



Australian Government

Great Barrier Reef
Marine Park Authority

Low level coral bleaching on the Great Barrier Reef

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A growing number of reports of coral bleaching in the Great Barrier Reef has prompted authorities and researchers to step up in-water field surveys and monitoring.

Patchy bleaching has been detected on multiple reefs in mainly shallow areas where corals are frequently exposed to high levels of sunlight.

Great Barrier Reef Marine Park Authority Chairman Dr Russell Reichelt said February and March represent the highest risk periods for mass coral bleaching on the Reef because of hot and dry conditions associated with the El Niño weather system and high sea surface temperatures usually present at this time of year.

“Bleaching is a clear signal that living corals are under physiological stress. If that stress is bad enough for long enough, the corals can die. Corals generally have a temperature limit, and the bleaching indicates they’re outside of their comfort zone,” Dr Reichelt said.

“At this stage, there appears to be low rates of coral mortality restricted to a small number of reefs, and most of the corals affected by bleaching are those that are particularly vulnerable to this type of event such as plate and branching corals.

“Sea surface temperatures are fluctuating across the 345,000 square kilometres of Marine Park, but in some areas they’ve ranged up to 2.5 degrees above the average for summer. This has been exacerbated by lack of cloud cover.

“Fortunately, what we’re seeing right now on the Great Barrier Reef is much less severe than what’s happened across the Pacific during the current global bleaching event.”

Dr Reichelt said the widespread minor bleaching and adverse weather forecasts had prompted the agency to mount a level one incident response.

“What this means is that we’re stepping up in-water site inspections with our partners because the forecasts show further above average sea surface temperatures are on their way, meaning the next few weeks will be critical,” he said.

“Forecasts from the Bureau of Meteorology and the National Oceanic and Atmospheric Administration show a high probability of heat stress that would be sufficient to cause further bleaching.

“What happens now will be entirely dependent on local weather conditions. If we’re fortunate enough to receive plenty of cloud cover, which will effectively provide shade, it will go a long way to reducing heat absorption by the ocean and alleviating thermal stress on corals.”

If mass bleaching does occur, the Great Barrier Reef Marine Park Authority will work with leading science groups to study its extent and impacts. Australian coral reef scientists are combining the skills from the Australian Institute of Marine Science, James Cook University and its Coral Reef Centre of Excellence, the University of Queensland and the CSIRO.

Past bleaching events show coral reefs can recover if the thermal stress does not persist for prolonged periods.

Bleaching occurs when stress causes corals to expel tiny marine algae called zooxanthellae, which live inside their tissue and provide corals with much of their food and colour.

Without zooxanthellae, the coral tissue appears transparent, revealing the coral’s bright white skeleton.

The Australian Government is working to improve the Great Barrier Reef’s health and resilience so it’s better able to withstand threats to its

future.

The Reef 2050 plan provides an overarching framework for Reef management and includes a Reef Trust, which will use government and private funds to improve water quality and coastal habitats, and continued work to cull the crown-of-thorns starfish.

Visitors to the Great Barrier Reef are encouraged to help reduce pressure on the ecosystem by abiding by zoning rules which stipulate where and how certain activities can take place, reducing marine debris, and being careful not to anchor on coral.

For further information see our fact sheet on coral bleaching.

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