



Pollution Worsens Drought

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Recently, a study done by **Indian Institute of Tropical Meteorology (IITM), Pune** has revealed that, during **El Nino** years, pollutants from south Asian countries can amplify the effect of the climate cycle on the monsoon, increasing the severity of droughts in India.

- The study held that pollutants loading in the **Asian Tropopause Aerosol Layer** (a high altitude layer of pollutants), reduced the amount of solar radiation in the Indian subcontinent region.
- The enhanced aerosol loading leads to **abnormal cooling over north India and Tibetan plateau**, which **weakens the low-pressure system**.
- This leads to **weakening the monsoon circulation** and thereby **aggravates the severity of the drought**.
- This phenomenon has led to a **decrease in rainfall is around 17% over central India**.
- Since aerosol pollution loading over South Asia is still expected to remain until the end of the 2040s. **Therefore, more extreme El Nino events can be expected**.
- The study also held that the future increases in industrial emissions from both east and south Asia would lead to a wider and thicker pollutant aerosol layer in the upper troposphere, potentially amplifying the severity of droughts over India.

Source: TOI