Heatwave in Rajasthan

Why in News?

According to the **Indian Meteorological Department (IMD),** a Heatwave alert has been issued in **West Rajasthan** & Kerala.

Key Points

- **Strong moisture flow** is coming into the nation from the **Bay of Bengal**, due to which **thunderstorm** activity along with cloud-to-ground lightning will be increasing.
- As per IMD, a region undergoes a heatwave if the maximum temperature reaches at least **40 degrees Celsius** or higher **in plains** and at least **30 degrees Celsius** or more **for Hilly regions.**
    - In essence, a **heatwave** is a situation where the **air temperature poses a severe risk to human health when exposed.**

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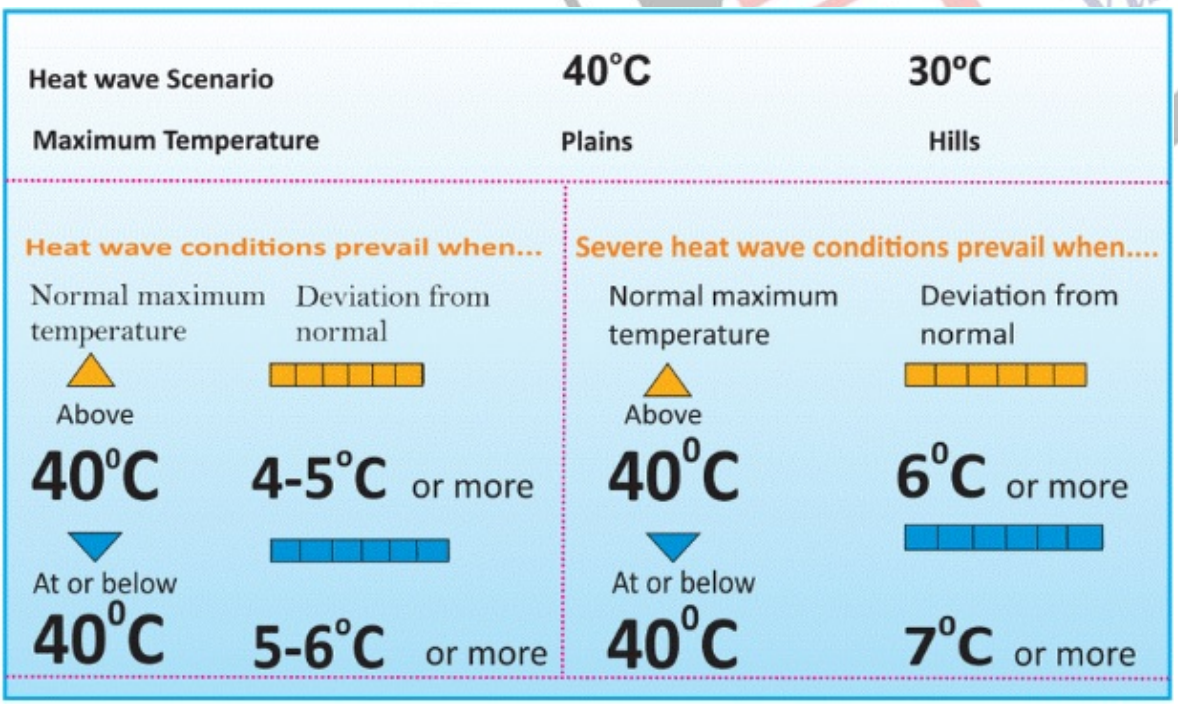

Causes of Heat Waves

- **Global Warming:**
    - One of the **primary causes of heatwaves in India is global warming,** which refers to the long-term increase in **Earth's average temperature due to human activities such as burning fossil fuels, deforestation, and industrial activities.**
    - Global warming can result in higher temperatures and changes in weather patterns, leading to heatwaves.

- **Urbanisation**:
  - Rapid urbanisation and the growth of **concrete jungles in cities** can lead to the phenomenon known as the "**urban heat island effect.**"
  - Urban areas with **high population density, buildings, and concrete surfaces absorb and retain more heat**, leading to higher temperatures, particularly during heatwaves.
- **Sparse Pre-Monsoon Season Showers:**
  - Less moisture in many areas, leaving large parts of India arid and dry.
  - The **sudden end of pre-monsoon rain showers,** an uncommon trend in India, has contributed to the heat waves.
- **El Nino Effect:**
  - El Nino often **increases temperatures in Asia**, combined with the weather pattern to create record high temperatures.
  - Trade winds coming from South America normally blow westward towards Asia during the Southwest Monsoon and **warming of the Pacific Ocean results in weakening of these winds.**
    - Therefore, moisture and heat content get limited and results in reduction and uneven distribution of rainfall across the Indian sub-continent.