United Nations Educational, Scientific and Cultural Organization (UNESCO)

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UNESCO addresses extreme heat by advancing climate monitoring, supporting forecasting, and promoting conservation through international cooperation in education, science, and culture to foster resilience and sustainable development. UNESCO is the United Nations Educational, Scientific and Cultural Organization. It contributes to peace and security by promoting international cooperation in education, sciences, culture, communication and information. UNESCO promotes knowledge sharing and the free flow of ideas to accelerate mutual understanding and a more perfect knowledge of each other's lives.

UNESCO's mission is to contribute to the building of a culture of peace, the eradication of poverty, sustainable development and intercultural dialogue, with extreme heat being tackled within each of these areas.

Lead Heat Entities:

Disaster Risk Reduction Unit

Technical Focal Points: Yasukawa Soichiro, Chief, Disaster Risk Reduction Unit

KEY FACTS

In 2022, despite the cooling influence of La Niña, 58% of the ocean surface experienced at least one marine heatwave.

Marine heatwaves—periods of unusually high ocean temperatures—now occur in all ocean basins, posing serious risks to marine ecosystems and the communities that rely on them. These events can lead to shifts in the habitats of economically important species and cause significant mortality among marine organisms.

The Global Ocean Observing System - Ocean Observing System: Report Card 2023

47% of national curriculum frameworks of 100 countries made no reference to climate change.

Nearly 95 percent of teachers believed that it is important or very important to teach about the severity of climate change and its effects but fewer than 40 per cent were confident in teaching it and only about one-third felt able to explain well the effects of climate change on their region or locality.

Getting every school climate-ready: how countries are integrating climate change issues in education (2021)









숮 Featured initiative

The Global Ocean Observing System

The Global Ocean Observing System (GOOS), led by UNESCO's Intergovernmental Oceanographic Commission (IOC), develops a global ocean monitoring system to provide essential information for sustainable development, safety, well-being, and prosperity. This system tracks marine heatwaves and their impacts, delivering critical data for analysis.

A key component of GOOS is the Global Sea Level Observing System (GLOSS), an international program that produces high-quality sea level observations to support research and operational needs. Using a network of 290 sea level stations worldwide, GLOSS has provided real-time sea level measurements since the 2004 Indian Ocean tsunami. This data underpins long-term climate change studies and informs efforts to address rising sea levels.

Core Partners: World Meteorological Organization (WMO), United Nations Environment Program (UNEP), International Science Council (ISC), Joint Centre for Oceanographic and Marine Meteorological Observing Programme Support

Planning Education for Climate Resilience

UNESCO supports ministries of education to plan for and adapt to climate change impacts, including extreme heat. This involves analyzing the risks to education and learning communities and putting in place measures to address the impacts of extreme heat on learners as part of their education planning processes. Education strategies may include adapting school calendars, updating education facilities to be climate resilient, or advocating for clean energy and waste management practices.

Core Partners: Ministries of Education

UNESCO World Heritage Convention

The World Heritage Convention is an international treaty, adopted at the General Conference of UNESCO in 1972, focused on the preservation of cultural sites and the conservation of nature. The States Parties to the Convention, by committing to protect and cherish the world's natural and cultural heritage, express a shared commitment to preserving our legacy for future generations. The threatening impacts of change, including heatwaves, on the preservation of cultural sites and nature drive advocacy and action in this space.

Core Partners: United Nations Environment Programme (UNEP)

African Flood and Drought Monitor

The African Flood and Drought Monitor is a powerful and versatile web-based tool that can monitor and predict periods of drought, flooding or other extreme events by providing realtime data for more meteorological and hydrological variables, allowing users to visualize and interact with region-specific data. The system is based on a set of ground, satellite and modeled datasets, which are combined to provide a consistent picture of hydrological conditions close to real-time, as well as forecasts out to 7-days for floods and out to 6 months for drought. The African Flood and Drought Monitor has a dedicated warning section for heat, highlighting areas under 'moderate' 'severe' or 'extreme' Heat. This is available for Zimbabwe, Mozambique, South Africa, Namibia, Botswana, Malawi and Zambia.

Core Partners: Princeton University, University of Southampton, Princeton Climate University, UNESCO Intergovernmental Hydrology Programme (IHP), International Center for Integrated Water Resources Management (ICIWaRM)









HEAT RESOURCES



Foundational documents governing institutional heat activities

Policy Document on Climate Action for World Heritage (2023)

Provides high-level guidance on enhancing the protection and conservation of heritage of Outstanding Universal Value. Annex I; B on Climate Risk Management incorporates all actions necessary to assess and manage the risks of a changing climate, considering heatwaves as a climate-related hazard.

Global Ocean Observing System: 2030 Strategy

The strategy guides GOOS, the community, and those willing to support the development of the integrated global ocean observing system required for our safety, well-being, prosperity and sustainable future.

SUPPORTING THE SDGS, INCLUDING:



Secretary-General's Call to Action on Extreme Heat



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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