



Australian Government
Great Barrier Reef
Marine Park Authority



Queensland
Government



INSIGHT STORIES

Reef Joint Field Management Program



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SO, WHAT IS THE REEF JOINT FIELD MANAGEMENT PROGRAM?

The Great Barrier Reef is one of the seven wonders of the natural world and the largest living structure on the planet – so big it's visible from space! Over 348,000 square kilometres of coral reef and its surrounds make up the Great Barrier Reef World Heritage Area (the Reef)– an area the Reef Joint Field Management Program (the Program) has been managing for over 40 years in on-ground, practical ways.

The Reef is not just beautiful, it's one of the most precious and diverse ecosystems on Earth. Fiercely loved by people within Australia – and worldwide – the area is also critical to the cultural, economic and social wellbeing of local and regional communities and Australians more generally. We all want to see the Reef thrive, for us and future generations, but system-wide declines in the condition of the Reef have put it under pressure. The time for action is now. Which is where the Program comes in.

The Program plans and delivers on-ground actions to protect the Reef, including Commonwealth and State marine parks (plus Commonwealth Islands Zones) and island protected areas like national parks.

The Program plays a proactive role in maintaining the value and building resilience of the Reef, delivering hands-on results while global efforts to limit climate change and regional efforts to improve water quality have the time to take effect.

Run jointly by the Great Barrier Reef Marine Park Authority and Queensland Department of Environment and Science, (through the Queensland Parks and Wildlife Service), the Program carries out key actions outlined in the **Reef 2050 Plan** and the **Reef Blueprint report**. The Program also has established evolving collaborations with allied government agencies, Traditional Owners, research institutions, reef-dependent industries and the community to ensure we have the very best minds on the job at all times.



THE FIVE PROGRAM PRIORITIES ARE:



DELIVERING CONSERVATION ACTIONS to protect and recover important natural and cultural values, including coral reefs, seagrass meadows, mangrove forests, coral cays, continental islands, threatened species and cultural heritage.



CHECKING FOR CHANGE on islands and in the water to monitor reef and island conditions and determine the extent of existing or emerging threats.



RESPONDING TO INCIDENTS involving ships and smaller vessel groundings and sinkings, pollution spills, bushfires, coral bleaching, island and marine pest incursions, stranded marine animals and extreme weather events.



WELCOMING PEOPLE to improve community understanding of values and threats, foster responsible behaviour and provide visitor facilities.



UPHOLDING COMPLIANCE, to manage the threat direct users pose to the Reef. The Program delivers risk-focused, well-planned and intelligence-driven patrols to detect and deter illegal activity.



The engagement and involvement of Traditional Owners in the management of the Reef is a core component of the Program. The collaboration with the more than 70 Traditional Owner groups who have an enduring connection to the Reef has grown significantly, with various groups assisting or delivering field activities. Their land and sea management, custodianship, rich culture and shared efforts has protected the Reef for thousands of years, and will continue to do so for future generations.

[CLICK HERE TO LEARN MORE ABOUT OUR WORK >>](#)

KEEPING A BETTER EYE ON THE REEF

Managing such a vast and remote area as the Reef is a challenge, to say the least! But new drone technology could make monitoring the 348,000 square kilometres of islands, cays and reefs a whole lot easier.

The Program is currently developing and implementing a five-year technology transformation program to investigate and leverage technologies – such as the use of drones, vessel tracking and enhanced data analysis – aimed at improving monitoring capability, efficiency and staff safety. Cameras and remote acoustic recorders are already being trialled to monitor remote seabird nesting populations, while drones are increasingly being used for compliance surveillance and habitat monitoring.

Of course, the search for new technologies to increase efficiency hasn't ended here. In October 2020, a team of Queensland Parks and Wildlife Service, Great Barrier Reef Marine Park Authority and Queensland University of Technology staff tested a range of new technologies for field operations in the central Great Barrier Reef across a week-long period.

Various autonomous surface vehicles (ASV), underwater and aerial drones were used to conduct crown-of-thorns starfish benthic surveys, vessel grounding site assessments, mooring inspections and seagrass surveys – all to great effect.



The RangerBot underwater drone and ASVs (equipped with GoPro cameras) conducted coral mapping transects and manta tow surveys for detecting crown-of-thorns starfish (COTS).



The DJI Mavic aerial drone conducted aerial mapping to collect orthomosaic images. High resolution images were gathered at 115, 100, 80, 60, 40 and 20m altitude.



The BlueROV underwater drone conducted a visual assessment of a mooring line.

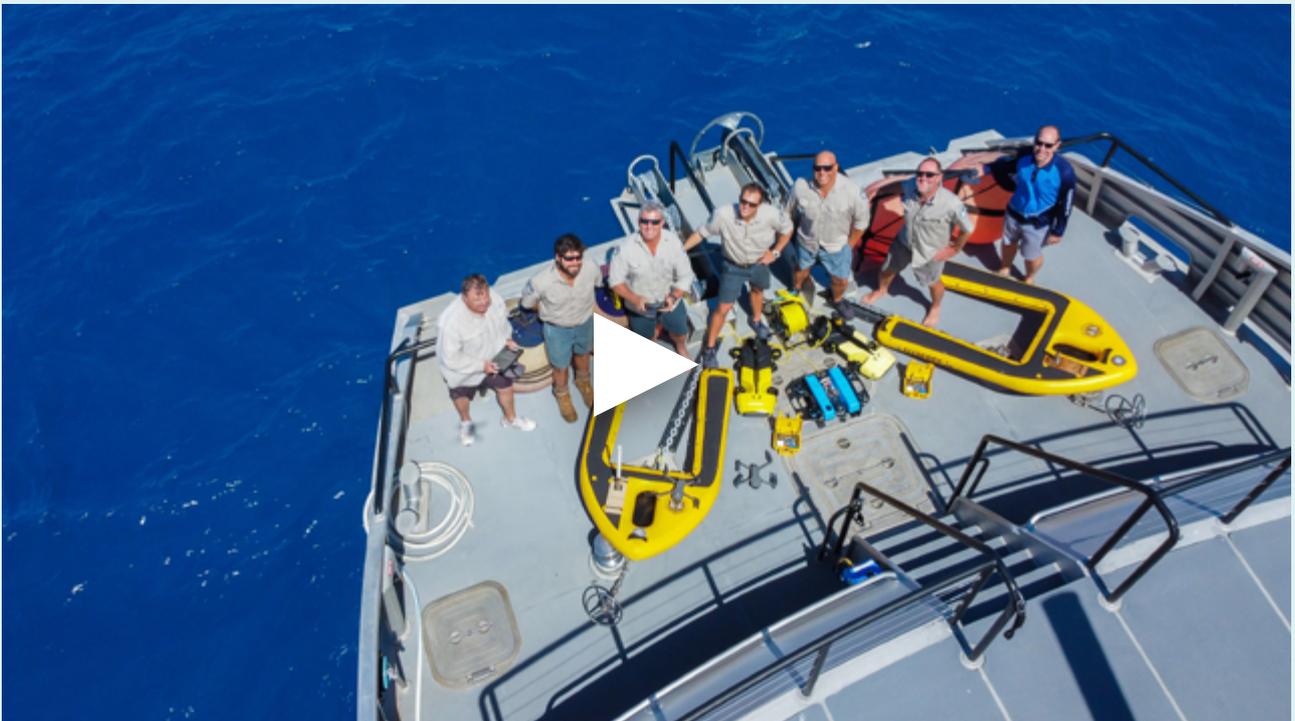


Site assessment of damage was conducted by a range of technologies, including the BlueROV to generate images of 'vessel' condition with time and depth metadata.

During the trip, staff were trained to use the equipment and troubleshoot common problems. The trials will lead to improvements to the technology tested to make it better suited to the Program's needs and operating conditions.

This first field trip achieved outcomes well beyond those anticipated – and it was all down to people power. Both the inspiration and expertise of the experts who drove the technology trials, and the enthusiastic staff who embraced the opportunity, led to a range of excellent suggestions and advice that will only lead to better technology applications in the Program in future.

▶ [CLICK HERE TO WATCH THE VIDEO OF THIS TRIP >>](#)



WORKING RESPECTFULLY ON COUNTRY

As part of the ongoing commitment to develop and strengthen relationships with Traditional Owners across the Reef, the Program is developing cultural etiquette videos for working respectfully on Country.

Aboriginal and Torres Strait Islander people have lived on the Australian continent for more than 60,000 years. During that time more than 300 Aboriginal and Torres Strait Islander nations formed complex societies and cultures centred on a deep and enduring spiritual or cultural relationship with a site or area. Culture, language, spirituality, wellbeing, family, relationships, law, lore and connection grew together to form a place-based cultural ecosystem in tune with the land, sea and sky.

Collaborating with Traditional Owners to manage Land and Sea Country within the Reef is a core component of the Program. There are some 70 Traditional Owner groups with authority for Sea Country management in the Great Barrier Reef Marine Park, many of whom assist with or deliver field activities, including the Australian Government's Working on Country Program and Queensland Government's Land and Sea Country Rangers Program. The Program is working with established Land and Sea Ranger groups to deliver field management activities together or through contract arrangements. This will expand as more

groups become established and upskilled to deliver field activities. It is thus vital that collaborations with Traditional Owners remain respectful and meaningful.

As such, during 2019-20, the Program worked with the Cape Melville, Flinders and Howick Island Aboriginal Corporation to develop the first of a series of videos for visiting and working on Country respectfully. During 2020-21 a further two videos with the Kuuku Ya'u and Lama Lama Traditional Owners were completed.

The development of cultural awareness videos highlights the intrinsic connection that Traditional Owners have to their Country and is seen as foundational to making this a tangible reality. The films provide the opportunity for Traditional Owners to share their stories, personal insights and experiences, helping to provide appropriate cultural guidance for working on Country in an engaging and effective medium.

[CLICK HERE TO WATCH THE VIDEO >>](#)



APP CAMPAIGN HELPS FISHERS COMPLY WITH ZONING RULES

School holidays are a known high-risk period for non-compliance by fishers on the Reef – but a new app is helping to lead change.

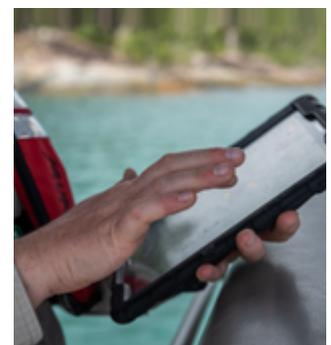
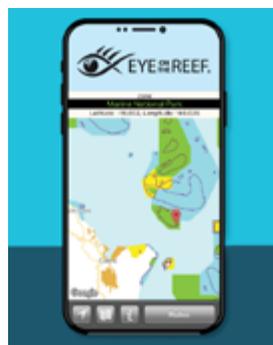
Protecting the world-renowned beauty and biodiversity of the Reef, and upholding compliance to zoning rules, are key priorities for the Program.

In order to ensure Marine Parks zoning rules are followed, the Program runs risk-based, intelligence led compliance patrols day and night to detect and deter illegal activity. But by better educating recreational fishers, we may be able to stop illegal activity before it starts.

The Program already uses strategic communications and engagement to encourage voluntary compliance. During the 2020/21 summer school holidays, however, a catchment-wide education campaign was run encouraging recreational fishers to download the Eye on the Reef app to help them better understand and comply with zoning rules – which in turn helps protect the Reef.

Source referrals and app installations were monitored throughout the campaign, with the results outperforming expectations with app installations up 380% on the daily average during the previous campaign. The result? More fishers than ever are better educated and equipped to successfully comply with the zoning rules that protect the Reef – which is a win for all of us.

▶ **FOR MORE INFORMATION ON ZONING OR THE EYE ON THE REEF APP VISIT THE AUTHORITY'S WEBSITE WWW.GBRMPA.GOV.AU >>**



REEF REHABILITATION TRIAL SHOWS PROMISING SIGNS

A collaborative and innovative project at Green Island, a popular tourist destination located 27 kilometres off Cairns, is showing early signs of success - with monitoring results suggesting approximately 90 per cent rate of coral survival.

The Green Island reef rehabilitation project is a multi-stakeholder initiative trialling the use of reef stars and Coralclips® to build new stable areas of live coral from loose coral fragments.

In November 2020, 2675 coral fragments found lying loose on the seabed were installed at a 200-square-metre target area of reef at Green Island. The coral fragments were installed using 165 hexagonal reef stars (designed as part of the Mars Assisted Reef Restoration System (MARRS)) and 200 Coralclips® (developed by the Coral Nurture Program).

The first full round of environmental monitoring for the project took place in February 2021, with preliminary data suggesting a 90 per cent coral fragment survival rate on the reef stars. Most of the coral fragments used in the trial are also showing signs of new growth and are beginning to attach to the reef stars. Plus, there are indications coral cover has increased and that fish species have begun to populate the site. All of which is great news!

While 10 per cent mortality rate of the coral fragments is higher than experienced at some other similar projects overseas, this wasn't unexpected at Green Island. Its position as an inshore reef, close to Cairns, can mean poorer water quality due to higher turbidity and nutrient loads which lead to a growth of algae on the reef stars. To help survival rates we have been using small scrubbing brushes to keep the stars clean but - thankfully - herbivorous fish will take over this job in time.

The trial is a collaboration between the Great Barrier Reef Marine Park Authority, Queensland Parks and Wildlife Service, Mars Incorporated, Gunggandji Traditional Owners, Quicksilver Cruises, Big Cat Green Island Cruises and the Coral Nurture Program.

The project will continue for five years, with detailed site monitoring to occur every six months.

[CLICK HERE TO WATCH THE VIDEO >>](#)



[FOLLOW THIS PROJECT'S PROGRESS AT THE GREAT BARRIER REEF MARINE PARK AUTHORITY WEBSITE >>](#)

HELPING THE WHITSUNDAYS SHINE EVEN BRIGHTER

The Whitsunday Islands are the most popular tourism destination in the Reef, with the top two most visited sites being Whitehaven Beach and the Hill Inlet lookout. Maximising visitor enjoyment and optimising opportunities to view iconic sites while minimising impacts is a major focus of the Program.

By improving community understanding of the park's values and threats we can foster responsible behaviours. That's why the Program is committed to providing a wide range of recreation and tourism facilities that provide great visitor experiences while being ecologically sustainable and minimising impacts – a win for tourists and the environment.

The Program is also helping the health of the Whitsundays by responding to environmental incidents, such as coral bleaching, vessel groundings and extreme weather events. Recent years have seen an increase in environmental impacts, including three successive years of coral bleaching in 2016, 2017 and 2020 and a whopping six tropical cyclones since 2011. We have been working hard to recover national park tourism sites in the Whitsundays following the impacts of tropical cyclone Debbie in 2017, with works at several of the visitor destinations now completed, and some amazing new facilities and experiences open for visitors. Short walks and viewing platforms have also been built on picturesque Haslewood (Chalkies Beach), Border and Langford islands.

The iconic Hill Inlet Lookout and walking track network has also had an upgrade. With three platforms, the new and improved facility accommodates larger volumes of visitors. While across the bay, on the southern end of the world-famous Whitehaven Beach, an immense amount of recovery effort has also been implemented. Immediately after tropical cyclone Debbie, Queensland Parks and Wildlife Service rangers were onsite clearing debris re-profiling sand, replanting trees and vegetation to reinstate the greatly eroded beach and speed up recovery. This restoration work has been complemented with an upgrade to day use areas and the campgrounds, as well as the development of a new walking track and lookout, providing incredible views along Whitehaven Beach and around to Pentecost Island. There is still more to come, with a 29km multi-day walking track (Ngaro Walking Track) between Tongue Point and Whitehaven Beach due for completion in 2021.

Overall, \$10M has been invested in these new facilities for visitors across the Whitsunday Islands, providing memorable experiences but also alleviating the pressures on our in-water fringing reefs as they recover.

[▶ TO LEARN MORE ABOUT THE WHITSUNDAYS >>](#)



FOR MORE INFORMATION ABOUT THE REEF JOINT FIELD MANAGEMENT PROGRAM

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