

Group on Earth Observations (GEO)

www.earthobservations.org

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At the critical interface between science and policy, GEO facilitates access to Earth observation data, tools, and services that help decision-makers build resilience against extreme heat.

The Group on Earth Observations (GEO) is a global collaboration of 116 governments and 162 organisations dedicated to understanding Earth in all its complexity. As a collaborative intergovernmental body, GEO is dedicated to co-producing user-driven Earth Intelligence solutions. By collecting and sharing vital information, ranging from satellite images of forests to oceanic temperature readings and beyond, GEO provides a comprehensive view of the Earth system, allowing monitoring and safeguarding of its health.

GEO supports the integration and application of Earth observations to help manage the risks that extreme heat poses to human health and the economy.

Lead Heat Entities:

Resilient Cities Human Settlements Working Group
Earth Observations for Health (EO4 Health)
Community of Practice Heat-Health Work Group

Technical Focal Points:

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KEY FACTS

Preparing cities for extreme heat now is cheaper than addressing the future impacts, but inadequate data blocks access to needed climate finance.

The limited availability of reliable, local-level data severely hampers cities' ability to build evidence-based cases for heat resilience funding, identify priority interventions, and develop actionable adaptation plans. Without robust data infrastructure and analytical capacity, cities struggle to demonstrate their specific vulnerabilities and secure climate finance, even as they compete with more visible climate risks for limited resources.

As hot days and extreme heat events become more intense and more frequent, cities need to be properly equipped with the tools and information needed for comprehensive heat risk management.

GEO Workshop 2024 & Global Heat Resilience Service



HEAT INITIATIVES

Global Heat Resilience Service

GEO is developing the Global Heat Resilience Service to provide every urban area in the world with actionable intelligence on the health and economic risks of exposure to extreme heat.

Using a mix of data sources, including satellites, field measurements, local surveys, and geospatial data, the service will help cities better understand and manage heat-related risks.

This free, open service will allow cities to integrate their own data, enabling informed decision-making before and during extreme heat events. With these insights, city leaders will be empowered to develop policies, plans, and investments to reduce health risks and economic impacts from extreme heat.

Core Partners:

World Meteorological Organization (WMO), National Oceanic and Atmospheric Administration (NOAA), C40 Cities Climate Leadership Group (C40 Cities), Resilient Cities Network, Local Governments for Sustainability (ICLEI)

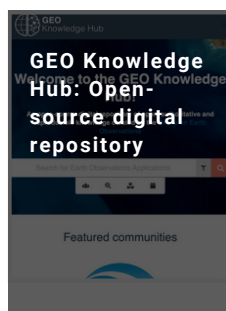
EO4Health Community of Practice: Heat-Health Work Group

GEO hosts a Health Community of Practice, which serves as a global platform to leverage expertise across sectors and geographic regions and to share Earth observation data and tools to support public health applications. The GEO Health Community of Practice developed the Heat-Health Work Group, which offers a unique opportunity to bridge dialogue and action between the Earth and health science communities and encourage collaborations.

This Work Group aims to build a global mapping tool that conveys heat risk and identifies essential data on heat, forecasts, land cover, and social vulnerability. The work group fosters knowledge sharing and networking through bimonthly meetings on heat, bringing together experts and researchers on earth observations and health.

Core Partners: Johns Hopkins University, Montana State University, National Integrate Heat Health Information System (NIHHIS), Global Heat Health Information Network (GHHIN)

HEAT RESOURCES



Foundational documents governing institutional heat activities

GEO Post-2025 Strategy: Earth Intelligence for All

Outlines GEO's strategy to provide targeted and actionable insights, based on Earth Observation data, that is co-created with users and enables them to make better informed decisions for a more sustainable world - ultimately supporting their heat focused initiatives.

GEO Urban Resilience Engagement Plan

Urban resilience is a priority for GEO, focused with the consideration to address heat island effects.

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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