

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION NO. 46
TO BE ANSWERED ON FRIDAY, JUNE 21, 2019**

HEAT WAVE

**46. SHRI RODMAL NAGAR:
SHRI SUMEDHANAND SARSWATI:
SHRI RAVINDRA SHYAM NARAYAN SHUKLA ALIAS RAVI KISHAN:
SHRI SUDHAKAR TUKARAM SHRANGARE:
SHRI SUNIL KUMAR SINGH:**

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government is aware that temperatures recorded in several parts of the country have shot up beyond 50 degree celcius;**
- (b) if so, the details thereof along with the average temperatures recorded in the country during the last three years;**
- (c) whether the Government proposes to take long term measures for protection against heat wave and hot weather conditions, if so, the details thereof;**
- (d) the details of special assistance, if any, given to the States recording high temperature, especially Rajasthan, Uttar Pradesh, Maharashtra and Madhya Pradesh ?**

ANSWER

**MINISTER FOR MINISTRY OF SCIENCE AND TECHNOLOGY AND
MINISTRY OF EARTH SCIENCES
(DR. HARSH VARDHAN)**

- (a) Yes Sir, Government is aware that several parts of the country have observed maximum temperatures more than 50°C during summer season of 2019. The noticeable rise in the temperatures over India in line with the rising Global temperatures is also noted by the Government.**
- (b) Details of average annual temperature and anomalies over the country as a whole during the last three years (2016 to 2018) are given in the table below;**

Year	Annual Temperature (°C)	Annual Temperature anomaly (°C) (Based on climatology 1981-2010)
2016	26.20	+0.70
2017	26.04	+0.54
2018	25.90	+0.39

Average temperature over India during 2018 was significantly above normal. During the year, annual mean surface air temperature, averaged over the country, was +0.39°C above (1981-2010 period) average. The year 2018 was the sixth warmest year on record since nation-wide records commenced in 1901; however, this was substantially lower than the highest warming observed over India during 2016 (+0.7068°C).

(c) & (d) As an adaptive measure, IMD in collaboration with state health departments have started heat action plan in many parts of the country to forewarn the heat waves and advising action to be taken during such occasions. Heat action plan became operational since 2013.

The Heat Action Plan is a comprehensive early warning system and preparedness plan for extreme heat events. The Plan presents immediate as well as longer-term actions to increase preparedness, information-sharing, and response coordination to reduce the health impacts of extreme heat on vulnerable populations.

The main aims of the Heat Action Plan are;

- Establish Early Warning System and Inter-Agency Coordination to alert residents on predicted high and extreme temperatures. Who will do what, when, and how is made clear to individuals and units of key departments, especially for health.**
- Capacity building / training programme for health care professionals at local level to recognize and respond to heat-related illnesses, particularly during extreme heat events. These training programmes should focus on medical officers, paramedical staff and community health staff so that they can effectively prevent and manage heat-related medical issues to reduce mortality and morbidity.**

National Disaster Management Authority (NDMA) and India Meteorological Department are working with 23 states that recorded high temperatures leading to heat-wave conditions to develop heat action plans. Expanding heat resilience across India shows that extreme temperatures are becoming more frequent in India, including geographies with mild temperatures, like Himachal Pradesh in India. Till May 2019, the following States are under Heat Action Plan;

- **Andhra Pradesh**
- **Arunachal Pradesh**
- **Bihar**
- **Chhattisgarh**
- **Delhi**
- **Gujarat**
- **Goa**
- **Haryana**
- **Himachal Pradesh**
- **Jharkhand**
- **Jammu and Kashmir**
- **Karnataka**
- **Kerala**
- **Maharashtra**
- **Madhya Pradesh**
- **Odisha**
- **Punjab**
- **Rajasthan**
- **Tamil Nadu**
- **Telangana**
- **Uttarakhand**
- **Uttar Pradesh**
- **West Bengal**

Appreciable rise in maximum temperatures as well as heatwaves are found to be more in the months of April, May & June. IMD started issuing Seasonal Outlook for temperatures for the April, May & June in the last week of March for planning purpose, since 2016.
