

Marine heatwaves are leading to widespread coral bleaching

A moderate heatwave has been observed on 3 May over the Lakshadweep coast

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Marine heatwaves starting October 2023 have caused widespread coral bleaching in the Lakshadweep Sea, ICAR-Central Marine Fisheries Research Institute (CMFRI), said in a statement on Monday.

Around 75% of corals around Lakshadweep have bleached according to K. R. Sreenath, senior scientist at CMFRI. Some varieties are hardy and are on the brink of bleaching.

According to the Indian National Centre for Ocean Information Services, a marine heatwave event of moderate category with area of spreading 98.56% has been observed on 3 May over the Lakshadweep coast. And one of moderate to extreme category with area of spreading 100% has been

observed on 3 May over the South Tamil Nadu coast.

"Marine heatwaves are rare extreme weather events that involve prolonged periods of abnormally high ocean temperatures. These temperatures often exceed the 90th percentile of typical

regional ocean temperatures based on historical data. In Lakshadweep, the Degree Heating Week (DHW) indicator, which measures

accumulated heat stress, has surged above 4°C-weeks. According to the National Oceanic and Atmospheric Administration (NOAA), this level of DHW poses a substantial risk of coral bleaching, threatening the region's diverse marine ecosystems," CMFRI said in a statement.

According to the Pacific Island Ocean Observing System, DHW shows how much heat stress has accumulated in an area over the past 12 weeks (3 months) by adding up any temperature exceeding the bleaching threshold during that time period. When DHW reaches 4°C-weeks, significant coral

bleaching is likely, especially in more sensitive species. When DHW is 8°C-weeks or higher, widespread bleaching and mortality from thermal stress may occur.

In Lakshadweep, DHW has surged above 4°C-weeks, CMFRI said. This level poses a substantial risk of coral bleaching, according to NOAA

"Such heat stress levels signify a severe threat to coral health, leading to extensive bleaching where corals lose the symbiotic algae (zooxanthellae), compromising their survival by depriving them of essential nutrients," said CMFRI's Sreenath.