Heat Wave

What is the issue?

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The heat waves are rising constantly across India.

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What is a heat wave?

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The IMD has given the following criteria for Heat Waves:

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- 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.
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- Heat Waves typically occur **between March and June,** and in some rare cases even extend till July.
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- The extreme temperatures and resultant atmospheric conditions adversely affect people living in these regions as they cause physiological stress, **sometimes resulting in death.**
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What causes the spike?

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- All statistics on heat waves listed above refer to trends between March and June, but there’s no evidence that there are more heat waves in March as opposed to April or May.
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- The general answer would be **global warming,** but ‘how’ isn’t clear.
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- Studies have linked an increase in heat waves to more increase in **El Nino events,** or years marked by an anomalous heating in the Central Pacific Ocean that’s linked to a weakening of the Indian monsoon.
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- Particularly, years succeeding an El Nino event are said to be linked to heat waves and mortality.
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- Moreover, during eight of the 11 El Nino years (1961-2010), the all-India heat wave days were above what is normal.
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- The **Indian Ocean temperatures** are also rising faster than the other oceans, and this, too, may be reducing moisture over the Indian mainland, thus playing some part in longer stretches of hot days.
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- **Deforestation, the heat-island effect, and industrial pollution** are also being blamed for exacerbating heat waves.
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- According to the MET Department, **the presence of an anti-cyclonic circulation over south Pakistan and neighbouring regions** is the reason behind the hot winds prevailing over the entire northwest India.
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What is the geographical spread?

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- Typically, heat waves are associated with the north and northwest of India and over coastal Andhra Pradesh, north Odisha and parts of West Bengal.
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- However, there’s been a slight increase in the number of regions in recent years, with more parts of the Himalayan plains, regions north of Andhra Pradesh and Central India also registering more heat waves.
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- This year, the maximum spikes in temperatures, in May, were recorded in unconventional places such as Shimla, Kullu and tourist spots in Uttarakhand.
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How do heat waves affect us?

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- The health impacts of Heat Waves typically involve dehydration, heat cramps, heat exhaustion and/or heat stroke. The signs and symptoms are as follows:
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- **Heat Cramps:** Ederna (swelling) and Syncope (Fainting) generally accompanied by fever below 39*C i.e.102*F.
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- **Heat Exhaustion:** Fatigue, weakness, dizziness, headache, nausea, vomiting, muscle cramps and sweating.
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- **Heat Stoke:** Body temperatures of 40*C i.e. 104*F or more along with delirium, seizures or coma. This is a potential fatal condition.
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- Heat waves killed 1,422 in Andhra Pradesh and 541 in Telangana in 2015 or about 90% of all the heat wave mortality of that year.
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Source: The Hindu

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