



Cooling is for many of us an essential part of everyday life – from cold supply chains for fresh produce, safe storage of life-saving vaccines and temperature-sensitive medicines, to comfortable work and educational environments that help maintain productivity. As temperatures rise with climate change, and as economies grow and urbanize - a major part of which will take place in developing and emerging countries - the world's cooling needs are expected to dramatically increase. Nonetheless, access to cooling is limited, especially for the poorest people and communities, creating major productivity losses as well as adverse impacts on the provision of quality health care, nutritious food, and education. This in turn undermines the efforts and opportunities for dozens of countries to fully realize the Sustainable Development Goals, such as ending poverty, hunger and disease.

Cooling is critical to human health and prosperity and yet access to cooling is limited, especially for the poorest people and communities. Cooling needs are expected to increase as temperatures rise with climate change, and as economies grow and urbanize.

Visionary leaders at different levels of government in developing and emerging countries are already focusing on the opportunities to extend access to energy to those at the bottom of the pyramid. Nonetheless, to date cooling has not captured the political imagination. Over 1 billion people currently lack access to energy and are therefore likely to lack access to cooling as well. Furthermore, only 0.04% of total aid (Overseas Development Assistance) goes towards cooling solutions. The economic and social costs of not ensuring sustainable and affordable cooling access for all are poorly understood and not widely disseminated. This creates the risk of locking countries into costly, high-carbon, energy inefficient cooling pathways.

In autumn 2016 a group of influential philanthropic donors joined forces to pledge funding for the support of energy efficiency improvements alongside refrigerant phase-down, brought about by the Kigali Amendment on hydrofluorocarbons (HFCs). This amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer will result in an early phase down of HFCs, commonly used in air conditioners and other cooling devices.

Combining the phase down of HFC production and consumption with energy efficiency gains in cooling is expected to double the anticipated CO<sub>2</sub>-e savings, avoiding as much as 1°C of global warming. Providing access to sustainable cooling solutions can help mitigate many of the adverse impacts brought about through increased heat strain while also reducing operating costs and stress on energy grids, which may grow significantly as the world moves towards installing an estimated 1.6 billion air-conditioning units by the year 2050.

Providing access to sustainable cooling solutions can help avoid and mitigate many of the adverse impacts that result from having no, limited or unsustainable access to cooling. The latter is particularly true for some of the common, contemporary solutions we apply to manage heat strain. This is resulting in rapidly rising operating costs and stress on energy grids, as the world moves towards installing an estimated 1.6

billion air-conditioning units by the year 2050 – driven mainly by population growth, increased urbanization, and rising incomes. Sustainable Energy for All has therefore established a [Global Panel on Access to Cooling](#), uniting eminent leaders from industry, academia, philanthropy and international organizations, to provide evidence for access to environmentally friendly, affordable, and efficient cooling solutions for citizens, especially those in low-income countries.

The Global Panel met for the first time on September 18 and 19, 2017 in New York City to formally kick-off the work of the Panel and to start gathering evidence which will culminate in mid-2018 in the publication of an authoritative report on sustainable access to cooling pathways. The key conclusions from the meeting were:

- Access to cooling is essential for Sustainable Development and to achieve nearly all SDGs;
- Many current or projected cooling trends are not sustainable neither credible as a future pathway;
- With global cooling demand rapidly on the rise, we need to rethink how to provide sustainable cooling services to a growing and urbanizing world population, increasingly living in hot climates;
- Access to cooling is more than simply cooling technology. Although the technology required is increasingly available, far fewer efforts are being spent on how to join the dots and how to create a fertile enabling environment;
- To ensure sustainable access to cooling, there is an urgency to act now
  - by making current, dominant cooling technologies such as air conditioners radically more energy efficient, as well as
  - by rapidly expanding access to cooling for those considered at the Bottom of the Pyramid, to let them reap the many beneficial socio-economic and health impacts of such access,
- Simultaneously we need to prepare the ground for a longer-term shift in our thinking around cooling by considering the provision of our cooling needs from a thermally driven, systems thinking perspective;
- Considerable opportunity therewith exists to get access to cooling ‘right’, with buildings, cities, and cold chains considered the main battle grounds for tackling this challenge;
- Countries with an emerging or rapidly surging cooling demand have a critical window of opportunity to leapfrog to a more sustainable cooling system. This however requires a shift in mindsets and action on many fronts away from a singular, electricity and technology focused approach.
- In the next months the Cooling for All team will reach out to Panel members individually and through the formation of 2-3 small virtual working groups looking at the topics of buildings and cities, cold chains, and finance. There may be an opportunity for additional stakeholders to join these working groups.
- In addition, a request for evidence will be posted in October on the Sustainable Energy for All and KCEP websites to allow members of the wider community to submit their data and supporting evidence to the Cooling for All team.

For more information please contact the [Cooling for All](#) team at [coolingforall@seforall.org](mailto:coolingforall@seforall.org)

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