



WWF Submission to the Mitigation Work Programme

Opportunities, Best practices, Actionable Solutions and Challenges for Accelerating Just Energy Transition

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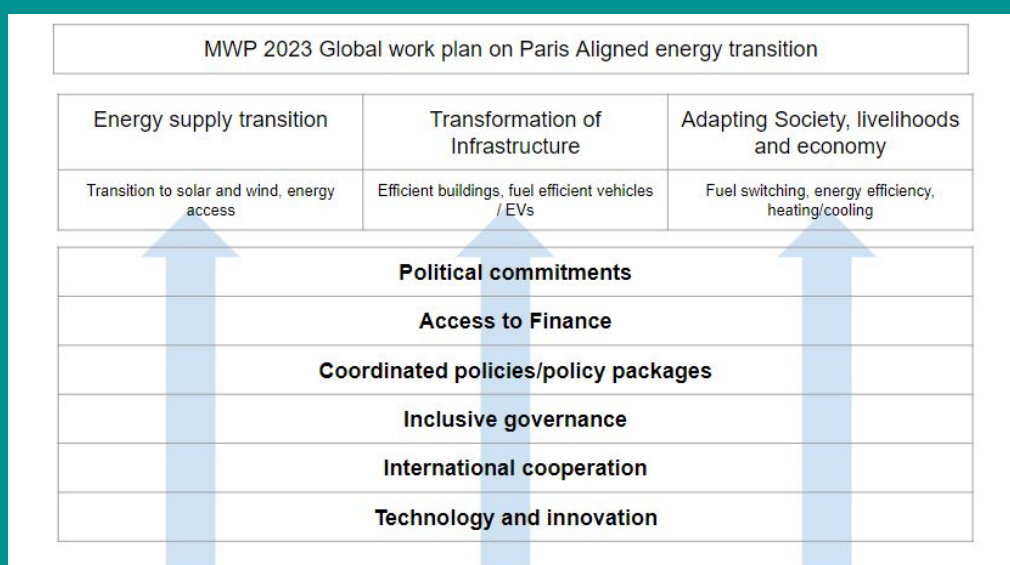
The recently announced topic of the dialogues taking place under the Mitigation Work Programme in 2023 is accelerating just energy transition, including by:

- Implementing policies and measures with global overview and country-specific experience;
- Addressing financial, technological and capacity-building needs in this area, such as through international cooperation, including with non-Party stakeholders, and provision of support to developing countries;
- Promoting sustainable development and understanding socioeconomic effects.

WWF is pleased to offer our views and inputs on opportunities, best practices, actionable solutions and challenges and barriers relevant for this topic.

Summary

WWF proposes the following structure for the 2023 Mitigation Work Programme Dialogue focused on accelerating just energy transition:



I – Context

We see the Mitigation Work Programme (MWP) outcomes as part of a globally agreed plan to phase out all fossil fuels. Other elements of this plan, to be agreed in other processes inside and outside the UNFCCC, are targets for renewable energy deployment, energy efficiency and implementing SDG7 (clean and affordable energy for all) on energy access. Within the climate regime, we believe that both the UNFCCC's Mitigation Work Programme, with a focus on solutions and implementation, and the future Just Transition Work Programme, with a focus on social aspects, governance, participation and equity, could support achieving the energy-related outcomes that will move the needle on the climate crisis.

As stated in decision 4/CMA.4, we expect the dialogues to keep the scope of the Work Programme on broad thematic areas relevant to urgently scaling up mitigation ambition and implementation in this critical decade. We anticipate this will facilitate a constructive exchange of views and experiences that will allow countries to deliver more. This includes focused discussion on the "how" since the "what" has already been agreed upon. To contribute to that we share below some reflections on opportunities, best practices, actionable solutions and challenges and barriers, based on our long-term engagement in UNFCCC and also from our work on the ground.

II – Opportunities

Political momentum: 2023 has already seen unprecedented high level political discussion on how to phase out fossil fuels and scale up renewable energy. Decisions and communications in this sense have come up in the G7 Ministers of Climate, Energy and the Environment meeting, The Major Economies Forum Communiqué and most recently in the Petersberg Dialogue. The UN Secretary General's Acceleration Agenda also includes moving away from fossil fuels.

Energy in NDCs: The latest UNFCCC Synthesis Report (October 2022) highlights that almost all Parties (97 per cent) outlined domestic mitigation measures as key instruments for achieving mitigation targets, such as energy supply, transport, buildings, industry, agriculture, LULUCF, and waste:

- Most Parties (74 per cent) communicated one or more quantitative mitigation targets specific to priority areas or sub-areas; these were provided most frequently for energy supply (57 per cent).
- Domestic mitigation measures for renewable energy generation (88 per cent) were most frequently mentioned by Parties, followed by measures for improving energy efficiency of buildings (70 per cent).
- Some Parties (21 per cent) communicated quantitative targets for the share (ranging from 15 to 100 per cent) of renewable energy in electricity generation by 2030.

For the Parties that communicated new or updated NDCs, renewable energy generation continued, as in their previous NDCs, to be the most frequently indicated mitigation option, with the share of Parties indicating this option sharply increasing since their previous NDCs from 59 to 91 per cent. The solid basis of interest and existing energy-related commitments provides the MWP with an invaluable opportunity to make an implementation-focused contribution through enhancing international cooperation and means of implementation.

Renewables keep progressing, with co-benefits: According to IRENA, although the energy transition is still off track, some progress is being made, notably in the power sector, with renewables representing 83% of capacity additions and reaching 40% of installed power generation globally in 2022. A total of 295 gigawatts (GW) of renewables was added worldwide in 2022, the largest-ever annual increase in renewable energy capacity (IRENA, 2023a). The strong business case for renewables, coupled with supportive enabling policies, has sustained an upward trend in their share of the global energy mix.

However, overall deployment remains centered on a limited number of countries and regions, with China, the European Union and the United States accounting for 75% of capacity additions. Additionally, this uptake in renewable energy is not being matched by a phase-down in fossil fuel reliance, with fossil fuel production and

consumption continuing to grow globally¹. This is a key risk to meeting the goals of the Paris Agreement: projected CO₂ emissions from existing fossil fuel infrastructure without additional abatement would exceed the remaining carbon budget for 1.5°C (IPCC, 2021 WGIII).

Also according to IRENA and ILO, the renewable energy sector employed some 12.7 million people worldwide as of 2022, growing from about 7.3 million in 2012. Energy transition modeling indicates that tens of millions of additional green and decent jobs will likely be created in the coming decades as investments grow and installed capacities expand.

III – Best Practices

We believe international cooperation should be a key focus of the Mitigation Work Programme. The Breakthrough Agenda Report 2022 by the IEA, IRENA and the High Level Champions has rightly identified an international collaboration gap and has highlighted priorities for strengthened international collaboration in five focus sectors that could inform a solutions-oriented MWP. For the power sector, in summary, this includes:

1. Governments, working with companies, multilateral development banks (MDBs) and investors, should agree on a clear set of strategic priority projects to demonstrate and test power system flexibility solutions, including but not limited to energy storage, in a wide variety of contexts. *This will increase confidence in delivering net zero power systems in a broader set of markets, supported by increasingly affordable and effective technologies.*
2. Donor governments, working with key institutions, initiatives, and funds, should increase the scale, coordination, transparency and accessibility of international support for the power sector transition, building on established frameworks and successful models. *This will provide developing countries with the resources they need to deliver on a rapid acceleration towards a net zero power system.*
3. Donor governments and MDBs should work together to more strongly align development funding with targeted support for local jobs, skills, and investment, for the repurposing of fossil fuel assets and for environmental restoration, in the fossil-fuel-dependent regions and communities. Civil society, governments and industry should contribute to creating international centres of expertise on the just transition, within existing institutions. *This action will be vital to ensure inclusive and participatory transition processes, effective social protection for affected workers and communities, and better economic and environmental outcomes.*
4. Governments should work together to reassess the opportunities for cross-border and regional power interconnection and smart grids to support the transition to clean power systems. Countries and investors should support international efforts to identify top regional priorities for interconnection, and to replicate successful approaches to technical agreements. *In doing so, countries can access new opportunities to integrate larger shares of renewables and improve system reliability.*
5. Countries, in consultation with industry, should collectively agree to higher minimum energy performance standards for high energy-consuming appliances, supported by awareness campaigns and incentives, such as energy efficiency retrofit programmes. Improved technical assistance should facilitate the implementation of effective standards in developing countries. *This will help to cut energy costs and reduce emissions, as well as mitigate future electricity demand growth, easing pressure on renewables and electricity infrastructure deployment.*

¹ According to the 6th Assessment Report, the largest share of Global net anthropogenic GHG emissions and growth in gross GHG emissions occurring in CO₂ from fossil fuels combustion and industrial processes (IPCC, 2021, WGI)

IV - Actionable Solutions for a just energy transition

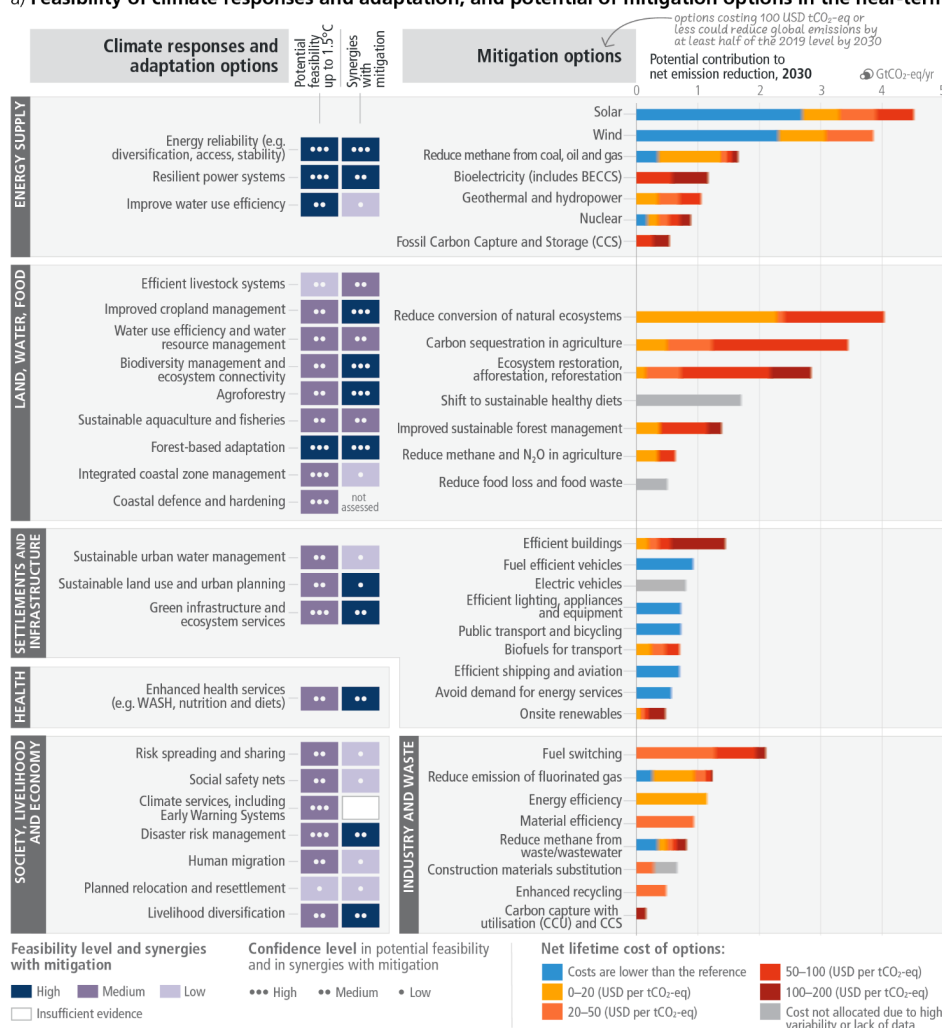
The IPCC 6th Assessment Report provides relevant guidance on where discussions can best provide concrete outputs and create enabling conditions for action and transformation (IPCC, 2021, WGIII, SPM). This, includes:

1. **Political commitment:** strong and sustained political commitment including effective policies and measures.
2. **Access to finance:** adequate and predictable finance, particularly in developing countries
3. **Coordinated policies, and policy packages across all levels:** supporting transition in all aspects of the energy sector, levels of governance including national, subnational and international levels
4. **Inclusive governance:** to engage and empower diverse stakeholders including indigenous people, local communities and vulnerable groups, including those without access to energy
5. **International cooperation:** to address the global nature of energy markets
6. **Technology and innovation:** for increased development of the range of, and sustainability of low carbon technologies in the energy sector

The presence of enabling conditions across these facets is necessary for delivering systemic change and a key factor in ensuring the feasibility of getting 'back on track' to a global 1.5°C pathway. (Source: IPCC)

Further, we suggest that the 2023 dialogues consider this in the context of the driving cost-effective mitigation options related to energy identified in the figure below, specifically in the areas of: Energy Supply; Settlements and Infrastructure and Society, Livelihoods and Economy. For each of those 3 areas we suggest the six enabling conditions above are discussed.

a) Feasibility of climate responses and adaptation, and potential of mitigation options in the near-term



The figure below combines both sets of recommendations from the IPCC and it's WWF's suggestion of a structure for the first 2023 dialogue:



Fig: 2023 MWP framework to develop enabling conditions for a global energy transition

V – Challenges and Barriers

We believe that the structure and themes WWF proposes, as well as the investment focused events on the margins of the dialogue, can contribute to addressing the following challenges and barriers:

Capital Cost Barrier: *"One of the key barriers hampering clean energy investment in emerging market and developing economies is the high cost of capital" (IEA, 2022).* Most Levelized Cost of Energy (LCoE) calculations find renewable power as a cheaper alternative than fuel based power generation. However, as the IEA concludes, this is not necessarily the case in countries with high cost of capital connected to concerns on national governance, lack of legislated targets, an inadequate national financial accounting and monitoring system, political tensions in the country etc. Generally, renewable electricity requires a larger upfront investment compared to fossil fuels like coal or gas, but over the lifetime of the project produces significantly cheaper power. The business case for renewable electricity is therefore strong in countries with low cost of capital, but weak in countries with high cost of capital. Countries with high cost of capital might be economically forced to opt for fuel-based power, simply because it requires a smaller up-front investment. This is a key issue to be addressed by the Mitigation Work Programme through the exchange of experiences and recommendations for financial and other policies, capacity building and technology sharing.

Financial flows: The Paris Agreement states that addressing climate change will require ‘making finance flows consistent with a pathway towards low greenhouse gas emissions.’ Clarified further in the IPCC 6th Assessment report, this includes *shifting energy investments away from fossil-fuels and towards low-carbon technologies* (IPCC, 2021, WGIII).

Between 2019 and 2020, global investments in fossil fuels were higher than those in climate change mitigation and adaptation. This includes both public and private investment (IEA, 2021). Meanwhile, in 2017 76% of the annual climate investment gap was in the energy sector (IPCC, 2021, WGIII).

There is a sense of urgency to addressing these hidden market challenges: current investment decisions which delay mitigation will increase carbon lock-in and could result in large-scale stranded assets. A business-case supporting renewables uptake alone is insufficient in the face of these as yet unchallenged market imperfections. The complex political economy of the energy sector provides serious constraints on such investment reform. For these reasons it is fundamental that the MWP consider not only increasing investment in renewables, but also what new high level political signals can be put in place to also drive a decrease in subsidies and investments in the fossil fuel sector (IEA, 2020; IPCC, 2021).

Challenges pointed out in the LT-LEDS Synthesis report: Common challenges communicated by countries include the significant amount of new zero-carbon electricity capacity required; development of new energy transmission, distribution and storage infrastructure to flexibly respond to changes in supply and demand when deployment of solar and wind power is increased; the high cost of electric vehicles; alternate sources of low-carbon fuels for long-distance transport such as aviation; the long lifetime of buildings with high upfront costs for energy-efficiency improvements; and decarbonization of high-temperature heat required for industrial processes including cement production.

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