European Heat Wave

What is the issue?

Last week, Europe went through a heat wave that lasted for six days. It has smashed temperature records, left many people dead and caused huge fires to break out.

Why is it happening?

- The heat wave in Europe is a **result of warm air masses** from Africa, the World Meteorological Organization (WMO) said.
- It follows extreme heat episodes in India, Pakistan, parts of the Middle East and Australia.
- More events are expected to follow during this northern hemisphere summer.

What is a heat wave?

- Heat wave is a **weather** phenomenon which is a period of **prolonged abnormally high surface temperatures** relative to those normally expected.
- **No standardized definition** of a heat wave exists.
- **WMO definition:** If five or more consecutive days during which the daily maximum temperature surpasses the average maximum temperature by 5 °C or more, it is called heat wave.
- It may be characterized by low humidity (which may exacerbate drought) or high humidity.

How heat waves are classified?

- **Classifying** a heat wave **varies from country to country**.
- That is because what is seen as extremely hot in one place may seem within normal range in another.
- In 2016 – The WMO listed several factors to be considered while analysing an extreme weather event such as a heat wave.
- This includes **defining a specific threshold for variables** such as temperature to be considered extreme as well as a human perspective of extremes.

How heat waves are classified in India?

- The India Meteorological Department (**IMD**) classifies heat waves.
- It does not consider a heat wave unless the maximum temperature crosses **40°C** and **30°C** in the plains and hills respectively.
- Where the normal maximum is **40°C or less**,
    1. Heat wave departure from normal – 5°C to 6°C
    2. Severe heat wave departure – 7°C or more.
- Where the normal maximum is **more than 40°C**,
    1. Heat wave departure from normal – 4°C to 5°C
    2. Severe heat wave departure – 6°C or more.
- In places where the maximum temperature reaches **45°C or more**, the IMD declares a heat wave irrespective of the normal.

What is the controversy?

- **Some scientists** – Blamed climate change for these trends.
- **WMO** – It is too early for such an attribution.
- However, the WMO **agreed that the heat wave is consistent with climate scenarios** which predict more frequent.
- The WMO says that the drawn out and intense heat events as greenhouse gas concentrations lead to a rise in global temperatures.

What are its health hazards?

- It poses a risk to people's health, agriculture and the environment.
- **Babies and older people** are particularly **vulnerable** as their bodies are not as well able to regulate their own temperatures.
- It can cause **exhaustion** and **heat stroke.**
- It can cause **organ failure** and **breathing problems**.
- The people living in **urban** areas are **trapped in heat islands** as steel, concrete, and asphalt structures absorb heat.
- In regions like Europe where people are not used to extremely high temperatures, many buildings don't have air-conditioning.

Source: The Indian Express