

**GST Roundtable 1: Mitigation, including response measures: Wednesday 7 June, 15:00-18:00, Chamber Hall**

**Full statement by Shikha Bhasin, on behalf of the Council on Energy, Environment and Water (CEEW) and UNEP-Cool Coalition**

1. The need for accountability needs to be brought forth to ensure the ‘implementation’ of existing and future commitments. A [study](#) by Council on Energy, Environment and Water (CEEW’s) found that developed countries collectively exceeded their [carbon space](#) by around 25 gigatonnes (GtCO<sub>2</sub>e) in the pre-2020 period. Based on the experiences from the pre-2020 climate regime, as well as the limitations of the Paris Agreement, the prospects for delivery of climate action, enforcement of obligations, and accountability are slim. This clearly highlights the urgent need to deliberate on strengthening accountability mechanisms, which would ensure compliance with obligations and also translate ambition to real action (delivery). Based on A CEEW [study](#), here are some key recommendations to strengthen accountability to improve compliance and delivery:

- **Enhance the scope** of the compliance committee under Article 15 of the Paris Agreement
- **Formalise the role of non-party stakeholders** within the climate regime
- **Draft model climate laws** to enshrine international commitments and require subnational governments to set targets in alignment with them
- **Strengthen climate litigation** through use of attribution studies as legal evidence

Additionally, transparency of climate actions is pivotal for multilateral climate governance. Informing other nations, civil society organisations, and the public about the progress and impact of domestic climate measures, strengthens trust and enhances accountability in the international community. However, there lie several challenges: (i) the current reporting arrangements require substantial technical information and capacity, which does not facilitate direct benchmarking of the countries’ performance internationally; (ii) the reporting obligations<sup>1</sup> provide extensive detail as climate reports but it is difficult to relate to the climate achievements of countries as these disclosures are qualitative or are based on broad assumptions; and (iii) there exist several grey accounting areas<sup>2</sup> that support masking of the non-performers. While the new enhanced transparency framework (ETF) imposes a greater level of rigour for reporting and measurement from developing countries, this data in past experience has not facilitated greater ambition or trust amongst Parties and the GST must be used to recognise the processes that can enable greater implementation of targets and support the development of accountability amongst Parties; especially so that the pre-2020 fate of emissions reductions are not repeated again.

2. In the context of net-zero, historical emitters – and the largest most developed Parties – have tied their net-zero commitments towards 2050. The EU, and the UK, for example, will be taking over 7 decades to reach net-zero since their peaking years; a significantly different reality from most developing countries which are yet to even peak. These commitments must be made more ambitious in recognition of the IPCC’s recommendations of the world needing to get to net-zero by

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<sup>1</sup> In the form of greenhouse gas (GHG) inventories, national inventory reports, biennial transparency reports, adaptation communications, and national communications

<sup>2</sup> These are in the form of inflated base year emissions, accounting of emission from the source instead of consumption, double counting of emission reductions, the definition of climate finance, accounting of the land use, land-use change, and forestry (LULUCF) sector.

2050. If early industrialisers will not hit net-zero much sooner, the space for the ‘world’ to get there will not remain given the different baselines developing countries are at.

For the developing world, finance is a key enabler to achieve net zero. Looking at India specifically, of the several pathways to achieve it, a CEEW-CEF report on investment sizing (which assumes green hydrogen becomes commercially viable but not CCUS) suggests India would require investments to the tune of [USD 10.1 trillion](#) over a fifty-year period to decarbonise three major emitting sectors: power, industry and transport. It went on to estimate that **investment support of on average USD 28 billion per year over a fifty-year period** is what it would take to mobilise capital to bridge that 35% investment gap. Hence, it must be acknowledged that in the absence of such support, it will be nearly impossible for India and other Global South nations to achieve net zero. About [80 per cent of Parties and negotiating blocs official submissions](#) clearly identify the need for enhanced finance. In light of this rising need, the GST must look at accelerating the flow of finance through international cooperation by:

- **Providing a definition of climate finance**, taking in account the support provided for climate action and assess its adequacy in line with Articles 9.3 and 9.4 of the Paris Agreement
- **Identifying sources, types of finance, and quantum of funds needed** to allow developing countries to tap into the required finance to fuel their development.
- **Highlighting market designs and institutional frameworks for finance delivery** by providing guidance for market designs that can help ensure strong investor signals and support mechanisms to de-risk clean energy investments in the Global South. They should also aim to attract private equity using government seed fund support, among other measures. Further, on the institutional front, the GST will need to provide institutional frameworks and processes for the delivery of timely finance to countries, so that the outcomes are relevant and usable for developing countries, especially India.

3. Finally, in addition to the messages highlighted by the co-facilitators, a formal request was made to consider **the inclusion of sustainable cooling as an opportunity of a low-hanging fruit with high impact**. In addition to the 0.5 degrees of warming that will be abated owing to the HFC phase down as agreed in the Kigali Amendment, energy efficiency and passive cooling solutions present an opportunity as high as others to abate climate change. For instance, [40 percent of refrigerant demand in India](#) comes from the servicing sector driven primarily due to leakages and maintenance. Moreover, India’s space cooling demand will grow by 11 times the 2017 levels by 2037-38 as projected by the India Cooling Action Plan, which will increase the prevalence of air-conditioner usage. The trend will lead to India potentially having [a billion air-conditioners](#) needing about [600 giga watts of power by 2050, and considerable infrastructure to serve the peak demand](#). The Star Labelling Programme for Room Air Conditioners (RACs) by India’s Bureau of Energy Efficiency (BEE) has led to an estimated 4.6 billion units of energy savings in FY 2017-18 alone and a cumulative energy savings of 46 billion units translating to 38 million tonnes of carbon emission reduction. This shows that action on sustainable cooling presents significant and sizable opportunities for energy security and global climate change mitigation.

Countries are increasingly looking at rolling out programmes and policies to support a transition to sustainable cooling: not just due to its mitigation potential, but also the productivity, healthcare, nutritional, and economic benefits associated with access to cooling. It is estimated [that India will lose an equivalent of 34 million jobs due to 5.6 percent decline in working hours](#) associated with heat stress by 2030. India also loses about 15 percent of its fruits and vegetables due to lack of cold chain facilities, leading to monetary losses to the tune of INR 92650 crores. These risks and benefits

must be widely recognized and compounded on to ensure that the opportunity that cooling presents for mitigation, adaptation and resilience are realized.

Finally, while most international initiatives on technologies and sectors remain relegated to transference of 'soft' skills, the 'cooling community' has seen actual technological development and policy knowledge co-developed, not least through the UNEP-based Cool Coalition, a Secretariat-based platform with over 130 members including countries, companies and civil society. The Global Cooling Challenge is an example to this end.

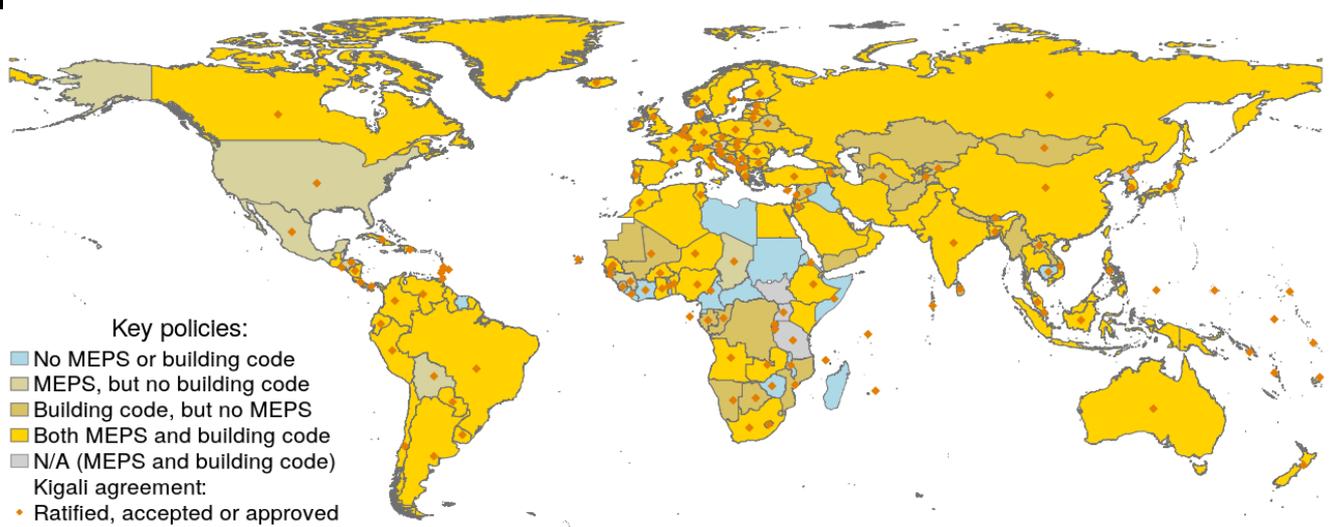
To bring to the note of the Facilitators of the GST processes, the Cool Coalition is currently finalizing the upcoming Global Cooling Stocktake Report. As part of this first of its kind, integrated assessment of the climatic impact that cooling is currently having, and poised to have on the world, data on policy metrics on cooling from all 193 recognised UN countries has been undertaken. Furthermore, an integrated modelling assessment for cooling's impact on the climate today (baseline) and scenarios for a net-zero future are being developed. Some key findings from the policy survey that has been undertaken have been highlighted below, and may be cited as **UNEP 2023 (forthcoming) Global Cooling Stocktake Report, Paris:**

### I. Nearly all countries have national policies in place to curb emissions from cooling

Countries are increasingly conscious of the climate risks posed by cooling, and have established national frameworks to regulate these. Almost all (95%) countries have at least one national level key policy already in place to reduce the emissions arising from cooling and refrigeration from among the following three (see Figure 1):

- 128 countries have nationally established Minimum Energy Performance Standards (MEPS) covering the cooling sector;
- 151 have a nationally established building code to ensure a minimum standard of efficiency;
- 148 countries have ratified, accepted or approved<sup>1</sup> the Kigali Amendment to the Montreal Protocol, which was negotiated and signed in 2016; and
- Only 8 countries are yet to adopt either of these three policies.

**Figure 1: National policies to lower cooling emissions exist across most countries globally**



Notes: Number of policies in place at national level among the following three: (1) ratification, approval, or acceptance<sup>2</sup> of the Kigali amendment to the Montreal Protocol; (2) Minimum energy performance standards established at National level for each category of appliances in the cooling

sector; and (3) Building codes established at national level (regional level building codes are not included). **[NB: Data from Central African countries is yet to be added, missing data points in this map]**

**II. There are multiple opportunities to do more, by: (a) regularly updating energy efficiency standards to global best practices, (b) using integrated building design and include passive cooling solutions in building codes (c) controlling refrigerant leakage and (d) strengthening actions at a sectoral level, such as cold chain and space cooling, at multiple levels of governance.**

While 68% of countries have established MEPS for cooling appliances, only 14% of countries update those standards every two years. Building codes have been established at national level in 80% of countries. However, 17% of those codes still do not stipulate minimum material performance standards, only a half include a methodology for system level efficiency standards as opposed to individual component pieces only, and only a third of those codes account for cool and reflective surfaces. Further effort is also required to ensure refrigerant recovery during servicing or refrigerant disposal, which are only contemplated in about 60% of countries. Finally, about 40% of countries are yet to identify cooling access rates and gaps to increase thermal comfort, and two-thirds (globally) are yet to map out cold chain to understand gaps that lead to food shortage, wastage, malnourishment and enable access to healthcare.

### **III. National Cooling Action Plans emerging as a cross-sectoral strategy.**

National Cooling Action Plans (NCAPs) are a critical tool for countries wishing to strengthen their current regulatory framework around sustainable cooling: As has been noted, NCAPs are particularly decisive in *“driving alignment between various government line ministries and agencies by establishing strong political will and meaningful nationwide directives, leveraging inter-linkages with national and international agendas, and setting direction and actionable targets for addressing access to cooling while reducing its environmentally harmful impacts and maximizing the socioeconomic benefits. It can facilitate the, as it can help identify access gaps, emissions potential, and mobilises governance frameworks across multiple government Ministries and/or agencies who, while critical stakeholders for cooling, do not necessarily recognise or prioritise sustainable cooling”* (UNEP 2021) . Since 2018, when the first national cooling action plan was publicly launched in India, 31 NCAPs have been established or under development. However, the success of the NCAP is only as strong as its implementation. As these NCAPS get established, an execution and implementation plan with clear lines of governance, responsibilities, mandated timelines should also be established,

### **IV. More action on sustainable cooling could allow countries to increase the ambition of their NDCs.**

Including cooling in NDC updates could allow increasing national climate ambitions and leadership internationally. As of May 2023, we identified that 39% countries so far are mentioning cooling and cooling-specific policies in their NDCs, climate strategies or net-zero plans. There is therefore room for addressing cooling and refrigeration in NDCs more systematically. This could facilitate the adoption of cost-effective mitigation solutions with the potential for strong development co-benefits. The reduction in emissions from cooling may also facilitate the achievement of net-zero plans without an overreliance on carbon removal technologies. The value added of including cooling in NDCs is high because greenhouse gas emissions (GHG) from space cooling and refrigeration have doubled in 20 years and are now responsible for about 10 percent of global emissions (Dong, Coleman and Miller, 2021). Emissions from cooling services could double again by 2050 (Dong, Coleman and Miller, 2021), fuelled by global temperature rise; urbanisation and higher cooling needs in heat islands; population growth; as well as increases in disposable income leading to higher air conditioning (AC) ownership (IEA, 2018).

**V. G20 countries, responsible for about 80% of global GHG emissions and 75% of international trade flows, could lead the transition to sustainable cooling. Increasing access to cooling solutions while reducing their environmental burden could be done by strengthening existing regulation, with tighter enforcement and updating on MEPS, and the use of passive cooling technologies**

A global transition to sustainable cooling, led by G20 countries, would facilitate access to cooling for economic and human development, allowing for better health and nutrition, as well as higher productivity, while strongly curbing down the environmental burden of cooling globally. The G20 grouping consists of 19 countries<sup>3</sup> and the European Union (EU), and cumulatively accounts for 85% of global GDP, 75% of international trade and two-thirds of the world population (G20, 2023). The political prioritisation of provisioning access and deployment of sustainable cooling from this significant group of nations would have global scale impacts, and nudge supply chain and investment decisions beyond its collective borders.

G20 countries should strengthen the regulations that are already in place. They have already established minimum efficiency performance standards in the cooling and refrigeration sectors as well as building codes at either national or regional level. A low hanging fruit is the inclusion of system level efficiency standards in building codes as opposed to individual component pieces only in all those codes, since it is missing in 11% of the building codes reviewed for G20 countries. Moreover, only half of G20 countries account for cool and reflecting surfaces in their building codes. While building codes are strengthened, MEPS and labelling policies need to be regularly updated, and non-compliance strongly deterred. Given the development impact that cooling carries, it is surprising that approximately only half of the G20 countries have identified cooling rates and cooling gaps amongst its populations, particularly in the wake of increasing heat stress. More work on cold chains could also provide strong development benefits, as only half of G20 countries have mapped out their cold chains, critical to nutrition and food security, access to healthcare, as well as jobs in the agriculture and allied sectors.