# REEF SNAPSHOT

SUMMER
2025–26

Australian Government

Reef Authority

Australian Government

Australian Institute of Marine Science

CSIRO

# Acknowledgement of Country

We acknowledge the continuing Sea Country management and custodianship of the Great Barrier Reef by Aboriginal and Torres Strait Islander Traditional Owners, whose rich cultures, heritage values, enduring connections and shared efforts protect the Reef for future generations.

Nautilus Shell Artwork © 2023 by Laurence Gibson, Yalanji Arts, Mossman Gorge


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**This snapshot draws on various types of information, including:**
Climate time series data
Cyclone wave damage predictions
Eye on the Reef program data
Crown-of-thorns Starfish Control Program dashboard
Protecting Great Barrier Reef resilience through effective management of crown-of-thorns starfish outbreaks
Long-Term Monitoring Program survey reports and Ceccarelli et al. (2026)
NOAA 5km Satellite Coral Bleaching Heat Stress Degree Heating Week
CSIRO eReefs Modelling System and Framework

# About this snapshot

Summer is a critical time for coral health, as the Great Barrier Reef (the Reef) faces a heightened risk of exposure from multiple stressors, including extreme weather events, floods, and elevated sea temperatures.

This snapshot provides a summary of conditions on the Great Barrier Reef (the Reef) from December 2025 to March 2026, how those conditions impacted coral, and actions in place to help coral reefs. The snapshot focuses on coral and does not present information on the health of other habitats or species.

Each year, towards the end of summer, the snapshot is prepared by 3 Australian Government agencies with responsibilities in Reef management and science: the Great Barrier Reef Marine Park Authority (Reef Authority), Australian Institute of Marine Science (AIMS), and CSIRO, Australia's national science agency.

This snapshot is based on the latest information available at the time of writing and sets the scene for more comprehensive reports released later in the year, including from the AIMS Long-Term Monitoring Program, and the Reef Authority's Marine Monitoring Program.


*The 4 Management Areas (regions) of the Great Barrier Reef*

## Coral monitoring programs

Monitoring the health of the Reef is a joint effort between monitoring partners.

The AIMS Long-Term Monitoring Program monitors the status and trends in indicators of reef condition. Researchers examine between 80 and 130 representative coral reefs annually.

A further 30 inshore reefs are monitored as part of the Reef Authority's Marine Monitoring Program.

Additional observations are contributed by the multiple organisations and people through the Eye on the Reef program, including through the Reef Joint Field Management Program, Crown-of-thorns Starfish Control Program, and by Traditional Owners and the Reef-based tourism industry.

Learn more about how we assess coral bleaching events on the Reef and explore the science used in this report through the Reef Knowledge System, the portal for the Reef Integrated Monitoring and Reporting Program (RIMReP).


*Reef Health and Impact Survey (RHIS) being undertaken on the Reef*

# Overview of summer 2025–26

## Elevated temperatures

Prolonged exposure to above average sea surface temperatures (marine heatwaves) this summer has contributed to a regional coral bleaching event in the Northern region, and localised low levels of coral bleaching in parts of the Far Northern, Central and Southern regions of the Reef. The assessment of the coral bleaching and its consequences will be an ongoing process over the coming months.

## Rainfall

Above average rainfall this summer has led to flooding in all 4 regions (Far Northern, Northern, Central and Southern) of the Reef. Flood plumes from freshwater runoff can cause adverse conditions for inshore coral reef systems, including increased sediment, nutrients, pesticides and reduced light and salinity. These combined aspects of flood plumes can persist for days and create conditions stressful to corals, which can lead to coral bleaching.

## Cyclones

Two cyclones crossed the Reef this summer. The potential for cyclone related damage to reefs is largely determined by the duration of their exposure to damaging waves. Tropical Cyclone Koji crossed the Reef north of Bowen as a category 1 and is likely to have exposed the mid and outer shelf reefs in the Central region of the Reef to increased wave impacts. Severe TC Narelle crossed the Reef in the Far Northern region between Lockhart River and Cape Melville, initially as a fast-moving category 5 system. This cyclone likely exposed reefs in the Northern and Far Northern regions to more damaging waves.

## Crown-of-thorns starfish

Crown-of-thorns starfish (COTS) outbreaks are a major driver of coral loss on the Reef. The fourth recorded outbreak, which started between 2010 and 2012, is still affecting the Central and Southern regions. Another COTS outbreak emerged across the Far Northern and Northern regions in 2023–24. The COTS Control Program works across the Reef, including areas with the most severe outbreaks — currently the Swain Reefs and between Cairns and Lizard Island.

# Recent summers

During the summer of 2024–25, reefs in the Northern and Central regions were impacted by a mass coral bleaching event. While less extensive than the 2023–24 event, it was the second time the Reef had experienced back-to-back events.

Coral cover has fluctuated in recent years and shown significant volatility. The AIMS Long-Term Monitoring Program reported in August 2025 that hard coral cover had declined substantially across the Reef from the high levels of recent years to near long-term average levels. There was a 14 to 31% decline in regional hard coral cover relative to 2024 levels. Coral cover in the Central region generally showed stable or increasing coral cover, while the Northern and Southern regions had the largest annual declines on record. The findings highlighted the effects of Severe TC Jasper and the mass coral bleaching event of 2023–24.

Full results of ongoing reef surveys on the outcomes of the 2024–25 summer for coral cover will be delivered through the AIMS Long-Term Monitoring Program report in August 2026. The most up-to-date data on reef surveys can be found on the AIMS Reef dashboard.

*Coral bleaching on island fringing reef in the Central region*

# What has the Reef experienced?

The Reef goes through cycles of disturbance and recovery, just like any natural system. The Reef experiences cumulative impacts from marine heatwaves, tropical cyclones, freshwater inundation and crown-of-thorns starfish (COTS) outbreaks. While many disturbances are naturally occurring events, they are exacerbated by climate change — which remains the greatest threat to the Reef. Given the Reef is very large, disturbances can affect it at local, regional and Reef-wide scales, and conditions may vary among locations. The Reef has demonstrated its capacity to recover if given enough time between disturbance events.

Prolonged heat exposure during summer 2025–26 contributed to localised coral bleaching in the Far Northern, Central and Southern regions and regional coral bleaching in the Northern region. Some of these areas had already experienced consecutive mass coral bleaching events across the past 2 summers. The ongoing fourth COTS outbreak wave continues to impact parts of the Southern region, with a fifth outbreak wave emerging in the Northern region.

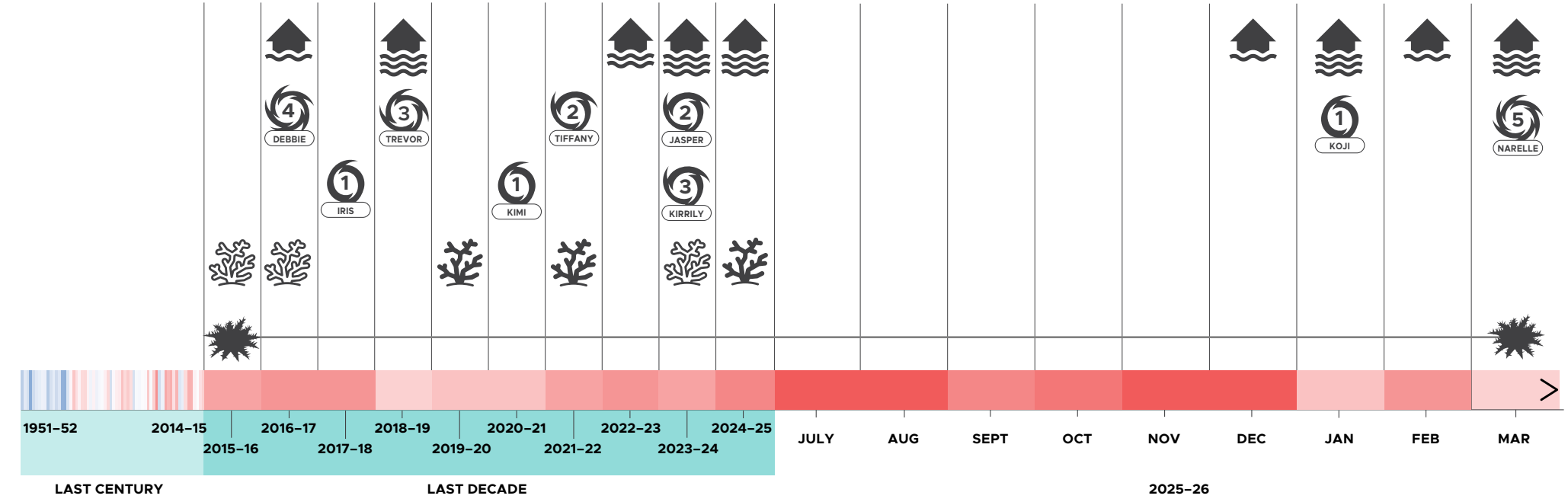
The Reef also experienced 2 tropical cyclones, likely to have exposed some reefs to damaging waves, and a tropical low. High rainfall and increased cloud cover from these systems reduced the accumulation of thermal stress in these areas. However, associated flood plumes likely increased levels of nutrients, sediments and pesticides in surrounding seawater, and reduced salinity and available light.

The full extent of cumulative impacts from this summer and previous years is still being assessed. Current information can be found on the Reef Authority's Reef Health page.

Climate change influences weather patterns and the ocean's temperature, pH level and currents, and amplifies the impact of other pressures. The World Meteorological Organization confirmed that 2025 was one of the 3 warmest years on record. Since 2024, the world's coral reefs have been subject to the biggest ongoing global coral bleaching event to date.

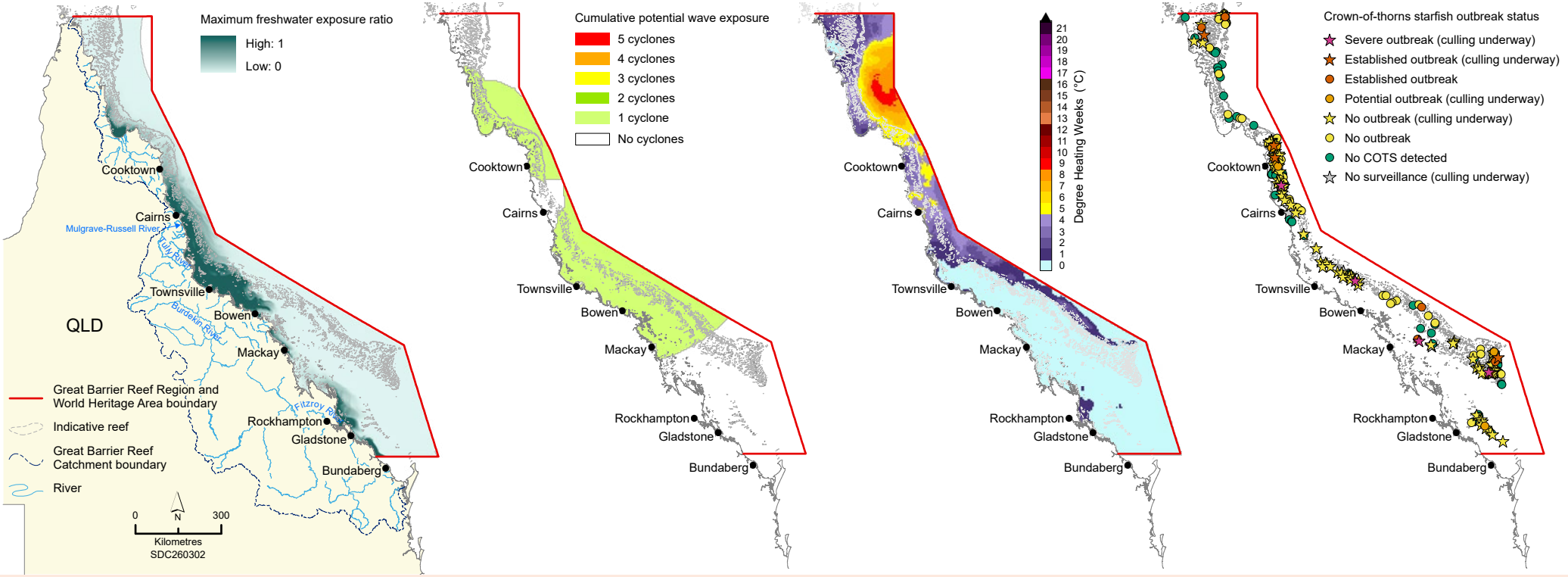
**Four key stressors on coral reefs:**

- Above average sea temperatures
- Cyclones and storms
- Flood plumes
- Crown-of-thorns starfish



# Recent conditions across the Reef

**Graphical overview of the key stressors and their variation across the Reef over recent months.**




## Freshwater exposure

Maximum exposure to water from rivers on any single day between 1 October 2025 and 16 March 2026. Severe Tropical Cyclone (TC) Narelle crossed the coast on 20 March 2026. Exposure values represent the ratio of freshwater to seawater origin at the sea surface (where 1 equals 100% river origin, 0.1 equals 10% river origin and 90% seawater origin, and 0 equals 100% seawater origin), calculated using aggregated model data from the one-kilometre resolution eReefs hydrodynamic model version 2.0 (GBR1_H2p0). *Data from CSIRO.*

## Cumulative potential cyclone wave exposure

Estimated cumulative exposure to destructive waves (significant wave height of 4 metres or greater) from tropical cyclones that influenced the Reef between 1 July 2025 and 22 March 2026. *Data from AIMS.*

## Heat stress exposure

Spatial patterns of heat stress using Degree Heating Weeks (DHW) as of 16 March 2026. The map shows DHW accumulation over the Reef during the period 23 December 2025 to 17 March 2026 using data from the NOAA Coral Reef Watch (Version 3.1 daily 5km data). Coral bleaching risk increases above 4˚C-weeks and severe bleaching risk increases above 8˚C-weeks. *Data from NOAA.*

## Crown-of-thorns starfish outbreak status

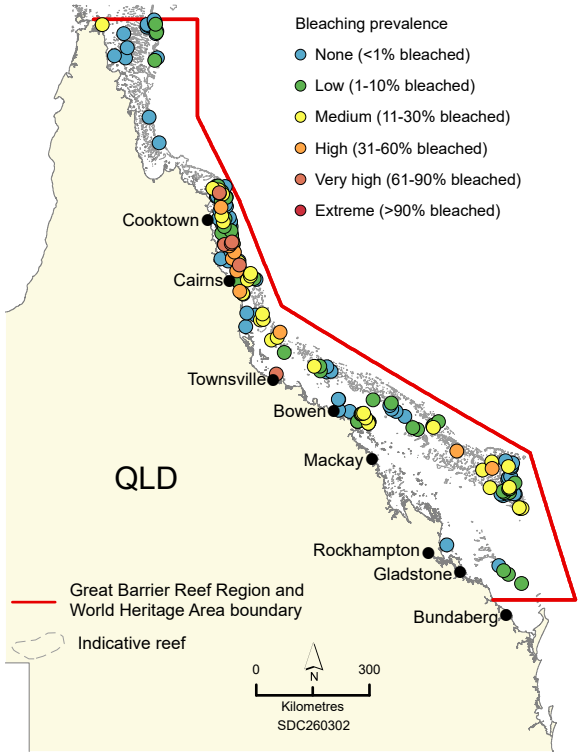
Crown-of-thorns starfish (COTS) outbreak status calculated as the average number of COTS recorded across all manta tow surveys conducted at each reef between 1 July 2025 and 16 March 2026. The Crown-of-thorns Starfish Control Program dashboard provides near real-time information on COTS outbreaks, coral cover, and COTS Control Program operations. *Data from the Reef Authority and AIMS.*

# What does this mean for coral?

Throughout the year, the Queensland Parks and Wildlife Service (QPWS), Reef Authority staff, tourism operators, Traditional Owners, and the COTS Control Program contribute to routine Reef Health and Impact Surveys (RHIS) through the Reef Authority's Eye on the Reef monitoring and reporting program. These surveys are designed to be a quick and efficient way to provide point-in-time intelligence to inform how management agencies respond to Reef health events and trigger management actions, such as aerial and in-water bleaching response surveys.

The information below summarises what we know about coral condition as of the end of March 2026, including a regional bleaching event in the Northern region. Severe TC Narelle generated intense winds and strong wave action along its track in the Far Northern region, with modelling indicating widespread high wave action in the Northern region, particularly across offshore reefs.

*Right: Coral bleaching prevalence (proportion of coral cover bleached) across the Great Barrier Reef Marine Park from 1 November 2025 to 16 March 2026. Data are derived from Reef Health and Impact Surveys. Values represent the highest mean coral bleaching prevalence level recorded for each reef. This approach highlights peak coral bleaching conditions observed during each set of surveys throughout the summer.*




*Bleached coral on a reef in the Northern region*

In-water surveys (RHIS) over summer, up to 16 March 2026, indicate low levels of coral bleaching of surveyed reefs in Far Northern, Central and Southern regions and a regional coral bleaching event in the Northern region.

Prevalent bleaching was observed on 28 from 79 surveyed reefs in the Northern region, likely a cumulative effect of heat stress and freshwater impacts from flood plumes, particularly on inshore and mid-shelf reefs. Early observations indicate that physical damage from Severe TC Narelle has occurred at reefs as far south as Cairns.

At this point in time only a low number of reefs have been surveyed in the Far Northern region due to its remoteness. However, we would expect to see damage from Severe TC Narelle and bleaching in the Far Northern region due to prolonged heat exposure. A dedicated Reef Joint Field Management Program voyage planned for April will undertake surveys to help determine the extent and severity of impacts to coral reef habitat in this region.

Surveys and observations will continue throughout the year, and more comprehensive analyses and summaries will be made available later in the year. The coral bleaching impact framework will be used to further describe how coral reefs fared this summer.

**Watch how we conduct surveys**

# What are we doing to help coral?

Supporting coral reef resilience and recovery is vital. Resilience-based management builds on foundational management programs, such as the zoning plans and Reef Joint Field Management Program. It places a strong emphasis on using the best available information and forecasting tools to adjust management actions to improve Reef health and recovery.

A combination of preventative and restorative actions, as well as ongoing research and management, are needed to protect coral and the species and communities that depend on it.

The following are 3 examples of actions taken to help protect the Reef.

*Participants of the 2025 Cairns Eye on the Reef mega training event*

## Integrated monitoring scales up Reef protection

The Reef Authority's Eye on the Reef program is a globally recognised citizen science program and is scaling up the Great Barrier Reef's protection network.

In a significant step for localised management, the Reef Authority recently delivered intensive Eye on the Reef training in the Cairns and Whitsunday regions, in the lead up to the 2025–26 summer season. For the first time, this program brought together Traditional Owners, teachers, and tourism operators, qualifying some 125 new citizen scientists and significantly expanding the Program's reach.

By standardising how participants track coral health and recovery, the Reef Authority translates field-based observations into the high-quality data required for adaptive management.

For Traditional Owners, Eye on the Reef provides a platform to create a highly valuable data and information stream for their Sea Country, enabling both cultural ecological knowledge systems and western models of scientific research to collectively shape management decisions.

Site-specific data helps the Reef Authority monitor how the Reef responds to pressures like bleaching and cyclones. The resulting insights ensure Marine Park management remains targeted and responsive to emerging threats.

## Preventing crown-of-thorns starfish outbreaks

A study by CSIRO and AIMS, shows that one of the largest-ever marine conservation initiatives played an important role in reducing crown-of-thorns starfish (COTS) outbreaks on the Great Barrier Reef.

COTS are one of the biggest causes of coral death on the Reef, with multiple outbreaks of COTS occurring over the past 4 decades.

Some large predatory fish, like emperors, eat COTS. In 2004, fisheries management strategies, involving increasing no-take zones, were put in place across almost a third of all reefs to protect these predatory fish.

Modelling of the effect of zoning plans shows these initiatives likely averted a catastrophic tipping point that would have left the Reef with fewer large fish, resulting in continuous outbreaks of COTS and substantially less coral. Without intervention over the last 2 decades, grouper and emperor populations on the Reef would have consistently declined under increasing fishing pressure. Model projections to 2050 also show that without these fish protection strategies, there could be a four-fold increase in the percentage of reefs with COTS outbreaks.

This research is an important step towards understanding the potential for COTS management to protect the Reef under the increasing threat of climate change.

This research received funding support from the COTS Control Innovation Program, which is funded through a partnership between the Australian Government's Reef Trust and the Great Barrier Reef Foundation.

*Predators of the crown-of-thorns starfish include the redthroat emperor*

*First Nation rangers from Cooktown to Bundaberg joined reef restoration trials*

## Training Indigenous rangers in Reef interventions

Around 20 rangers from 6 Traditional Owner groups gathered on Woppaburra Sea Country in the Keppel Islands to bring restoration research out of the lab and onto the Reef for trials during the Reef's greatest show — coral spawning.

Woppaburra, Yuku Baja Muliku, Minggamingga, Gudjuda, Darumbal and Gidarjil rangers worked side-by-side with AIMS scientists during the trials, honing skills to apply in their own Sea Country in the future. Together, they gathered coral spawn, nurtured coral larvae, and prepared millions of young corals before deploying them onto damaged reef areas and will monitor their progress.

This three-year Indigenous Futures project combined deep cultural and spiritual connections to Sea Country with cutting edge scientific methods developed through the Reef Restoration and Adaptation Program, helping to build the skills needed to fast track reef recovery at large scales.

Through hands-on learning on the water and in classrooms, the participants gained qualifications and experience to support long-term custodianship of their Sea Countries as Indigenous Reef leaders.

The trainees are now transitioning from training to delivery in the Pilot Deployments Program, one of the largest reef restoration tests on a coral reef system. These trials are led by AIMS and funded by the Australian Government's Reef Trust through the Reef Trust Partnership with the Great Barrier Reef Foundation.

# How can you help?

Spanning over 2300 kilometres of the Queensland Coast, the Great Barrier Reef, globally renowned for its stunning biodiversity, urgently requires our protection through reduced carbon emissions, water conservation, and the avoidance of pollutants. Ways to reduce your consumption habits include transform your transport (walk, ride or use an electric vehicle), rein in your power use at home and in the workplace and reduce food waste. Such collective actions are essential for ensuring the Reef's preservation for future generations.

Visit the Reef Authority website for actions you can take to help love the Reef.

***See the Reef. Love the Reef. Protect the Reef.***

**When heading out on the water**

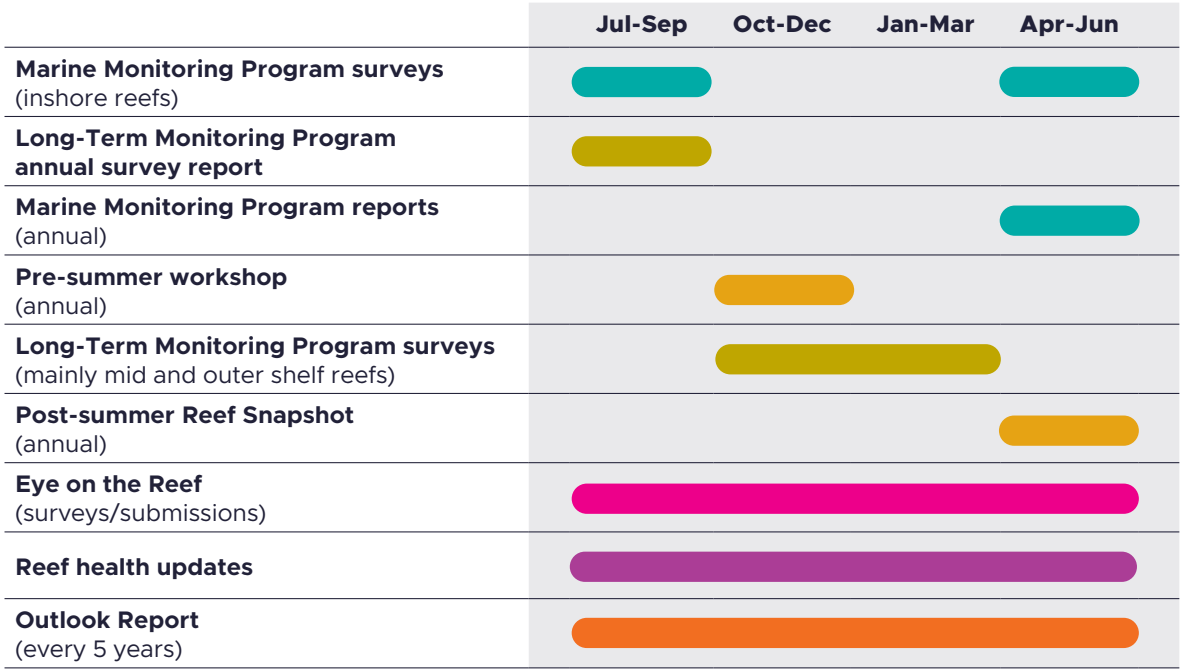
- know your zone (rules on what activities are allowed)
- fish sustainably, obey your size and possession limits
- know where to anchor and use public moorings
- record your observations and sightings on the Eye on the Reef App
- choose a High Standard Tourism Operator.

**Take action**

- how to help protect the Reef
- contribute your ideas to better look after the Reef and have your say in how it's managed.

# Reef health monitoring and updates

Each year, data on the health of the Reef's corals are collected, analysed, and shared. The timing of data collection periods, report releases and related workshops are shown below.




Information and data for the above is available on the Reef Knowledge System.

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