



Heat Waves

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Why in News

Recently, the **India Meteorological Department (IMD)** has forecasted the “**heatwave to severe heatwave conditions**” over northwest, central and adjoining peninsular India along with heavy rain over northeast India.

- Many parts of coastal Andhra Pradesh, Odisha and Maharashtra have also observed **increase in temperatures above 42°C**, triggering heatwave conditions.
- The heat wave has been observed due to **dry northwesterly winds** prevailing over northwest and central India.

India Meteorological Department (IMD)

- The India Meteorological Department (IMD) was established in **1875**.
- It is an agency of the **Ministry of Earth Sciences** of the Government of India.
- It is the principal agency responsible for meteorological observations, weather forecasting and seismology.

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 and South Central parts of India.
- Heat waves typically occur **between March and June**, and in some rare cases even extend till July.
- Higher daily peak temperatures and longer, more intense heat waves are becoming increasingly frequent globally **due to climate change**.

Criteria for Heat Waves

- The heat wave is considered when the maximum temperature of a station reaches at least **40°C for Plains** and at least **30°C for Hilly regions**.
- If the **normal maximum temperature** of a station is **less than or equal to 40°C**, then an **increase of 5°C to 6°C** from the normal temperature is considered to be **heat wave** condition.
Further, an increase of **7°C or more** from the normal temperature is considered as **severe heat wave condition**.
- If the normal maximum temperature of a station is **more than 40°C**, then an **increase of 4°C to 5°C** from the normal temperature is considered to be **heat wave condition**. Further, an **increase of 6°C or more** is considered as **severe heat wave** condition.
- Additionally, if the actual maximum temperature remains **45°C or more** irrespective of normal maximum temperature, a **heat wave is declared**.

Health Impacts of Heat Waves

- The health impacts of Heat Waves typically involve **dehydration, heat cramps, heat exhaustion and/or heat stroke**.
- It also causes heat cramps, fatigue, weakness, dizziness, headache, nausea, vomiting, muscle cramps and sweating.
- The extreme temperatures and resultant atmospheric conditions adversely affect people living in these regions as they cause physiological stress, sometimes resulting in death.

Way Forward

While climate change does have a strong link with the occurrence of extreme weather events, it **isn't the cause for extreme weather events**. Episodes of heat waves are growing more common as climate change intensifies. Therefore, the intensity and frequency of heatwaves can be reduced if the global community adopts and adheres to a lower emissions scenario in the future.

Source:TH