



UN Secretary-General issues call to action on extreme heat

Crippling heat is everywhere. Billions of people around the world are wilting under increasingly severe heatwaves driven largely by a fossil-fuel charged, human-induced climate crisis. More than 70% of the global workforce – 2.4 billion people are now at high risk of extreme heat. The most vulnerable communities are hit hardest. In response to the rapid rise in the scale, intensity, frequency and duration of extreme heat, UN Secretary-General António Guterres called for an urgent and concerted effort to enhance international cooperation to address extreme heat in four critical areas: Caring for the vulnerable; Protecting workers; Boosting resilience of economies and societies using data and science; Limiting temperature rise to 1.5°C by phasing out fossil fuels and scaling up investment in renewable energy.

THE WORLD MUST RISE TO THE CHALLENGE OF RISING TEMPERATURES

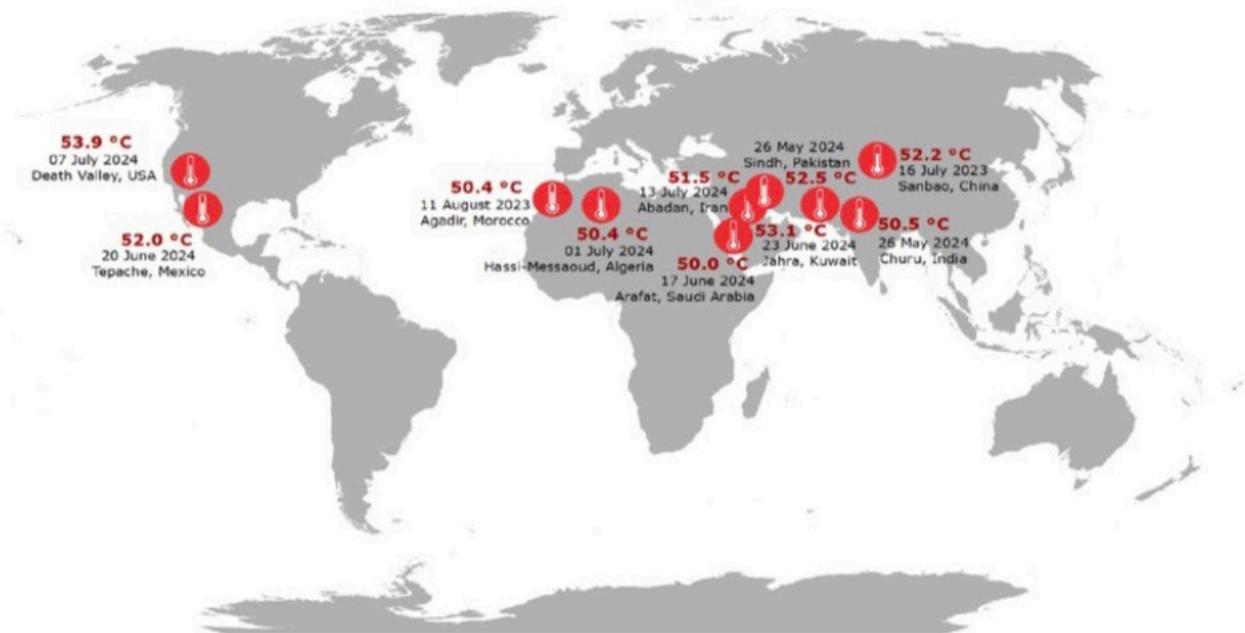
The World Meteorological Organization is one of ten specialized United Nations entities rallying behind UN Secretary-General António Guterres' Call to Action on Extreme Heat, which is posing an increasing threat to our socio-economic and environmental well-being. The new initiative was launched in a week which saw the three warmest days recorded on Earth in recent history, according to one of the datasets that the WMO uses to monitor the climate.

Earth is becoming hotter and more dangerous for everyone, everywhere. Billions of people are facing an extreme heat epidemic - wilting under increasingly deadly heatwaves, with temperatures topping 50 degrees Celsius around the world. That's 122 degrees Fahrenheit and halfway to boiling.

The World Meteorological Organization, the Intergovernmental Panel on Climate Change, and others have documented a rapid rise in the scale, intensity, frequency and duration of extreme-heat events. Extreme heat is increasingly tearing through economies, widening inequalities, undermining the Sustainable Development Goals and killing people. It is estimated to kill almost half a million people a year, that's about 30 times more than tropical cyclones.

It brings together the expertise and perspectives of ten specialized UN entities, including extensive and detailed input from experts at WMO and in the WMO-WHO Joint Office on Climate and Health. It is a first-of-its-kind joint report underscoring the diverse multi-sectoral impacts of extreme heat on human health, lives, and livelihoods. National and local governments and businesses who are the most impacted around the world also supported the launch of the Call to Action.

Extreme daily temperatures of 50°C or more July 2023 to July 2024



Note: Based on reported daily maximum near surface air temperature by NMHSs. List is not exhaustive and includes provisional data.

Source: World Meteorological Organization, 2024



“Our Earth is running an unprecedentedly high fever,” said WMO Secretary-General Celeste Saulo. “In addition to this week’s three new global daily temperature records, we have seen monthly temperature records for 13 successive months. Widespread, intense and extended heatwaves have hit communities on every continent. At least ten countries have recorded temperatures of more than 50°C in more than one location this year. Many dozens of locations have seen daytime maximum temperatures of more than 40°C and dangerously high minimum overnight temperatures.

“The WMO community is working hard with many partners to strengthen heat-health action plans and early warnings to treat the symptoms of this fever. But, in addition, we need to tackle the root cause and urgently reduce greenhouse gas levels, which remain at record observed levels,” said Celeste Saulo.

The Call to Action stresses the need to establish and bolster heat early warning systems in line with the Early Warnings for all initiative, ensuring at-risk populations receive timely alerts that include information on protective actions to undertake and sources of assistance. Strengthening capacities of National Meteorological and Hydrological Services (NMHSs) would be critical.

There is good news, it says, heat illness and deaths are preventable and many impacts can be minimized with targeted economic and social policies and concrete actions, including public awareness campaigns. It cites recent estimates produced by the WHO and WMO that the global scale-up of heat health-warning systems for 57 countries alone has the potential to save an estimated 98,314 lives per year.

The need is urgent. Modelled estimates show that between 2000 and 2019, approximately 489,000 heat-related deaths occurred each year, with 45 per cent of these in Asia and 36 per cent in Europe. Worldwide, the official diagnosis and reporting of heat-related illness, injuries and deaths are recognized to be under-reported. The lack of uniform reporting standards makes the aggregation and comparison of nationally reported impact statistics challenging, it says.

MULTI-SECTORAL HEALTH ACTION

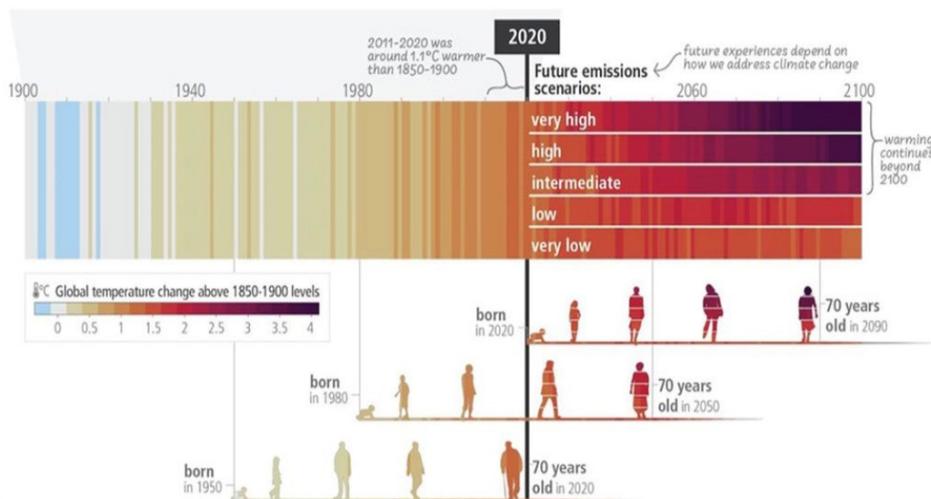
Heat directly impacts people and amplifies the risks of wildfire, droughts, and water shortages and food insecurity. Therefore, the acute, long-term, and compounding risks of extreme heat must be managed across society by multiple sectors.

The WMO and UNDRR Center of Excellence for Disaster and Climate Resilience together with the Global Heat Health Information Network have been working with more than a dozen UN agencies and the International Federation of the Red Cross and Red Crescent Societies to find common approaches to integrated planning, better resource allocation, and improved collaboration to address the systemic drivers of extreme heat risk.

WMO is committed to collaboration with partners in the Early Warnings for All Initiative and the Global Heat Health Information Network to provide a solid framework for more integrated and impactful heat action.

Heat risk management solutions are many. The WMO State of Climate Services for Health 2023 features case studies from around the world showcasing how integrated climate and health action makes a very real difference in people’s daily life. This includes early warning systems for extreme heat at city and national level, community-based heat risk awareness campaigns, and nature - based solutions for local cooling.

The extent to which current and future generations will experience a hotter and different world depends on choices now and in the near term



Source: IPCC, 2023: Summary for Policymakers. Figure SPM.1. In: Climate Change 2023: Synthesis Report. Contribution of Working Groups I, II and III to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change [Core Writing Team, H. Lee and J. Romero (eds.)]. IPCC, Geneva, Switzerland, pp. 1-34, doi: 10.59327/IPCC/AR6-9789291691647.001.

Source: United Nations Secretary-General’s Call to Action on Extreme Heat 2024



The Intergovernmental Panel on Climate Change (IPCC) indicates that Heat Action Plans and Heat Health Warning Systems are some of the most effective adaptation options for extreme heat. Sensible occupational safety and health measures that protect indoor and outdoor workers could save US\$361 billion a year, according to the International Labor Organization.

EXTREME HEAT IN 2024

According to the report, extreme heat, like other facets of the climate crisis, does not affect everyone equally. It is the most vulnerable and exposed communities in society who are hit hardest. Urban poor and displaced persons are particularly defenseless in the face of extreme heat.

New data from the International Labour Organization (ILO) warns that over 70 per cent of the global workforce – 2.4 billion people – are now at high risk of extreme heat, resulting in 22.85 million injuries and 18,970 deaths annually among workers.

This year heatwaves have hit countries across the globe this year. This led to: A spike in hospitalizations and deaths in the Sahel in Africa; Record temperatures across the United States reportedly placing 120 million people under heat advisory warnings; Scorching conditions that killed 1,300 pilgrims during Haj; Extended heatwaves in Europe; The closure of schools across Asia and Africa – impacting more than 80 million children.

Extreme heat is having devastating impacts on the global economy. One important channel is through diminished worker productivity. Heat exposure-related loss in labour capacity resulted in average potential income losses equivalent to US\$863 billion in 2022. Implementing occupational, safety and health (OSH) measures to prevent occupational injuries related to excessive heat could save over US\$361 billion globally.

While extreme heat is impacting virtually everyone, everywhere, the costs and burdens are not shared equally. Higher temperatures mean more poverty and greater inequality. According to the Food and Agriculture Organization



Source: ILO. 2024. Heat at work: Implications for safety and health. Geneva: ILO.

(FAO), in an average year, poor rural households lose 5 per cent of their total income due to heat stress relative to better-off households.

Repeated seasonal heatwaves can place significant stress on healthcare service delivery and systems. Demand for ambulatory services and healthcare can dramatically increase during extreme heat conditions. It is hard to learn in extreme heat. Many parts of Asia and North Africa experienced school closures in 2024 due to extreme heat, leaving millions of children out of school, widening learning gaps.

More cooling uses more electricity, and around 60% of the world’s electricity is currently generated by burning fossil fuels, the very energy source driving climate change in the first place. Greater usage of air conditioners is straining power systems around the world. Cooling accounts for almost 20 per cent of global electricity consumption.

Extreme heat: Impacts

489,000 heat-related deaths occurred 2000–2019 each year, more than from tropical cyclones	12% About 12 per cent of all food produced is lost due to a lack of cooling	Triple The installed capacity of cooling equipment globally will almost triple by 2050
80 million Working hours equivalent to 80 million full-time jobs could be lost due to heat stress by 2030	9.1% An annual 1°C increase in temperature leads to a 9.1 per cent increase in poverty	80 million students More than 80 million students are impacted by worldwide school closures due to heat in 2024

Extreme heat: Solutions

98,314 Scaling up heat health warning systems in 57 countries alone can save about 98,314 lives per year	\$361 billion Occupational safety and health measures can save \$361 billion a year in medical and other costs	\$1 trillion Reducing cooling energy demand can cut electricity bills for end users by \$1 trillion in 2050
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Source: United Nations Secretary-General’s Call to Action on Extreme Heat 2024



The risk of extreme heat is in part driven and exacerbated by the very practices that prevail in the development of the built environment. Extreme heat poses risks to the built environment, including the transport, energy, water and communication sectors. Global agriculture and food systems are being severely impacted by extreme heat. Extreme heatwaves can trigger a rapid onset of drought and wildfires, which can also be detrimental to agricultural production. The lack of access to sustainable cold chains results in the loss of 526 million tons of food production, or 12 per cent of the total, and contributes to a significant reduction in smallholder farmers' income.

Extreme heat is significantly impacting the global environment. Heatwaves, without concomitant increases in precipitation, can lead to water shortages and increased stress for plants, particularly in arid regions. This has the effect of reducing plant growth, the basis of energy production and the food chain, with an overall drying out of the landscape.

CALL TO ACTION ON EXTREME HEAT

The world needs a strategy to deal with heat that serves to mobilize Governments, policy makers and all stakeholders to act to: prevent and reduce heat risk; increase resilience to heat; manage extreme heat crises; and mitigate its worst impacts. The United Nations will continue to mobilize global heat, health ecosystem and policy experts and bring together the existing expertise and ongoing work of the UN and scientific and technical communities on extreme heat. The crisis we see unfolding globally requires an urgent response. Deadly heat is becoming commonplace. Now is the time to strengthen global action on extreme heat that:

Firstly, recommends concrete measures that can be taken now by Governments and communities to ease the suffering of people everywhere, while building resilient economies and protecting lives and livelihoods.

Secondly, supports Governments and communities everywhere by collecting good practices in policy and governance, risk reduction and management, and including the latest data and science on extreme heat. This is information that can help Governments, and their partners, build resilience to heat risk and save lives.

Thirdly, identifies key areas of national and international cooperation to help address extreme heat risk. The world needs a strategy to deal with heat that serves to mobilize Governments, policy makers and all stakeholders to act, prevent and reduce heat risk; to increase resilience to heat; to manage extreme heat crises; and to mitigate its worst impacts.

Besides, the report call on all countries and communities to protect the most vulnerable people from the impacts of extreme heat, reduce extreme heat risk and build their resilience; enhance social protection schemes to integrate specific measures that help address the risks of extreme heat; establish and bolster heat early warning systems in line with the Early Warnings for All initiative, ensuring at-risk populations receive timely alerts that include information on protective actions to undertake and sources of assistance; increase equitable access to and scale up low carbon cooling; strengthen health systems and operationalize heat-health action plans to prepare healthcare professionals to diagnose and treat heat-related conditions and provide quality care during acute heat emergencies; develop and implement targeted public education campaigns, including in school curriculums, that raise awareness about extreme heat risks and actionable steps that can be taken at all levels, including self-protection; develop and expand international, regional and national financing mechanisms to support early response to heatwaves, with a focus on ensuring that resources reach the local level; invest in preparedness for early, locally-led humanitarian responses to severe heatwaves; improve standardized surveillance and reporting of heat-related morbidity, mortality, and injuries.

The report call on all countries to protect all workers in all sectors through appropriate occupational safety and health measures based on a rights-based approach; call on all countries and communities to build sustainable multi-sectoral and multi-scalar partnerships that ensure development and implementation of comprehensive extreme heat action plans, strategies and solutions to build heat resilience; call on all countries to accelerate the pace of the just transition away from fossil fuels and scale up investment in renewable energy. Limiting global warming to below 1.5°C will significantly reduce the risks, adverse impacts and related human suffering from climate change, including extreme heat. By early 2025, under the Paris Agreement, every country must submit a new Nationally Determined Contribution (NDC) that is 1.5°C-aligned and economy-wide, providing absolute emissions reduction targets for 2030 and 2035, covering all greenhouse gases and all sectors. Take urgent measures to cut super pollutants or short-lived climate pollutants, emanating especially from the cooling sector. Prevent dumping of new inefficient equipment that uses obsolete refrigerants. Finance is critical to raise ambition on mitigation and enhance adaptation measures. needed, and generates momentum for reform of the international financial architecture ■

XUÂN THẮNG

(Source: *United Nations Secretary-General's Call to Action on Extreme Heat 2024*)