Mitigation Work Programme 2024

Submission by the United Nations Environment Programme (UNEP) to the United Nations Framework Convention on Climate Change

In response to the call for submissions on Sharm el-Sheikh mitigation ambition and implementation work programme

29 January 2024

Summary

UNEP recommends as the initial focus for the Mitigation Work Programme in 2024 the theme "Integrating energy efficiency with a focus on sustainable cooling into updated NDCs". UNEP also recommends that the dialogues cover the following topics:

- Minimum Energy Performance Standards (MEPS) and labels
- Financing Energy Efficiency and Sustainable Cooling
- Passive Measures to Avoid the Demand for Cooling
- Enhancing Synergies Between Montreal Protocol and Paris Agreement Agenda
- Sharing best practices and lessons learnt on integrating energy efficiency and cooling targets in NDCs.

Context

The Emissions Gap Report 2023: Broken Record – Temperatures hit new highs, yet world fails to cut emissions (again) finds that the world is heading for a 2.5-2.9C temperature rise above pre-industrial levels unless countries step up action and deliver more than promised in their 2030 pledges under the Paris Agreement. There has been progress since the Paris Agreement was signed, but significantly ramping up implementation in this decade is the only way to keep the window open for limiting global warming to 1.5C without significant overshoot.

The outcome of the first global stocktake (GST) highlighted the key role of energy efficiency by calling for doubling average global energy efficiency improvements by 2030. Moreover, the Global Cooling Pledge a joint initiative between UNEP Cool Coalition and the United Arab Emirates as host of the 2023 United Nations Climate Change Conference, joined by over 60 countries at COP28, also highlighted the importance of increasing access to cooling while minimizing emissions from the sector by 2050. It provides a strong political push to take immediate steps to increase passive strategies, bring back nature to cities, enhance building energy codes, improve energy efficiency standards, and phase down HFCs in the cooling sector.

Priority Topic for 2024: Integrating energy efficiency with a focus on sustainable cooling into updated NDCs

According to the IPCC 6th Assessment Report, global warming cannot be limited to 1.5°C without rapid and deep reductions in energy system CO2 and GHG emissions. Energy efficiency is one of the key ways the world can meet energy service demand with lower energy use, which is crucial in most of the IPCC GHG emissions pathways limiting global warming to 1.5oC. The frequency and intensity of hot temperature extremes are rising with the onset of climate change according to IPCC. This is particularly significant given that at least 1.2 billion people already remain at risk as a result of not having access to cooling solutions, disproportionately affecting women (SE4All, 2022).

In responding to higher global average temperatures, cooling demand is growing rapidly, also driven by rising populations and increasing incomes. This growth in demand will drive further climate change, creating a vicious cycle of more cooling and emissions.

Emissions from cooling are projected to rise to 10% of projected global emissions in 2050 (UNEP 2023), and cooling is already constraining the energy transition as a top driver of generation capacity additions to meet peak power demand (IEA 2024). Sustainable cooling can be achieved through higher energy efficiency standards, passive cooling, and a faster phase down of climate-warming refrigerants used in the cooling industry. Actioning this can cut at least 60 per cent off projected 2050 sectoral emissions, provide increased access to life-saving cooling, take the pressure off energy grids, and save trillions by 2050 (UNEP 2023). Furthermore, depending on the rate of grid/power sector decarbonization, emissions from the cooling sector could be brought to near-zero levels (UNEP 2023).

The next NDCs to be submitted in 2025 will provide a unique opportunity for countries to undertake a more critical review of the status of the implementation of their previous climate plans and consider aspects such as integrating energy efficiency and sustainable cooling targets.

Considering these two critical timeframes from COP28, i.e., 2030 and 2050, and the submission of updated NDCs in 2025, the Dialogue in 2024 may consider "**integrating energy efficiency with a focus on sustainable cooling into updated NDCs**" in the Sharm el-Sheikh 2024 mitigation ambition and implementation work programme. This would support and encourage countries to revisit and strengthen 2030 targets in NDCs, urgently scaling up mitigation ambition and implementation towards the energy transition, with specific attention on energy efficiency and sustainable cooling. In addition, this would yield multiple benefits such as energy security, financial savings, food security, air quality and productivity.

Suggested topics for discussion under the global dialogues

Under the larger banner of "**integrating energy efficiency with a focus on sustainable cooling into updated NDCs**" in the Sharm el-Sheikh 2024 mitigation ambition and implementation work programme, following are the list of suggested topics that will help countries to make informed decisions on how to establish energy efficiency mitigation targets and/or revise them on their updated NDCs.

- **Minimum Energy Performance Standards (MEPS) and labels:** MEPS establish a minimum floor for products entering the market and can be combined with limits on the global warming potential for refrigerants. The focus will be on cooling products (room air conditioners, refrigerators, commercial refrigeration, fans), however MEPS and labels are also applicable for other products, such as lighting, dishwashers and electric motors.
- **Financing Energy Efficiency and Sustainable Cooling:** financing can help incentive the transition to energy efficient and sustainable cooling by reducing the upfront costs. Business models and financial incentives will be explored during the workshop, such a repayment through electricity bills, retailer financing, lease/servicing models (e.g. cooling as a service) and ESCOs.
- **Passive Measures to Avoid the Demand for Cooling:** encourage the reduction in the need for mechanical cooling through passive cooling measures in new buildings and building retrofits, including providing shading, ventilation and insulation. One of the most effective instruments of scaling up of passive cooling are energy building codes.
- **Enhancing Synergies Between Montreal Protocol and Paris Agreement Agenda:** The Montreal Protocol, and the Kigali Amendment to the Montreal Protocol, have been directing greater attention – and financing – towards not only supporting countries in enabling a phase-down of high-GWP refrigerant phase-down nationally, but have also created a special funding window to support the maintenance and improvement of energy efficiency as they target their refrigerant-based commitments.
- **Sharing best practices and lessons learnt on integrating energy efficiency and cooling targets in NDCs:** promote exchanges among countries making use of existing communities of practice (such as CBIT-GSP regional networks, UNFCCC's Regional Climate Change Center, etc.), thereby creating a basis for enhanced NDC ambition through south-south cooperation and exchange.

References:

IEA (2024) Space Cooling, accessed online at https://www.iea.org/energy-system/buildings/space-cooling, 31 January 2024

IPCC (2021) Climate Change 2021: The Physical Science Basis. Contribution of Working Group I to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change

SE4All (2022) Chiling Prospects: Tracking Sustainable Cooling for All

UNEP (2023) Global Cooling Watch: How to meet cooling demand, while cutting emissions