GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 495
TO BE ANSWERED ON WEDNESDAY, 23RD JULY, 2025

HEAT WAVES

†495. SHRI SANJAY UTTAMRAO DESHMUKH:
SHRI ARVIND GANPAT SAWANT:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether the frequency of heat waves is increasing in various regions of the country;
(b) if so, the urgent steps taken by the Government to prevent the heat wave and save the people;
(c) whether there is any proposal to address the increasing frequency/intensity of heat waves in the country and if so, the details thereof and if not, the reasons therefor;
(d) whether the Government has assessed the severity of disaster caused by heat waves, if so, the details thereof;
(e) whether there is any proposal to notify the disaster caused by heat waves as a disaster entitled to adequate funds for emergency response/relief/rehabilitation efforts from both the National Disaster Response Fund and the State Disaster Response Fund;
(f) if so, the details thereof;
(g) whether the Union Government proposes to equip disaster management authorities to address challenges caused by heat waves; and
(h) if so, the details thereof?

ANSWER
THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR
MINISTRY OF SCIENCE AND TECHNOLOGY
AND EARTH SCIENCES
(DR. JITENDRA SINGH)

(a) Yes. Recent studies have shown that frequency of the Heat Waves is increasing over various parts of the country.

(b) The India Meteorological Department (IMD), in collaboration with various research centers across the country, has undertaken several initiatives to enhance monitoring and early warning systems. These efforts have significantly contributed to minimizing the loss of life and property during extreme weather events, including heatwaves. These include:

- Issuing seasonal and monthly outlooks, followed by extended-range forecasts of temperature and heatwave conditions. The early warning and forecast information are also disseminated through various social media platforms for timely public outreach.

- District-wise heatwave vulnerability Atlas over India to help State Government authorities and disaster management agencies in planning.

- The hot weather hazard analysis map of India incorporates daily data on temperature, wind patterns, and humidity levels.

- A series of National and State-level heatwave preparedness meetings are conducted much before the start of the summer season, with regular review meetings from time to time during the season.

(c) Due to climate change, the annual temperature is increasing globally, and the impact of this is reflected in the rising frequency and intensity of heat waves in various parts of the globe, including India. Furthermore, the Ministry has recently published the Climate Change Assessment Report over the Indian region, which is available at https://link.springer.com/book/10.1007/978-981-15-4327-2. The increasing frequency and intensity of heat waves are clear indicators of the broader issue of global climate change. Addressing the root causes of global climate change is essential to mitigating the impact of heat waves. This involves international cooperation to reduce carbon emissions, transition to renewable energy sources, and implement sustainable practices across all sectors. Towards this, India has taken a proactive role in fostering international collaborations through initiatives such as the International Solar Alliance and the Coalition for Disaster-Resilient Infrastructure. India is committed to pursuing low-carbon strategies for development and is actively pursuing them, as per national circumstances.

(d) Yes. Abnormal temperature events can impose severe physiological stress on the human body as the body operates best within a fairly normal temperature range. There is a marked relationship between human mortality and thermal stress. During unusually hot episodes, deaths from different causes can rise significantly, with the elderly at greater risk than others.

Four common heat health impacts resulting from excessive exposure to heat waves include dehydration, cramps, exhaustion, and heatstroke. It is also learnt that there is a sharp rise in the number of cases of acute gastroenteritis and food poisoning due to the spoilage of food and the reduction of its shelf life due to high temperatures. There is also a rise in the number of cases of anxiety, palpitations, nervousness, and behavioural change linked to extreme temperature rise. The occupational profile of most of the victims was ascertained as agricultural labourers, coastal community dwellers, and people living below the poverty line category, with mostly outdoor occupations.

(e)-(f) Currently, the notified list of disasters eligible for National Disaster Response Fund (NDRF)/State Disaster Response Fund (SDRF) assistance includes 12 disasters, namely cyclones, droughts, earthquakes, fires, floods, tsunamis, hailstorms, landslides, avalanches, cloud burst, pest attack, and frost & cold wave. The issue of the inclusion of more calamities in the existing notified list of calamities was considered by the 15th Finance Commission. The Commission, in para 8.143 of its report, had observed that the list of notified disasters eligible for funding from the State Disaster Response Mitigation Fund (SDRMF) and National Disaster Response Mitigation Fund (NDRMF) covers the needs of the State to a large extent and thus did not find much merit in the request to expand its scope.

However, a State Government can use up to 10% of the annual fund allocation of the SDRF, subject to the fulfillment of certain prescribed conditions and norms, to provide immediate relief to the victims of natural disasters that they consider to be 'disasters' within the local context in the State and which are not included in the centrally notified list of natural disasters.

(g)-(h) The weather information is provided to all the stakeholders, including the ministries of the Union Government, State Governments, and local Government bodies. Further, Heat Action Plans (HAPs) have been implemented in 23 states that are particularly vulnerable to heatwave conditions. These plans are a joint initiative by the National Disaster Management Authority (NDMA) in collaboration with the respective State Governments. The Common Alert Protocol (CAP), developed by the NDMA, is also being implemented to disseminate warnings and timely alerts by the IMD.

IMD has also brought out a web-based online "Climate Hazard & Vulnerability Atlas of India" prepared for the thirteen most hazardous meteorological events, which cause extensive damage and economic, human, and animal losses. The same can be accessed at https://imdpune.gov.in/hazardatlas/abouthazard.html. This atlas will help State Government authorities and disaster management agencies identify the hotspots and plan and take appropriate action to tackle extreme weather events. This product is helpful in building Climate Change resilient infrastructure. Further, the India Meteorological Department is making efforts to provide weather information to the public through various platforms:

- Mass Media: Radio/TV, Newspaper network (AM, FM, Community Radio, Private TV), Prasar Bharati, and private broadcasters.
- Weekly & Daily Weather Video.
- Internet (email), FTP.
- Public Website (mausam.imd.gov.in).
- IMD Apps: Mausam/Meghdoot/DAMINI/RAIN ALARM.
- Social Media: Facebook, X, Instagram, BLOG.

i. X: https://twitter.com/Indiametdept
ii. Facebook: https://www.facebook.com/India.Meteorological.Department/
iii. Blog: https://imdweather1875.wordpress.com/
iv. Instagram: https://www.instagram.com/mausam_nwfc
v. YouTube: https://www.youtube.com/channel/UC_qxTReoq07UVARm87CuyQw

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