# India’s 70 Year Temperature Pattern

## What is the issue?

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- A new study has crunched decades of IMD data to observe patterns of warming and some cooling across India’s landscape.
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- The focus of the study was on the impact of climate change on agriculture.
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## What is the key finding of the study?

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- Surface temperature data across India over the past 7 decades has found “a consistent pattern of warming” over the north-western and southern parts.
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- An unmistakable rapid rise, particularly since 1980, has been observed over - winter, pre-monsoon, monsoon and post-monsoon period depictions.
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- The decade mean maximum surface temperatures over India in the pre-monsoon months in 1950s showed limited areas with values as high as 40°C.
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- But in 2010s, area with values exceeding 40°C had expanded to the majority of the Indian peninsula, with peak values in south-central India reaching 42°C.
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- **Anomaly -** The zone anchored over north-east that extends south-westward across central India saw a pattern of cooling during this period.
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- These trends are explained by “the presence of a large region of anthropogenic brown haze over India and the adjacent ocean regions.
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- This haze is especially in the winter and spring and is composed of aerosols that absorb solar radiation, and reduce insolation at the Earth's surface.
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## And what do the data suggest?

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- The researchers underline that India is more vulnerable to climate change because of the sheer size of its population and the stress on its land resources.
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- Notably, Indians account for about 17.5% of the world's population, but has merely 2.5% of the world's land and 4% of fresh water resources.
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- A mid-range projection of climate change for 2020-39 has indicated a reduction in crop yields of between 4.5% and 9%.
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- The only comforting aspect is that the primary rice and sorghum growing areas lie predominantly in the regions that aren't seeing intense heating.
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**Source: Indian Express**

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