SCALING-UP GCF PROJECTS ON ENERGY-EFFICIENT AND CLIMATE FRIENDLY COOLING

SUMMARY REPORT

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Video Recording: https://www.youtube.com/watch?v=DdtaUkV-cg4

About the Green Climate Fund

The Green Climate Fund (GCF) provides financial support to developing countries to limit or reduce greenhouse gas emissions and to adapt to the impacts of climate change, with the goal of promoting a paradigm shift towards low-emission and climate-resilient development and making a significant and ambitious contribution to global goals on climate change.

About the United Nations Environment Programme

The UN Environment Programme (UNEP) is the leading global voice on the environment. It provides leadership and encourages partnership in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations.

Context of the Session

This awareness raising webinar hosted by the GCF and UNEP presented how countries can scale up efforts on energy-efficient and climate friendly cooling through specific financing and policy mechanisms. The webinar, which took place on August 5, 2020, was moderated by Sabin Basnyat, Senior Energy Efficiency Specialist, Division of Mitigation and Adaptation of the GCF.

Speakers from the GCF, UNEP-led Cool Coalition Secretariat, the International Energy Agency (IEA), UNEP's United For Efficiency (U4E) and the Lawrence Berkeley National Laboratory (LBNL) contributed to the discussion by highlighting the climate impacts of the cooling sector and what actions governments can take to transition to energy-efficient cooling and climate-friendly refrigerants to ensure widespread access to cooling services while limiting their negative climate impacts.

Practical guides, toolkits, references, and how-to manuals were presented with the aim to assist National Designated Authorities (NDAs) and Accredited Entities (AEs) in the development of transformational GCF projects and programs in this priority field.

Report of the Session

Sabin Basnyat welcomed the audience and the speakers to this first GCF-UNEP webinar on cooling. He thanked everyone for joining and reminded all that "if we do cooling right, we can reduce global warming by one degree by 2050".

***Opening remarks*:** Dr German Velasquez (Jerry), Director of Mitigation and Adaptation Division, GCF delivered opening remarks, underscoring the importance of energy-efficient and climate friendly cooling in delivering much needed emission reductions. He stated that "while nearly two-thirds of NDCs contain energy efficiency targets, these are often limited to high-level

commitments and lack detail on implementation" and that creation and strengthening of dedicated policies are urgently needed.

In this framework, he underscored, cooling plays an important role. On the one hand "globally cooling represents 10 percent of electricity consumption and demand for cooling is increasing rapidly" with global energy use for cooling projected to triple by 2050. On the other hand, 2.3 billion people lack access to cooling, which contributes to an estimated 1.5 million preventable deaths each year, to the loss of one-third of total food produced, with associated annual financial losses of 1 trillion dollars, and to 600 billion dollars in productivity losses in Asia alone.

As such, "the time to act is now", Dr Velasquez said. He explained that the GCF, as a catalytic fund, is following a two-pronged approach towards clean cooling. The first is enabling environment: by supporting countries in moving from just policy to planning, to develop minimum energy performance standards and labeling, building codes, and national cooling action plans. The second is to support implementation by working with partners on: integrated and cross sectoral approaches, new business models, replicable and scalable projects, establishing new markets/market trends, and sustainable financial products.

He closed his intervention by thanking speakers and co-organizers, saying that "we hope that this serves as a venue to share and come up with collective voice for cooling towards the future".

Overview of the Cooling Sector and its Climate Impact: Melanie Slade, Senior Programme Manager, Energy Efficiency in Emerging Economies, IEA presented key results of the newly published IEA-UNEP "Cooling Emissions and Policy Synthesis Report". She highlighted that today, 3.6 billion cooling appliances are in use, and that 14 billion will be needed by 2050. By 2025 "two-thirds of the world's households would have an air conditioner, but China, India and Indonesia will account for all half of all air conditioning units in buildings".

While increased access to cooling is good news, the bad news is that consumers do not buy the most efficient available technologies, and this has little to no relation to prices. In fact, getting cooling right "is not a technology problem: it's something that we need to address with policy and with finance", including by eliminating the most inefficient appliances in the market, Slade highlighted.

During the Q&A, she specified that current gaps in cooling efficiency actions include a lack of interest in efficiency at the policy level, lack of knowledge on the relevance of these issues, as well as a misconception about the importance of EE policies given the limited savings at household levels.

If no action is taken, space cooling-driven energy demand growth will require alone 1.2 trillion in power generation investments worldwide by 2050. The investment amounts to 2.9 trillion if transmission and distribution investments are also taken into account. As such, emission reduction potentials from efficient space cooling are almost equal to those of decarbonizing power generation, Slade reported.

Slade concluded by reminding the audience that, while the technology is there, investments and policy support are strongly needed to ensure a transition to efficient, climate-friendly cooling, and that COVID-19 recovery plans and stimulus packages are not-to-be-missed opportunities to support this process.

The Key Role of National Cooling Action Plans: Lily Riahi, Coordinator of the UNEP-led Cool Coalition started her intervention by highlighting cooling's key role not only in ensuring thermal comfort, but also in securing livelihoods and strengthening resilience through food and medical cold chains. The latter will be particularly important in the delivery of the forthcoming COVID-19 vaccine. "We do need to increase access to cooling, but we definitely need to manage this growth in a smart, efficient, climate-friendly manner in order to meet those needs" Riahi underscored.

She stated the need to adopt a mix of approaches to act effectively on cooling, including policies to push for the uptake of efficient equipment and solar or renewable driven cooling, as well as investing in smart buildings, sustainable urban planning and nature-based cooling solutions. Riahi highlighted the unique opportunity that the Kigali Amendment to the Montreal Protocol presents to phase down HFCs while acting on energy efficiency. This double action alone could avoid the equivalent to 4-8 years of global greenhouse gas emissions at 2018 level over the next four decades, she said.

Riahi explained that the vision of the Cool Coalition, launched last year, is to help countries meet cooling demand by using a comprehensive approach, maximizing the climate and development benefits of cooling while reducing emissions. In this framework, National Cooling Action Plans (NCAP) are key actions for policy makers to create enabling conditions to accelerate joint action on energy efficiency and the HFC phase down, provide market signals and investment security to producers and end-users, and preparing for future cooling requirements to deliver on the goals of the Kigali Amendment, Paris Climate Agreement and the SDGs. NCAPs are key to assess cooling needs across sectors, creating baselines, cooling growth projections, and intervention scenarios, as well as targets and potential policy and projects actions that allow for cooling expansion and access while reducing environmental impact.

Multiple countries around the world have developed NCAPs, with India having produced the most comprehensive and far reaching one. India's NCAP (ICAP) process was guided by the need to increase the currently very low access to cooling in the country, the strong political for ambitious climate action linked to energy efficiency and refrigerants transition, as well as the strong leadership of the National Ozone Unit, Riahi explained. "The ICAP was an extremely collaborative process" across a multitude of ministries, industry representatives, civil society stakeholders, research institutions and academia, which allowed to break silos and set up a cross-sectoral collaboration framework.

After building baselines and future growth scenarios for various cooling sectors, the ICAP process developed intervention scenarios and specific recommendations for actions largely based on existing policy frameworks, monitoring mechanisms, and operational links to the NDC and HPMP plans. The end-product, Riahi explained, is a flexible, living document that guides the country's cooling action in the long term.

Based on India's efforts, she concluded, Cool Coalition members, supported by the Kigali Cooling Efficiency Programme (K-CEP), are developing a model NCAP methodology to support the development of similar endeavors in interested countries. Lily noted it is imperative to respond to the UN Secretary General on World Ozone Day call to action for *"all countries to*

develop National Cooling Action Plans to deliver efficient and sustainable cooling and bring essential life-preserving services like vaccines and safe food to all people" and noted that countries can do so with the support of the Cool Coalition model NCAP methodology, the experience of those who have developed NCAPs, as well as through GCF readiness projects.

MEPS, labels and supporting policies for Energy-Efficient and Climate Friendly Cooling: Patrick Blake, Programme Management Officer, UNEP's United for Efficiency (U4E), presented the important role of minimum energy performance standards (MEPS), labelling and supporting policies in the transition to energy-efficient and climate-friendly cooling.

U4E, as a global program working on energy efficiency, works with developing and emerging countries on implementing an integrated policy to accelerate the market transformation, he explained. This approach includes MEPS to "eliminate the least efficient products from markets and sets the floor for the market of cooling products sold in a country or a region"; labels, comparative or endorsement-based, to help communicate the products' efficiency to buyers; financing mechanisms help the purchase of more efficient products; and policies for market monitoring and surveillance and testing to ensure compliance.

Blake underscored that, while aforementioned policies exist in many countries, there is widespread lack of implementation, update or enforcement. In fact, MEPS and labels, in order to be effective, need to be updated as technology progresses. To facilitate the additional work still required in this policy field, U4E has developed Model Regulation Guidelines for ACs and refrigerators, was developed with input from over 50 experts and includes requirements for energy efficiency and lower global warming refrigerants. These are intended as guidance templates for countries when developing MEPS and supporting policies at national or regional level. Specific guidelines on energy efficiency labeling are under development, Blake announced.

He proceeded by outlining ongoing efforts at the national and regional efforts in development efficiency policies for cooling products. The Rwanda Cooling Initiative (R-COOL), funded by KCEP, brings together national ozone and energy focal points to develop policy and financial mechanisms, including an NCAP, MEPS, labels, and the "Cool-Lease". The latter, Blake outlined, consists of leasing of cooling products in the commercial sector and then on bill financing (using utility to pay back the purchase of the product over a period of time) for the residential sector, to remove price barriers and support the market transition to energy efficient appliances with low global warming potential refrigerants.

On the regional level, U4E is supporting the harmonization of products, policies and standards between countries, he continued. In Southeast Asia, in collaboration with the ASEAN Center for Energy, International Institute for Energy Conservation and LBNL, U4E is supporting the update of air conditioner MEPS. Regional efforts allow for reduced trade barriers between the countries and sharing of experiences and resources (e.g. testing laboratories) to reduce costs.

Blake concluded by calling on countries to accelerate action for the uptake of MEPS and supporting policies for cooling appliances, coupling them with refrigerants considerations, both at the national and regional level. Countries can do so with the support of existing tools, the experience of countries and organizations already working in this field, as well as through GCF readiness projects.

Opportunities for Funding Energy Efficiency Improvement by Green Climate Fund with Refrigerant Transition under the Montreal Protocol: Nihar Shah, Presidential Director, Global Cooling Efficiency Program of LBNL, and Ambereen Shaffie, President and Managing Partner, Shaffie Law and Policy outlined opportunities and challenges in acting on energy efficiency and refrigerants transition through existing funding mechanisms.

Shah started the intervention by introducing LBNL, a research institute managed by the University of California for the United States Department of Energy (US DoE), "dedicated to solving the most pressing scientific problems facing humanity". These include a significant focus on energy efficiency, whereby LBNL provides technical support for Kigali Amendment and Montreal Protocol negotiations and for market transformation programs for efficient ACs and refrigerators in China, India, Brazil, Mexico, Egypt, Indonesia, among others.

"The impact of energy efficiency is much higher than many significant renewable energy policies, like China's Three Gorges Dam or India Solar Mission" Shaffie explained. She then highlighted the need to act on both refrigerants transition and energy efficiency to limit global warming, interventions that can be carried out jointly as they "both require typically a redesign of appliances and retooling of manufacturing lines". The Multilateral Fund (MLF), the funding arm of the Montreal Protocol, "already funds the incremental costs of the refrigerant transition for so-called Article 5 Parties, which most developing countries fit into".

Shaffie proceeded by highlighting that coordinated EE and refrigerant transition interventions are cost effective, "reduce risk and shorten payback for consumers, manufacturers, utilities and funders". However, funding coordination requires specific considerations to be made. For example, "just by switching out the refrigerant […] there is an impact on energy efficiency" in cooling appliances. However, when planning joint interventions, one must keep in mind that efficiency has a continuous improvement path, as technology, standards and labels are constantly updated, while the refrigerants transition is a "step change", Shah underscored. As such "starting from the refrigerant transition (with MLF funding) makes sense" for countries, and then proceed with additional energy efficiency investments.

To facilitate effective joint interventions, LBNL has developed the Joint Investment Framework Tool, which addresses barriers to co-financing energy efficiency and the refrigerant transition. This tool, Shaffie explained, "relies on publicly available data on the cost of efficiency improvement", "is a flexible tool for planning and evaluation of energy efficiency projects coordinated with refrigerant transition projects", and "it enables the already made pipeline of projects in the Montreal Protocol to be leveraged for energy efficiency improvement".

This tool can be used in GCF readiness activities, can help design GCF projects, as well as defining specifications for specific policies and incentive programs for cooling appliances. They concluded by announcing the forthcoming publication of a paper this year "specifically focused on the joint investment framework and strategy" that will be accessible on the LBNL website.

Introduction on the GCF Readiness Support modality: Eduardo Freitas, Africa Regional Manager, Division of Country Programming, GCF, started his presentation by outlying the GCF programming cycle, which goes from the country's strategic climate documents, through the project preparation facility, all the way to GCF investment requests.

Readiness Support is a "financial tool of the GCF that allows countries to tap into non-reimbursable grants" to support access to climate finance, "institutional capacities, strategic planning, and early stages of project development" for up to USD 1 million dollars per country

per year. On top of this, up to USD 3 million per country can be requested for the formulation of National Adaptation Plans (NAPs) and/or other adaptation planning.

As of June this year, 250 million dollars have already been approved for 381 GCF Readiness grants, Freitas announced. He specified that only National Designated Authorities (NDAs) and Focal Points (FPs) are authorized to submit Readiness proposals to GCF. As such, interested parties should work closely with NDAs to develop such requests, expect an average of six months from drafting to approval of Readiness proposals.

Freitas concluded by underscoring that activities for building an enabling environment for the transition to sustainable cooling, as outlined by other speakers, have already been approved under the GCF Readiness facility. Projects to build “MEPS and labeling schemes, national policy roadmaps, enabling environments financing mechanisms” for cooling relate perfectly to this GCF program.

Call to Action / Closing

Sabin Basnyat concluded the event by underscoring the GCF’s mandate to help countries increase and deliver on their climate ambitions by testing new business models and ideas that can elevate the gaps in cooling financing, demonstrating their application and acting as a catalyzer for investments that are seen as risky or difficult to make, leading the way in decarbonization investments. He called for increased collaboration and “action on the ground” in the next few years, to ensure we deliver on the transition to efficient, climate friendly cooling and on its mitigation potential.