



Australian Government



AUSTRALIAN INSTITUTE
OF MARINE SCIENCE

INTRODUCTION TO CORAL BLEACHING

AIMS: Australia's tropical marine research agency.

What is coral bleaching?

Coral bleaching – when corals turn pale or white – is a sign of stress. Increasingly, corals bleach in response to unusually warm water temperatures. Corals expel the algae which give them their colour, and provide the corals with food through photosynthesis. If warm temperatures persist, the corals eventually die without their algae.

In 2016, severe bleaching occurred on the Great Barrier Reef and in some of the northern reefs of Western Australia (Scott Reef). Thankfully, reefs further south (Rowley Shoals, Ningaloo Reef and the Abrolhos Islands) escaped bleaching in 2016. Mass coral bleaching has again affected the Great Barrier Reef in 2017 and 2020. Low to moderate bleaching affected reefs across the Kimberley and oceanic reefs in the northwest in early 2020 and we are concerned that bleaching could occur across WA reefs more often in the future.

Satellite data gives us advance warning of upcoming events when bleaching is likely, but to understand in more detail where bleaching has happened and which corals have been affected, we need eyes on the reef. We can use your observations to understand bleaching and recovery. With this information, managers can make better decisions about how to protect our reefs from coral bleaching events.

To help us do this, we have developed this Bleaching Info Pack which allows anyone to report sightings of coral bleaching. The app will locate observations on a map, record the amount of bleaching you saw, and you can also add additional information if you wish (like photos, depth and what types of corals are worst affected). Alternatively, you can also use a paper datasheet to record observations.



Above: Bleaching occurs when tiny algae within each coral polyp are expelled, when the coral is stressed.

Above: Divers observed severe coral bleaching at Scott Reef in 2016. At some places, more than 90% of corals were bleached.

What can you do?

Helping us by reporting coral bleaching is a vital first step. You can do this either using our app (instruction guide enclosed) or the paper datasheet. We can use this information to determine which places, and which corals are most at risk in the future, and we can take steps to protect these areas.

Healthy reefs have a better chance of recovering from coral bleaching, so taking care of our reefs is another important way to protect against coral bleaching. Scientists are also investigating other ways to assist corals in recovering from bleaching.

For more information, contact AIMS or your local Department of Biodiversity, Conservation and Attractions (DBCA) Parks and Wildlife office.



Above: Stressed corals during a bleaching event are pale or bright white.

Left: Several months after bleaching, corals that had bleached have now died and algae has grown over them (Scott Reef, 2016).

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