

**GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
LOK SABHA
UNSTARRED QUESTION No. 3667
TO BE ANSWERED ON WEDNESDAY, JANUARY 02, 2019**

RISING GLOBAL TEMPERATURE

3667. SHRI DEVUSINH CHAUHAN :

Will the Minister of EARTH SCIENCES be pleased to state:

- (a) whether the Government has taken note of global rise in temperature especially in Indian continent in the last five years and if so, the details thereof;**
- (b) whether a large number of deaths due to intensive heat waves were reported in various parts of the country and if so, the details thereof, State-wise;**
- (c) whether the Government has conducted or proposes to conduct a detailed scientific study on the 'heat wave' phenomenon in various parts of the country and if so, the details thereof including Kerala;**
- (d) whether the Government has also assessed the impact of intensive heat waves on human beings and flora and fauna of the country and if so, the details thereof; and**
- (e) the remedial measures taken/proposed to be taken by the Government to address the issue?**

ANSWER

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

- (a) Yes Madam, Government has taken note of rise in global temperatures. With this global warming, surface air temperatures over India also showed appreciable rise.**
- (b) Yes, deaths due to Heat wave during 2010-2018 years are given in table below.**

Year	Deaths due to Heat wave
2010	269
2011	12
2012	729
2013	1433
2014	548
2015	2081
2016	700
2017	375
2018	20

State wise statistics for the year 2017 and 2018 are given in Annexure-I. However, the deaths due to heat waves are not reported from Kerala. It is further mentioned that due to improved weather forecasts and heat action plans by different states, number of people dying from heat wave is reduced substantially during the recent years.

- (c) A latest study shows that heat waves have increased in many parts of the country. In India, the heat wave (HW) conditions are generally experienced during the period from March to July. It has been observed that during the hot weather season (April-May-June), stations from the states of Punjab, Himachal Pradesh, Uttarakhand, Delhi, Haryana, Rajasthan, Uttar Pradesh, Gujarat, Madhya Pradesh, Chhattisgarh, Bihar, Jharkhand, West Bengal, Orissa and Telangana and met subdivisions of Marathwada, Vidarbha, Madhya Maharashtra and coastal Andhra Pradesh experience heat waves and severe heat waves.**

In the State of Kerala, during the last five years heat wave condition was declared only during April-May 2016 for five days in Palakkad, Kozhikode and Kannur districts.

- (d) 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.**
- (e) 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 these occasions. The Heat Action Plan is a comprehensive early warning system and preparedness plan for extreme heat events. The Plan presents immediate and 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 Building Public Awareness and Community Outreach, Utilizing an Early Warning System and Inter-Agency Coordination, Capacity Building among Health Care Professionals and Reducing Heat Exposure and Promoting Adaptive Measures.**

Annexure-I

State wise statistics for the year 2017 and 2018 for Deaths due to Heat wave according to reports received

Deaths due to Heat wave during the year 2017	
State	No. of Deaths
Andhra Pradesh	236
Jharkhand	4
Maharashtra	16
Odisha	17
Telangana	100
West Bengal	2
Total	375

Deaths due to Heat wave during the year 2018	
State	No. of Deaths
Maharashtra	9
U.P.	9
Jharkhand	2
Total	20