IMD Statement on Climate of India in 2018

What is the issue?

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- A recently released IMD (India Meteorological Department) statement shows 2018 as the sixth warmest year on record.
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- In this context, a look at the temperature and rainfall trends last year and a series of extreme weather events becomes essential.
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How was 2018 overall?

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- 2018 was the sixth warmest year on record, with the average temperature over India being “significantly above normal”.
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- [The 5 warmest years on record (nationwide records began in 1901) are, in order, 2016, 2009, 2017, 2010, 2015.
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- Notably, 11 of the 15 warmest years were during the recent past fifteen years (2004-18).
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- The 20 warmest years on record have been in the past 22 years, with the top four in the past four years.
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How was the temperature trend?

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- The temperature trends of recent years are part of the larger “global warming” trend.
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- The rate of increase of temperatures over India is almost similar to the global average.
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- The winter and pre-monsoon seasons, with an anomaly of +0.590°C and +0.550°C respectively, mainly contributed to the warming in 2018.
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- Mean temperature during the monsoon and post-monsoon seasons were also above normal.
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- The mean monthly temperatures were warmer than normal during all months of the year across the country, except December.
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- Broadly, temperatures are increasing during both day and night time.
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- Heat waves are increasing in frequency as well as in magnitude.
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- Consequently, extreme rainfall and rainstorms which can cause floods are increasing.
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- Dry spell duration is also increasing.
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What is the case with extreme weather events?

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- The increase in temperatures is predicted to lead to more extreme weather events.
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- Apart from the six cyclonic storms that formed over the northern Indian Ocean, India experienced “high impact weather” events.
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- These were extremely heavy rainfall, heat and cold waves, snowfall, thunderstorms, dust storms, lightning and floods.

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- Uttar Pradesh was the most adversely affected state during 2018.
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- It reported nearly 600 deaths due to cold waves, thunderstorm, dust storm, lightning and floods.
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- Flood and heavy rain related incidents reportedly claimed over 800 lives from different parts of the country.
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- North India also witnessed high-velocity dust storms and thunderstorms in April and May and then, later in June-July.
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- Dust storm claimed over 150 lives from Uttar Pradesh and adjoining parts of Rajasthan.
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- Thunderstorm was another major event of the year over the northeastern parts of the country.
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- Notable cyclones in the year are Titli, Gaja, and Phethai which crossed the Odisha, Tamil Nadu, and Andhra Pradesh coasts respectively.
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How was the monsoon rainfall trend?

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- Rainfall over India as a whole during the southwest monsoon season was near normal with 90.6% of Long Period Average (1951-2000).
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- But the northeast monsoon season rainfall was substantially below normal with 56% of LPA and was the sixth lowest since 1901.
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- The seasonal rainfall during the northeast monsoon season over the core region of the south peninsula was also below average (66% of LPA).
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- It comprises of 5 subdivisions - Coastal Andhra Pradesh, Rayalaseema, Tamil Nadu & Puducherry, South Interior Karnataka and Kerala.
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- Out of these, Kerala received normal rainfall and the other four subdivisions received deficient rainfall.
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Source: Indian Express

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