

City may see rise in heatwave days, erratic rain events: Study

'63% Change In Land-Use And Land-Cover By 2030'

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Chennai: Chennai is among eight Indian cities likely to face a two-fold increase in heatwave days in the next five years, with extended heatwave conditions expected to trigger more frequent, erratic, and incessant rainfall events, says a new study. The city, along with several coastal districts, is projected to undergo rapid microclimatic changes driven by land-use shifts, deforestation, and loss of wetlands and mangroves.

Climate change is expected to drive a 43% rise in the intensity of extreme rainfall events across India,

making it simultaneously hotter and wetter. "More than 75% of districts in 10 states, including TN, will face the double burden of heat stress and erratic, incessant rainfall by 2030. These districts are likely to experience at least one instance of a heatwave during March, April, or May."

The study was conducted by IPE-Global, involved in sustainable development, and Esri India, a company involved in GIS software and related solutions. 'Weathering the Storm: Managing Monsoons in a Warming Climate,' which assessed the link between extreme heat and erratic rainfall, was re-

leased at the International Global-South Climate Risk Symposium.

By 2030, it said, 69% of coastal districts are projected to experience prolonged summer discomfort due to heat stress-like conditions during the June-Sept season, a figure that may rise to 79% by 2040. Under a business-as-usual climate scenario, where current emission trends and policies continue unchecked, Chennai and other identified hotspots could see up to a 63% change in land-use and land-cover by 2030. India already recorded a 15-fold increase in extreme heatwave days between March-May and June-

Sept in the past three decades, with a 19-fold increase in the last decade alone.

"Meteorological phenomena like El Niño and La Niña are gaining stronger momentum, leading to abrupt surges in climate extremes such as floods, cyclones, storm surges, and extreme heat," said Abinash Mohanty, head of Climate Change and Sustainability Practice at IPE Global and lead author. "Our analysis suggests that around 72% of tier-I and tier-II cities will increasingly face heat stress and extreme rainfall, with storm surges, lightning, and hailstorms."

Among the key recommendations of the study, which used spatial and temporal data along with climate models, is setting up a Climate Risk Observatory (CRO) to assess risks in real-time and develop risk financing tools to mitigate impacts of heatwaves and extreme rainfall events.

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