

## Marine heat causes record-high coral bleaching in Lakshadweep



Bleached staghorn corals at Agatti reef in Lakshadweep

PHOTO: CMFRI

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New Delhi, 6 May

Extreme heat on the Indian coast and marine heatwave have caused record-high bleaching events, impacting the coral reefs in the Lakshadweep Sea. A survey of various Lakshadweep islands revealed that a considerable percentage of the hard coral species have undergone severe bleaching, primarily due to a prolonged period of marine heat waves affecting the region since late October 2023. The survey was conducted by a group of researchers of the ICAR-Central Marine Fisheries Research Institute (CMFRI).

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.

"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. If the DHW continue to rise, reaching beyond 12 °C-weeks, it could precipitate an unprecedented biodiversity cri-

sis due to multispecies mortality," said Dr K R Sreenath, senior scientist of CMFRI.

He further said that the ongoing heat waves also threaten other critical marine habitats, including seagrass meadows. "Similar to corals, seagrass meadows are experiencing detrimental impacts due to the heatwaves, such as impaired photosynthesis, reduced growth, and hindered reproductive functions. The degradation of these ecosystems can lead to the collapse of local marine food webs, affecting a wide range of marine species, from fish communities to marine mammals like dugongs and dolphins," he said.