippines.com/news/2021/11/6/PH-over-40-countries-agree-to-phase-out-coal-fired-power.html>.
- COP28 Presidency (2023), *COP28 Letter to Parties*, [7]  
[https://www.cop28.com/pdfs/COP28\\_Letter\\_July\\_2023\\_1.pdf](https://www.cop28.com/pdfs/COP28_Letter_July_2023_1.pdf).
- E3G (2023), *MWP Submission (01.02.2023)*, [41]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202302011416---E3G%20Submission%20-%20Topics%20for%20the%20Mitigation%20Work%20Programme%202023.pdf>.
- Ellis, J., L. Lo Re and S. Errendal (2023), "Making the Mitigation Work Programme fit for purpose: Options for forms, focus and information that would lead to successful implementation", *OECD/IEA Climate Change Expert Group Papers*, No. 2023/02, OECD Publishing, Paris, <https://doi.org/10.1787/26446ffc-en>. [9]
- Forner, C. and M. Finch (2023), "A review of intergovernmental cooperation on the mitigation of climate change", *World Resources Institute*, <https://doi.org/10.46830/wriwp.23.00002>. [36]
- G20 (2023), *Final Energy Transitions Working Group Meeting under India's G20 Presidency Concludes*, <https://www.g20.org/en/media-resources/press-releases/july-2023/etwgm-concludes/>. [28]
- G7 (2023), *G7 Clean Energy Economy Action Plan*, [29]  
[https://www.g7hiroshima.go.jp/documents/pdf/session5\\_02\\_en.pdf](https://www.g7hiroshima.go.jp/documents/pdf/session5_02_en.pdf).
- G7 (2023), *G7 Climate, Energy and Environment Ministers' Communiqué*, [37]  
<https://www.env.go.jp/content/000127828.pdf>.
- Global Energy Monitor (2023), *Global Coal Plant Tracker*, [62]  
<https://globalenergymonitor.org/projects/global-coal-plant-tracker/tracker/>.
- Gomez, C. (2019), "Gov declares Negros Occidental coal-free", *Philippine Daily Inquirer*, [64]  
<https://newsinfo.inquirer.net/1093345/gov-declares-negros-occidental-coal-free>.
- Gotinga, J. and R. Nirmala (2021), "Philippines, Indonesia Join Programs to Phase out Coal-Power Plants", *Benar News*, <https://www.benarnews.org/english/news/philippine/coal-projects-11092021155930.html>. [67]
- Green Powered Future Mission (2022), *Green Powered Future Mission, Action plan 2022-2024, Mission Innovation*, <http://mission-innovation.net/wp-content/uploads/2022/09/Green-Powered-Future-Mission-Action-Plan-2022-2024.pdf>. [72]
- Hetmanski, M. (2021), *Just Transition in Eastern Wielkopolska, Outlook on employment - reduction pathways and job creation potential*, Instrat, [63]  
[https://energy.ec.europa.eu/system/files/2021-05/3\\_michal\\_hetmanski\\_instrat\\_0.pdf](https://energy.ec.europa.eu/system/files/2021-05/3_michal_hetmanski_instrat_0.pdf).
- High-Level Climate Change Champions (2023), "MWP Submission (13.02.2023)", [16]  
[https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202302281310---MWP\\_HLCs\\_topic\\_submission\\_Feb\\_2023.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202302281310---MWP_HLCs_topic_submission_Feb_2023.pdf).

- High-Level Climate Change Champions (2019), “Letter to Parties from the High-Level Champions of Global Climate Action”, [96]  
[https://unfccc.int/sites/default/files/resource/HL\\_champions\\_letter\\_to\\_Parties\\_2019.pdf](https://unfccc.int/sites/default/files/resource/HL_champions_letter_to_Parties_2019.pdf).
- High-Level Climate Change Champions et al. (2022), *Implementation Lab, Concept Note, “Actionable Adaptation Plans”*, [21]  
[https://unfccc.int/sites/default/files/resource/MPGCA\\_COP27\\_IL\\_Actionable\\_Adaptation\\_Plans\\_1711\\_411.pdf](https://unfccc.int/sites/default/files/resource/MPGCA_COP27_IL_Actionable_Adaptation_Plans_1711_411.pdf).
- IEA (2023), *Clean Energy Transitions Programme*, <https://www.iea.org/programmes/clean-energy-transitions-programme>. [31]
- IEA (2023), *Credible pathways to 1.5°C*, International Energy Agency, Paris, [4]  
<https://www.iea.org/reports/credible-pathways-to-150c>.
- IEA (2023), *People-Centred Clean Energy Transitions*, <https://www.iea.org/programmes/people-centred-clean-energy-transitions> (accessed on 20 October 2023). [50]
- IEA, IRENA and UN Climate Change High-Level Champions (2023), *Power*, [44]  
<https://iea.blob.core.windows.net/assets/b551dc82-c4d3-4330-8975-2d3e07739a6f/THEBREAKTHROUGHAGENDAREPORT2023.pdf>.
- IEA, IRENA and UN Climate Change High-Level Champions (2023), *The Breakthrough Agenda Report 2023*, <https://www.iea.org/reports/breakthrough-agenda-report-2023>. [32]
- IEA, IRENA and UN Climate Change High-Level Champions (2022), *The Breakthrough Agenda Report 2022*, <https://www.iea.org/reports/breakthrough-agenda-report-2022>. [40]
- IPCC (2023), *Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland.*, Intergovernmental Panel on Climate Change, Geneva, <https://doi.org/10.59327/IPCC/AR6-9789291691647>. [1]
- IRENA (2023), *SIDS Lighthouses Initiative, Progress and way forward*, [https://mc-cd8320d4-36a1-40ac-83cc-3389-cdn-endpoint.azureedge.net/-/media/Files/IRENA/Agency/Publication/2023/May/IRENA\\_SIDS\\_LHI\\_progress\\_2023.pdf?rev=6aac8f77eede4b768a078cc4a971c543&hash=71506332B61D8EF36A5417152044DEF1](https://mc-cd8320d4-36a1-40ac-83cc-3389-cdn-endpoint.azureedge.net/-/media/Files/IRENA/Agency/Publication/2023/May/IRENA_SIDS_LHI_progress_2023.pdf?rev=6aac8f77eede4b768a078cc4a971c543&hash=71506332B61D8EF36A5417152044DEF1). [82]
- IRENA and KEEI (2021), *Renewable energy and electricity interconnections for a sustainable Northeast Asia*, IRENA, Abu Dhabi, [https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/May/IRENA\\_Electricity\\_Interconnections\\_NortheastAsia\\_2021.pdf?rev=1b359e14494849e180f052a96d9ddc4b](https://www.irena.org/-/media/Files/IRENA/Agency/Publication/2021/May/IRENA_Electricity_Interconnections_NortheastAsia_2021.pdf?rev=1b359e14494849e180f052a96d9ddc4b). [52]
- Japan (2023), *MWP Submission (19.09.2023)*, [39]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309191835---Japan%20submission%20on%20the%20second%20global%20dialogue.pdf>.
- Jedy-Hugo, S. and L. Charles (2022), “Translating outputs to outcomes under the global stocktake of the Paris Agreement”, *OECD/IEA Climate Change Expert Group Papers*, No. 2022/01, OECD Publishing, Paris, <https://doi.org/10.1787/e06c61f0-en>. [92]

- Lam, A. and J. Mercure (2022), "Evidence for a global electric vehicle tipping point", No. 2022/01, University of Exeter, Economic of Energy Innovation and System Transition, [https://www.exeter.ac.uk/media/universityofexeter/globalsystemsintstitute/documents/Lam\\_et\\_al\\_Evidence\\_for\\_a\\_global\\_EV\\_TP.pdf](https://www.exeter.ac.uk/media/universityofexeter/globalsystemsintstitute/documents/Lam_et_al_Evidence_for_a_global_EV_TP.pdf). [35]
- Mission Innovation (2023), *Catalysing clean energy solutions for all*, <http://mission-innovation.net/>. [68]
- Mission Innovation (2023), *MI-8 Ministerial*, <http://mission-innovation.net/events/eighth-mission-innovation-ministerial/>. [43]
- Mission Innovation (2021), *Since Mission Innovation's launch at COP21 in 2015*, <http://mission-innovation.net/wp-content/uploads/2021/05/MI-Infographic.png>. [70]
- Mission Innovation (2020), *Mission Innovation, The story so far, 2020 impact report*, <http://mission-innovation.net/wp-content/uploads/2020/09/1.-MI-Impact-Review-2020.pdf>. [71]
- Myslikova, Z. and K. Gallagher (2020), "Mission Innovation is mission critical", *Nature Energy*, Vol. 5/10, pp. 732-734, <https://doi.org/10.1038/s41560-020-00694-5>. [69]
- OECD (2023), *Clean Energy Finance and Investment Mobilisation*, <https://www.oecd.org/cefim/>. [85]
- OECD (2023), *Implications of low-carbon hydrogen production on renewable energy systems webinar*, <https://www.oecd.org/environment/cc/cefim/green-hydrogen/implicationsoflow-carbonhydrogenproductiononrenewableenergysystemswebinar.htm>. [87]
- OECD (2023), *Inclusive Forum on Carbon Mitigation Approaches*, <https://www.oecd.org/climate-change/inclusive-forum-on-carbon-mitigation-approaches/>. [30]
- OECD (2022), *Finance and investment mobilisation for bioenergy projects in LAC: regional peer-learning event*, <https://www.oecd.org/environment/cc/cefim/colombia/financeandinvestmentmobilisationforbioenergyprojectsinlacregionalpeer-learningevent.htm>. [86]
- Ojemen, U., R. Sugioka and P. Heinrichs (2023), *Energy Transition Council, Progress in 2022*, Energy Transition Council, [https://energytransitioncouncil.org/uploads/Energy\\_Transition\\_Council\\_Annual\\_report\\_2022.pdf](https://energytransitioncouncil.org/uploads/Energy_Transition_Council_Annual_report_2022.pdf). [42]
- PPCA (2023), *Join us*, <https://poweringpastcoal.org/join-us/>. [73]
- PPCA (2023), *Just Transition*, <https://poweringpastcoal.org/strands-of-work/just-transition/> (accessed on 20 October 2023). [45]
- PPCA (2023), *The PPCA is coming to BETD23*, <https://poweringpastcoal.org/events/the-ppca-is-coming-to-betd23/>. [57]
- PPCA (2023), *Who we are*, <https://poweringpastcoal.org/>. [60]
- PPCA (2022), *Powering past coal - social solutions - eastern Wielkopolska*, Case Studies, <https://poweringpastcoal.org/news/powering-past-coal-social-solutions-eastern-wielkopolska/>. [61]
- PPCA (2022), *Powering past coal report*, Case Studies, <https://poweringpastcoal.org/news/powering-past-coal-2022/>. [59]

- Rappler (2018), "Masbate bans coal-fired energy projects", [65]  
<https://www.rappler.com/business/203186-masbate-ban-coal-energy-source/>.
- Sagar, A. (2022), "Broadening the mission of Mission Innovation", *Nature Energy*, Vol. 7/9, [75]  
 pp. 782-784, <https://doi.org/10.1038/s41560-022-01119-1>.
- Samoa on behalf of the Alliance of Small Island States (2023), *MWP Submission (28.09.2023)*, [88]  
[https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309281908---Second\\_GD\\_AOSIS%20Submission\\_Final.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309281908---Second_GD_AOSIS%20Submission_Final.pdf).
- Saudi Arabia on behalf of Saudi Arabia on behalf of Arab Group (2023), "MWP Submission (23.05.2023)", [26]  
[https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202305231141--MWP%20Arab%20Group%20Submission\\_SB58.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202305231141--MWP%20Arab%20Group%20Submission_SB58.pdf).
- Senegal on behalf of Least Developed Countries Group (2023), "MWP Submission (28.02.2023)", [25]  
[https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202302282027--LDC%20Group%20Submission%20-%20MWP\\_Feb%202023\\_Final.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202302282027--LDC%20Group%20Submission%20-%20MWP_Feb%202023_Final.pdf).
- Sharpe, S. and T. Lenton (2021), "Upward-scaling tipping cascades to meet climate goals: plausible grounds for hope", *Climate Policy*, Vol. 21/4, pp. 421-433, [34]  
<https://doi.org/10.1080/14693062.2020.1870097>.
- Spain and the EC on behalf of the EU and its Member States (2023), *MWP Submission (27.09.2023)*, [91]  
[https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309271350---ES-EU%20submission%20for%20GD\\_IFE\\_final.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309271350---ES-EU%20submission%20for%20GD_IFE_final.pdf).
- Sweden and the EC on behalf of the EU and its Member States (2023), "MWP Submission (05.05.2023)", [24]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202305051330--SE-2023-05-05%20EU%20submission%20MWP%20-%20accelerating%20a%20just%20energy%20transition.pdf>.
- Switzerland on behalf of Georgia, Liechtenstein, Monaco, and Switzerland (2023), *MWP Submission (03.03.2023)*, [23]  
[https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202303031012---Joint%20Submission%20on%20the%20Mitigation%20Work%20Programme\\_Selection%20of%20topics%20for%202023.pdf](https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202303031012---Joint%20Submission%20on%20the%20Mitigation%20Work%20Programme_Selection%20of%20topics%20for%202023.pdf).
- Switzerland on behalf of the Environmental Integrity Group (2023), *MWP Submission (25.09.2023)*, [89]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309250908---EIG%20Submission%20on%20the%20MWP%20Second%20Global%20Dialogue.pdf>.
- Systemiq, University of Exeter and S. Sharpe (2023), *The Breakthrough Effect: How to trigger a cascade of tipping points to accelerate the net zero transition*, [33]  
<https://www.systemiq.earth/breakthrough-effect/>.
- UK (2023), *MWP Submission (03.10.2023)*, [101]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202310031439---UK%20MWP%20Transport%20submission%20GD2%20IFE2.pdf>.
- UK (2023), *MWP Submission (14.02.2023)*, [22]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202302141034---MWP%20UK%20February%202023%20submission.docx>.

- UK (2023), *MWP Submission (15.05.2023)*, [93]  
<https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202302141034---MWP%20UK%20February%202023%20submission.docx>.
- UK Department for Business, E. (2023), *UK and United Arab Emirates agree to boost energy security and unlock investment*, [98]  
<https://www.gov.uk/government/news/uk-and-united-arab-emirates-agree-to-boost-energy-security-and-unlock-investment>.
- UN Energy (2022), *Energy Compact Action Network*, UN, [55]  
<https://un-energy.org/wp-content/uploads/2022/05/ENERGY-COMPACTS-ACTION-NETWORK-BROCHURE-042622-rev-28April.pdf> (accessed on 17 August 2023).
- UN Energy (2022), *Energy Compacts - Annual Progress Report 2022*, UN, [56]  
[https://www.un.org/sites/un2.un.org/files/energy\\_compacts\\_annual\\_progress\\_report\\_2022\\_-\\_final\\_version\\_v2.pdf](https://www.un.org/sites/un2.un.org/files/energy_compacts_annual_progress_report_2022_-_final_version_v2.pdf).
- UNEP (2022), *Emissions Gap Report 2022: The Closing Window - Climate crisis calls for rapid transformation of societies.*, [3]  
<https://www.unep.org/resources/emissions-gap-report-2022> (accessed on 27 January 2023).
- UNFCCC (2023), *2024 Regional Climate Weeks Master Information Note*, UNFCCC, [77]  
<https://unfccc.int/sites/default/files/resource/Info%20Note%20for%20Organizers%20RCW%20%202024.pdf>.
- UNFCCC (2023), *First Global Dialogue and Investment Focused Event under the Sharm el-Sheikh Mitigation Ambition and Implementation Work Programme*, [10]  
[https://unfccc.int/event/first-global-dialogue-and-investment-focused-event-under-the-sharm-el-sheikh-mitigation-ambition-and?\\_gl=1\\*1gfo1n6\\*\\_ga\\*MzM0ODcyMTk4LjE2ODQyMjU2MjA.\\*\\_ga\\_7ZZWT14N79\\*MTY4NDMyNTQyNS4zLjEuMTY4NDMyNTc4NC4wLjAuMA..](https://unfccc.int/event/first-global-dialogue-and-investment-focused-event-under-the-sharm-el-sheikh-mitigation-ambition-and?_gl=1*1gfo1n6*_ga*MzM0ODcyMTk4LjE2ODQyMjU2MjA.*_ga_7ZZWT14N79*MTY4NDMyNTQyNS4zLjEuMTY4NDMyNTc4NC4wLjAuMA..) (accessed on 19 October 2023).
- UNFCCC (2023), *Informal note by the Chairs of the subsidiary bodies on SBSTA 58 provisional agenda item 18 and SBI 58 supplementary provisional agenda item 21: Sharm el-Sheikh mitigation ambition and implementation work programme*, UNFCCC, [12]  
[https://unfccc.int/sites/default/files/resource/SB%20Chairs%20Information%20Note\\_MWP\\_SB58.pdf](https://unfccc.int/sites/default/files/resource/SB%20Chairs%20Information%20Note_MWP_SB58.pdf).
- UNFCCC (2023), *Non-paper on transport by the co-chairs of the work programme*, UNFCCC, [13]  
<https://unfccc.int/documents/632734>.
- UNFCCC (2023), *Report on the first global dialogue under the Sharm el-Sheikh mitigation ambition and implementation work programme*, [11]  
<https://unfccc.int/documents/631792> (accessed on 12 October 2023).
- UNFCCC (2023), *Second Global Dialogue and Investment Focused Event under the Sharm el-Sheikh Mitigation Ambition and Implementation Work Programme*, [14]  
<https://unfccc.int/event/second-global-dialogue-and-investment-focused-event-under-the-sharm-el-sheikh-mitigation-ambition>.
- UNFCCC (2023), *Technical dialogue of the first global stocktake - Synthesis report by the co-facilitators on the technical dialogue*, UNFCCC, Bonn, [15]  
[https://unfccc.int/sites/default/files/resource/sb2023\\_09\\_adv.pdf](https://unfccc.int/sites/default/files/resource/sb2023_09_adv.pdf).

- UNFCCC (2023), *Work programme for the High-Level Champions and the Marrakech Partnership for Global Climate Action for 2023*, [17]  
[https://unfccc.int/sites/default/files/resource/MP\\_Work%20Programme\\_2023.pdf](https://unfccc.int/sites/default/files/resource/MP_Work%20Programme_2023.pdf).
- UNFCCC (2022), *Decision 1/CMA.4: Sharm el-Sheikh Implementation Plan*, UNFCCC, [6]  
[https://unfccc.int/sites/default/files/resource/cma4\\_auv\\_2\\_cover\\_decision.pdf](https://unfccc.int/sites/default/files/resource/cma4_auv_2_cover_decision.pdf) (accessed on 22 February 2023).
- UNFCCC (2022), *Decision 4/CMA.4 Sharm el-Sheikh mitigation ambition and implementation work programme, Report of the Conference of the Parties serving as the meeting of the Parties to the Paris Agreement on its fourth session, held in Sharm el-Sheikh from 6 to 20 Nov.*, UNFCCC Secretariat, Bonn, <https://unfccc.int/documents/626569>. [8]
- UNFCCC (2022), *Synthesis report for the technical assessment component of the first global stocktake - Synthesis report on the overall effect of Parties' NDCs and overall progress made by Parties towards the implementation of their NDCs, including the information referred to in Article 13, paragraph 7(b), of the Paris Agreement*, Prepared by the secretariat under the guidance of the co-facilitators of the technical dialogue of the first global stocktake, Bonn, <https://unfccc.int/documents/461517>. [2]
- UNFCCC (2022), *The Breakthrough Agenda*, [74]  
<https://climatechampions.unfccc.int/system/breakthrough-agenda/>.
- UNFCCC (2022), *Topics to be discussed at dialogues under the Sharm el-Sheikh mitigation ambition and implementation work programme in 2023*, UNFCCC, [18]  
<https://unfccc.int/sites/default/files/resource/Message%20from%20the%20co-chairs%20of%20the%20sharm%20el-sheikh%20mitigation%20ambition%20and%20implementation%20work%20programme.pdf>.
- UNFCCC (2021), *Decision 1/CMA.3: Glasgow Climate Pact, Conference of the Parties serving as the meeting of the Parties to the Paris Agreement, Third session Glasgow, 31 October to 12 November 2021: Agenda item 2(c) Organizational matters Organization of work, including for the sessions of the subsidiary bodies*, UNFCCC Secretariat, [5]  
<https://unfccc.int/documents/460950> (accessed on 14 January 2022).
- UNFCCC (2021), *Post event report, Regional Climate Weeks - Roundtables 2021*, [76]  
<https://unfccc.int/sites/default/files/resource/POST%20EVENT%20REPORT-2021%20Final.pdf>.
- UNFCCC (2021), *Technical Examination Process on Mitigation*, UNFCCC, [78]  
<https://unfccc.int/topics/mitigation/workstreams/technical-examination-process-on-mitigation> (accessed on 2 January 2022).
- UNFCCC (2020), *Technical Expert Meetings*, UNFCCC, [20]  
<https://unfccc.int/resource/climateaction2020/tep/technical-expert-meetings/index.html> (accessed on 2 January 2022).
- UNFCCC (2019), *Regional technical expert meeting on mitigation, decentralized solutions for smart energy and water use in the agri-food chain*, [79]  
[https://unfccc.int/sites/default/files/resource/Brief%20report\\_TEM-M\\_AP%20CW.pdf](https://unfccc.int/sites/default/files/resource/Brief%20report_TEM-M_AP%20CW.pdf).

- UNFCCC (2018), *Decision 13/CP.23: Assessment of the technical examination processes on mitigation and adaptation*, <https://unfccc.int/resource/docs/2017/cop23/eng/11a02.pdf> (accessed on 2 January 2022). [97]
- UNFCCC (2018), *LAC Regional Technical Expert Meetings on Mitigation: Brief Summary Report*, [https://unfccc.int/sites/default/files/resource/20181001\\_LAC%20regional%20TEMs-M%20Summary%20Report.pdf](https://unfccc.int/sites/default/files/resource/20181001_LAC%20regional%20TEMs-M%20Summary%20Report.pdf). [80]
- UNFCCC (2018), *Regional technical expert meeting, Efficiency in industry*, <https://unfccc.int/resource/climateaction2020/media/1306/cnote.pdf>. [81]
- UNFCCC (2016), *Decision 1/CP.21: Adoption of the Paris Agreement*, UNFCCC Secretariat, Bonn, <https://unfccc.int/resource/docs/2015/cop21/eng/10a01.pdf> (accessed on 30 April 2021). [95]
- UNFCCC (2015), *Decision 1/CP.20 Lima Call for Climate Action*, <https://unfccc.int/resource/docs/2014/cop20/eng/10a01.pdf#page=2%22>. [94]
- UNFCCC (2015), *Paris Agreement*, UNFCCC, [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf). [99]
- UNFCCC, UNIDO and TEC (2018), *Asia-Pacific Regional Technical Expert Meetings on Mitigation: Brief Summary Report*, [https://unfccc.int/sites/default/files/resource/20180926\\_AP\\_regional%20TEMs-M%20Summary%20Report.pdf](https://unfccc.int/sites/default/files/resource/20180926_AP_regional%20TEMs-M%20Summary%20Report.pdf). [19]
- US (2023), *MWP Submission (20.09.2023)*, <https://www4.unfccc.int/sites/SubmissionsStaging/Documents/202309201103---MWP%20Global%20Dialogue%20Transport%20US%20Submission.pdf>. [90]
- WAPP (2023), *Creation of the WAPP*, <https://www.ecowapp.org/en/content/creation-wapp> (accessed on 13 October 2023). [53]
- WAPP (2021), *PIPES department of the West African Power Pool (WAPP)*, <http://pipes.ecowapp.org/en> (accessed on 13 October 2023). [54]