EXTREME HEAT ACTION PROFILE

United Nations Environment Programme (UNEP)

www.unep.org

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UNEP addresses extreme heat by fostering global partnerships and initiatives to advance access to sustainable cooling solutions and improve energy efficiency with a special focus on vulnerable populations.

The United Nations Environment Programme (UNEP) is the leading global authority on the environment. UNEP works closely with its Member States and representatives to address environmental challenges through the UN Environment Assembly, the world's highest-level decision-making body on the environment. UNEP's core mission is to find solutions to the triple planetary crisis. It strives to inspire, inform, and enable nations and peoples to improve their quality of life without compromising that of future generations.

UNEP fosters global partnerships and initiatives to advocate, track and build momentum for action on extreme heat including to advance sustainable cooling and to "redesign" the built environment, food systems and infrastructure to adapt to extreme heat. UNEP provides evidence-based data to inform policy decisions, collaborates with sectors for low-carbon transitions, provides climate finance mechanisms and aids countries in adaptation and mitigation efforts.

Lead Heat Entities:

Climate Change Division Cities Cluster

Technical Focal Points:

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KEY FACTS

From 2016 to 2050, the energy requirement for space cooling is predicted to jump 300%.

The escalating demand for space cooling is already putting pressure on electricity systems and will continue to strain the grids. Under a business-as-usual scenario, the energy requirement for space cooling is predicted to jump from 2,020 terawatt-hours (TWh) in 2016 to 6,200 TWh in 2050. This is almost equivalent to the electricity consumption of the United States and Europe/Japan combined.

Beating the Heat: A Sustainable Cooling Handbook for Cities

The use of air conditioners fuels a perpetuating cycle.

The rising use of air conditioners results in additions to grid infrastructure as well as increased greenhouse gas emissions and waste heat expelled into the environment. This further exacerbates the urban heat island effect, perpetuating a vicious cycle where mechanical cooling is further warming our cities – necessitating even more cooling – and disproportionately impacting those who lack adequate financial resources to procure mechanical cooling solution.

Beating the Heat: A Sustainable Cooling Handbook for Cities

37% of current heat-related deaths in over 700 locations across 43 countries is estimated to be due to climate change.

Exposure to extreme heat is increasing because of the climate crisis, with significant impacts on morbidity and mortality. Adaptation is needed urgently to protect human health and well-being.

The Pacific heat dome: Heatwave lessons from the United States of America. An online resource of Adaptation Gap Report 2023: Underfinanced. Underprepared. Inadequate investment and planning on climate adaptation leaves the world exposed

Global Cooling Pledge

The Global Cooling Pledge is the world's first collective effort to improve energy efficiency and reduce emissions from the sector while strengthening access to cooling. The Pledge aims to reduce global cooling-related emissions by 68% by 2050, improve energy efficiency of cooling technologies by 50% by 2030 and to increase access to sustainable cooling for the most vulnerable – all of which is needed to keep the 1.5°C goal in reach. The Global Cooling Pledge was launched at COP28 led by the UNEP-convened Cool Coalition and COP28 UAE Presidency, with over 70 government signatories and more than 60 supporters from international organizations, international finance institutions and industry.

Core Partners: COP28 UAE Presidency, 70 governments, 60 supporters

Global Alliance on Buildings and Construction (GABC)

Founded at COP21 and hosted by UNEP, the GlobalABC gathers over 330 members, including 42 countries, to promote zero-emission, efficient, and resilient buildings. GlobalABC is the leading global platform for all built environment stakeholders committed to a common vision: A zero-emission, efficient and resilient buildings and construction sector for all. The GABC and the Cool Coalition have set up a joint passive cooling hub to support policy, finance, and knowledge action for the development of heat resilient , passively designed buildings.

Core Partners: 330 plus members including 42 countries

Featured initiative

UNEP-Convened Cool Coalition

The Cool Coalition is the leading global platform for comprehensive action on sustainable cooling and extreme heat. It facilitates science, advocacy and joint action that supports national and subnational governments to adopt the triple strategy of passive cooling, higher energy efficiency and fast phasedown of climate-warming refrigerants.

One of the ways in which Cool Coalition supports governments to translate commitments into action is through its National Cooling Action Plan Methodology.

The Coalition's mission is implemented through twelve working groups chaired by various organizations including several UN agencies. The Cool Coalition is also the secretariat to the Global Cooling Pledge launched at COP28, working with 70+ governments to adopt the triple strategy, based on the science of the UNEP Cool Coalition Global Cooling Watch.

Core Partners: 250 members including several UN agencies and 80+ countries

"BeCool" Programme

As part of the Cool Coalition's framework, UNEP is leading the implementation of a global programme to support countries and cities to "Be Cool" in the face of extreme heat – this includes support to both cope with extreme heat and redesign and implement relevant policies. UNEP is supporting Brazil, Cambodia, Ghana, India, Laos, Nigeria, Morocco, Thailand, and Vietnam to drive comprehensive policy and finance and coordinate regional national-subnational action on passive cooling, such as nature-based solutions, urban design, smart buildings, and reflective materials. The programme engages states, cities, and the real estate sector to increase cooling access while minimizing energy consumption, GHG emissions and urban heat.

Core Partners: Country Governments, ClimateWorks Foundation, Economic and Social Commission for Asia and the Pacific (ESCAP)

Generation Restoration Cities - UN Decade on Restoration

UNEP's Generation Restoration project aims to implement a package of measures to address selected political, technical, financial challenges to promote restoration at scale, particularly in urban areas, as a contribution to the UN Decade on Ecosystem Restoration and the Global Biodiversity Framework. The project works through two components: i) encourage and advocate for public and private investment in ecosystem restoration and decent work creation through Nature-based Solutions and ii) empower city stakeholders across the globe to replicate and upscale ecosystem restoration initiatives. By restoring ecosystems and bringing nature to cities, numerous environmental benefits are unlocked, including reducing urban temperatures.

Core Partners: Food and Agriculture Organization of the United Nations (FAO)

UNEP-Convened Climate and Clean Air Coalition (CCAC)

The CCAC, through its Cooling Hub, brings together country and non-state partners to build high-level political leadership and facilitate collaboration on enhancing energy efficiency in the cooling sector, while countries simultaneously implement the phase-down of hydrofluorocarbon (HFC) refrigerants under the Kigali Amendment to the Montreal Protocol. The CCAC also supports and funds projects in developing countries for national policy development and implementation of mitigation measures aligned with the cooling priorities of the CCAC.

Core Partners: 91 state partners including CCAC member countries and regional partners; 104 non-state partners.

Climate Information and Early warning systems (CIEWS)

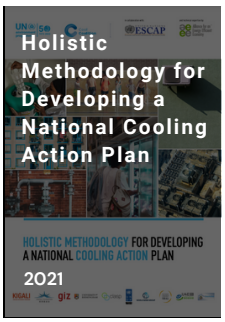
UNEP's Climate Information and Early Warning Systems (CIEWS) portfolio focuses on holistic strengthening of the four key elements of Multi-Hazard Early Warning Systems (MHEWS) which underpin evidence-based policy, planning, and early action. In implementation of CIEWS:

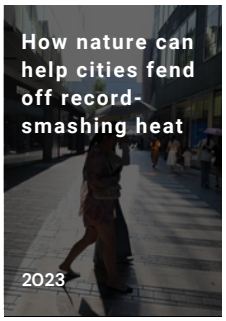
- UNEP's Climate Change Adaptation Unit work on Early Warning System helps countries:
  - increase access to high-quality forecasting, including extreme heat, and weather and climate data;
  - strengthen institutional frameworks for climate information and MHEWS;
  - enhance capacity for monitoring, analysis and forecasting of climate and its impacts, including heatwaves;
  - improve dissemination and communication of risk information and early warnings, including for heat;
  - enhance climate risk management capacity.

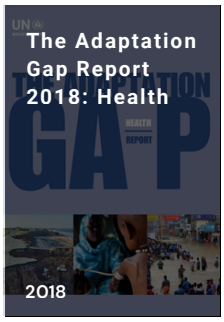
- The Systematic Observations Financing Facility (SOFF), co-founded by UNEP, is also one of its CIEWS implementing entities. SOFF projects include: enhancing weather and climate observation networks to facilitate compliance with the international Global Basic Observing Network (GBON) standard; strengthening human and institutional capacities necessary to deliver on the GBON requirements; and strengthening ICT infrastructure for weather and climate data collection, storage and sharing.

Core Partners: Early Warnings for All (EW4All); Systematic Observations Financing Facility (SOFF); Alliance for Hydromet Development; Risk-informed Early Action Partnership (REAP)

HEAT RESOURCES







Foundational documents governing institutional heat activities

For People and Planet: UNEP's Strategy for 2022-2025
UNEP's strategy guides activities on extreme heat and health initiatives, including on coping with extreme heat and support to member states on redesign of policies and landscapes. The strategy outlines how UNEP will strengthen the environmental dimension of the 2030 Agenda during the period 2022–2025, supporting countries to deliver on their environmental commitments under international agreements. UNEP's activities, including on extreme heat and health, are framed against three interconnected crises – climate change, biodiversity loss and pollution.

United Nations Environment Assembly (UNEA)
UNEA is the world's highest-level decision-making body for matters related to the environment, with a universal membership of all 193 Member States. It sets the global environmental agenda, provides overarching policy guidance, and defines policy responses to address emerging environmental challenges. It undertakes policy review, dialogue and the exchange of experiences, sets the strategic guidance on the future direction of UNEP, and fosters partnerships for achieving environmental goals and resource mobilization. UNEP's diverse activities on extreme heat fall under specific resolutions of UNEA including:
The UN Environment Assembly (UNEA) resolution 2/6 on supporting the Paris Agreement,
The UN Environment Assembly (UNEA) resolution 1/8, on ecosystem-based adaptation
The UN Environment Assembly (UNEA) resolution 5/5 on Nature-based solutions for supporting sustainable development
The UN Environment Assembly (UNEA) resolution 5/9 on Sustainable and resilient infrastructure

SUPPORTING THE SDGS, INCLUDING:

This heat action profile was developed by the Global Heat Health Information Network in partnership with the World Meteorological Organization (WMO) and the UN Office for Disaster Risk Reduction (UNDRR), as a contribution to the United Nations Secretary-General's Call to Action on Extreme Heat (2024). The content was validated by focal points from the profiled international organization / agency, and captures a snapshot of its heat work at the time of publication. The profile will be periodically updated.

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GLOBAL HEAT HEALTH INFORMATION NETWORK
WORLD METEOROLOGICAL ORGANIZATION
UNDRR UN Office for Disaster Risk Reduction