

# WHAT IS CORAL BLEACHING?

The  
Whitsundays

THE HEART OF THE GREAT BARRIER REEF

## Coral Bleaching Explained

### What is Coral?

To best understand coral bleaching, it is important to first understand what coral is. In simple terms coral can be classed as an animal, algae and a rock! The coral polyp is the animal component, simply picture a jellyfish, turn it upside down and shrink it down to the size of a pin head and you are getting pretty close to what a coral polyp is. This polyp recruits a single celled algae called a zooxanthellae that lives within the tissue of the polyp providing the coral with colour and up to about 80% of the systems food. This algae converts sunlight into energy to produce the limestone skeleton on hard corals that are the building blocks of the Great Barrier Reef.

### What is coral bleaching?

In the event of stress, the algae begins to create a toxin that is bad for the coral polyp, corals bleach to protect themselves from the stress by expelling the zooxanthellae, similar to how humans immune systems work they get the flu. This process allows the coral colony to survive. Each summer, this type of small isolate bleaching ordinarily occurs, and often goes unnoticed by the untrained eye.

### What causes coral bleaching?

Many things cause coral bleach, on the Great Barrier Reef, the two main stressors are water temperature change (both in the hot and cold direction) and UV. However, through human-driven climate change we are seeing these stressors being large and more widespread resulting in mass bleaching.

### Is bleached coral dead coral?

One thing marine biologists are clear about is that bleached corals are not dead. A better way of describing bleached corals is that they are 'in stress mode'. Here's where things get complex again. When we're talking about coral mortality, mortality doesn't always mean an entire coral colony – recorded coral mortality rates include sections / polyps of coral, which is why the reef might seem less healthy than it currently is. Outside of mass bleaching, in a moderate bleaching event, coral is simply undergoing a natural response to threats and their bleaching is their version of an "immune system fighting for their recovery".

### Does bleached coral recover?

In minor bleaching occurrences, bleached coral will recover. In mass bleaching events mortality is more common, purely because the stressor impact lasts for longer. However, scientists are still studying what this means for coral's future. Studies show that bleached corals that have recovered and depending on the level and type of bleaching can grow slower, more susceptible to diseases and are less productive in reproduction cycles.

### What does bleached coral mean for the health of the reef?

The difference and impact of coral bleaching opposed to mass bleaching on the health of the reef is significant, and yet frequently reported as the same. There is no denying that the three mass bleaching events on the Great Barrier Reef have had a negative impact on the Great Barrier Reef, and more needs to be done globally to mitigate climate change. While there are no positives in the short or long term for the reef's health when it comes to mass coral bleaching, it is well recognised that mild bleaching is a sign that the reef's ecological functions are still intact.

### How can you help?

As mentioned before, bleached coral, does not mean dead coral! It is now more important than ever to '[See the Reef, Love the Reef and Protect the Reef](#)'. In terms of protecting it, everyone can play their part, no matter how small. Engage in citizen science projects like [Eye on the Reef](#), reducing your carbon footprint or cut out single-use plastics. Everyone can play their part to ensure the Great Barrier Reef remains a beautiful environment for future generations to enjoy.

### Tourism Facts

- The Great Barrier Reef continues to be Australia's greatest natural attraction, recognised as an iconic experience, locally, nationally, and internationally.

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- Tourism is low risk and well managed. Access is regulated through a permitting system and multi-user zoning plan that governs where certain activities can take place - this is vitally important in the day-to-day management of the marine park and for improving long-term resilience.
- Most marine tourism occurs in about 7% of the Great Barrier Reef Marine Park. On average, 86% of tourism visits are based out of Cairns/Port Douglas and The Whitsundays.
- Tourism plays a vital role in GBRMPA's early warning system alerting to impacts on reef health. [Eye on the Reef](#) that enables tourism operators and their guests to contribute to its long-term protection by collecting valuable information about reef health, marine animals, and incidents via a mobile app.
- Anyone out on the reef can also contribute information on reef health, animal sightings and incidents via the Marine Park Authority's free Eye on the Reef app, available in the Apple and Google Play stores.
- Each ticket sold to experience the reef includes the "Environmental Management Charge" (EMC). Funds are used to support strong, effective, and agile marine park management practices to protect the reef, reduce threats and improve the long-term outlook. On 6 October 2020, the Australian Government announced budget measures to provide continued support to GBR Marine tourism operators significantly affected by COVID-19, including an EMC Waiver: details can be found [here](#).

## Reef Health

- The Great Barrier Reef Marine Park Authority (GBRMPA) continues to provide up-to-date information for the public through the Reef Authority's Reef Health Updates. Questions in relation to reef health and marine park management can be directed to the GBRMPA at [media@gbmpa.gov.au](mailto:media@gbmpa.gov.au) or by calling +61 7 4750 0846.
- The Australian Government is investing an additional \$1 billion over nine years (2021-22 to 2029-30) to help ensure that one of Australia's natural treasures, the Great Barrier Reef is protected for future generations. This is on top of the \$2 billion the Australian Government has committed since 2014 for Reef protection, which has helped to improve water quality, control outbreaks of coral-eating crown-of-thorns starfish, address plastic pollution and rehabilitate island, coastal and reef habitats.

For regular Reef Health updates, please [click here](#).

For more myth-busting information about coral bleaching, [click here](#) to view the Great Barrier Reef Marine Park Authority's answers.

**About Tourism Whitsundays:** *Tourism Whitsundays (TW) is the organisation responsible for destination marketing and visitor attraction for the Whitsunday region. It is the lead agency recognised by Tourism and Events Queensland and the Whitsunday Regional Council to lead the promotion of the region as a tourism destination. Tourism Whitsundays markets all aspects of the region including the Great Barrier Reef, Whitsunday Islands and Coast, accommodation, boating and sailing, fishing, touring, recreational activities, adventure, dining, shopping, weddings and honeymoons, conferencing and business events.*

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