Cool Leadership in a Hot World: Enabling a Global Transition to Sustainable Cooling

Bonn Climate Change Conference SB58

Summary Report

June 8, 2023 1315 – 1430 (CET)





environmental investigation agency





KEY TAKEAWAYS

- Cooling is one of the most critical blind spots in today's climate debate and one of the biggest contributors to global warming.
- Sustainable cooling is a key strategy for climate change mitigation and adaptation. Renewable energy is important for the sustainable cooling pathway, as a solution to reducing emissions from fossil fuels and to meet rising demand for cooling as temperatures rise, particularly in cities.
- Recognizing this, the COP28 UAE Presidency announced the Global Cooling Pledge which intends to raise
 ambition and international cooperation on improving energy efficiency and increasing access to sustainable
 cooling, through collective targets.
- The Global Cooling Pledge aims to raise aspirations and further the work that leaders in this space including Pakistan, Dominican Republic, Panama, and Viet Nam are already doing on sustainable cooling at the national level. Such as, improving efficiency performance standards, model building energy codes, developing national cooling action plans, and increasing nature-based solutions for cooling.
- Non-state actors, cities and the private sector also play a key role in the promotion of sustainable cooling solutions. ICLEI summarized passive cooling solutions that cities can adopt e.g. promoting increased shade through urban planning and increased green spaces; making changes to building design through white roofs, avoiding glass buildings, and having natural ventilation through windows.

CONTEXT OF THE SESSION

Cooling is one of the most critical blind spots in today's climate debate and one of the biggest contributors to global warming. If left unchecked, emissions from cooling are expected to double by 2030 and triple by 2050, driven by heat waves, population growth, urbanization, and a growing middle class.

Recognizing the vital role of sustainable cooling in tackling climate change, delivering on the energy transition, and achieving the Sustainable Development Goals, the COP28 UAE Presidency announced the development of a Global Cooling Pledge and a menu of options - to be featured prominently at COP28.

The side-event convened by the United Arab Emirates (UAE) COP28 Presidency, the United Nations Environment Programme's

REPORT OF THE SESSION: SPOTLIGHT ON COOLING

Mr. Dane McQueen – Director, Programs and Partnerships, UAE COP28 Presidency – outlined the importance of sustainable cooling with rising temperatures resulting in increased demand for cooling with emissions implications. Cooling is not only a mitigation or an adaptation issue but a matter of climate justice, as heat primarily affects the lowest income families. Many actors have made cooling one of their top climate concerns, including in India's G20 Presidency and at the Clean Energy Ministerial (CEM). The UEA wants COP28 to be a cool COP.

He showcased the Global Cooling Pledge. In collaboration with G20 President India, the UNEP Cool Coalition, and other partners, the COP28 Presidency is working to develop the Global Cooling Pledge and a menu of options to deliver a significant collective response to the cooling challenge. The actions range from nature-based solutions (NbS) to appliance efficiency policy to innovation investments. The Global Cooling Pledge is currently

The Global Cooling Pledge will be launched at the CEM meeting in Goa. This will be followed by campaigning until COP28. COP28 hopes to make cooling a strategic investment for the economy, the most vulnerable, and the climate.

Mr. Francesco La Camera - Director General, IRENA – spoke about the importance of renewable energy for the sustainable cooling **Cool Coalition, Environmental Investigation Agency (EIA)** and **Sustainable Energy for All (SEforALL),** aimed to rally momentum for global action and increased ambition on sustainable cooling on the road to a Cool COP28. It showcased international collaboration on the Global Cooling Pledge to high-level country representatives and private sector stakeholders.

The side-event also showcased national best practices to assess and meet the demand for sustainable cooling through plans, policies, and actions taken by the Governments of the US, **Pakistan, Kenya, Vietnam, Panama,** and the **Dominican Republic**. The session also highlighted the innovative work on cooling of **IRENA** and provided guidance for local governments through **ICLEI**.

pathway, as a solution to reducing emissions from fossil fuels and to meet rising demand. He noted this was particularly important for economies in Africa and Southeast Asia. The physical infrastructure required for renewable energy development for cooling is the priority to enable access and trade. Work is needed to be done to promote an enabling environment for renewable energy for cooling – including regulatory changes.

Dr. Jonathan Moch - Science and Technology Advisor, U.S. Department of State – concluded this session by focusing on how cooling overlaps with both adaptation and mitigation, providing opportunities to reduce emissions and limit global warming to less than 1.5 degrees. Firstly, he urged countries to advance progress on sustainable cooling by ratifying the Kigali Amendment to reduce HFC refrigerants. He recommended countries to draw on the Multilateral Fund for the Implementation of the Montreal Protocol to support the development of operational frameworks to improve energy efficiency. Secondly, he outlined the American Innovation and Manufacturing (AIM) Act which was passed by US Congress to phase down HFCs by 85% in the US by 2036. He concluded by discussing prototypes from the Global Cooling Prize which is a competition to incentivize development of a residential cooling solution that will have at least five times less climate impact than standard residential/ room air conditioner units in the market today.

REPORT OF THE ROUNDTABLE: INTERNATIONAL COLLABORATION TOWARDS A COOL COP28

Ms. Lily Riahi – Global Coordinator, Cool Coalition - introduced the roundtable discussion by asking a question to each of the panelists related to their plans and policies to address rising temperatures, extreme heat and to promote sustainable cooling.

Ms. Saima Shafique - Climate Change Director, Ministry of Climate Change, Government of Pakistan – spoke about the wide-ranging impact of the heatwaves that Pakistan had faced in March and April on food value chains, the agriculture sector and the health sector. Pakistan has enforced a number of sustainable cooling solutions: on the policy side, Pakistan has introduced the National Clean Air Policy, and are also launching the National Cooling Action Plan (NCAP). To reduce the intensity of heatwaves, Pakistan is promoting the introduction of green space through the Green Pakistan Programme, as well as through green building codes. They are also working on short-lived climate pollutant inventories. Pakistan is seeking international support on capacity building components, as well as contextualization and adoption of innovative cooling technologies particularly to make it accessible and affordable for communities.

Mr. Stephen Nzioka - Deputy Director, Renewable Energy, Ministry of Energy, Kenya - Kenya has made strong progress on electrifying its population with renewables: the country's electrification rate was around 28 percent in 2013, and it now stands at 75 percent. Meanwhile, 81 percent of this electricity comes from renewable sources – with significant progress made on solar with the aim for this to reach 100 percent by 2030.

Kenya also has made strong progress on cooling. A national Energy Efficiency and Conservation strategy has been published in 2020. Kenya switched to more energy efficient building codes which emphasize passive design strategies and renewable energy.

This month, with the support of SEforAll, a National Cooling Action Plan will be published aiming to increase the performance and efficiency of energy consuming cooling appliances, transition to low GWP refrigerants, increase access to sustainable cooling and agricultural cold chains.

The first Africa Center of Excellence for Sustainable Cooling and for Cold Chain SPOKE (Specialized Outreach and Knowledge Establishments) is being developed in Kenya in partnership with UK Government and UNEP with a focus on fish, dairy, and fruits value chains to guide design of flexible and efficient self-sustaining cold chain services. Mr. Pham Van Tan - Deputy Director General for Climate Change, Ministry of Natural Resources and Environment, Viet Nam - In May, Viet Nam's all-time heat record was broken on two consecutive days with early heat waves across many parts of the country. Temperatures are rising and heatwaves will become more frequent and intense impacting vulnerable populations the hardest. For the government of Viet Nam, adapting to this heat - with particular emphasis on vulnerable communities – is a national priority highlighted in the updated NDC. By 2030 Viet Nam's National Climate Change Strategy targets a reduction of 32.6% in energy sector emissions and the cooling sector will have a major role to play. Specifically, the net-zero strategy include making important changes to refrigeration and air- conditioner sector and promoting use of energy-saving and green building materials in residential and commercial sectors along with urban planning level solutions.

Viet Nam developed a NCAP, focusing on room air conditioners which is now being expanded to cover food cold chain, passive cooling and direct emissions from refrigerants. It is also preparing Urban Cooling Action Plans (UCAPs) that integrate action on cooling, nature and extreme heat into the urban planning for three cities.

He noted how international cooperation and support will be critical to Viet Nam's efforts to deliver netzero by 2050. Viet Nam welcomes the multistakeholder effort of the Global Cooling Pledge and its role uniting state and non- state actors in this effort.

Ms. Rosilena Lindo - Undersecretary, National Energy Secretariat, Panama – started by mentioning that in Panama there is a clear and fundamental need to decarbonize cooling and the role that technological innovation plays in this. She noted the need for collaboration to move to sustainable cooling across local and national governments and the private sector – as well as the importance of behavioral change of consumers, including women and youth. The Global Cooling Pledge and menu of actions provides a framework to deliver this. For the promotion of sustainable cooling, Panama is aiming to decarbonize its electricity supply, provide extensive renovations to existing homes, improving renewable energy usage for cooling. Panama's preliminary national strategy for the rational and efficient use of energy (ENUREE) is key for emissions reductions. By accelerating energy efficiency transition and equipment penetration by 72% by 2050, the national energy transition agenda is looking to deploy an additional \$77m investment for cooling.

Panama also has a NCAP to assure collaboration between other cooling initiatives and environmental strategies. The plan also outlines the transition to low-GWP refrigerants and a clear roadmap for action, this includes sustainable building codes.

Ms. Nathalie Flores Gonzalez - Director of Change Adaptation Climate and Mitigation, Vice-Ministry of International Cooperation, Dominican Republic - began by discussing how the Dominican Republic in its constitution mentions adaptation and mitigation. The Global Cooling Pledge links adaptation and mitigation and that's what makes it so important. The Dominican Republic also has the law of development which is aligned with SDGs and has a guota of emissions reductions. Energy is the biggest source of carbon emissions, but this framework provides an opportunity for change and to engage the private sector also. The Dominican Republic also has presidential decrees for green procurement and energy efficiency policies, which are in line with the Kigali Amendment. In addition, the Dominican Republic includes GHGs in its transparency report, in order, as an example, to link actions on cooling and HFC reductions to this reporting process.

Ms. Maryke van Staden - Director of carbonn **Climate Center, ICLEI** – spoke about sustainable cooling in cities. Cities are typically warmer due to the Urban Heat Island Effect. With increasing urbanization, cities are a place where action is needed to protect communities. Much can be achieved in terms of infrastructure, particularly in terms of energy demand, by switching to clean, green renewable energies while reducing and emissions. Governments avoiding have the opportunity to think about vertical integration and integrated urban planning, through the application of national policies to enable local and sub-national actions. Urbanization offers opportunities for action, facilitating the design of solutions for more compact systems. Secondly, governments could facilitating access to finance for implementation including of heat action plans in cities.

ICLEI provides technical assistance and policy guidance that can help cities understand the challenges and think holistically about the issue. Passive cooling solutions include promoting increased shade through urban planning and nature. Cities should promote white and light roofs, and could adopt super-cool colored materials and technology to decrease temperatures. Changes can also be made to building design to avoid glass buildings, and to have natural ventilation through windows. Renewable and district energy should be promoted for energy supply.

Ms. Avipsa Mahapatra, Climate Campaign Lead, EIA – provided concluding remarks by highlighting the importance of the role of the private sector given 10 new air conditioners will be sold every second for the next 30 years. The EIA, in consultations with a large number of private companies, stresses the importance of corporate commitment to progress and the role governments play in holding the private sector to account.