

## Dip in Delhi's Temperature - Causes

### Why in news?

The minimum or night time temperature in New Delhi dropped to 4.1 degrees Celsius on 15 December 2020, the lowest during the season this year.

### Why is it significant?

- A rapid decline in minimum temperature in Delhi was noted from 14.4 degrees Celsius on December 12 to 4.1 degrees on the 15th.
- The dip was five degrees below the normal temperature for this time of the year, according to the India Meteorological Department (IMD).
- IMD has also forecasted that the temperature would fall further over the next three days, both during night and day.

### What is causing the dip in Delhi's temperature?

- There has been a significant amount of snowfall over the past few days in states falling in the western Himalayan range under the influence of a **Western Disturbance**.
  - These include Jammu & Kashmir, Himachal Pradesh and Uttarakhand.
- In winters, whenever an active Western Disturbance passes through the western Himalayan region, it leads to a dip in temperatures across northwest India.
  - A Western Disturbance is as an extra-tropical storm originating in the Mediterranean.
  - It is an area of low pressure that brings sudden showers, snow and fog in northwest India.
- Snowfall in the western Himalayan range means cold, north-westerly winds blowing over Delhi from the direction of this high altitude area.
- It also leads to clearing of cloud cover with the passing of Western Disturbance, and leads to a fall in temperatures.
- The lack of cloud cover also leads to higher radiation from the Earth's surface into the atmosphere at night time, which also cools the ground.
- Moreover, under the influence of an **active La Niña climate pattern**, temperatures across the globe have been dipping.
- The maximum or day time temperature has also dipped in Delhi from 29 degrees Celsius on December 10 to 19.4 on the 14th.

## What does IMD forecast show?

- The IMD has forecast cold day and cold wave conditions in some parts of the city for the next three days.
  - A **cold day** is when the maximum temperature dips 4.5 degrees Celsius below normal temperature.
  - The 'normal' has been set based on climatological data of 30 years between 1981 and 2010.
  - **Cold wave** is when the minimum temperature dips to 10 degrees Celsius or less and the departure from normal temperature is 4.5 degrees Celsius or lower.
- Until December 19, the maximum temperature is forecast to be between 18 and 19 degrees Celsius.
- The minimum temperature is forecast to be between 4 and 5 degrees Celsius.

**Source: The Indian Express**

