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PERSPECTIVE: local coral reefs battle bleaching conditions

Written by Verena Schoepf



Bleached Kimberley corals exposed at low tide.

Morane LeNohaïc

AUSTRALIA'S iconic Great Barrier Reef (GBR) is currently suffering from the most severe bleaching in its history—but how are WA's less well-known reefs coping during this crisis?

When corals all around the world suddenly turn a ghostly white, it is a warning sign that global climate change is happening right in front of our eyes.

Coral reefs are extremely sensitive to heat stress and are therefore among those ecosystems that will be affected by global climate change first.

A record-strength El Niño, which already started in 2014, has led to the third and longest global bleaching event on record due to warmer than usual water temperatures in all ocean basins.

This triggered the worst mass bleaching in the history of the GBR, although severe bleaching and mortality already occurred there in 1998 and 2002.

Compared to the GBR, Western Australia's coral reefs—such as World Heritage Ningaloo Reef or the coral reefs of the Abrolhos Islands—mostly escaped the major bleaching events of 1998 and 2002 (with the exception of offshore reefs in the Kimberley).

Only during the marine heatwave in 2010/11, when a La Niña phase coincided with an unusually strong Leeuwin current, did WA's coral reefs experience devastating bleaching spanning the entire coast from Ningaloo to Rottnest Island.

A major bleaching event also affected the coral reefs in the Pilbara in 2013, but generally it was believed that WA's reefs are relatively safe from bleaching during El Niño years as this typically leads to cooler waters along WA's coast.

Sadly, 2016 will go down in history as the first year when even some of WA's inshore reefs are severely bleached for the first time during an El

Niño phase.

Less than two weeks ago, significant bleaching in the Kimberley was reported from [Broome](#) as well as Cape Leveque and Derby.

As part of the National Coral Bleaching [Taskforce](#), colleagues and I were able to confirm and document unprecedented coral bleaching during a recent research trip to Cygnet Bay.

We discovered up to 80 per cent of all corals were bleached at some of these sites and some of the corals had already died.

Kimberley corals were long hoped to be “super corals” due to their unique ability to cope with extreme temperature swings and tides of up to 10m.

However, my past [research](#) as well as the current bleaching event have clearly shown that even these “super corals” are not immune to climate change.

The good news is that major bleaching seems to be restricted to the Kimberley region, giving other reefs along WA’s coast more time to recover from the 2010/11 heatwave.

As bleaching monitoring will be expanded to other inshore and offshore Kimberley reefs in the next two weeks, I am hopeful against expectations that at least some of these reefs have somehow escaped major bleaching.

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Notes:

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