



Rise in Heat Waves

Why in News

According to a recent study, **more than 3,56,000 people died in 2019** as a result of extreme heat and that number is likely to grow in the future.

- **Recent [heat waves](#) across the world** have been alarming in terms of [global warming](#) and have been **attributed to climate change**.

Key Points

▪ Heat Waves:

- Heat wave is **a condition of air temperature which becomes fatal to the human body** when exposed.
- **In India**, heat waves typically occur **between March and June**, and in some rare cases even extend till July.
 - A heat wave is **a period of abnormally high temperatures**, more than the normal maximum temperature that occurs during the summer season in the North-Western and South Central parts of India.
- The **India Meteorological Department** requires that temperatures should reach at least 40°C in the plains and at least 30°C in the hilly regions, and should reflect an increase of at least 5°C-6°C above the normal temperature to be classified as a heatwave.

▪ Impact of Heat Waves:

- **Heat Strokes:** The very high temperatures or humid conditions pose an elevated risk of [heat stroke](#) or heat exhaustion.
 - Older people and people with chronic illness such as [heart disease](#), [respiratory disease](#), and [diabetes](#) are more susceptible to heatstroke, as the body's ability to regulate heat deteriorates with age.
- **Increased Healthcare Costs:** Effects from extreme heat are also associated with increased hospitalisations and emergency room visits, increased deaths from cardio-respiratory and other diseases, mental health issues, adverse pregnancy and birth outcomes, etc.
- **Lessens Workers' Productivity:** Extreme heat also lessens worker productivity, especially among the more than 1 billion workers who are exposed to high heat on a regular basis. These workers often report reduced work output due to heat stress.
- **Risk of Wildfires:** The [heat domes](#) act as fuel to [wildfires](#), which destroys a lot of land area every year in countries like the US.
- **Prevents Cloud Formation:** The condition also prevents clouds from forming, **allowing for more radiation from the sun to hit the ground**.
- **Effect on Vegetation:** The trapping of heat can also damage crops, dry out vegetation and result in [droughts](#).
- **Increased Energy Demands:** The sweltering heat wave also **leads to rise in energy demand**, especially electricity, leading to pushing up rates.

- **Power Related Issues:** Heat waves are often **high mortality disasters**.
 - Avoiding heat-related disasters depends on the resilience of the electrical grid, which can fail if electricity demand due to air conditioning use exceeds supply.
 - As a result, there is the **double risk of infrastructure failure and health impacts**.
- **Recommendations:**
 - **Cooling Measures:**
 - Effective and environmentally sustainable cooling measures can protect from the worst health impacts of heat.
 - These range from increasing green space in cities, wall coatings that reflect heat from buildings, and widespread use of electric fans and other widely available personal cooling techniques.
 - **Climate Change Mitigation:**
 - Climate change mitigation **to reduce carbon emissions** and alter the further warming of the planet can also help.
 - **Effective Prevention Measures:**
 - Identifying timely and effective prevention and response measures, particularly for low-resource settings can help in mitigating the problem.
- **Initiatives Taken:**
 - **Global:**
 - Global forums dealing with climate change issues—such as the [World Health Organization](#), [World Economic Forum](#), **First Global Forum on Heat and Health**, and **the Global Forum for Environment-OECD**—also focus on heat waves by investing in research on health risks of extreme heat, climate and weather information, advice on surviving heat waves, partnerships and capacity building, and communications and outreach.
 - **Indian:**
 - The [National Disaster Management Authority \(NDMA\)](#) has issued **guidelines** on dealing with heatwaves.
 - However, India **does not recognise heatwaves as a disaster** under its Disaster Management Act (2005).

Way Forward

In alignment with the [Paris Agreement](#), the study calls for global warming to be limited to 1.5°C to avoid substantial heat-related mortality in the future. Reducing the health impacts of extreme heat is an urgent priority and should include immediate changes to infrastructure, urban environment, and individual behaviour to prevent heat-related deaths.

[Source: IE](#)