IMD Statement on Climate of India in 2018

What is the issue?

\n\n

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

\n\n

How was 2018 overall?

\n\n

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

\n\n

How was the temperature trend?

\n\n

\n
- The temperature trends of recent years are part of the larger "global warming" trend.
  \n

- The rate of increase of temperatures over India is almost similar to the global average.

- 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.
- Mean temperature during the monsoon and post-monsoon seasons were also above normal.
- The mean monthly temperatures were warmer than normal during all months of the year across the country, except December.
- Broadly, temperatures are increasing during both day and night time.
- Heat waves are increasing in frequency as well as in magnitude.
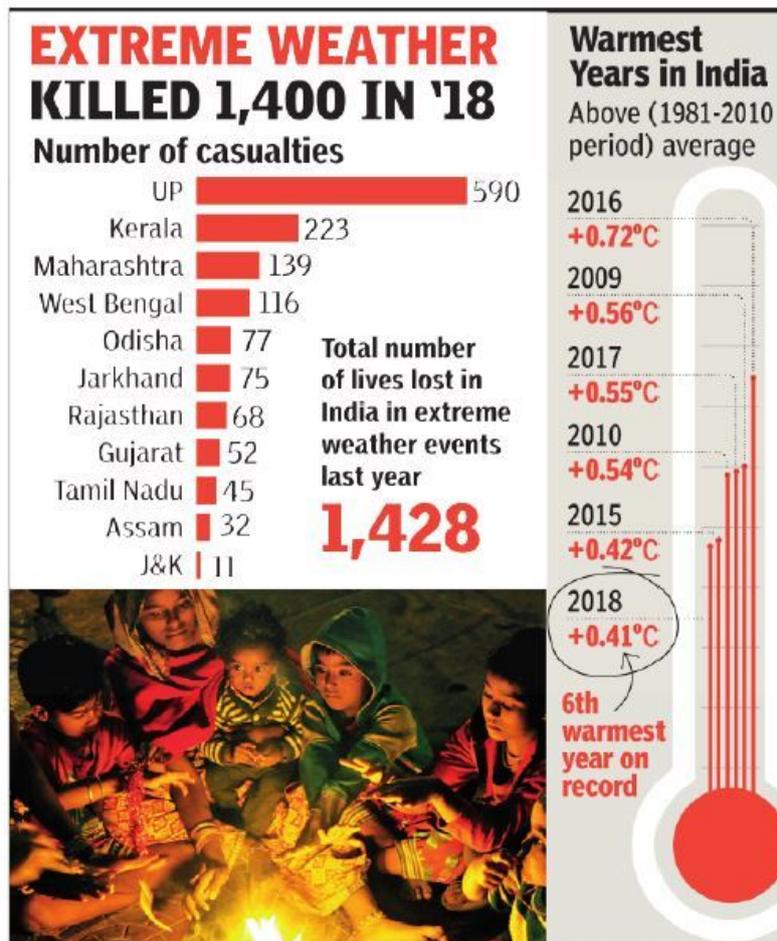- Consequently, extreme rainfall and rainstorms which can cause floods are increasing.

- Dry spell duration is also increasing.

EXTREME WEATHER KILLED 1,400 IN '18

Number of casualties

State	Casualties
UP	590
Kerala	223
Maharashtra	139
West Bengal	116
Odisha	77
Jarkhand	75
Rajasthan	68
Gujarat	52
Tamil Nadu	45
Assam	32
J&K	11

Total number of lives lost in India in extreme weather events last year

1,428

Warmest Years in India
Above (1981-2010 period) average

Year	Above average
2016	+0.72°C
2009	+0.56°C
2017	+0.55°C
2010	+0.54°C
2015	+0.42°C
2018	+0.41°C

6th warmest year on record

\n\n

What is the case with extreme weather events?

\n\n

\n
- The increase in temperatures is predicted to lead to more extreme weather events.
\n
- Apart from the six cyclonic storms that formed over the northern Indian Ocean, India experienced "high impact weather" events.
\n
- These were extremely heavy rainfall, heat and cold waves, snowfall, thunderstorms, dust storms, lightning and floods.
\n
- Uttar Pradesh was the most adversely affected state during 2018.
\n
- It reported nearly 600 deaths due to cold waves, thunderstorm, dust storm, lightning and floods.
\n
- Flood and heavy rain related incidents reportedly claimed over 800 lives from different parts of the country.

- North India also witnessed high-velocity dust storms and thunderstorms in April and May and then, later in June-July.
- Dust storm claimed over 150 lives from Uttar Pradesh and adjoining parts of Rajasthan.
- Thunderstorm was another major event of the year over the northeastern parts of the country.
- Notable cyclones in the year are Titli, Gaja, and Phethai which crossed the Odisha, Tamil Nadu, and Andhra Pradesh coasts respectively.

How was the monsoon rainfall trend?

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

Source: Indian Express