



# REEF CHECK AUSTRALIA

Celebrating  
**20 YEARS**  
in Townsville



Since 2003, Reef Check Australia volunteers have been collecting locally and globally relevant reef health data within the Townsville region.

## THE REEF NEEDS YOU

Reef Check Australia is an environmental charity dedicated to empowering people to protect local reefs and oceans. To find out how you get involved go to [www.reefcheckaustralia.org](http://www.reefcheckaustralia.org)



### Environmental Impacts

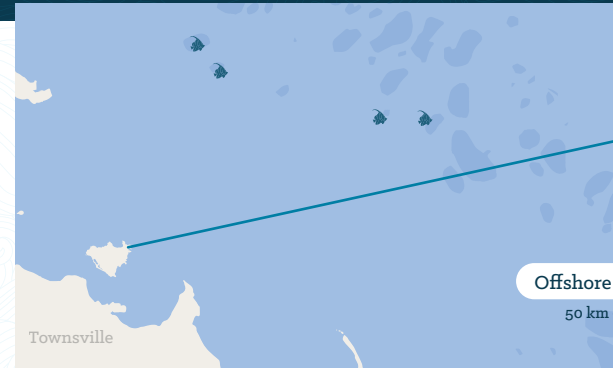
The Townsville region has been subjected to a number of disturbances over the last twenty years including cyclones, mass bleaching events, extreme rainfall and flooding events and crown of thorns starfish outbreaks. This may correspond with the increase in temperature experienced in this region due to global temperature change.

The below 'warming stripe' graphic is a visual representation of the change in temperature as measured in Queensland from 1901-2022. Temperatures and natural disturbances for the corresponding 20 years of Reef Check Australia data collection can be seen on the right.

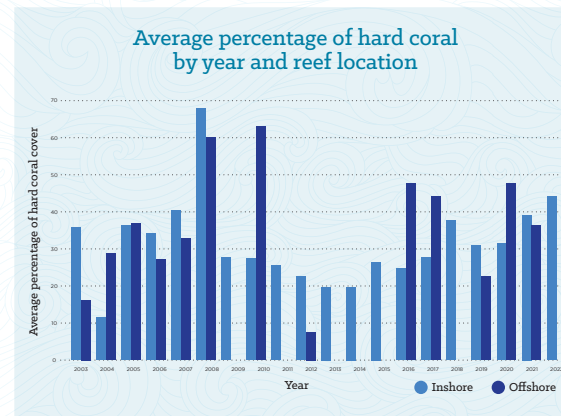
Credit: Professor Ed Hawkins (University of Reading) via [www.showyourstripes.info](http://www.showyourstripes.info)

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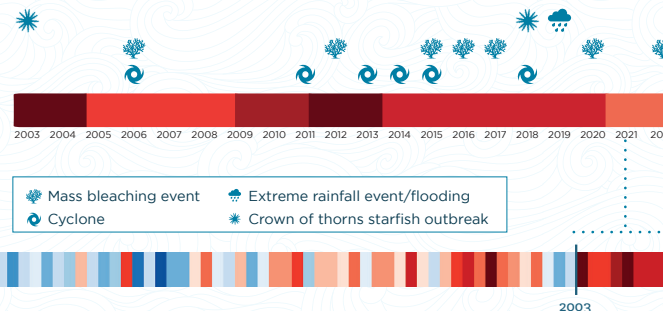
### Regional reef monitoring sites



Long-term monitoring is essential for documenting changes in reef health. Through the help of Industry partnerships, Townsville City Council support, and a team of dedicated volunteers and team leaders, we have more than 20 reef health monitoring sites within the wider Townsville region.



The graph above shows the changes in coral cover over a twenty-year period. Information on benthic composition is collected using the globally standardised Reef Check methodology. Coral cover is often used as a measurement of reef health as corals are sensitive to changes in the marine environment.

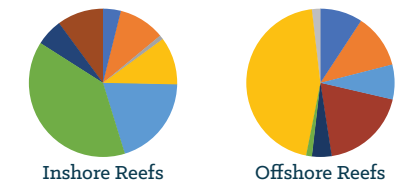


Volunteers conducted 181 reef health surveys in the region over the past 20 years, monitoring 14,480m<sup>2</sup> of reef, and collecting more than 28,960 pieces of data on substrate alone. Volunteers donated 21,720 hours to conduct reef health surveys; an estimated in-kind financial value of more than \$906,000 during this period. Volunteer citizen scientists are vital to ongoing monitoring efforts within the Great Barrier Reef. Thank you to our volunteers past, present and future.

### The results

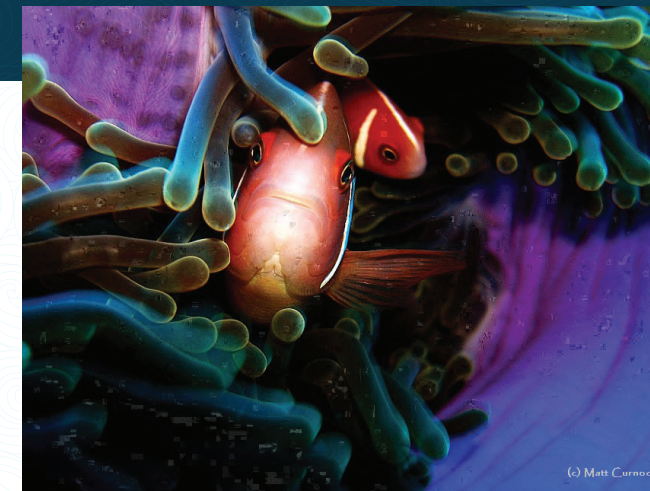
The images below show the coral growth forms for both inshore and offshore reefs based on the combined results over 20 years; 2003-2022. Results show inshore reefs to be dominated by slower growing, harder foliose and encrusting growth forms, whereas offshore reefs are dominated by fast growing branching and plate growth forms.

#### Breakdown of coral categories 2003-2022



Coral growth forms : Hard Coral (HC) Bleached (HCB), Plate (HCP), Foliose (HCF), Massive (HCM), Encrusting (HCE), Branching (HCBR), Soft Coral (SC). Visit [www.reefcheckaustralia.org/methods](http://www.reefcheckaustralia.org/methods) to read the full methodology.

Data from the 181 surveys conducted suggest that inshore reefs around Magnetic Island and Middle reef are relatively robust, showing minimal changes in coral cover over time. Inshore reefs are readily impacted by activities occurring on land. They are resilient but need our continued help. Inshore reefs are extremely important environments, offering a refuge and nursery for a variety of invertebrate and fish species.



## THANK YOU TO OUR SUPPORTERS

Our work within the Townsville region is possible thanks to a network of dedicated volunteers, generous dive operators, wise advisors, innovative collaborators and supportive funding agencies. **Thankyou to Townsville City Council and the Creek to Coral Program for their ongoing support.**

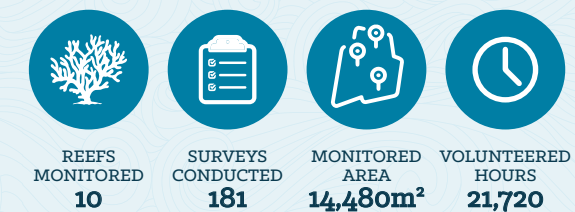


## REEF HEALTH MONITORING IN TOWNSVILLE

The Great Barrier reef is a massive and challenging area to monitor and protect, and its going to take all hands on deck to create significant change for the future.

Since 2003, Reef Check Australia volunteers have been collecting locally and globally relevant reef health data within the Townsville region. Here are some of the 20 year comparisons and highlights!

### 2003-2022 reef health surveys



Reef surveys were conducted on the traditional lands and sea country of the Wulgurukaba, Bindal and Manbarra people. We acknowledge the Traditional Custodians and their Elders past, present and emerging.



**TO FIND MORE, VISIT:**  
[www.reefcheckaustralia.org](http://www.reefcheckaustralia.org)  
[support@reefcheckaustralia.org](mailto:support@reefcheckaustralia.org)