

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 4375
TO BE ANSWERED ON WEDNESDAY, 20TH AUGUST, 2025**

IMPACT OF HEAT STRESS

4375. SMT. D K ARUNA:
SHRI EATALA RAJENDER:

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether heat-related data indicate that the impact of heat stress is worst on the poor, the marginalised, migrants, subsistence workers, women and the elderly and women are additionally impacted due to social norms such as working in the kitchen, the need to wear clothing due to cultural requirements and if so, the details thereof;
- (b) whether any research have been done in this regard and if so, the details thereof along with its reports and present status thereof; and
- (c) whether in the middle of the 19th century, researchers and scientists made observations that urban areas have a higher temperature than rural areas arriving at the inference that much of the rise in temperature is human-made and yet it took another 150 years for the first Heat and Health Action Plans (HHAP) to be prepared in the European countries and the first such efforts were from the non-tropical regions and in the last decade more than 23 Indian States and around 140 cities across India have State and city-level HHAPs and if so, the details thereof and the reasons therefor?

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

- (a)-(b) In India, there are no heat-related data or research studies to indicate the extent of impact of heat stress on the categories of people mentioned here. However, some studies conducted in other parts of the world have shown that the poor, the marginalised, migrants, subsistence workers, women, and the elderly are more prone to the impact of heat stress.

The India Meteorological Department (IMD) has published the Climate Hazard & Vulnerability Atlas of India, prepared for heatwaves across the country, and this is based on casualties associated with the severe heatwaves. It is mainly for the users of the disaster management sectors to identify the vulnerable districts affected by the heatwave for taking preventive and adaptive measures. This vulnerability maps, vulnerability assessment are at the district level.
https://imdpune.gov.in/hazardatlas/about_hazard.html.

- (c) Yes. It was known to researchers during older days that urban areas have a higher temperature than rural areas. Heat Action Plan (HAP) became operational on an experimental basis in Ahmedabad during the summer of 2013, and till today, it has been operational in 23 States by the National Disaster Management Authority (NDMA) in coordination with various State and Central Agencies, including IMD, prone to high temperatures leading to heatwave conditions, and developing heat action plans. HAPs are designed by the local level agencies, considering the administrative and management requirements at the ground level. IMD plays a crucial role by providing meteorological information and warning services. Subsequently, the actions are taken by different stakeholders at the local government bodies and associated NGOs. IMD provides all support as and when required in the level development of HAPs for meteorological information, monitoring day-to-day conditions, forecasts at seasonal to monthly scales, early warning for timely preparedness and implementation of mitigation measures well in advance.
