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'La Nina increases cyclone frequency in Bay of Bengal'

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Study conducted by ocean scientists on tropical cyclone activity

Will a tropical cyclone occur in the Bay of Bengal this October-December? It might, if there is a cooling of the western Pacific Ocean due to La Nina phenomenon. And the good news is that it could be predicted a few months in advance.

A study conducted by ocean scientists on the tropical cyclone activity between 1993 and 2010 during La Nina and El Nino events has found that El Nino/La Nina-Southern Oscillation (ENSO) significantly influenced the frequency, genesis and intensity of cyclones in the Bay of Bengal.

According to M. Ravichandran, Scientist and Head, Modelling and Ocean Observation Group, Indian National Centre for Ocean Information Services (INCOIS), and one of the authors of the study, as many as 20 cyclones, out of which 10 were quite severe, had occurred during La Nina years, while nine were in El Nino period.

He said that while the eastern side of Pacific was normally cold and the western side warm, the condition gets reversed during El Nino, affecting the climatic condition and monsoon patterns in many continents.

Wind direction

It was found that the wind direction in the Pacific changed during La Nina time resulting in an increase in the speed of winds blowing from Africa to Indonesia during the cyclone season.

This increased speed led to piling up warmer water in Indonesia and made Bay of Bengal warmer.

With ocean getting heated up the intensity of the cyclones increased. "

Now it is clear that intensity of heat in the ocean will also increase the intensity of cyclones," he said.

Apart from observing pronounced tropical cyclone activity during La Nina, the scientists found that the genesis location shifted to 87 degrees East in the Bay of Bengal.

The study showed that La Nina had a greater tendency to trigger intense tropical cyclones than the El Nino.

Dr. Ravichandran said that in the next three four months the scientists would be in a position to indicate whether the cyclone season this winter would be intense depending on who rules the Pacific Ocean – El Nino or La Nina. The study co-authored by M S Girishkumar was published in Journal of Geophysical Research.

Keywords: La Nina, wind direction, cyclone frequency, Bay of Bengal

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