

# State of the Climate Report 2020

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## In News

- IMD issues a Statement on Climate of India during 2020. The year 2020 as the eighth warmest year on record since 1901.

## State of the Climate Report 2020

### Highlights of the report

- During 2020, the annual mean land surface air temperature averaged over India was above normal.
- In that year, the annual mean land surface air temperature averaged over the country was  $+0.29\text{ }^{\circ}\text{C}$  which was above normal and based on the data of 1981-2010.
- On record, the year 2020 was the eighth warmest year since nation-wide records commenced in 1901. It is said that this is substantially lower than the highest warming observed over India during 2016 ( $+0.71\text{ }^{\circ}\text{C}$ ).
- Factors that contributed to this warming are the monsoon and post-monsoon seasons with mean temperature anomalies that are Actual temperature-Normal temperature of  $+0.43\text{ }^{\circ}\text{C}$  and  $+0.53\text{ }^{\circ}\text{C}$  respectively.
- During winter, the mean temperature was also above normal with an anomaly of  $+0.14\text{ }^{\circ}\text{C}$ , and during the pre-monsoon season temperature was below normal ( $-0.03\text{ }^{\circ}\text{C}$ ).
- During 2020 (January to October as per WMO state of the global climate), the global mean temperature anomaly was  $+1.2\text{ }^{\circ}\text{C}$ .
- The annual rainfall in 2020 over the country as a whole was 109% of its Long Period Average (LPA) based on the data of 1961-2010. The monsoon season rainfall over the

country as a whole was above normal that is 109% of its LPA.

## **Average Temperature**

- The annual average temperature during the year in the country was 0.290C above the 1981-2010 period average. This made the year 2020 the eighth warmest year on record since 1901. However, it is lower than the highest warming observed over India during 2016 (+0.710C).
- Such trends of temperature were reported despite the cooling effect of La Nina. It is a global weather pattern that prevailed in 2020 and is linked to substantially below normal temperatures in winter.
- Let us tell you that on global temperatures, La Nina has a cooling effect but due to global warming, greenhouse gas emissions, it is disturbed. Therefore, La Nina years are now warmer as compared to the years with El Nino events of the past.
- On the surface of the sea when there is a periodic fluctuation in temperature then it is known as ENSO (El Nino and the Southern Oscillation) and the air pressure of the overlying atmosphere across the equatorial Pacific Ocean. It poses an influence on weather and climate patterns including heavy rains, floods, and drought.

## **About High Impact Weather Events**

- Some high-impact weather events are also experienced by the country like extremely heavy rainfall, floods, landslides, thunderstorms, lightning, cold waves, etc.
- Due to thunderstorms, lightning & cold wave events, Bihar and Uttar Pradesh were the most adversely affected states during the year which reportedly claimed more than 350 deaths from each state.
- During pre-monsoon, monsoon and post-monsoon seasons due to heavy rainfall & flood-related incidents reportedly

claimed over 600 lives from different parts of the country.