

HEAT AND STATE : ON A HEATWAVE BEING ONLY ONE HALF OF THE ISSUE

The Hindu

Paper - III (Disaster Management)

In the brutal heatwave beating down on Uttar Pradesh and Bihar, one district in U.P., Ballia, reported the most deaths. The medical superintendent at the local government hospital was reportedly transferred after ascribing the deaths to the heat, followed by a visit by a State-appointed team to assess the local conditions. A member later told journalists that the team had expressed its doubts about the heat being a factor since the toll due to the same heatwave was lower in districts nearby. The member's statement is a timely reminder that a heatwave is only

Heat wave Scenario	40°C	30°C	
Maximum Temperature	Plains	Hills	
Heat wave conditions prevail when...	Severe heat wave conditions prevail when...		
Normal maximum temperature	Deviation from normal	Normal maximum temperature	Deviation from normal
Above	4-5°C or more	Above	6°C or more
At or below	5-6°C or more	At or below	7°C or more
40°C	40°C	40°C	40°C

half heat, the other being bad public infrastructure and social security. Ballia's toll could be high because of, as the team suspects, contaminated water, or because the local people could not cool themselves. Heat's deadliness depends on an individual's general well-being, acclimatisation, physical exertion, comorbidities, location, relative humidity, and extent of heat exposure. But for all the complexity the interplay of these factors augurs, the fight against this mode of the climate crisis, which India is expected to suffer more often, can benefit considerably from some literacy and access to resources. Literacy needs to be rooted in a simple fact: heat is deadly when our bodies are unable to shed it as quickly as it accumulates. This can happen due to poor living conditions, adherence to caste- and gender-based strictures, or even in overcrowded hospitals. Amenities that can help include access to drinking water, indoor ventilation, health care, regular work breaks, and protections against wage loss. If a person dies in a heatwave, it is only fair to ask whether he/she was able to access these amenities.

If U.P. and Bihar are to forge a better way forward vis-à-vis their heat response, they need to register all heat-related deaths, assign the cause, ensure the medical certificates of the cause of death (MCCDs) follow the proper codes of the most recent revision of the International Statistical Classification of Diseases and Related Health Problems, and issue them. Next, the Office of the Registrar General should compile and release MCCD data every year to facilitate independent research and policy input and to prevent time-wasting disputes over official versus actual figures. However, the office has not released the corresponding reports for 2021 and 2022. In the 2020 report, which was uploaded only last year, Bihar assigned causes to just 3.4% of registered deaths — the worst among States. Not everyone who dies during a heatwave has died due to the heat, but only if good living conditions have been the norm. If they have not, the state is as much to blame as the heat.

Heat Wave

A Heat Wave is a period of abnormally high temperatures, more than the normal maximum temperature that occurs during the summer season in the North-Western parts of India. Heat Waves typically occur between March and June, and in some rare cases even extend till July. The extreme temperatures and resultant atmospheric conditions adversely affect people living in these regions as they cause physiological stress, sometimes resulting in death.

The Indian Meteorological Department (IMD) has given the following criteria for Heat Waves :

Heat Wave need not be considered till maximum temperature of a station reaches atleast 40°C for Plains and atleast 30°C for Hilly regions

When normal maximum temperature of a station is less than or equal to 40°C Heat Wave Departure from normal is 5°C to 6°C Severe Heat Wave Departure from normal is 7°C or more

When normal maximum temperature of a station is more than 40°C Heat Wave Departure from normal is 4°C to 5°C Severe Heat Wave Departure from normal is 6°C or more

The health impacts of Heat Waves typically involve dehydration, heat cramps, heat exhaustion and/or heat stroke. The signs and symptoms are as follows:

Heat Cramps: Edema (swelling) and Syncope (Fainting) generally accompanied by fever below 39°C i.e. 102°F.

Heat Exhaustion: Fatigue, weakness, dizziness, headache, nausea, vomiting, muscle cramps and sweating.

Heat Stroke: Body temperatures of 40°C i.e. 104°F or more along with delirium, seizures or coma. This is a potential fatal condition

Expected Question

Que. With reference to Heatwave, consider the following statements:

1. Heatwave is considered if the maximum temperature of a station reaches at least 40 °C or more for the Plains
2. Heatwave is considered if the maximum temperature of a station reaches at least 20 °C or more for Hilly regions.

How many of the above statements are correct?

- (a) Only 1
- (b) Only 2
- (c) Both 1 and 2
- (d) Neither 1 nor 2

Answer : a

Mains Expected Question & Format

Que.: Discuss the reasons and impact of the rising frequency and intensity of heat waves across India. Also, suggest some measures to mitigate its effect. (250 words)

Answer Format :

- ❖ Discuss the dispute between America and China at the beginning of the answer.
- ❖ In the next part of the answer, discuss the impact of these disputes between the two countries on global geopolitics.
- ❖ Finally give a brief conclusion.

Note: - The question of the main examination given for practice is designed keeping in mind the upcoming UPSC mains examination. Therefore, to get an answer to this question, you can take the help of this source as well as other sources related to this topic.