Delhi Heatwave

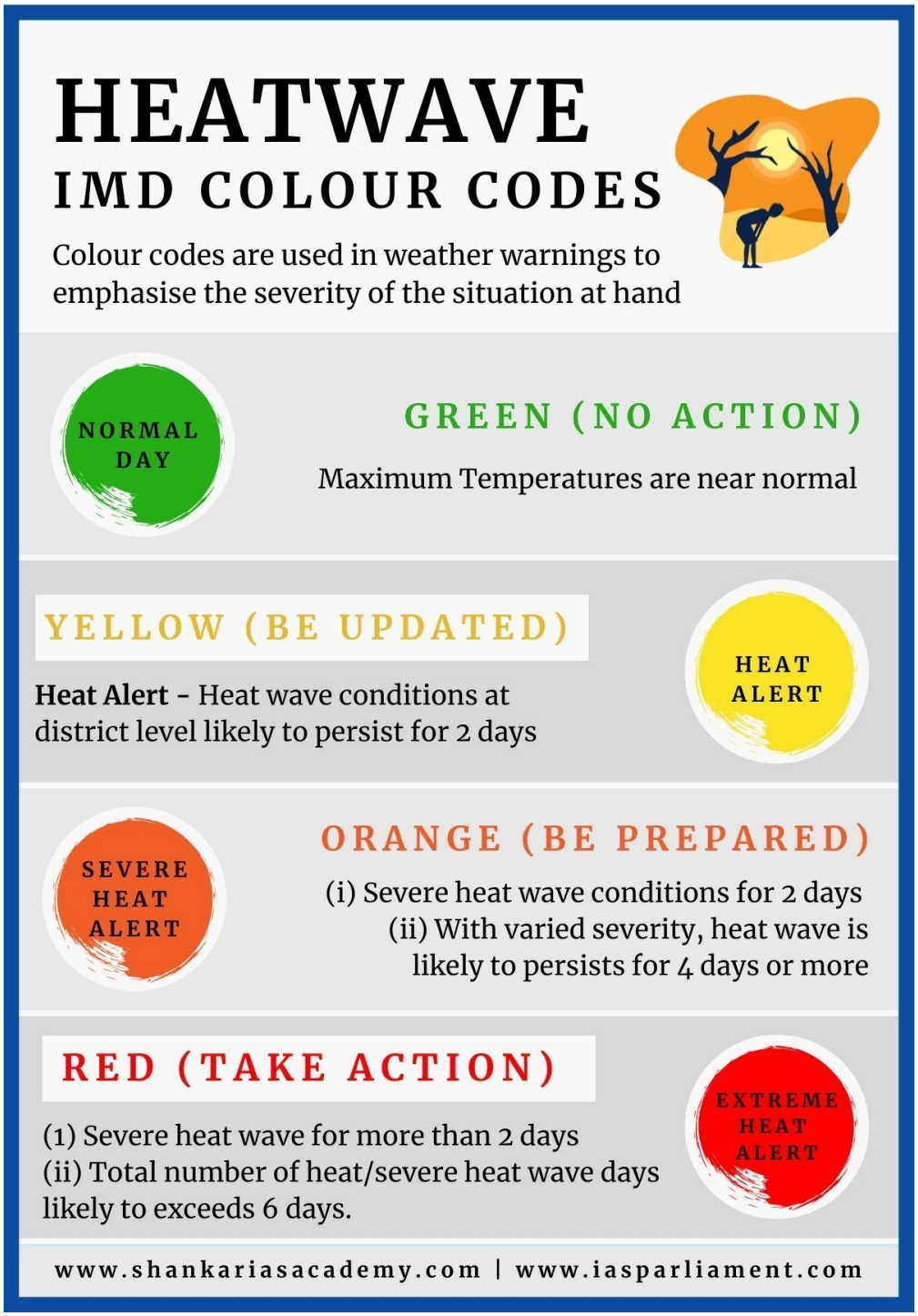
What is the issue?

Delhi-NCR is in the midst of another heatwave, with the maximum temperature at some weather observatories likely to hit 45 degree Celsius.

What is a heat wave?

- Heat wave is a condition of air temperature which becomes fatal to human body when exposed.
- Quantitatively, it is defined based on the temperature thresholds over a region in terms of actual temperature or its departure from normal.
- **Criterion for declaring heat wave**
- Heat wave is considered if maximum temperature of a station reaches at least 40 degree C or more for plains and at least 30 degree C or more for hilly regions.
- **Based on Departure from Normal**
    - Heat Wave: Departure from normal is 4.5 degree C to 6.4 degree C
    - Severe Heat Wave: Departure from normal is >6.4 degree C
- **Based on Actual Maximum Temperature**
    - Heat Wave: When actual maximum temperature ≥ 45 degree C
    - Severe Heat Wave: When actual maximum temperature ≥47 degree C
- If above criteria met at least in 2 stations in a Meteorological sub-division for at least two consecutive days and it declared on the second day.
- **For coastal areas**- When maximum temperature departure is 4.5 degree C or more from normal, heat wave may be described provided actual maximum temperature is 37 degree C or more.

Warm night is considered only when maximum temperature remains 40 degree C or more.



What are the favorable conditions for Heat wave?

> *The heat index is the combination of air temperature and relative humidity, it measure of how hot it really feels when relative humidity is factored in with the actual air temperature.*

- Transportation / Prevalence of hot dry air over a region (There should be a region of warm dry air and appropriate flow pattern for transporting hot air over the region).
- Absence of moisture in the upper atmosphere (As the presence of moisture restricts the temperature rise).
- The sky should be practically cloudless (To allow maximum insulation over the region).

- Large amplitude anti-cyclonic flow over the area.
- It is occurring mainly during March to June and in some rare cases even in July but peak month of the heat wave over India is May.

What is the current forecast?

Heatwaves have killed over 6,500 people in India since 2010.

- The city recorded a high of 43.5 degrees Celsius on April 28 and 29 which was the highest maximum temperature on an April day in Delhi in 12 years.
- The weather department has issued an "orange" alert, warning people of a severe heatwave in many parts of Delhi.
- Power outages compounded the misery of millions of people wilting in a heatwave across India, with experts blaming climate change for an early onset of roasting summer temperatures.
- Many regions also reported falling water supplies.

References

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