REEF TRUST PARTNERSHIP

YEAR IN REVIEW 2021-2022

Australian Government

REEF TRUST

Great Barrier Reef Foundation

ACKNOWLEDGEMENT OF COUNTRY

The Great Barrier Reef Foundation extends its deepest respect and recognition to all Traditional Owners of the Great Barrier Reef and its Catchments, as First Nations Peoples holding the hopes, dreams, traditions and cultures of the Reef.

More than 70 Traditional Owner groups have deep and enduring connections spanning the length of the Reef along the Queensland coastline and beyond, from the Torres Strait Islands in the north to Bundaberg in the south.

'Great Barrier Reef' artwork by Melanie Hava, Mamu Aboriginal woman, Dugulbarra and Waribarra family groups, from the Johnstone River catchment of the Wet Tropics of Far North Queensland and the adjoining Great Barrier Reef Sea Country.

Front cover – Acropora coral spawning on Magnetic Island – Yunbenun.

HEALING COUNTRY STATEMENT BY GREAT BARRIER REEF TRADITIONAL CUSTODIANS

Heart of the Reef – A Call for Healing

If there was ever a time for us to come together that time is now.

If there was ever a time for the voice of Traditional Custodians to be heard - this is that time.

There has been so much damage to our Country and she is struggling to recover from threats on a scale never faced before.

Country is stressed,

Country is crying.

Country is land, sea, air, stars, rocks, plants and animals – all things living and non-living. She is our spirituality. Country is Us.

The Reef is Country. The Reef is our Heart and the water is the life-blood that connects us all.

She is our Family. The Reef is an extension of Us and we are an extension of Her.

The Reef looks after us, feeds and protects us, and keeps us healthy.

She's the keeper of our stories, our Lore.

Without her we will suffer irreversible effects to our identity.

For millennia, Country and People were healthy.

We lived harmoniously according to our cultural Lore.

Our collective connections were strong and balanced through our songlines and interactions with each other.

We looked after Country according to our seasonal calendars and she looked after us.

Today Country is sick.

We are losing our culturally significant plants and animals and places.

For many of us, separation from Country has meant a loss in intricate connections and knowledge.

The imbalanced condition of Country is the result of the ongoing impacts of colonisation and climate change.

The seasons are changing beyond our control no matter how hard we try to help Country heal.

We are all suffering and we can't continue this way.

The world is now turning to Us, as Traditional Custodians, for our unique leadership, traditional knowledge and cultural practices.

And we call on you to listen to Us.

To learn from Us and to do it our way.

To recognise, respect and accept our LORES.

To understand that healing is about the relationship between Country and its People. That one can't heal without the other.

Country needs to hear our children running around – hear our laughter and happiness.

In some places this has been missing from our Country for many generations. This was not our choice and never will be.

We call on you to stop using the poison frameworks that have made Country and People sick.

Frameworks that fragment Country and split families.

Learn how to holistically manage Country, People.

To honour everything as one.

We recognise that healing Country means starting with ourselves.

We need to rebuild pathways of connection between ourselves and Country.

There must be presence of mob on Country.

Families and Elders must come together. Hold each other dear.

It means placing our young ones at the heart of change.

It means using our own languages that tie us to our place on Country, where we belong and who we are.

It means recognising education, justice and health are all crucial parts of healing.

It means employment and opportunities that get you close to Country, to homeland and saltwater.

It's about being honest and seeing that we can't do it all on our own.

We need to see the real threats posed by climate change and face these challenges head on.

All Australians need to come together and show the Reef the respect she deserves. To help her heal and to make us who we are all meant to be.

We call on our Saltwater brothers and sisters across the Pacific and throughout the world to join and support us.

We need everyone's feet and mouth pointing in the same direction and we need talk to be followed by action.

The time to save our future is now.

We need to stand up as one mob, one Country, one spirit, one voice.

And heal.

You can view the **Healing Country Statement** video here:

MESSAGE FROM THE CO-CHAIRS AND MANAGING DIRECTOR

The Great Barrier Reef Foundation is proud to share the 2021-2022 Year in Review for the Reef Trust Partnership.

Our planet needs healthy oceans to survive, and healthy oceans rely on healthy coral reefs. Their role as a nursery for over a quarter of all ocean life is fundamental to ocean biodiversity and health.

Coral reefs are some of the most vulnerable ecosystems on the planet. On the Great Barrier Reef, climate change, poor water quality and crown-of-thorns starfish (COTS) outbreaks are creating conditions that challenge the Reef's inherent resilience. Recognising no one group can solve this problem alone, we are proud to be delivering the Reef Trust Partnership, the largest collaborative reef protection effort of its kind in the world, highlighting the power of collaboration and what we can achieve when we work together.

Under the partnership between the Australian Government's Reef Trust and the Great Barrier Reef Foundation, we are on track to achieve end-of-Partnership outcomes, improving the health of the Reef in this critical decade of action for climate and biodiversity. Our results are encouraging – over the past year, early field intelligence and rapid mobilisation in COTS control meant that for the first time we were able to respond with speed and precision to suppress an emerging outbreak.

This year, we have made critical advances in being able to deploy, at scale and in water, the first generation of climate-ready corals by 2025. We advanced the science and have improved water quality by working with farmers to reduce pesticide, dissolved inorganic nitrogen and fine sediment from entering the Reef and improved how we monitor, manage and protect the Reef. And we have grown our network of community champions and volunteers, particularly youth, to unprecedented levels.

Foundational to all of this is our commitment to walking alongside Traditional Owners, learning from their more than 60,000 years of experience caring for Country, firm in the knowledge that co-design and co-delivery with First Nations Peoples results in better, stronger and more enduring outcomes.

In 2022, with the easing of international travel restrictions from COVID-19, the Partnership also re-emerged on the world stage. One of the most significant events was the UN Ocean Conference in Lisbon, with the Reef Restoration and Adaptation Program and its partners participating in multiple panels, presentations and meetings, further contributing to the global effort to protect and restore coral reefs.

We have continued to deliver on our commitment to growing the $443m investment from the government. As of 30 June 2022, we have raised $240m ($30m ahead of the published fundraising target), and we are incredibly grateful to the community of supporters that has joined with us to help create a future for coral reefs.

This work is all testament to an incredible team and a huge network of project partners – more than 30,000 people up and down the Reef all lending their support and effort to ensuring a Great Barrier Reef into the future. This is truly a coalition of the willing, from COTS divers working to suppress outbreaks, to community clean-ups and lab scientists bringing the next generation of climate-ready corals to life. We can only succeed by working together.

We extend our deepest thanks to the members of the Partnership Management Committee, the Traditional Owner Advisory Group, our Component-level working groups and cross-cutting co-design groups who continue to help shape the Partnership for greatest impact and best practice.

We would like to welcome the new Minister for the Environment and Water, The Hon Tanya Plibersek MP, and look forward to continuing to work with the government to deliver the Reef Trust Partnership.

In line with the Partnership itself, this Year in Review is structured around three core pillars:

Acceleration

Recognising the Reef cannot wait and the task is urgent, we are scaling what we know and is proven, developing or adapting solutions where none exist and taking big, bold steps.

Collaboration

Understanding that no single group can tackle this alone, we are embedding partnerships as a founding ethos, growing the $443m in public funds, creating local ownership of projects through co-design and co-delivery and bringing in new ideas and fresh perspectives.

Legacy

Giving the Reef outcomes that live beyond the end of the Partnership, we are growing and strengthening capacity, driving long-term behavioural change, implementing sustainable financing solutions and creating new business and delivery models.

We would also like to acknowledge the work of our passionate team at the Great Barrier Reef Foundation, which works tirelessly to usher in new thinking and new investment to support the Reef that we all care so deeply about.

While delivering the Partnership's program of work, our team works closely with our partners to develop projects of impact that foster acceleration, collaboration and legacy. We are pleased to share some of the highlights of the Partnership's work in this Year in Review.

With two years' time and budget remaining in the Partnership, we will continue to focus on accelerating action for the Reef, ensuring that every activity and dollar spent has a clear pathway to impact.

We will use the momentum of the Partnership to push ourselves even further in our commitment to excellence, rigour, accountability and transparency.

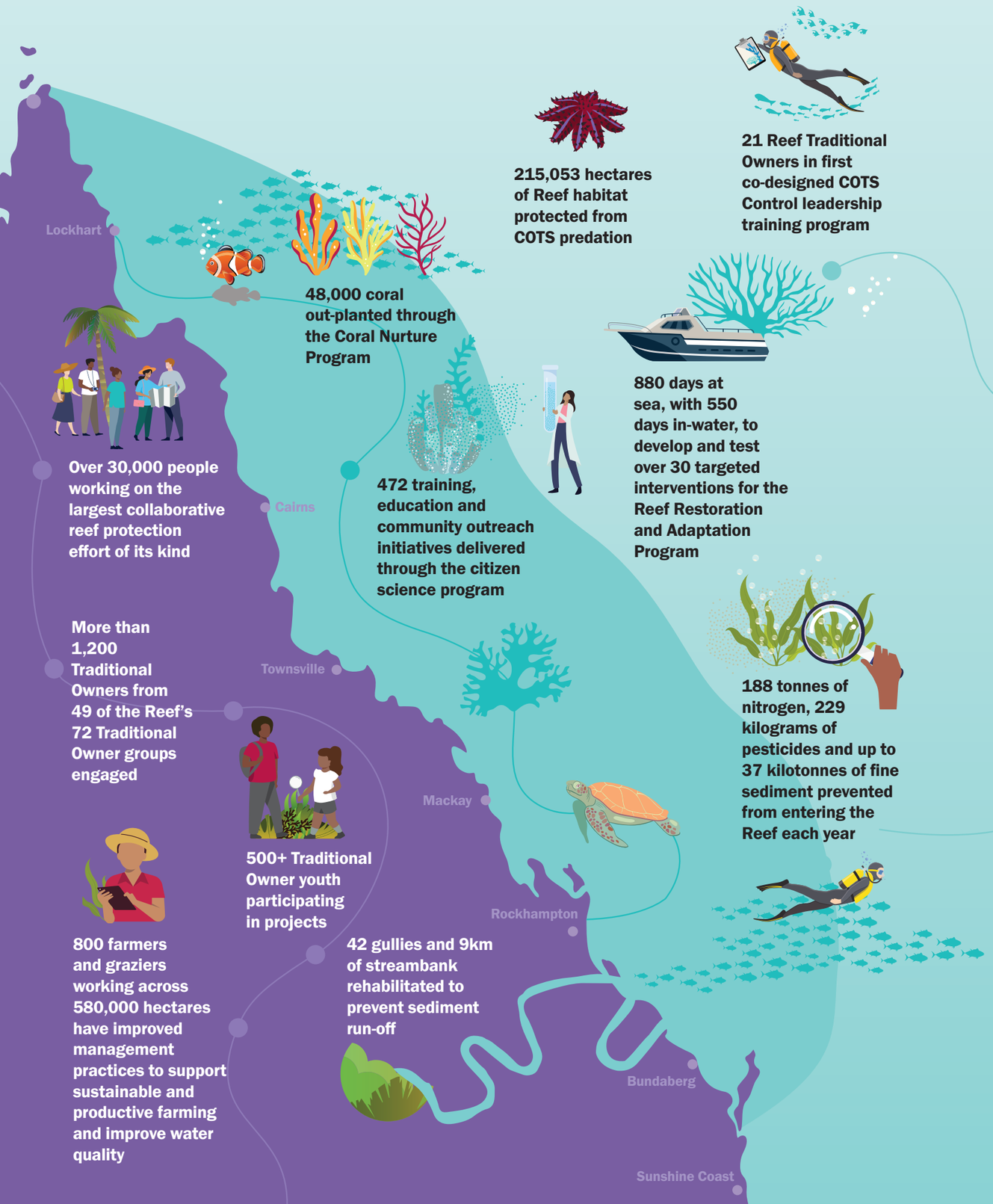
Thank you for your ongoing support of the Partnership.

David Thodey AO, Co-chair

Dr Martin Parkinson AC PSM, Co-chair

Anna Marsden, Managing Director

PARTNERSHIP PROGRESS



The Reef Trust Partnership is a six-year $443m partnership between the Australian Government's Reef Trust and the Great Barrier Reef Foundation and is the largest collective effort ever for the Great Barrier Reef.

With 375 projects involving more than 500 partners, an independent mid-term review has determined that we are on track to deliver against all of the Partnership's performance measures.

Partnership duration	Grant funding committed	Leveraging target
67%	78%	67%

The Partnership continues to tackle the threats facing the Reef by:

- Delivering the world's largest Reef restoration program, buying the Reef time to recover from the impacts of a changing climate by developing a toolkit of scalable coral restoration and adaptation activities.
- Improving the quality of water flowing onto the Reef by accelerating the scale and pace of investment into proven on-ground measures to reduce pollutants across the Reef's highest priority catchments.
- Protecting coral from predation by COTS outbreaks, with a team of more than 100 divers protecting 215,053 hectares of high-value Reef habitat.
- Investing in on-ground, community-led local action to protect and restore the Reef, working with hundreds of community groups to accelerate effort and inform Reef management.
- Supporting Reef decision-making by filling critical monitoring gaps, building a system to integrate Reef data and developing next generation monitoring technologies.
- Recognising the significance of Traditional Owners' inherent rights, interests and capacity, we are working in partnership with Traditional Owners to co-design and deliver the largest ever investment in Traditional Owner-led Reef protection activities.
- Inviting investors and donors around the globe to take an active part in Reef conservation efforts by contributing to Reef Recovery 2030, the Foundation's fundraising campaign to turn the tide on coral reef decline.

Figures as at 30 June 2022.

FOCUS AREA OVERVIEW

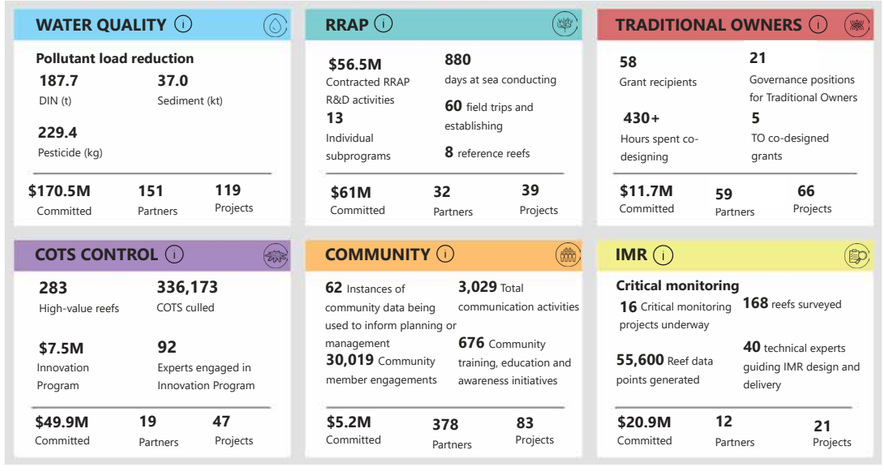
Transparency and accountability are key guiding principles for the Foundation in delivering the Reef Trust Partnership.

The following pages are an overview of the dashboards that have been developed to track progress against end-of-Partnership outcomes. Data provided is as at 30 June 2022.

FOCUS AREA OVERVIEW

PARTNERSHIP OVERVIEW

$319M* committed
$240M co-invested
515 partners
375 projects

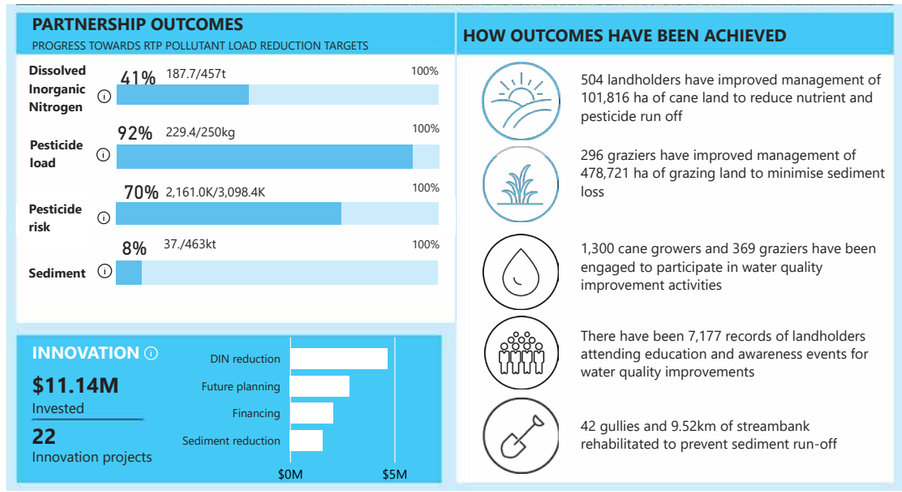


*Excluding component 1 administration costs

FOCUS AREA OVERVIEW

IMPROVING WATER QUALITY

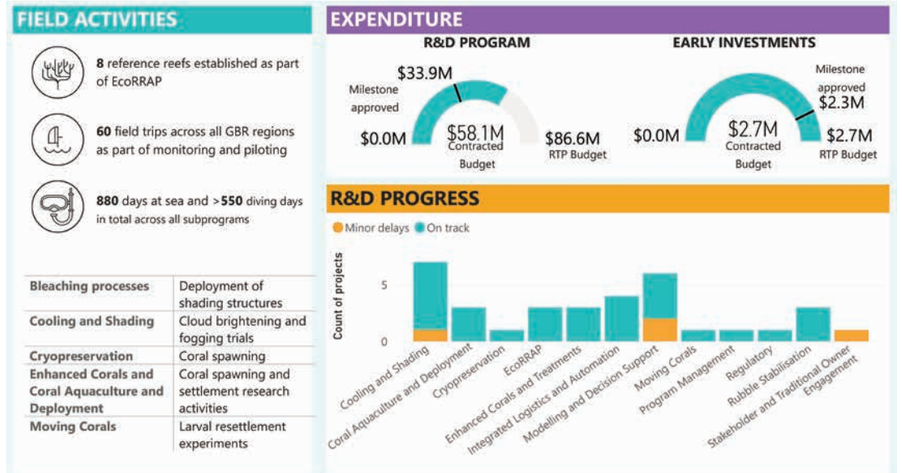
$170.5M committed
$120.8M co-contributions
151 partners
119 projects



FOCUS AREA OVERVIEW

REEF RESTORATION AND ADAPTATION PROGRAM

$61M committed
$76.1M co-contributions
32 partners
39 projects



FOCUS AREA OVERVIEW

TRADITIONAL OWNER REEF PROTECTION

$11.7M committed

$6.9M co-contributions

59 partners

66 projects

$10M Futures Fund commitment

Traditional Owner Participation in Reef Governance

3 Traditional Owner Technical Working Groups

16 Traditional Owner positions in Technical Working Groups

4 Members in Traditional Owner Advisory Group

1 Traditional Owner in Partnership Management Committee or board positions

430+ Hours spent co-designing programs and delivery processes with Traditional Owners

Traditional Owner Leadership and Innovation Projects

Women's communication and leadership program
73 Participants

Men's communication and leadership program*
0 Participants

Traditional Owner groups piloting Strong People Strong Country
3

Youth Projects being supported
7

Traditional Owner Youth Participating
500+

Traditional Owner-led Grants

18 Early Investment - Stage 1 Grants valued at $1.8m

16 Healthy Water Round 1 Grants valued at $3m

7 Stage 2 TO Grants valued at $1.2m

10 Healthy Water Round 2 Grants valued at $2.3m

7 Healing Country Grants valued at $1.8m

Traditional Owner Engagement and Communication

1,336 Traditional Owners involved in on-country activities

49 Traditional Owner groups engaged

5 Traditional Owner-focused social media posts

4 Traditional Owner stories created

*Projects will commence in 2023

FOCUS AREA OVERVIEW

COMMUNITY REEF PROTECTION

$5.2M committed

$13.2M co-contributions

378 partners

83 projects

PARTNERSHIP OUTCOMES

Community informs decision-making through collaborative planning and community data use

62 Instances of community data being used to inform planning or management

130 Leadership development activities for community leaders/champions

285 Activities to enhance community and partner engagement in information exchange, collaborative planning and project data uses

Projects are delivering effective outcomes for the Reef and community

30,019 Community member engagements

48% Community members participated in project activities for the first time

676 Community training, education, and outreach initiatives

326,666 Data points collected

Community action project contributions are recognised, valued and celebrated

31% Engaged community members were youth under 25

1,241 Engagements or consultations with Indigenous people

80 Community group and participant recognition initiatives

46,459 Hours of community volunteering

A suite of tools for funding and models of community action are available and useful

44 Collaborative design activities with GBRF

6 New program delivery models piloted

7 Enduring Investment Tools

FOCUS AREA OVERVIEW

COTS CONTROL

$49.9M committed

$10.2M co-contributions

19 partners

47 projects

COTS CONTROL PROGRAM

Delivering targeted action to protect coral from COTS predation by surveying reefs of high economic and ecological value, culling COTS to ecologically sustainable levels for coral to recover and monitoring cull sites to ensure sustainable levels are maintained for coral.

CUMULATIVE ACTIVITIES SINCE 2018

283 High-value reefs managed to protect coral

20,230 ha reef culled to protect coral from COTS

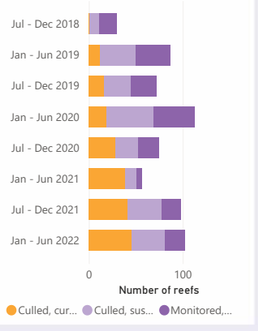
1,689 hours research support delivered by COTS vessel crew

14,961 ha High-value reef surveyed

336,173 Coral-eating starfish culled

147 people employed annually, including **11** Indigenous people

HIGH-VALUE REEF STATUS OVER TIME

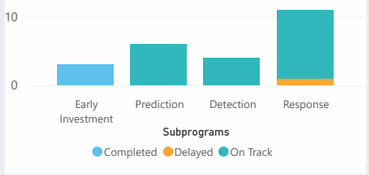


COTS CONTROL INNOVATION

11 research institutions including four core partners

92 experts engaged in multi-disciplinary research teams across institutions

24 collaborative projects delivering innovation in COTS surveillance and control



COTS FORUM

HELD ON 29-31 MARCH 2021

39 presentations across **8** sessions focused on exchange of scientific, cultural, industry and management knowledge

105 in-person attendees, plus **65** via live-stream

8 Traditional Owner groups represented

FOCUS AREA OVERVIEW

INTEGRATED MONITORING AND REPORTING

$20.9M committed

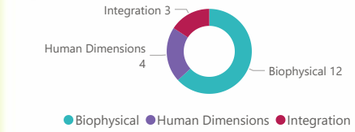
$12.5M co-contributions

12 partners

21 projects

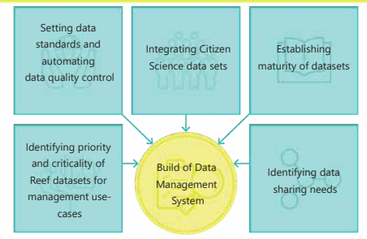
CRITICAL MONITORING INVESTMENT BY THEME

RTP IMR funding is filling critical knowledge gaps covering Reef ecological and social systems, as well as Indigenous heritage.

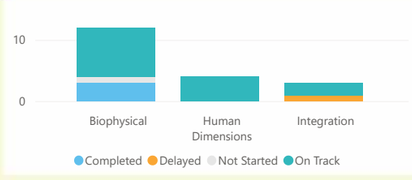


- Over 37% projects include a citizen science element
- Over 63% projects include direct Traditional Owner participation

DATA MANAGEMENT SYSTEM



CRITICAL MONITORING PROJECT PROGRESS



CRITICAL MONITORING HIGHLIGHTS

55,600 Reef data points generated

52 vessel and island operators contributing to Reef collection data

40 crew from **5** COTS control vessels collecting Water Quality samples as part of an IMR/COTS/WQ project

4,365 Local resident surveys undertaken for the Reef Social Economic Long Term Monitoring Program

40 Technical experts guiding IMR protect design and delivery

CASE STUDIES:

ACCELERATION

Recognising the Reef cannot wait and the task is urgent, we are scaling what we know and is proven, developing or adapting solutions where none exist and taking bold action.

Reducing global emissions is no longer enough to safeguard coral reefs. We must also accelerate our efforts to protect our ocean habitats, restore coral reefs and help them adapt to climate change. We have 10 years to act and accelerate our efforts to help our Reef, and reefs around the world, resist and adapt to the impacts of climate change.

Reef Restoration and Adaptation Program

The Partnership has enabled the acceleration of the critical Research and Development needed to design and test novel solutions, which will form a new intervention toolkit and scale up of reef restoration and adaptation science at a scale never seen before.

Coral spawning in SeaSimulator. Credit: Carly Randall, AIMS.

Lasting benefits at meaningful scale

The science is clear – we need to be planting 10-20 million corals per year over the next 20 years to have functioning reefs into the future. And, critically, these corals need to be heat-tolerant and climate-ready, to be able to withstand warming ocean temperatures.

The scaling and breakthroughs that are needed to help the Reef adapt for a warming future are being powered by the Reef Restoration and Adaptation Program (RRAP).

As the Program progresses into its third year of the Research and Development phase, we are now planning for real-world deployment by 2025, with one million first-generation corals planted, scaling to 10 million super corals per year by 2030.

The Program is also taking steps to ensure interventions are safe and acceptable to regulators and the public, and that Reef community and Traditional Owners of land and sea Country are involved in the development, decision-making and design of the future of reef restoration.

Coral spawning in SeaSimulator. Credit: Dorian Tsai, QUT.

This year has seen an acceleration in research and development, and a shift to in-water trials, in partnership with six leading research institutions; the Australian Institute of Marine Science, CSIRO, James Cook University, QUT, Southern Cross University and the University of Queensland.

Over 350 researchers, including ecologists, mathematicians, engineers and geneticists have now collectively spent over 880 days at sea, with 550 days in-water, to develop and test over 30 targeted interventions.

The Program's unique approach is focused on three integrated tiers:

1. Protecting remaining reefs from the threat of coral bleaching by investigating, developing and deploying cooling and shading interventions.

2. Restoring lost diversity by deploying stabilising reef structures, and by transferring large numbers of corals onto highly connected priority reefs.

3. Assisting corals to adapt to the rapidly changing environment. This involves selectively breeding and seeding thermally-tolerant corals using engineering, as well as automation to achieve a scale never before accomplished.

Automating coral propagation

One of the bottlenecks large-scale reef restoration faces is the propagation and survival of young corals at meaningful scale to have an impact on Reef health. To unlock a step-change it is critical that we accelerate our understanding of coral reproductive biology and ecology. With this knowledge, we will have the capacity to design and scale-up coral aquaculture systems and production pipelines, with the aim of propagating, growing and deploying millions of new climate-ready corals onto the Reef each year.

After extensive research and trial, a prototype 'autospawner' has now been developed to automate coral propagation, accelerating the production of corals grown in aquaculture. Traditionally the process is very labour-intensive, with researchers collecting and fertilising coral sperm and eggs by hand. Early results show that by using the autospawner system, it is possible to collect and fertilise corals at a scale never seen before, generating millions of healthy coral larvae.

Coral spawning in SeaSimulator. Credit: Dorian Tsai, QUT.

CASE STUDIES:

ACCELERATION

Early detection and rapid mobilisation in response to emerging outbreak

Crown-of-thorns starfish (COTS) have long been a major threat to the Great Barrier Reef's survival. The Reef has experienced numerous outbreaks of COTS, with the current outbreak wave still spreading across the Reef right now. COTS are a robust and persistent predator, able to live for up to nine months without a meal. During an outbreak, they can have a devastating impact, stripping a reef of around 90% of its living coral cover.

For the first time ever, the Partnership has brought together the resources, capability and expertise to respond to the early signs of an outbreak and protect corals, putting us on the front foot in the battle to control COTS numbers.

Researchers and managers identified a critical need to undertake pre-outbreak monitoring of reefs in the Northern and Far Northern Great Barrier Reef where outbreaks are thought to initiate.

This monitoring revealed that COTS numbers were already beginning to increase in these regions and provided an early warning of the next outbreak.

This new field intelligence led to the rapid mobilisation of two additional vessels, accelerating the COTS Control Program's capacity to suppress the emerging outbreak and protect corals.

This critical work is one of the lifelines we are providing to protect breeding corals that are essential to supporting Reef resilience.

If these efforts are successful, we will look back at this moment as the crucial point where researchers and managers came together under the Partnership to rapidly detect and suppress an emerging outbreak for the first time.

A COTS feeding on coral.

COTS Control Program vessel leaders from INLOC ready to set sail to respond to early warning signs of a new COTS outbreak. Credit: INLOC.

Cutting-edge farming tech improving Great Barrier Reef water quality

Many of the pollutants found on the Reef start their journey on agricultural land in regional Queensland. When it rains, they wash into rivers and streams that flow out to the Reef.

The Partnership's innovative approaches to farming and land management are helping farmers get the most out of their land while providing better outcomes for the Reef. These are just two of the 22 innovative water quality projects we're funding:

Autoweed spraying trials. Credit: Sugar Research Australia.

LiDAR-equipped drones feed information back about the surrounding landscape. Credit: Verterra Ecological Engineering.

Reducing herbicide use with AI and robotics

Most sugarcane growers only use pesticides and herbicides to control weeds as a last resort, but when weeds do take hold the conventional method for controlling them is blanket spraying entire fields. This method uses more herbicide than is necessary and the excess gets flushed out to waterways and onto the Reef, where it's toxic to some organisms including seagrasses.

We've teamed up with James Cook University, Sugar Research Australia and Townsville-based tech company AutoWeed to design a smart weed management system that uses artificial intelligence robots to detect and spray weeds while avoiding crops. The robot can be retrofitted to any tractor and its accuracy is an impressive 95%. The technology aims to reduce the amount of toxic herbicides flowing into waterways by up to 80%.

Restoring gullies and riverbanks with drones

Remediating degraded land, boosting native plant species and controlling invasive weeds along riverbanks and in wetlands is critical to improving habitat for local wildlife and water quality on the Reef. Site access can limit this work however, due to remote locations, boggy terrain and safety issues such as crocodiles.

Many of our partners use drones to help them access sites and obtain data that would otherwise be difficult to obtain. Verterra Ecological Engineering is using drones mounted with LiDAR lasers that scan the landscape and ensure effective and efficient remediation of the worst affected areas.

Another partner, Greening Australia, is trialling the use of drones to control weeds and disperse native seeds over large areas. It's comparing how effective this is with the results from manual efforts to identify areas that are better served by drones, and vice versa.

CASE STUDIES:

ACCELERATION

Insurance for farmers ensuring a future for the Reef

One of the ways the Partnership is accelerating water quality improvements for the Reef is through our work with farmers to change farming practices now and into the future.

Over 800 farmers and graziers are already working hard to improve land management to support sustainable and productive farming. This shift has contributed to the 187 tonnes of nitrogen, 229 kilograms of pesticides and up to 37 kilotonnes of fine sediment prevented from entering the Reef each year so far.

Unafraid of navigating unknown territory, the Partnership is also testing how a new product could further catalyse behaviour change and have a positive, lasting impact for the Reef.

The Partnership is testing a world-first insurance product – prototype nitrogen (N) insurance – to help farmers manage the risk of reduced yields from reduced fertiliser application. If successful, it will overcome a significant barrier to the adoption of reduced nitrogen rates.

The project worked with sugarcane farmers and industry in the Wet Tropics to build knowledge, understanding and trust in the N insurance product and evaluate its commercial viability. The potential for such insurance to drive water quality improvement is huge – it could result in a 30kg/ha reduction in nitrogen applied to half of the cane area in Great Barrier Reef catchments. This would see a reduction of dissolved inorganic nitrogen discharge of up to 1,000 tonnes per year and substantial improvements in water quality.

A commercial insurance product is now available to sugarcane farmers for ratoon crops in specified sugarcane growing regions from Northern Cairns to Southern Tully in Queensland. Farmers can insure one, some, or all their blocks providing complete control over the buying decision. The program covers early, mid and late season ratoon crops.

Over the next year, we will be exploring opportunities to scale this product to other Reef catchments.

Cane heading to the Tully Mill. Credit: Larelle McMillan, CSIRO.

Credit: Tourism and Events Queensland.

CASE STUDIES:

COLLABORATION

Understanding that no single group can tackle the challenges the Reef faces alone, we are embedding partnerships as a founding ethos, growing the $443m in public funds, creating local ownership of projects through co-design and co-delivery and bringing in new ideas and fresh perspectives.

We all want to protect the Reef. And there is a part we can all play in its protection. Through individual donors signing up to Plant a Coral, local communities taking action, growing networks of supporters and working with passionate corporate partners – our collective impact has incredible potential.

Thanks to the generous contributions of our project partners, corporate Australia and individuals, we have already unlocked an additional $240m in leveraged funding, putting us $30m ahead of our published fundraising target.

Mangroves play an important role in removing carbon dioxide from our atmosphere.

Australian companies making a big difference

Over the past year, corporate Australia has shown remarkable leadership in investing in and promoting greater action on environmental protection. Some of our most trusted brands have identified the Reef as a critical investment and we have been thrilled to share news of these new partnerships throughout 2022.

In addition to investment in programs around reef restoration and water quality, each of these partnerships enables a powerful platform for storytelling and elevating awareness of the action we are taking right now to protect the Reef. The extensive customer base of these companies provides an unprecedented opportunity to communicate to a mass audience about the challenges facing the Reef, the great work being done by so many people and what everyone can do to help.

Working with farmers in the Burdekin to improve Reef water quality. Credit: XXXX.

Growing the number of informed and passionate Reef supporters is a key step in securing its future.

Some of the incredible corporate partnerships launched over the past year include:

- Coles and the Great Barrier Reef Foundation announced a 10-year, $10m partnership to help strengthen the regeneration and resilience of the Great Barrier Reef. Together, we're helping mitigate the impacts of climate change by unlocking the Reef's potential as one of the world's most valuable blue carbon sinks and protecting vulnerable marine life by restoring critical ecosystems.
- Life-Space Probiotics has partnered with the Great Barrier Reef Foundation to fund a three-year, $2.25m probiotics research project. This will fund work to pioneer coral probiotics and support the first major scientific breakthroughs around how probiotics can support the health of this precious reef ecosystem
- XXXX and the Foundation entered a $1m partnership to protect the environment for future generations. Through this partnership, we're helping farmers automate their farm irrigation systems, reducing labour, saving energy and improving the quality of water flowing onto the Reef.
- AECOM and the Foundation announced the launch of a three-year partnership including up to $1m in-kind services to look at green infrastructure, unsealed roads, carbon management, reef restoration and resilience. So many of the solutions needed to help our Reef are facing scale and time challenges, which is where engineering, technology and other specialist companies can help by providing the skills and 'outside-the-box' answers the Reef desperately needs.
- Snapchat and the Foundation collaborated on a world-first augmented reality experience to raise awareness around the impacts of climate change on the Great Barrier Reef. The campaign was a huge success, directly reaching over 47 million predominantly Gen Z users, with 840,000 signing a branded climate pledge and 160,000 clicking through to learn more at **barrierreef.org.**

CASE STUDIES:

COLLABORATION

Citizen science supporting change

On an ecosystem as large and complex as the Great Barrier Reef, community-led expeditions of scientific discovery are critical to building our knowledge of the Reef. Over the past four years, through the Partnership, thousands of passionate community members have been collecting data along the length of the Reef. From beach clean-ups to seagrass and coral monitoring, the data collected by citizen scientists is informing Reef planning and management and being integrated and aggregated into formal reporting frameworks.

One program that clearly demonstrates the power of citizen science is the Cairns and Far North Environmental Centre's MangroveWatch project, delivered with EarthWatch Australia.

Mangroves and coastal ecosystems are critically important to Reef health, but until recently there's been a knowledge gap for reporting on mangrove health in the Wet Tropics. We need this information to help drive local action to protect these precious habitats that provide nurseries for fish, act as buffers for coastal communities from cyclones, storm surges and flooding, and filter water run-off from land.

Through MangroveWatch, more than 400 volunteers, Landcare group members and Indigenous rangers have been trained to collect data on mangrove and tidal wetland health. These citizen scientists used science-based methodology to carry out monitoring and help assess mangrove and tidal wetland health across seven estuaries within the Wet Tropics and Southern Cape York region.

Due to the efforts of these citizen scientists, this year, for the first time ever, the annual Wet Tropics Waterway Health Report Card includes data on mangrove condition. This has created a model for citizen science data that can be applied across other regions.

The MangroveWatch project will now continue through the Citizen Science for Change grant round, expanding coastal wetland mangrove monitoring locations to continue providing data for the report card, as well as informing a series of local action plans to inform on-ground mangrove and saltmarsh protection actions.

Participants in MangroveWatch. Credit: CAFNEC.

Community action on Magnetic Island

There are already thousands of community members along the length of the Great Barrier Reef working tirelessly to protect it. Through the Partnership, we're committed to making it easier for communities to get involved in Reef conservation and discover how, by combining their efforts, they can have an even greater impact for the Reef. One of the ways we're doing this is through Community Action Plans.

Magnetic Island – Yunbenun – is home to a community of around 2,500 residents who are passionate about protecting the social, ecological and cultural values of their home. The community has long recognised the ecological importance of the island and its contribution to the Great Barrier Reef ecosystem. It's also keenly aware of the challenges the Reef faces from climate change and other local threats like urban and coastal development and invasive animals and plants.

In 2020, the Magnetic Island Community Development Association (MICDA) led the creation of the Magnetic Island Reef Community Action Plan (CAP) to empower local groups and individuals to nurture, restore and protect the island.

CAPs are funded by the Partnership through the Community component and aim to identify shared goals, priorities and actions to maximise the impact of community projects across Reef catchments. The CAP for Magnetic Island, supported by the Great Barrier Reef Foundation, initially united 12 groups including Wulgurukaba Traditional Owners, five different community groups, Magnetic Island State School, Townsville City Council, QPWS and the Great Barrier Reef Marine Park Authority to develop the plan and then commit to a whole-of-island approach to protect and restore the island's World Heritage values.

Projects currently underway as a result of the CAP include ecosystem monitoring to record and report on the island's marine and coastal ecosystem health, and increasing Traditional Owner participation in on-Country initiatives which promote and strengthen cultural heritage and help protect the local area.

This small island is a powerful example of how much can be achieved when a community of passionate Reef supporters pool their resources, knowledge, funding and efforts to work towards a better future for the Reef.

Tourism and research partnership fast-tracking Reef recovery

This year, in a major breakthrough for world-first local reef restoration partnership the Coral Nurture Program, the first coral fragments planted on the Great Barrier Reef have reproduced, just three years after being planted.

In 2018, program partners salvaged 5cm coral fragments from the seafloor that had broken off due to storm activity and planted them at Opal Reef, near Port Douglas. In a first for the Reef, these corals have rapidly grown to maturity (up to 41cm) and spawned early in 2022, giving fresh hope that they'll produce thousands of new corals over the course of their lives and help repopulate damaged reefs.

The Coral Nurture Program is a unique partnership between tourism providers and researchers, which aims to rehabilitate damaged reefs and boost the resilience of healthy areas by pioneering rapid re-planting methods and cost-effective coral nurseries.

Over 18 months, the program has out-planted 48,000 corals. These corals are attached to the Reef using the innovative Coralclip device, a simple metal clip which is the key to rapid re-planting methods. The device joins the corals to the Reef without the need for chemical bonding agents. It's faster and cheaper than traditional methods and has contributed to an impressive coral survival rate of 85%.

Coral outplants mature and ready to spawn. Credit: Wavelength Reef Cruises.

CASE STUDIES:

LEGACY

Giving the Reef outcomes that live beyond the end of the Partnership, we are growing and strengthening capacity, driving long-term behavioural change, implementing sustainable financing solutions and creating new business and delivery models.

Walking in step with Traditional Owners

The World Heritage-listed Great Barrier Reef is one of the most complex natural ecosystems on Earth with deep cultural significance for Aboriginal and Torres Strait Islander peoples, referred to as Traditional Owners at their request. Traditional Owners hold inherent rights to the Reef and have successfully cared for their traditional homeland estates since time immemorial.

Every day, we see incredible leadership from Traditional Owners using their voices, actions and cultural knowledge to care for land and sea Country and protect the Reef.

Indigenous women are vital to climate action and the future of the Great Barrier Reef

Indigenous women play a critical role as ancestral knowledge-holders and caretakers of Country. Through the Partnership, the Foundation is supporting a number of initiatives which aim to increase the participation of Indigenous women in land and sea Country management roles and elevate and amplify their voices.

The Partnership is engaging with 49 of 72 Traditional Owner groups, and is committed to supporting and enabling Traditional Owner aspirations for caring for Country. Below are just some examples of the learnings and impact of our work with Traditional Owners over the past year.

Reef Traditional Owner WomanSpeak participants.

These initiatives include:

WomanSpeak

This three-day intensive public speaking and leadership course for Reef Traditional Owner women focuses on empowering them to develop the tools and ability share their knowledge and stories.

These women further build on their communication skills and confidence through a 12-month virtual leadership circle. Thirteen women participated in the initial pilot program, with many becoming mentors for the next cohort that commenced in the second half of 2022.

Larissa Hale. Credit: Earthshot Prize.

Indigenous women win Earthshot Prize

An inspiring women-led program that combines 60,000 years of Indigenous knowledge with digital technologies to protect precious land and sea Country including the Great Barrier Reef has won the 2022 Earthshot Prize to Revive our Oceans

The awards, launched in 2020 by HRH Prince William, centre around five ‘Earthshots’ – simple, ambitious and aspirational goals defining the world we wish to build for future generations. The Great Barrier Reef Foundation’s Traditional Owner Advisory Group Chair and proud Yuku Baja Muliku woman Larissa Hale accepted the prestigious £1 million (AU$1.78m) prize on behalf of the Indigenous women who are leading the charge to build the next generation of female Indigenous rangers with the ancient knowledge, skills and modern conservation tools needed to better protect the Great Barrier Reef.

Queensland Indigenous Women’s Ranger Network

Jointly funded by the Queensland Government and WWF, and delivered by Yuka Baja Muliku, this network provides a space for women Indigenous rangers to share their experiences, provide support and advice, undertake training in shared priority areas and enable connections in remote and isolated communities. The Partnership is providing top-up funding to support training needs and ensure that all women rangers in this rapidly growing network are able to attend the bi-annual forums.

Reef Traditional Owner Women drone training participants. Credit: Yuku Baja Muliku.

Drone and spatial technology training

This scalable pilot program is training women Indigenous rangers in drone piloting, geospatial mapping and image processing in Far North Queensland. These digital technology skills are supporting enhanced land and sea Country management and provide a unique on-Country business enterprise opportunity.

Story Hub

This initiative provides practical hands-on support for developing video, photography, graphic design and storytelling skills. Together with the other initiatives underway, it is empowering the Indigenous women of the Great Barrier Reef by amplifying their voices and positioning them as champions of change in Reef conservation.

CASE STUDIES:

LEGACY

Grant Programs designed by Traditional Owners, for Traditional Owners

The Partnership's Traditional Owner grant programs have been co-designed with Traditional Owners and are staged to provide funding for land and sea Country activities spanning planning, implementation and scaling.

Groups progressing through this staged process are reporting a maturation of governance, enhanced business readiness, greater capacity and capability, and an unlocking of funding opportunities previously out of reach, enabling enhanced outcomes for Country, culture and community.

These grants provide Traditional Owner groups with the opportunity to further capacity and capabilities to stand on their own feet and meet their aspirations for the future.

Wanyurr-Majay Traditional Owner Clive Murray at a community planting day for their Healthy Water project.

Healthy Water – Healthy People

Enabled by a Healthy Water grant, Wanyurr-Majay Aboriginal Corporation (WMAC) have developed a Country Plan for Madjandji people to take increasing responsibility and care of Wanyurr-Majay waters, working in partnership with government bodies, Mulgrave Landcare and Catchment Group and private landholders. Together they are returning degraded farming land to its previous wetland state, improving water quality and restoring critical ecological and cultural values in the process. The grant has enabled Wanyurr-Majay Traditional Owners to be employed on-Country, and be trained in conservation and land management to support longer-term employment opportunities to care for Country.

The next stage of WMAC's plan sees them working with partners to co-design a monitoring program for culturally significant watercourses, develop a water quality report card incorporating Madjandji values, survey flora and fauna on their Country and develop an action plan for prioritising works to improve the health of target sites.

Through this work, WMAC are building and extending their network of partners including farmers, local and state government, agricultural and environmental NGOs, NRMs, research organisations and private enterprise. Madjandji Traditional Owners are also participating in the $6m Russell-Mulgrave regional water quality program, funded through the RTP Water Quality Component as cultural advisors.

With the support of their Healthy Water grant, WMAC together with their partners, are revitalising and protecting their cultural values and Country, while contributing to improved water quality and environmental outcomes in a priority agricultural catchment.

New data management systems supporting water quality

Until recently, Reef water quality investors have only been able to understand the impact of water quality improvement projects once the work has been completed.

This all changed over the past year with the Great Barrier Reef Foundation's development of a data collection and reporting system to track on-ground actions in real time. With the ability to see live data, regional managers can spot issues early and identify and avoid overlaps with previous investments. They are now able to manage the work taking place and assess the success of projects in close to real time.

This shift in approach is setting us up to achieve the highest possible water quality impact with the available funds, and promoting transparent and proactive management.

The new system consists of an online spatial database – a bespoke app for on-ground data collection and visual dashboards. Delivery providers upload relevant data to the app and the Foundation and regional managers can use the dashboards to view data in real time and extract it for reporting to the Australian and Queensland governments to inform decision-making.

The estimated pollutant load reductions are tracked at a farm level, providing a way to measure progress against the regional level water quality targets. And farmers can be certain their data is safe because the system includes privacy and security gold standards and a solid data management policy.

The excellence of this system was recognised in 2022 at the Asia-Pacific Spatial Excellence Awards where it won the Environment and Sustainability category.

Tully landscape.
Credit: Paul Curtis, NQ Wildscapes.

LOOKING AHEAD

With two years remaining, the Partnership will continue its focus on accelerating action and impact for the Reef. We will implement this work with a focus on transparency by continuing to provide the public with visibility of how every project, activity and dollar spent has a pathway to impact.

We will continue to foster collaboration across the Partnership and with other Reef 2050 activities to ensure we provide what the Reef needs, where it is needed.

Improving Water Quality

2022-2023 Budget: $54.8m

- Scaling the most promising pilots from our innovation portfolio and commencing projects under the data innovation theme.
- Supporting delivery providers to maximise project outcomes, including further support to ensure the sustainability of outcomes.
- Convening regional events to improve coordination and integration between projects and share lessons.
- Rolling out behaviour change programs with a focus on the Mackay-Whitsunday and Lower Burdekin regions.
- Strengthening the monitoring and evaluation framework with new indicators being developed for social and behavioural change to support landholder engagement.
- Building the legacy of the Reef Trust Partnership by ensuring the information, systems, methods and tools are available to guide and support future Australian and Queensland government investments in water quality.

Controlling COTS

2022-2023 Budget: $7.69m

- Delivering a scaled-up COTS Control Program in partnership with RRRC and the Great Barrier Reef Marine Park Authority.
- Accelerating development of new innovations to drive step-change in COTS control, through CCIP – the only program of its kind globally.
- Utilising citizen science data to support COTS detection and response efforts for the first time.
- Developing a long-term funding strategy for COTS management which includes COTS control, ongoing research and development, community participation and Traditional Owner business enterprise development.

Reef Restoration and Adaptation Program

2022-2023 Budget: $38.6m

- Progression of the new Translation to Deployment sub-program, established in late 2022.
- Focusing on in-water deployment and coordinating inputs from R&D teams towards clear on-ground targets, in addition to activating transition to industry and local communities, including Traditional Owners.
- Larger scale field trials of selectively bred, heat-tolerant corals.
- Medium scale field trials of mass culturing and deployment of wild coral spawn and larvae from automated vessels.

Traditional Owner Reef Protection

2022-2023 Budget: $15.22m

- Launch the first ever Leadership and COTS Control traineeship program, co-designed with Reef Traditional Owners, for Traditional Owners.
- Support the on-ground delivery of Traditional Owner actions through existing grant programs while exploring a transition to a partnership approach to facilitate more enduring program outcomes.
- Continue to improve Traditional Owner involvement in the governance and management of the Great Barrier Reef, while looking at succession planning and experiential development for up-and-coming young Traditional Owner leaders.
- Showcase impact stories that place Traditional Owner voice at the centre, uplifting communities and increasing awareness in the broader community.
- Co-design programs that support Reef Traditional Owner women, men and youth in leadership initiatives.
- Present options for appropriate business and governance models that will support a sustainable funding stream (Futures Fund) for Traditional Owner Reef protection activities.
- Increase participation of Traditional Owners in the innovation economy, including community-led digital skills programs that aim to strengthen culture, protect and preserve Country and create economic opportunities.
- Pilot on-Country incubator to accelerate a nature-positive future by incubating, scaling and flowing finance to Traditional Owner nature-based enterprises within the Great Barrier Reef World Heritage Region.

Community Reef Protection

2022-2023 Budget: $3.95m

- Fund, champion and inspire local climate action and community Reef protection with the launch of the community-led climate action program.
- Launching a new citizen science portfolio that builds on previous projects, supports innovation and translates community data to drive on-ground outcomes.
- Scaling activities through the Cairns-Port Douglas Reef Hub, including capacity-building and piloting new approaches for enabling local-scale reef rehabilitation.
- Facilitating greater integration across community hubs to increase knowledge-sharing, capacity-building and collaboration, and deliver enhanced outcomes for the Reef.
- Improving citizen science data integration into regional Reef report cards to fill critical knowledge gaps.
- Expanding community participation in the broader RTP portfolio including the water quality, COTS, Reef Restoration and Adaptation Science and Traditional Owner Components.

Integrated Monitoring and Reporting

2022-2023 Budget: $15.5m

- Continuation of the extensive critical monitoring projects portfolio.
- Launch of the build phase of the Reef Data Management System, including ensuring that the system supports best practice data management of culturally sensitive information collected by Reef Traditional Owners.
- Implementation of the Technology Transformation Fund focused on accelerating the development of a cost-effective deployment guidance and monitoring system to ensure that the right corals are positioned in the right place to maximise their survival rate, and to support the automation of deployment guidance systems to achieve scale.
- Focus on integration across projects, programs and Components of the RTP to facilitate knowledge sharing and support enduring outcomes.

Credit: Gary Cranitch, Queensland Museum.

DELIVERY PARTNERS

The Reef Trust Partnership is the largest collective effort ever for the Great Barrier Reef, enabled by a leadership investment by the Australian Government.

Lead partners delivering programs or projects under the Partnership from 1 July 2021 to 30 June 2022 include:

- Agro Group Pty Ltd
- Alluvium Consulting Australia Pty Ltd
- Australian Institute of Marine Science
- Australian Seaweed Institute Pty Ltd
- Babel-sbf Pty Ltd
- Balkanu Cape York Development Corporation Pty Ltd
- Binthi Land Holding Group Aboriginal Corporation
- Bundaberg Fruit & Vegetable Growers Cooperative Limited
- Bureau of Meteorology
- Burnett Catchment Care Association
- Burnett Mary Regional Group for Natural Resource Management Ltd
- C2O Consulting
- Cairns and Far North Environment Centre Inc
- Canegrowers Cairns Region Ltd
- Cape York Natural Resource Management Ltd
- Cape York Water Partnership Inc
- Catchment Solutions Pty Ltd
- Citizens of the Great Barrier Reef
- Commonwealth Scientific and Industrial Research Organisation
- Conservation Management Pty Ltd
- Creative Design Industries Pty Ltd
- Cultivate Farms Pty Ltd
- Dabu Jajikal Aboriginal Corporation
- Darumbal Enterprises Pty Ltd
- Dawul Wuru Aboriginal Corporation
- Djunbunji Limited
- Douglas Shire Council
- Earthwatch Institute
- Envigorate Consulting
- Environmental Systems Solutions Pty Ltd
- ESRI Australia Pty Ltd
- Farmacist Pty Ltd
- Fitzroy Basin Association Inc
- FNQ NRM Ltd t/a Terrain Natural Resource Management
- Fruition Environmental Pty Ltd
- Gallagher Eshepherd Pty Ltd
- Gidarjil Development Corporation Ltd
- Girringun Aboriginal Corporation
- GP One Consulting Pty Ltd
- Greening Australia Ltd
- Griffith University
- Gulngay Kinjufile Aboriginal Corporation
- Herbert Cane Productivity Services Limited
- Herbert River District Cane Growers Organisation Limited
- Hope Vale Congress Aboriginal Corporation RNTBC
- Illuminate FNQ Ltd
- Innisfail District Cane Growers Organisation Limited
- Intellidesign Pty Ltd
- Ipima Ikaya Aboriginal Corporation RNTBC
- J.W UDY & N.S. UDY trading as Science under Sail
- Jabalbina Yalanji Aboriginal Corporation RNTBC
- James Cook University
- Jaragun Pty Ltd
- Jarlls Pty Ltd
- JCU TropWATER
- Johnstone River Catchment Management Association Inc
- Juru Enterprises Ltd
- Keppel Coast Arts Council Incorporated
- Leo Burnett Australia
- Leon Studios Pty Ltd
- Liquaforce Pty Ltd
- Local Government Association of Queensland
- Lower Burdekin Landcare Association Incorporated
- Mackay Area Productivity Services Limited
- Mackay Canegrowers Limited
- Macquarie University
- Magnetic Island Community Development Association Inc
- Magnetic Island Nature Care Association Incorporated
- Marenray Pty Ltd
- Marine Discoveries Pty Ltd ATF Phillips Family Trust
- Mary River Catchment Coordination Association Inc
- Mosaic Insights
- Mungalla Aboriginal Corporation for Business
- NCEconomics Pty Ltd
- Nick Pty Ltd
- North Australian Indigenous Land and Sea Management Alliance
- NQ Dry Tropics Ltd
- NQ NRM Alliance Ltd t/a Corporate Nature
- OzFish Unlimited Ltd
- Port of Townsville (Dry Tropics Partnership for Healthy Waters
- Pullman Cairns International
- QLD Farmers' Federation Ltd
- QLD Government Department of Environment and Science
- QLD University of Technology
- Radiant Life Education Ltd
- Reef and Rainforest Research Centre Ltd Reef Catchments (Mackay Whitsunday Isaac) Ltd
- Reef Catchments Ltd
- Reef Check Foundation
- Reef Ecologic Pty Ltd
- Reef Magic Cruises Pty Ltd
- Resource Consulting Services Pty Ltd
- Rinyirru (Lakefield) Aboriginal Corporation
- Roeger Consulting Services - Traditional Owner Engagement and Scoping and Program Design
- Sarina Landcare Catchment Management Association Inc.
- SeeSide Dialogue
- Sharks And Rays Australia Pty Ltd
- South Cape York Catchments Inc
- Southern Cross University
- Speedwell Pty Ltd
- Star Economics Pty Ltd
- State of Queensland acting through the Department of Environment and Science
- Sugar Research Australia Ltd
- TBWA Melbourne Pty Ltd
- Terra Carbon Pty Limited
- The Commonwealth of Australia acting through the Great Barrier Reef Marine Park Authority
- The Nature Conservancy Limited as the Trustee for the Nature Conservancy Australia Trust
- The Social Deck
- The Trustee for Eberhard Consulting Trust
- The Trustee for SOUTH ENDEAVOUR TRUST
- The Trustee for The O'Reilly Property Trust
- The University of QLD
- Townsville City Council
- Tree Crop Technologies Pty Ltd (T/A Verterra)
- Truii Pty Ltd
- Trustee for the Dench Family Trust
- Tunuba Pty Ltd
- Turtle Care Volunteers QLD Inc
- University of Sydney
- University of Tasmania
- University of Technology Sydney
- University of the Sunshine Coast
- Wanyurr-Majay Aboriginal Corporation RNTBC
- Wavelength Reef Cruises
- Whitsunday Catchment Landcare INC
- Whitsunday Regional Council
- Wuthathi Aboriginal Corporation RNTBC
- Yuku-Baja-Muliku Landowner & Reserves Ltd
- Yuwi Aboriginal Corporation RNTBC

Great Barrier Reef.
Credit: Katerina Katopis, Ocean Image Bank.

GOVERNANCE

Great Barrier Reef Foundation Board

- David Thodey AO, Co-chair
- Dr Martin Parkinson AC PSM, Co-chair
- Hayley Baillie, Director
- Stephen Fitzgerald AO, Director
- Dr Paul Greenfield AO, Director
- John Gunn, Director
- Cindy Hook, Director
- Grant King, Director
- Anna Marsden, Managing Director
- Dr Russell Reichelt, Director
- Steven Sargent, Director
- Phillip Strachan, Director
- Olivia Wirth, Director

Partnership Management Committee

- John Gunn
- Dr Geoff Garrett AO
- Dr Paul Greenfield AO
- Larissa Hale
- Professor Ove Hoegh-Guldberg
- Jessica Hoey
- Wendy Morris
- Elisa Nichols
- Craig Rosner-Moore (until 8 February 2022)
- Rebecca Gee
- Theresa Fyffe

Traditional Owner Advisory Group

The purpose of the TOAG is to offer strategic advice to guide the co-design and co-delivery of activities under the RTP.

- Larissa Hale (Chair)
- Stan Lui (until September 2021)
- Malcolm Mann
- Gavin Singleton
- Manuwuri Forester

Along with the Traditional Owner Advisory Group, there are three Traditional Owner Technical Working Groups that collaborate with the Foundation to co-design Component level work programs across the Partnership:

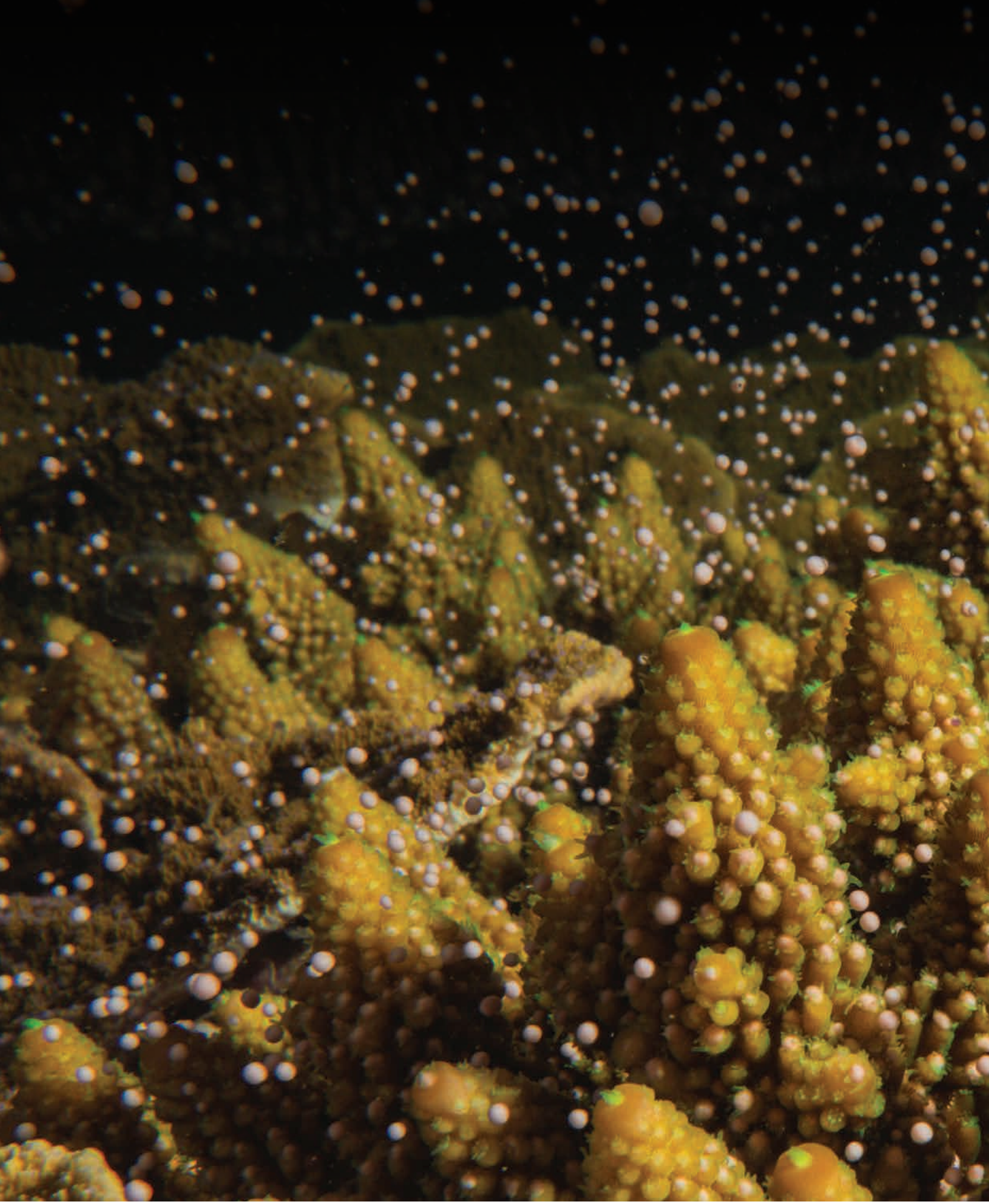
- Healthy Water Traditional Owner Technical Working Group
- Reef Restoration and Adaptation Science + Crown-of-Thorns Traditional Owner Technical Working Group
- Integrated Monitoring and Reporting Traditional Owner Technical Working Group

Other governance arrangements

- Water Quality Working Group
- Community Reef Protection Working Group
- RRAP Board
- COTS Control Partnership Group
- COTS Control Innovation Program Steering Committee

Members of Board, PMC and TOAG as of 30 June 2022

'Great Barrier Reef' artwork by Melanie Hava, Mamu Aboriginal woman, Dugulbarra and Waribarra family groups, from the Johnstone River catchment of the Wet Tropics of Far North Queensland and the adjoining Great Barrier Reef Sea Country.



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REEF TRUST

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