GOVERNMENT OF INDIA
MINISTRY OF EARTH SCIENCES
RAJYA SABHA
UNSTARRED QUESTION NO. 1957
ANSWERED ON 08/08/2024

IMPACT OF FREQUENT HEATWAVES

1957. # SHRI RAJENDRA GEHLOT:

Will the Minister of EARTH SCIENCES be pleased to state:

(a) whether India tops the list of countries experiencing high temperatures, particularly heatwaves, consecutively for five days or more during the last three years, if so, the details thereof and the reasons therefor;
(b) whether Government has made any assessment of the likely impact of frequent heatwaves, if so, the details thereof; and
(c) whether Government is taking any measures to reduce the long term rise in temperature, particularly heatwaves, in the country, if so, the details thereof and if not, the reasons therefor?

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

(a) No. However, the number of heatwave days observed over Indian region during the last three years is given in Annexure-1.

(b) The India Meteorological Department (IMD), in coordination with various research centers across the country, has been taken multiple steps to improve monitoring and early warning systems, which helped minimize loss of life and property during extreme weather events, including heat waves. These include:

- Issuing seasonal and monthly outlooks, followed by extended-range temperature and heat wave forecasts. The early warning and forecast information are also disseminated through various social media 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 over India that includes daily temperature, winds, and humidity condition

- Heat Action Plans (HAPs) in 23 States that are prone to heatwave conditions jointly implemented by the National Disaster Management Authority (NDMA) in collaboration with the State Governments

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, annual temperature is increasing globally, and the impact of the same is reflected in the rising frequency and intensity of heat waves in various parts of the globe, including India. The trend in heatwave conditions across the country has been analysed by the IMD based on datasets from 1961 to 2020. In general, there is an increasing trend in the frequency of heatwaves in the heat core zone covering northern plains and central India. The rising 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. To this, India has taken a proactively fostered 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.

In keeping with its sustainable development goals (SDGs) and commitments, the Government has been promoting sustainability across all fronts of development and urbanization.

Annexure-1

Number of heatwaves days observed over Indian region during the last three years:

	2022	**2023**	**2024**
ASSAM & MEGHALAYA	0	0	1
N M M T	0	0	0
SHWB & SIKKIM	1	15	11
GANGETIC WEST BENGAL	8	27	31
ODISHA	11	24	37
JHARKHAND	27	16	23
BIHAR	13	29	30
EAST U.P.	33	11	33
WEST U.P.	28	5	32
UTTARAKHAND	5	0	10
HAR. CHD & DELHI	37	5	30
PUNJAB	22	3	27
HIMACHAL PRADESH	38	0	18
JAMMU & KASHMIR & LADAKH	19	0	11
WEST RAJASTHAN	58	3	29
EAST RAJASTHAN	28	0	23
WEST MADHYA PRADESH	42	4	24
EAST MADHYA PRADESH	34	13	26
GUJARAT REGION	13	1	14
SAURASHTRA & KUTCH	25	4	16
KONKAN & GOA	2	6	4
MADHYA MAHARASHTRA	2	1	8
MARATHWADA	0	0	3
VIDARBHA	18	11	11
CHHATTISGARH	3	12	13
COASTAL A. P.& YANAM	0	22	11
TELANGANA	0	14	12
RAYALASEEMA	0	1	16
TAMIL, PUDU. & KARAIKAL	0	1	13
COASTAL KARNATAKA	0	2	3
N. I. KARNATAKA	0	0	18
S. I. KARNATAKA	0	0	10
KERALA & MAHE	0	0	6
All total heat wave days	**467**	**230**	**554**

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