



## UNEP's Action Plan for Cooling Sector

**For Prelims:** [United Nations Environment Programme](#), [Conference of Parties\(COP28\)](#), [Global Cooling Pledge](#), [Kigali Amendment](#), [India Cooling Action Plan \(ICAP\)](#)

**For Mains:** Importance Reducing Emissions from the Cooling Sector, Green Cooling Strategies for Sustainable Development, Government Policies & Interventions

**Source:** [DTE](#)

### Why in News?

The [United Nations Environment Programme \(UNEP\)](#) has proposed an action plan aimed at significantly **reducing emissions from the global cooling sector** in its recent report titled **“Keeping it Chill: How to meet cooling demands while cutting emissions.”**

- This initiative carries the potential to make a substantial impact on the predicted 2050 [greenhouse gas emissions](#), reducing them by 60%.
- The report is released in support of the **Global Cooling Pledge**, a joint initiative between the United Arab Emirates as host of the [Conference of Parties\(COP28\)](#) and the **Cool Coalition**.

### Note

- The Cool Coalition is a global network of partners working to provide efficient, climate-friendly cooling for all.
- The UNEP launched the Cool Coalition at the First Global Conference on Synergies between the [2030 Agenda for Sustainable Development Goals](#) and the [Paris Agreement](#).
  - India is a member of the Cool Coalition.

### What is UNEP's Proposed Action Plan for Sustainable Cooling?

- **Nature-Based Solutions:**
  - Recommendations include **passive cooling measures** like shading, ventilation, insulation, green roofs, and reflective surfaces, and reintroducing nature to urban areas.
  - Passive cooling can reduce the need for **mechanical cooling and save energy and emissions**.
- **Efficiency Standards:**
  - Emphasizes the importance of **higher energy efficiency technologies and practices** for cooling equipment, such as air conditioners, refrigerators, and fans.
    - Higher-energy efficiency cooling can **reduce the energy consumption** and emissions of cooling devices and lower the costs for users and utilities.
- **Phasedown of Refrigerants:**

- This refers to the use of alternative substances to cool devices, such as [hydrocarbons](#), [ammonia](#), or [carbon dioxide](#), instead of **hydrofluorocarbons (HFCs)**, which are potent greenhouse gases.
  - HFCs are a group of **synthetic gases** primarily used for cooling and refrigeration. HFCs, classified as "**super-pollutants**," possess potent greenhouse gas properties, **capable of trapping heat hundreds to thousands of times more than carbon dioxide**.
  - Despite their significant impact, they are short-lived climate pollutants, with an average **atmospheric lifespan** of 15 years.
- Low-global warming potential refrigerants can reduce the direct emissions of cooling devices and contribute to the phase-down of HFCs under the [Kigali Amendment to the Montreal Protocol](#).
- Urges a **faster phasedown of climate-warming refrigerants** and air conditioning.

## Why Address the Cooling Sector?

- The cooling sector plays a crucial role in **combating rising temperatures**, ensuring food safety, industrial cooling processes, and driving productive economies.
- However, without intervention, the growing demand for cooling equipment could lead to a substantial increase in electricity consumption and emissions.
  - The cooling sector accounts for a **substantial 20% of global electricity consumption**.
- If current policies continue, the installed capacity of cooling equipment globally will triple, resulting in a **more than doubling of electricity consumption by 2050**.
  - This could lead to **emissions between 4.4 billion and 6.1 billion tonnes of carbon dioxide equivalent (CO<sub>2</sub>e) in 2050**, accounting for over **10% of global projected emissions that year**.

## What are the Benefits of Sustainable Cooling?

- Passive cooling techniques and efficient cooling equipment can save consumers **USD 17 trillion between 2022 and 2050**.
  - It is projected to reduce peak power requirements by **1.5-2 terawatts (TW)**, **avoiding substantial power generation investments**.
- Increasing the adoption of **low-global warming potential technologies** in new equipment and effectively managing refrigerant life cycles can reduce **HFC emissions by 50% in 2050**.
  - **Decarbonizing** the power grid can further **reduce sectoral emissions by 96%**.

## What are the Initiatives Related to Sustainable Cooling?

- **Global:**
  - **National Cooling Action Plans (NCAPs):**
    - Presently, **more than 40 countries, including India, have developed NCAPs**, and 25 others are at various stages of preparing theirs as well.
    - Though India and China have included implementation mechanisms in their NCAPs, the rollout has been slow.
  - **Global Cooling Pledge:**
    - At the United Nations Framework Convention on Climate Change, the host country United Arab Emirates and the Cool Coalition launched the Global Cooling Pledge.
      - Over 60 countries signed up to the Pledge with commitments to reduce the climate impact of the cooling sector.
  - **Kigali Amendment Acceleration:**
    - The Kigali Amendment is an international agreement to reduce the production and consumption of HFCs.
    - The amendment is part of the Montreal Protocol on Substances that Deplete the [Ozone Layer](#).
    - The Kigali Amendment aims to reduce HFC production and consumption by 80–85% by 2047.

- This is expected to prevent the emissions of up to 105 billion tonnes of CO2 of greenhouse gases, avoiding up to 0.5 degree Celsius of global temperature rise by 2100.

▪ **India:**

- [India Cooling Action Plan \(ICAP\).](#)
- [Bureau of Energy Efficiency \(BEE\) Star Rating Programme.](#)

PDF Refernece URL: <https://www.drishtias.com/printpdf/unep-actionplan-for-cooling-sector>

