

GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 466
TO BE ANSWERED ON WEDNESDAY, 6TH DECEMBER, 2023

HEAT ACTION PLANS (HAPs)

466. SHRI N. REDDEPPA:

Will the Minister of **EARTH SCIENCES** be pleased to state:

- (a) whether it is true that most of the Heat Action Plans (HAPs) do not explicitly carry out vulnerability assessments thereby having no proper data on identification of vulnerable populations;
- (b) if so, whether the Ministry has any plans to incorporate such assessments in HAPs;
- (c) if so, the details regarding its parameters;
- (d) whether there is any mechanism in place to check the implementation of the actions prescribed in the HAPs, if so, the details thereof; and
- (e) whether the Government has any plans on providing Central financial allocation for implementation of the HAPs across States currently as many of the plans do not discuss funding sources and if so, the details thereof?

ANSWER

THE MINISTER OF EARTH SCIENCES
(SHRI KIREN RIJJU)

- (a)-(c) As a part of providing impact-based early warning services for various meteorological disaster events, India Meteorological Department (IMD) has prepared a Climate Hazards and Vulnerability Atlas of India for the thirteen most hazardous meteorological events including Heat Waves that cause loss of life, injury or other health impacts, property damage, loss of livelihoods and services. The web Atlas is depicted using Geographic Information System (GIS) tools and is made available in IMD, Pune website (<https://www.imdpune.gov.in/hazardatlas/index.html>). The Atlas provides districts maps on hazard events and vulnerability for all the calendar months and at annual scale. The hazard maps are prepared based on the climatological data, census data on population and housing density and using different statistical and mathematical methods. Climate vulnerability maps are prepared based on the disaster data from the annual publication of IMD “Annual Disastrous Weather Reports” for the climate hazardous events that cause casualties in terms of death and other losses.

The occupational profile of most of the victims was ascertained as agricultural labourers, coastal community dwellers, and people living below poverty level (BPL) category with mostly outdoor occupations. Percentage of districts and population affected by disastrous weather events in different categories of vulnerability scales based on the Normalized vulnerability index for eleven out of these thirteen climate hazards are prepared. The vulnerability atlas for heat waves indicates 13% of the districts and 15% of the population are moderate to very highly vulnerable and 4% of the districts and 7% of the population are highly vulnerable. The states of Rajasthan (15 districts) and Andhra Pradesh (13 districts) are the most vulnerable states for heat waves.

IMD has taken up various steps to improve monitoring and timely early warning which helped minimizing loss of life and property. IMD in collaboration with National Disaster Management Authority (NDMA) and local health departments have started Heat Action Plans (HAPs) in many parts of the country to forewarn about the heat waves and also advising action to be taken during such occasions. At present the HAPs have been implemented in 23 States that are prone to high temperatures leading to heat-wave conditions. The heat wave bulletin is issued daily at 1600 hrs IST providing heat wave forecast and warnings with 5-day forecasts. Impact of heat wave expected over a region is being mentioned in colour codes (Green, Yellow, Orange and Red) and also the specific impact is described in the text as per the NDMA guidelines. Bulletins are issued by Meteorological Centres/Regional Meteorological Centres at district levels.

IMD has introduced various new platforms and strategies for dissemination of its forecast and warning services in addition to existing print and electronic media and email services. IMD is now conveying heat wave information with the help of daily and weekly video messages for easy understanding of stake holders. Lot of emphasis is placed on social media to disseminate the warning messages such as YouTube, Facebook, WhatsApp, X (former twitter), Instagram etc. Dedicated State website has been operationalized to give district wise and localized information on heat wave warning services. Sector specific bulletins with respect to heat wave are also provided such as for health sector to prepare for the potential transmission of vector borne diseases and for agriculture sector to support interventions to avoid any loss of productivity.

(d)-(e) No Sir. The implementation of the heat action plan and its effective monitoring is the responsibility of the respective State Governments.
