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IITBBS study finds Kerala floods link to Bay of Bengal moisture

Sandeep Mishra | TNN

Bhubaneswar: An IIT Bhubaneswar study on extreme rainfall in Kerala last year has blamed unusually high amount of moisture flow from the Bay of Bengal as one of the main reasons behind the deluge.

The study titled 'Orographic effect and multi-scale interactions during an extreme rainfall event' and published in the journal Environmental Research and Communications was conducted by Sandeep Pattnaik, who heads the School of Earth, Ocean and Climate Sciences, and Himadri Baisya, a scholar, and was published in May this year.

"There are multiple reasons behind the extreme rainfall in Kerala. The rain was usually triggered due to the moisture from monsoon flow coming in contact with the Western Ghats. But we found other reasons too," Pattnaik said.

The study says from June 1 to August 19, 2018, Kerala received 2346.6 mm of rain as opposed to the normal 1649.5 mm, leading to the most devastating floods in the state in 100 years.

In the study, the researchers examined the period between August 13 and August 17, 2018, when the rainfall was the most in the state.

Pattnaik said the additional factors that caused the extreme rainfall in Kerala last year was the existence of a depression in the Bay of Bengal at that particular time. "The depression supplied continuous moisture from Bay of Bengal, which triggered extreme rains in that region at that time," he explained.

The study found that the high moisture created out of the depression over Odisha, Andhra Pradesh and Telangana at that time merged with the semi-permanent moisture presence over Western Ghats, triggering rainfall.

Besides, the wind flow over a particular location for longer time paved the way for the moisture-laden wind to flow into the region.

"In addition to the transport of moisture towards the Western Ghats due to onshore winds, we have also been examining the rainfall pattern in Kerala this year and so far our research has found the exact same reasons that had triggered last year's rains," he added.

WEATHER REPORT

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