2022/23
Year in Review

Creating a better future for coral reefs

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.

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.

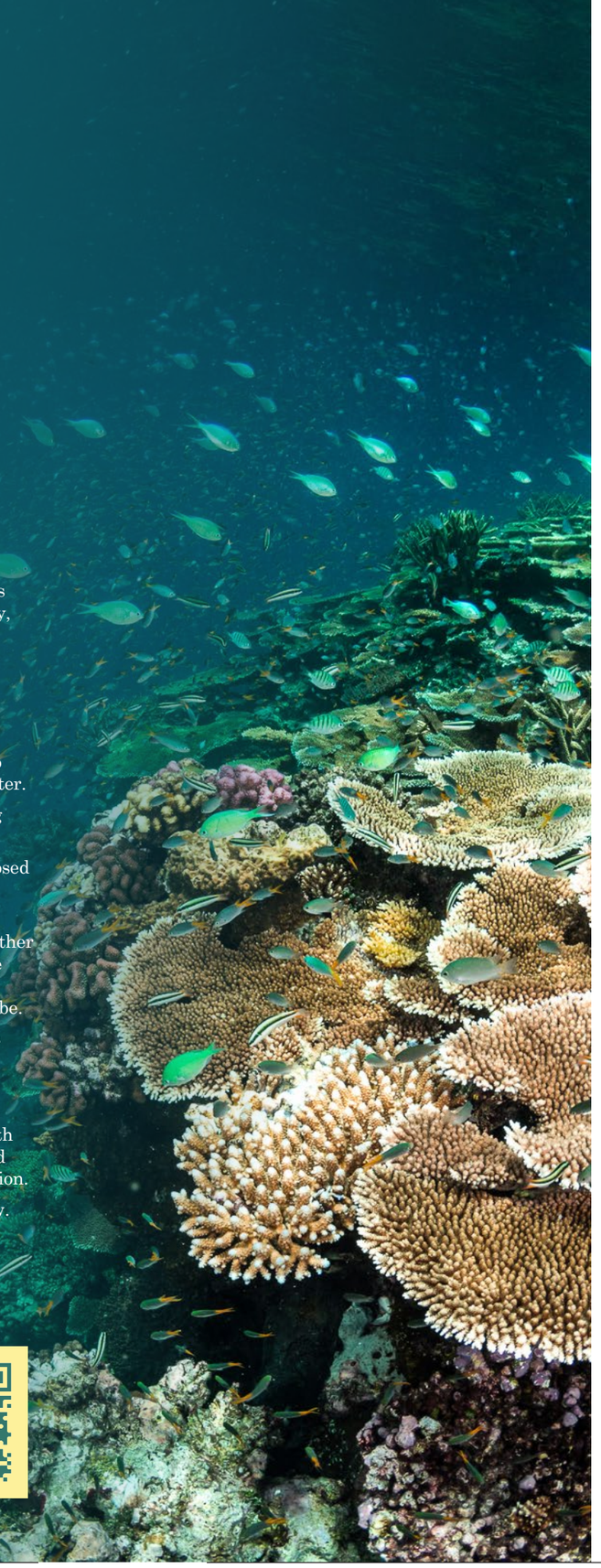
We need everyone's feet and mouth pointing in the same direction and we need talk to be followed by action.

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:



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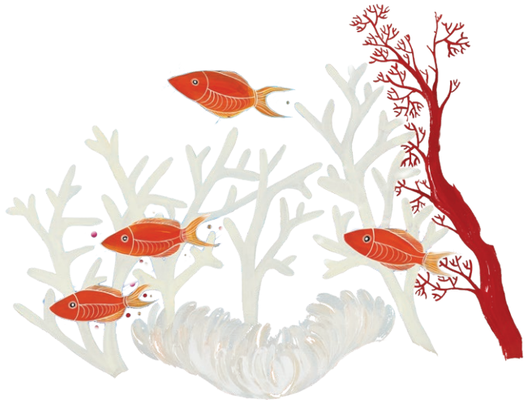


'Great Barrier Reef' artwork by Melanie Hava

Celebrating progress, embracing challenges

We may be running out of time, but we're not running out of solutions. Over the 2022/23 year, the Foundation accelerated and scaled efforts to protect the Great Barrier Reef and coral reefs around the world.

This year the Great Barrier Reef continued to face the escalating impacts of climate change. It brought the third consecutive La Niña summer, which typically means cooler temperatures and increased rainfall. While the Reef was spared a mass coral bleaching event, coral recovery stalled due to the mass coral bleaching in 2021/22 – the first recorded during La Niña conditions.

While we've experienced a reprieve from severe bleaching over the past 12 months, we know there are tough times ahead for the Reef. The upcoming summer is expected to bring El Niño conditions, which generally means warmer ocean temperatures. Already in the Northern Hemisphere, devastating mass coral bleaching has occurred in Florida and parts of the Caribbean. Scientists are warning the Great Barrier Reef could be next as we head into the warmer months.

That's why the Great Barrier Reef Foundation has worked tirelessly to build an innovative conservation portfolio of projects in Australia and the Pacific. Our work is broad but falls under three overarching pillars: Restoring coral reefs, protecting ocean habitats, and working with Traditional Owners and communities.

This year, the Foundation continued to deliver significant impact. We've achieved breakthroughs in the world's largest R&D program to protect an ecosystem from climate change – the Reef Restoration and Adaptation Program.

We've pioneered advances in coral restoration techniques, innovative methods to improve water quality and improvements in detecting and controlling crown-of-thorns starfish.

The Foundation expanded its research and tourism partnership – the Coral Nurture Program – into the iconic Whitsundays, establishing new coral nurseries and planting thousands of healthy corals across three priority reefs in the area.

We worked with our partners in Ningaloo and Belize to launch world-first Resilience Strategies designed to help local communities tackle the impacts of climate change and other local threats, and the Foundation commenced Blue Carbon pilot projects designed to strengthen the regeneration and resilience of the Great Barrier Reef. With support from our partners, we began work with farmers to restore a coastal wetland and develop the Reef's first large-scale seagrass nursery.

Alongside these restoration activities, the Foundation continued to develop and pilot financial markets and instruments that will help create sustainable funding for Reef conservation projects into the future.

Our dedicated staff, partners, First Nations Peoples, frontline communities and supporters have continued to strive tirelessly for a better future for coral reefs, rising to each new challenge with passion and commitment. And it is with this same energy and determination that we embark on the coming year.

There will be setbacks, but the breakthroughs we're achieving throughout our conservation portfolio bring great hope that we can secure a better future for coral reefs. We will continue to fight for our Great Barrier Reef. Thank you for playing your part in 2022-23 and beyond.

David Thodey AO, Co-chair

Dr Martin Parkinson AC PSM, Co-chair

Anna Marsden, Managing Director

Our impact

Coral Health

290 million baby corals deployed on targeted reefs via Coral IVF in the 2022/23 spawning season

540 tonnes of nitrogen, **7,940K** Risk Units (toxicity) of pesticides and up to **222 kilotonnes** of fine sediment prevented from entering the Reef each year

50 gullies and **10 streambanks** rehabilitated to prevent sediment run-off

411,493 hectares of Reef habitat protected from COTS predation

Innovation

1,478 days at sea, with **800 days in-water**, to develop and test targeted solutions as part of the Reef Restoration and Adaptation Program

New robotic camera developed that uses computer vision and learning algorithms to detect and count individual coral babies and track their health and growth in real time

Began work with farmers to **reinstate a significant coastal wetland in the Great Barrier Reef catchment** to serve as a highly effective carbon sink. This is the largest blue carbon project in Queensland and will trial the first Blue Carbon Methodology to create high quality carbon credits

Biodiversity and habitat improvements

16.3 hectares revegetated on Lady Elliot Island (LEI), equating to over half the area planned for revegetation

31 native species stocked in the nursery on LEI, with capacity to stock and propagate **6,000 coral cay plants**

18 Reef Traditional Owners in first co-designed COTS Control leadership training program

17,243 seagrass seeds collected to restore more than **400 hectares** of seagrass meadows

Climate Action

Began construction on the first **large-scale seagrass nursery** that can unlock the science needed to support seagrass restoration at scale

Two Resilience Strategies launched at World Heritage Marine Sites, Ningaloo and New Caledonia, to help coral reefs and their communities in the face of climate change

First Nations and community

More than **4,880 Traditional Owners** from **49** of the Reef's over **70 Traditional Owner groups** engaged

Over **40,000 community engagements** contributing to reef protection action

590+ Traditional Owner youth participating in projects

1,000 training, education and outreach initiatives delivered through community projects to date

Restoring the world's reefs and helping them adapt to climate change

Climate change is the biggest threat to the survival of the Great Barrier Reef and coral reefs around the world. Warmer water temperatures are causing more frequent and severe mass coral bleaching events and forcing marine species to move to cooler habitats, disrupting food supplies and breeding cycles and threatening entire ecosystems.

Ocean acidification is making it more difficult for corals to build skeletons and form reefs, while more frequent and intense weather events like cyclones, flooding and storms are battering the reefs that remain.

A range of other local threats are impacting coral reefs around the world such as poor water quality, crown-of-thorns starfish outbreaks, unsustainable fishing practices and coastal development.

Reducing global emissions is no longer enough to safeguard coral reefs. We must also urgently scale global coral restoration efforts and help reefs adapt to climate change.

Over the past year we have scaled our efforts on the Great Barrier Reef, in the Pacific and in Belize, and grown our global network to support and deliver this critical work.

Resilient Reefs Initiative

Pioneered by the Great Barrier Reef Foundation, the Resilient Reefs Initiative (RRI) is a global partnership to support UNESCO World Heritage-listed coral reefs and the communities that depend on them to adapt to the impacts of climate change and local threats.

To do this, we build local capacity and partner on the design and delivery of solutions that build the resilience of coral reefs and their communities. This work is led and delivered by local governments and communities and informed by global experts and the best science available.

RRI's sites currently include four UNESCO World Heritage Marine Sites of incredible beauty and biodiversity – the Rock Islands Southern Lagoon of Palau, Lagoons of New Caledonia, Belize Barrier Reef Reserve System and the Ningaloo Coast in Western Australia.

As a result of their partnership with RRI, these World Heritage sites benefit from:

A better understanding

of both the threats and opportunities they face.

Engaged communities

that can support this work moving forward.

A pipeline of projects and clear plan of action

for mitigating risk and building resilience.

Greater local government capacity

to develop partnerships with global funders and innovators.

This year saw the launch of the first two site-specific Resilience Strategies, which aim to create a better future for these World Heritage Sites and their communities.

Case Studies

A whale shark at Ningaloo. Credit: Joel Johnsson

Community members were highly engaged in the development of the Resilience Strategy. Credit: Joel Johnsson

Helping the Ningaloo Coast adapt to climate change

In a world-first for any World Heritage Marine Site, we partnered with the Department of Biodiversity, Conservation and Attractions and local communities to develop a Resilience Strategy to help the largest fringing reef in the world face the impacts of climate change and other local threats.

Perhaps best known as one of the world's top spots to get up close with whale sharks, Ningaloo is also home to an incredible range of wildlife including endangered species like the loggerhead turtle, short-nosed sea snake and curlew sandpiper.

But like all reefs worldwide, Ningaloo is feeling the impacts of climate change. And despite its strong management and lack of coastal development, the water at Ningaloo is getting warmer, coral cover appears to be declining and coral bleaching is becoming more frequent.

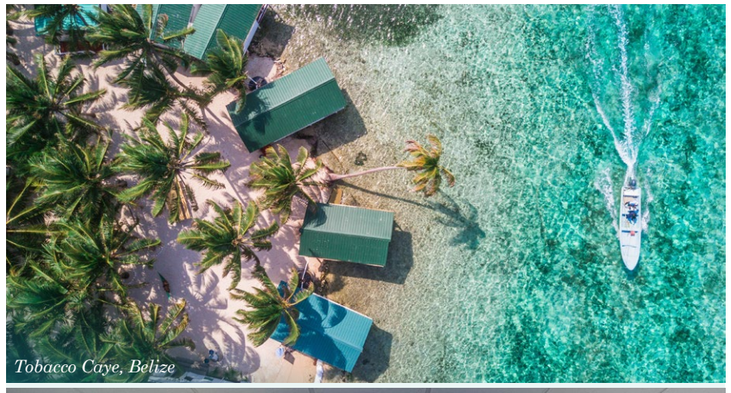
Traditional Owners and the broader community actively participated in developing the strategy, with almost one in every five residents contributing to its development. This level of support and engagement is unprecedented.

The result is a strategy that highlights the strengths of the region as well as the growing threats it faces. It also provides the vision for how the community and reef can better prepare for the impacts of climate change, addresses local threats and identifies opportunities for building a more adaptive management approach.

Ambitious strategy unveiled in Belize

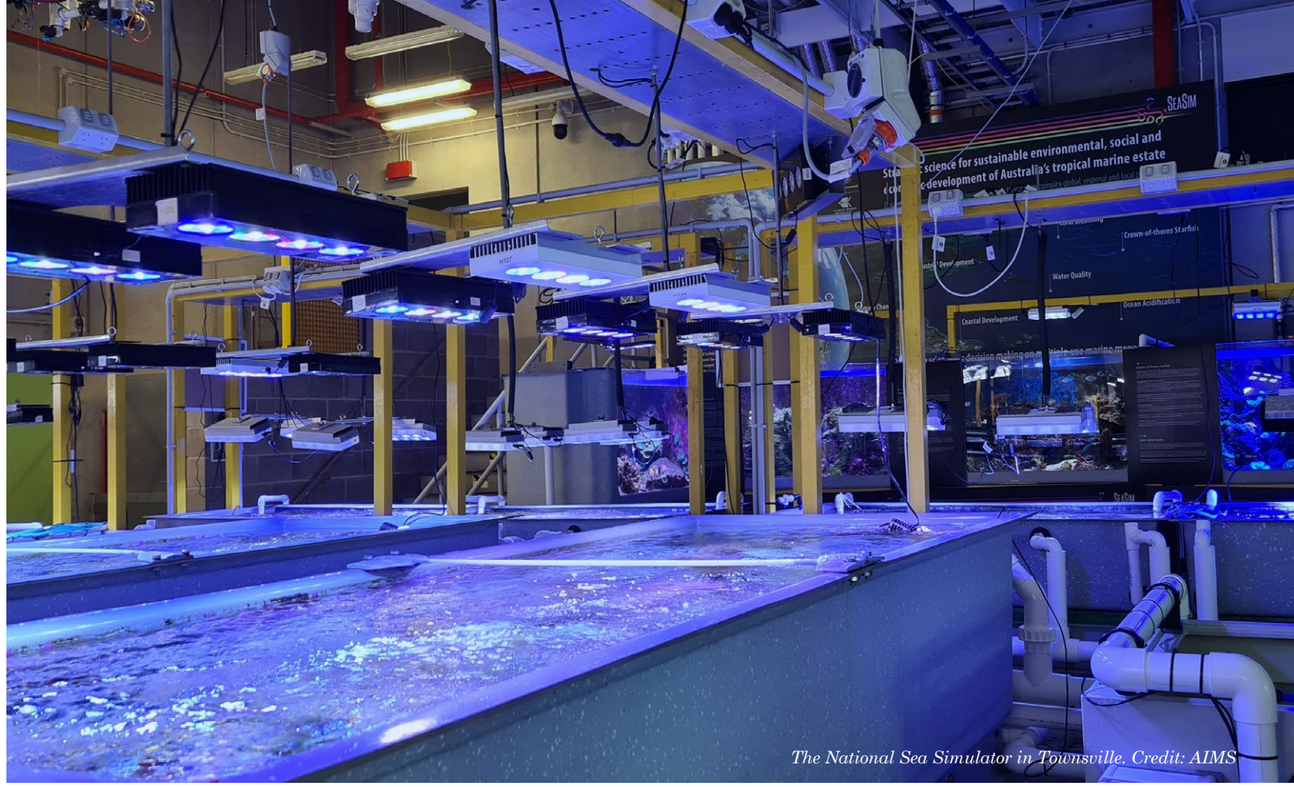
The Belize Barrier Reef Reserve System is home to over **1,400 species** of plants and animals including sea turtles, manatees and hundreds of species of corals.

It's also an important source of livelihoods for local communities, with almost half the population supported by incomes generated through the reef, mainly via tourism and fishing. We worked with the Government of Belize, the Coastal Zone Management Authority and Institute, and local communities to design a strategy to safeguard the future of this UNESCO World Heritage-listed reef from the impacts of climate change. It focuses on tackling the threats facing the reef such as the impacts of coral disease and climate change, rapid coastal development, and an overreliance on reef resources for people's livelihoods.



Tobacco Caye, Belize

Belize launched its Resilience Strategy in April 2023. Credit: Amy Armstrong



The National Sea Simulator in Townsville. Credit: AIMS

Reef Restoration and Adaptation Program

Funded through the partnership between the Australian Government's Reef Trust and the Great Barrier Reef Foundation, this program is enabling the acceleration of the critical research and development needed to design and test novel solutions to protect coral reefs and help them adapt to the impacts of climate change. This will form a new toolkit that will allow reef restoration and adaptation science to be scaled up like never before.

Local efforts, global outcomes

In its fourth year, the critical mission of the Reef Restoration and Adaptation Program (RRAP) remains to provide solutions to decision-makers, so they can better help the Great Barrier Reef and other coral reefs survive in the decades ahead.

Emissions reduction is essential, but alone will not safeguard the Great Barrier Reef and coral reefs around the globe, as the ocean warming to date has already caused substantial damage and further warming is locked in. New management options to prepare for a warmer future are needed.

RRAP, as a consortium of leading Australian marine science organisations, universities and Traditional Owners, is accelerating towards a ready-made toolkit of scientifically proven, ecologically effective, technically feasible, and economically viable solutions for intervening at scale on the Reef. These include solutions that can protect existing reefs, like novel engineering techniques to cool and shade entire ecosystems, building large-scale coral propagation and production systems, and addressing the fundamental coral and reef ecology knowledge-gaps that underpin best practice restoration efforts.

This year has seen an enormous contribution to global reef restoration and adaptation know-how and understanding on the part of over **350 researchers**, who've collectively spent the equivalent of **1,478 days at sea** and more than **800 days in water**, to develop and test solutions.

After four years of research and development and large in-water trials, RRAP is now ready to begin a period of pilot-scale deployments, which will road-test the capacity and capability to deliver millions of new resilient corals onto the Reef each year.

Case Studies

Data-driven decisions for effective reef restoration

We're focused on breaking through the scientific and engineering bottlenecks and knowledge gaps that currently limit the size and scale of global reef restoration efforts.

Over the last year, we have made essential scientific, technological, process, and management breakthroughs to allow for scaling of coral seeding and reef restoration, paving the way for larger coral deployments in-water from 2025-2030. Yet, as we look to future deployments, smart and efficient decision-making, with the best possible outcomes, is critical.

Providing the backbone for the how, when, and why of effective restoration are our ecological intelligence efforts. Our customised monitoring tools like 3D photogrammetry are now able to capture ecological information across enormous spatial scales – from millimetres to kilometres. For the first time in coral reefs, the technique is being used to collect new insights on coral biology and track this over time. These tools will also be used to monitor the success and ecological benefits of future deployments.

Ecological intelligence teams have also been addressing critical knowledge gaps in understanding coral growth and survival, especially in their vulnerable early life stages. Data on coral interactions with algae and fish, temperature tolerance, and improved estimates of larval production from reefs and connectivity to neighbouring reefs, are helping us to identify sites and regions that yield the greatest benefits for the Reef, and therefore prioritise future reef restoration.

Using this data, this year has also seen us integrate a range of existing, new, or improved predictive models. These models were used to help us understand the potential benefits, costs, risks, and uncertainties of our restoration efforts, and support strategies that maximise the likelihood of successful outcomes being realised through our restoration efforts.

Reef Mapping. Credit: Ian McLeod, AIMS

Mapping field work. Credit: Marie Roman, AIMS

Collecting genetic samples. Credit: Iva Popovic

Game-changing robotics to grow new corals at meaningful scale

Growing large numbers of healthy corals – known as coral propagation – has the potential to change the face of reef conservation, helping to deliver millions of corals back into the wild and restore our Great Barrier Reef.

It's critical that researchers can track the numbers, growth and health of these baby corals, grown in special aquarium tanks on land, before deploying them out onto the Reef. During this process of baby coral propagation, counting and monitoring has previously been done by hand, which is time-consuming and labour intensive.

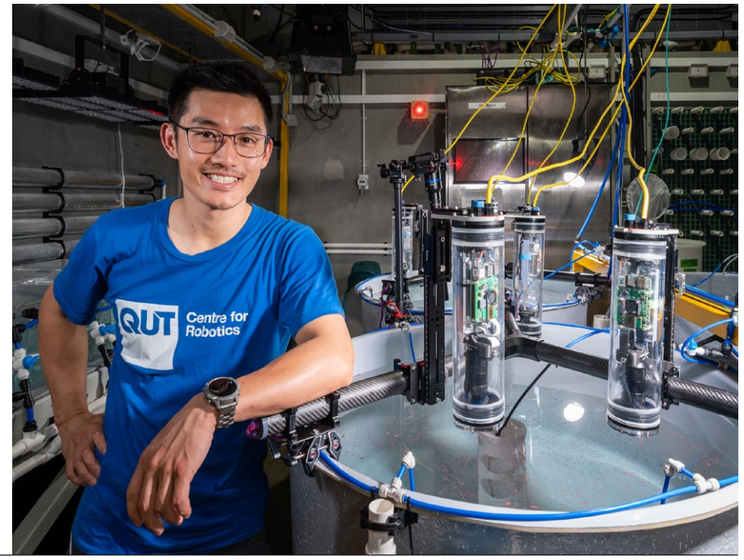
Now, a new engineering solution is lending an automated hand. Teams from RRAP, with research led by QUT, have successfully trialled game-changing coral counting technology, to be used during annual coral spawning events.

The technology includes a prototype robotic camera that uses computer vision and learning algorithms to detect and count individual coral babies and track their health and growth in real time. It will provide coral researchers with unprecedented levels of control in mass-producing corals.

Lead researcher Dr Dorian Tsai says that one of the most significant advantages of the system is that because it uses contact-free cameras, researchers can now count fragile day-old babies for the first time.

Additionally, the low-cost and modular technology will enable restoration solutions for wider reef communities around the world, creating a scalable and reliable product that can be used with minimal training.

R&D breakthroughs like this coral counting system are providing the critical step change that is needed to achieve impact at scale and provide real hope for our Reef.



Dr Dorian Tsai and his Coral Spawn and Larvae Imaging Camera Systems, which captures images of tiny coral spawn. Supplied: Dorian Tsai

Protecting ocean habitats

Globally, we know there can be no healthy oceans without healthy reef ecosystems – they are a nursery for over a quarter of all marine life.

We must conserve and protect our critical ocean habitats, from the islands and seas that support some of the highest biodiversity on the planet, to our coastal ecosystems that protect our coasts and store vast amounts of carbon.

Our work on the ground and in the water to protect ocean habitats is supporting a future for these diverse and unique habitats and the animals that rely on them for shelter, food, safety and breeding grounds.

Initial field demonstration of new COTS surveillance technology.

Robotics help detect coral-eating starfish

One of the most significant threats facing the Great Barrier Reef is crown-of-thorns starfish (COTS) outbreaks. During an outbreak, this coral-eating starfish can strip a healthy reef of 90% of its corals.

To protect corals from the devastating consequences of these outbreaks, we're out on the Reef every day taking action against these coral predators. We're also researching and developing cutting-edge technologies to better predict, detect and respond to COTS outbreaks.

We do this because every coral we save from COTS can reproduce and help repopulate damaged areas, boosting our Reef's ability to recover from the impacts of climate change.

Case Studies

Crown-of-thorns starfish feeding on coral

Smart robotics for COTS detection

The COTS Control Innovation Program (CCIP) is improving on-ground efforts to control predatory crown-of-thorns starfish outbreaks and protect corals.

This year, the program pioneered the development of new methods for COTS surveillance and monitoring, including eDNA techniques that detect the presence of COTS DNA in the water, and smart robotics technology that scans the Reef and detects starfish using real-time artificial intelligence.

These methods are being refined by researchers from AIMS and CSIRO, working in partnership with management end-users to ensure the tools are practical and fit for purpose. In 2023-2024, these tools will continue to be developed, alongside analyses that demonstrate how this new data can be used by the COTS Control Program.

The red decorator crab feeding on tiny pink juvenile crown-of-thorns starfish in a laboratory experiment. Credit: Kennedy Wolfe, UQ

Tiny predators targeting COTS

CCIP has discovered 29 new reef species that feed on crown-of-thorns starfish when they are young and therefore most vulnerable.

In a study led by the University of Queensland, a team conducted more than 500 aquarium trials and tested over 100 potential predators, including species of crabs, shrimp, worms, snails and small fish. Researchers identified the red decorator crab, Schizophyrs aspera, as a voracious predator that consistently consumed more than five juvenile COTS per day and chose to eat the starfish even when it was presented with other prey options.

Collaborators at AIMS developed an eDNA technique to detect the consumed starfish in the guts of the crabs and ongoing research will now assess the potential to use these crabs as an early warning indicator of developing outbreaks.

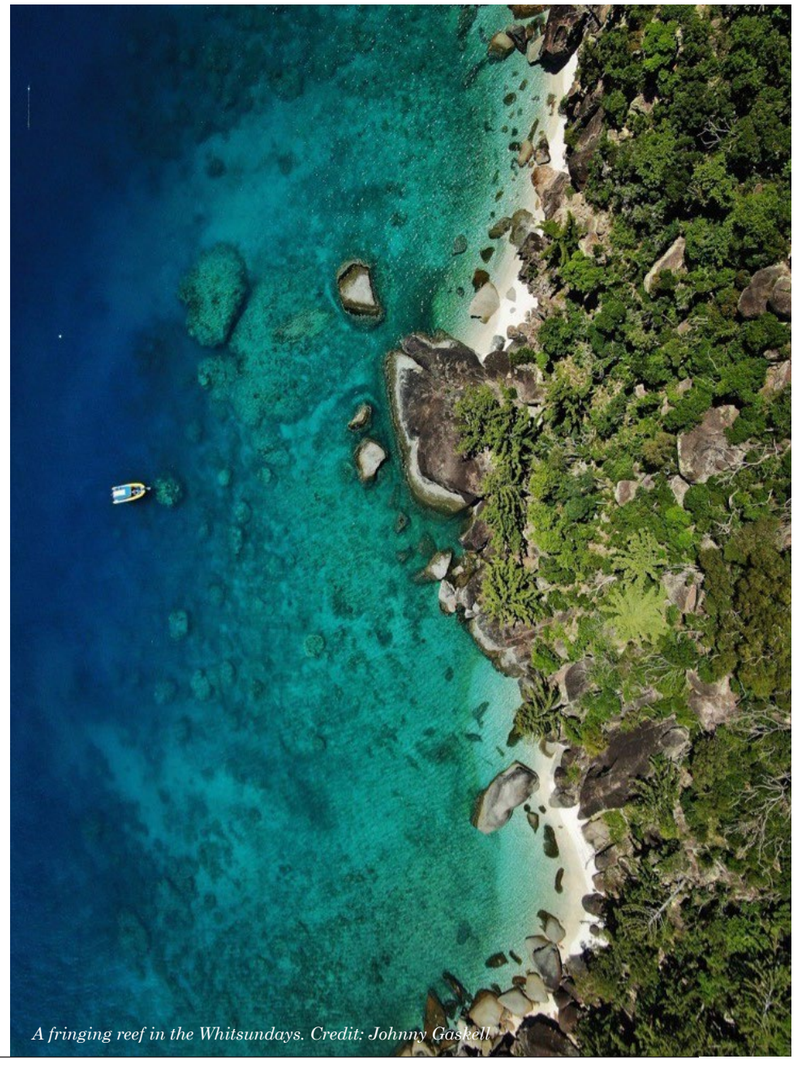
These discoveries lend exciting new insight into the role of predators in managing the abundance of the coral-eating starfish and offer potential tools for outbreak management.

Reef Islands Initiative

As climate change and local threats continue to build, islands and their adjoining reefs are likely to play an increasingly important role as habitat refuges for diverse and vulnerable wildlife populations.

Through the Reef Islands Initiative we are working to establish a network of climate change refuges to protect critical habitats on the Reef. This $14m, 10-year program is the largest reef island habitat rehabilitation project of its kind in the Southern Hemisphere.

It combines science and Indigenous Traditional Knowledge to build resilience in reef island habitats. These islands provide land and water for wildlife to rest, feed, shelter and breed, and they can't be allowed to fail.



A fringing reef in the Whitsundays. Credit: Johnny Gaskell

Restoring reefs in the Whitsundays

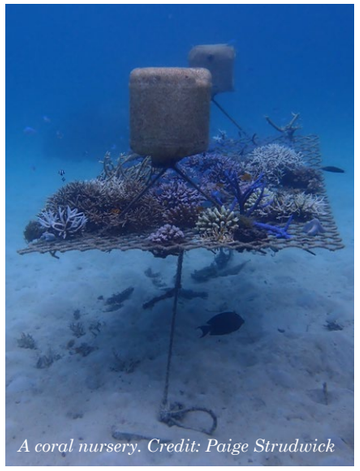
It's been a busy year for coral restoration in the Whitsundays, with a broad reach of local stakeholders now engaged in on-ground action.

The Coral Nurture Program was launched in the Whitsundays, with nine coral nurseries installed across three priority fringing reef sites.

An early monitoring program was established to collect valuable data on survivorship of newly planted corals. Initial data revealed survival rates were highest at Black Island and Luncheon Bay.

Boats4Corals 2022 field work was a success, with three Whitsunday tourism operators partnering with Traditional Owners and scientists during the annual coral spawning to capture an estimated 92 million spawn in nursery pools.

Once the baby corals were ready, they were deployed to priority sites to help restore damaged areas and reestablish breeding populations.



A coral nursery. Credit: Paige Strudwick

Boats4Corals restoration activities. Credit: Johnny Gaskell

Global collaboration in action

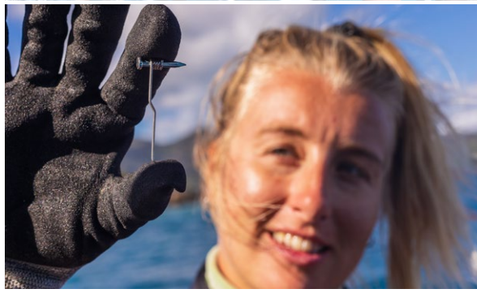
The Great Barrier Reef Foundation joined reef managers from around the world in the first ever international day of collaborative action to help restore key coral reef sites.

Coralpalooza™, created by Florida-based Coral Restoration Foundation™, took place in 12 countries on 10 June 2023 in honour of World Oceans Day. With our partner, the Coral Nurture Program, we contributed to this global effort by planting corals at sites in Port Douglas, Cairns and the Whitsundays.

Coral Nurture Program is a collaboration between marine scientists and the tourism industry to research and deliver local reef restoration on key reef sites on the Great Barrier Reef.

On the day, the program had over **45 divers** out on the Reef who planted **4,000 coral fragments**.

Local tourism operators and researchers from the University of Technology Sydney were out in force planting coral fragments using the innovative CoralClip® – a Queensland invention that allows corals to be planted quickly and with good survival rates.



Top: Coralpalooza with Down Under Dive in Cairns. Credit: Shannon Myers. Above: A CoralClip® used to attach coral fragments to the Reef.

Blue carbon

The health of coastal ecosystems like seagrasses, mangroves and tidal marshes along the length of the Reef is in decline due to the impacts of land-based pollution and the increasing severity of storm events.

Despite the intrinsic value of these ecosystems to the biodiversity of the Reef, coastal habitats typically receive far less focus and investment than their coral reef neighbours. This year the Foundation commenced its blue carbon program, which aims to restore these coastal habitats to:

- Maintain the integrity of critical habitats and food sources for threatened species such as sea turtles and dugongs
- Build the capacity of local Traditional Owners by engaging them in coastal conservation programs
- Unlock the role these ecosystems play as carbon sinks, absorbing carbon from the atmosphere and helping to mitigate the impacts of climate change

The main objective of the first three years of the program is to pilot two on-ground projects that will test barriers to current blue carbon activities, and trial new approaches for protecting and restoring ecosystems.

Top: Seagrass is an important food source for dugongs.
Above: A seagrass sample.

Mangroves are key blue carbon ecosystems.

Case Studies

Restore Coastal Wetlands

We began working with farmers to reinstate a significant coastal wetland in the Great Barrier Reef catchment.

This is the largest blue carbon project to date in Queensland and is designed to capture and store carbon and deliver multiple ecosystem benefits including improving water quality, supporting biodiversity and building the resilience of coastal habitats in the face of climate change.

The first site was selected and we worked with the landholders to formulate a restoration plan, identify barriers and formulate possible solutions. The next step in this pioneering work is to develop a detailed project plan outlining implementation.

Part of the tidal wetland selected for restoration. Credit: Molly McShane, TropWATER

SeaGROW

Seagrass meadows reduce the impact of catchment run-off, provide breeding grounds for fish and shellfish, as well as capturing and storing carbon.

The creation of a seagrass nursery will help unlock the science needed to support seagrass restoration at a scale that makes a meaningful difference. It also supports a healthier marine ecosystem, increases blue carbon capture and fosters long-term job creation.

Construction of the world's first Traditional Owner-operated seagrass nursery along the Reef has commenced. In partnership with leading seagrass researchers and Traditional Owners of the Reef, the nursery will act as a demonstration site for seed-based seagrass restoration, developing and trialling innovative new methods for scaling seagrass, testing voluntary carbon methods and creating Traditional Owner business opportunities.

Collecting seagrass flowers to harvest seeds for restoration work.

Traditional Owners from Gidarjil Development Corporation are working with researchers at SeaGrow.

This year we collected **17,243 seagrass seeds** to restore more than **400 hectares of seagrass meadows**. These pilot projects will develop new knowledge and innovations to help tackle the impacts of climate change.

Seagrass meadows provide critical habitats and food for marine creatures, and store vast amounts of carbon.

Healing Country with First Nations Peoples and community

For thousands of years, Indigenous Peoples have cared for the environment using Traditional Knowledge passed down through generations. And although Indigenous Peoples make up only about 6% of the world's population, they protect 80% of the biodiversity left on Earth.

Juunjuwarra Rangers, Norma Jacko and Tiara Darkan, using their training in water quality monitoring as part of the Eastern Cape York Program. Credit: Cape York Water Partnership

Walking in step with Traditional Owners

The Great Barrier Reef is one of the most complex natural ecosystems on Earth, with deep cultural significance for Aboriginal and Torres Strait Islander Peoples. Traditional Owners hold inherent rights to the Reef and have successfully cared for their land and sea Country since time immemorial.

Every day, we see incredible leadership from Traditional Owners using their voices, actions and cultural knowledge to care for Country and protect the Reef. Through the Reef Trust Partnership, we are engaging with 49 of more than 70 Traditional Owner groups along the Reef and its catchments, and are deeply committed to supporting and enabling Traditional Owner aspirations for caring for Country.

Case Studies

New pathways for Cape York Traditional Owners

In eastern Cape York, an innovative partnership with Traditional Owner groups has brought new skills and job opportunities to the region's Traditional Owners, while also improving water quality outcomes.

The Eastern Cape York Water Quality Program brought together a diverse group of stakeholders including scientists, land managers and Traditional Owners to address local water quality problems by reducing sediments that flow out to the Reef. Four organisations – the Cape York Water Partnership, South Cape York Catchments, South Endeavour Trust and Yuku Baja Muliku – worked to quantify the sources of sediment, demonstrate the efficacy of work to date, and develop best management practices to minimise erosion.

The projects are already showing positive results in the reduction of sediments reaching the Reef. Crucially, the program has established formal relationships with Traditional Owner groups including Yuku Baja Muliku, Daarrba Land Trust, Jabalbina Yalanji Aboriginal Corporation, Cape Melville, Flinders & Howick Islands Aboriginal Corporation, Juunjuwarra Aboriginal Corporation, Gamaay, Waymburr, Ngaatha, and Gulaal.

Through these relationships, Traditional Owners have gained a diverse set of skills including water quality and ecosystem monitoring, drone operation, safe fire management, track erosion mapping and on-ground restoration work. On a personal level, they've been empowered to teach and mentor their peers, manage projects and write reports. These skills are shaping a future where groups can move from being support staff to independently leading their own projects.

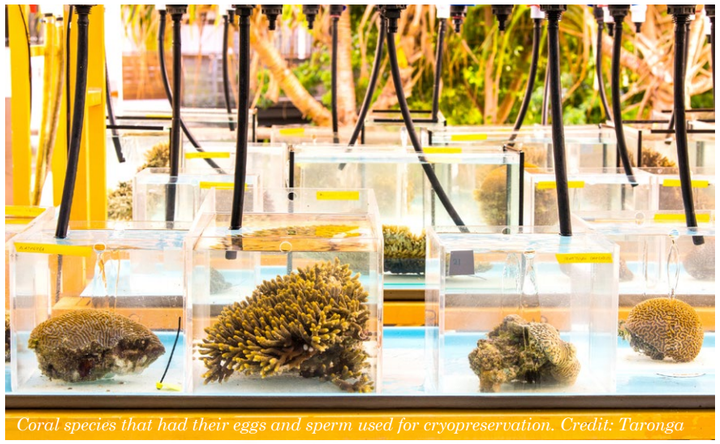
Practical fire training in the Eastern Cape York Program has enabled many Traditional Owners to be accredited under the national scheme. Credit: South Cape York Catchments

Culturally safe coral biobanking on sea Country

For the first time, cultural practice and procedure has been sought and followed for the transfer of living coral samples for cryopreservation, paving the way for best practice both here on the Great Barrier Reef and across other reef sites.

Cryopreservation projects in RRAP involve the culturally sensitive practice of collecting and transporting cryopreserved coral to Taronga's CryoDiversity Bank on Cammeraygal Country (Sydney), to be cared for in specialised facilities until it is needed for future reef restoration initiatives and research.

Culturally, the coral samples always remain a part of the Country from where they were collected, even while located and stored on another group's Country.



Coral species that had their eggs and sperm used for cryopreservation. Credit: Taronga

If cultural protocol is not followed, then the transfer of this living material will be culturally unsafe for First Nations people from both the sea Country of origin and the Country on which the material is stored.

The development of these cross-cultural biobanking procedures followed discussions and collaboration between Woppaburra Traditional Owners, scientists and First Nations staff from Taronga and AIMS, the Taronga Aboriginal Advisory Group and Traditional Owner representatives from the Sydney region where the CryoDiversity Bank is located.

This first step will form the basis of culturally safe biobanking of coral samples from Great Barrier Reef sea Countries to support reef restoration and adaptation efforts, and help to ensure that these valuable samples retain their links to Country in perpetuity.

Local Reef communities drive action

Passionate organisations and individuals along the length of the Reef and its catchments have worked tirelessly this year to deliver on-ground actions that reduce reef threats and increase reef resilience.

Collaboration at Moore Reef

The Cairns-Port Douglas Hub brought together a diverse group of partners to design and trial a monitoring program for a new assisted coral recovery technique.

The method uses new coral cradles engineered by AIMS to improve the survival of young corals when they're deployed onto the Reef. RRAP scientists from CSIRO and AIMS taught local partners including Gunggandji Traditional Owners, GBR Biology, Reef Restoration Foundation and James Cook University's TropWATER how to deploy and monitor the cradles, and deepened their understanding of coral recruitment patterns.

The local partners have been monitoring the baby corals to understand how effective the cradles are in rubble habitats and collecting data throughout 2023 to help inform decisions about future deployment activities.

Divers installing coral seeding devices. Image credit: Matt Curnock

Young Reef champions

School students around Australia laced up their running shoes to raise critical funds for our Reef.

This year, students from **93 schools** participated in colour explosion fun runs to raise money for our Plant a Coral campaign. Together, they raised enough to plant more than **42,000 corals** – almost four times as many as last year. The colour runs, hosted by Australian Fundraising, are a great way for kids of all ages to have a real impact on our Reef.

Milton State School students raise money to support the Foundation's Plant a Coral campaign with Australian Fundraising.

Statement of Financial Results for the Great Barrier Reef Foundation

For the year ended 30 June 2023

	FY23 ($)	FY22 ($)
Revenue		
Government grants	106,728,032	81,902,097
Grants	6,601,857	5,051,581
Philanthropy	1,963,292	2,279,865
Interest*	7,530,657	6,345,942
Other	660,035	565,081
Total	**123,483,872**	**96,144,567**
Expenses		
Programs investment	113,051,959	84,945,233
Fundraising	2,377,496	2,208,014
Administration & governance	2,849,557	2,704,289
Communications & engagements	1,365,703	1,576,962
Depreciation & amortisation	348,532	345,856
Total	**119,993,247**	**91,780,354**
Surplus for the year	**3,490,625**	**4,364,212**

FY23 Results

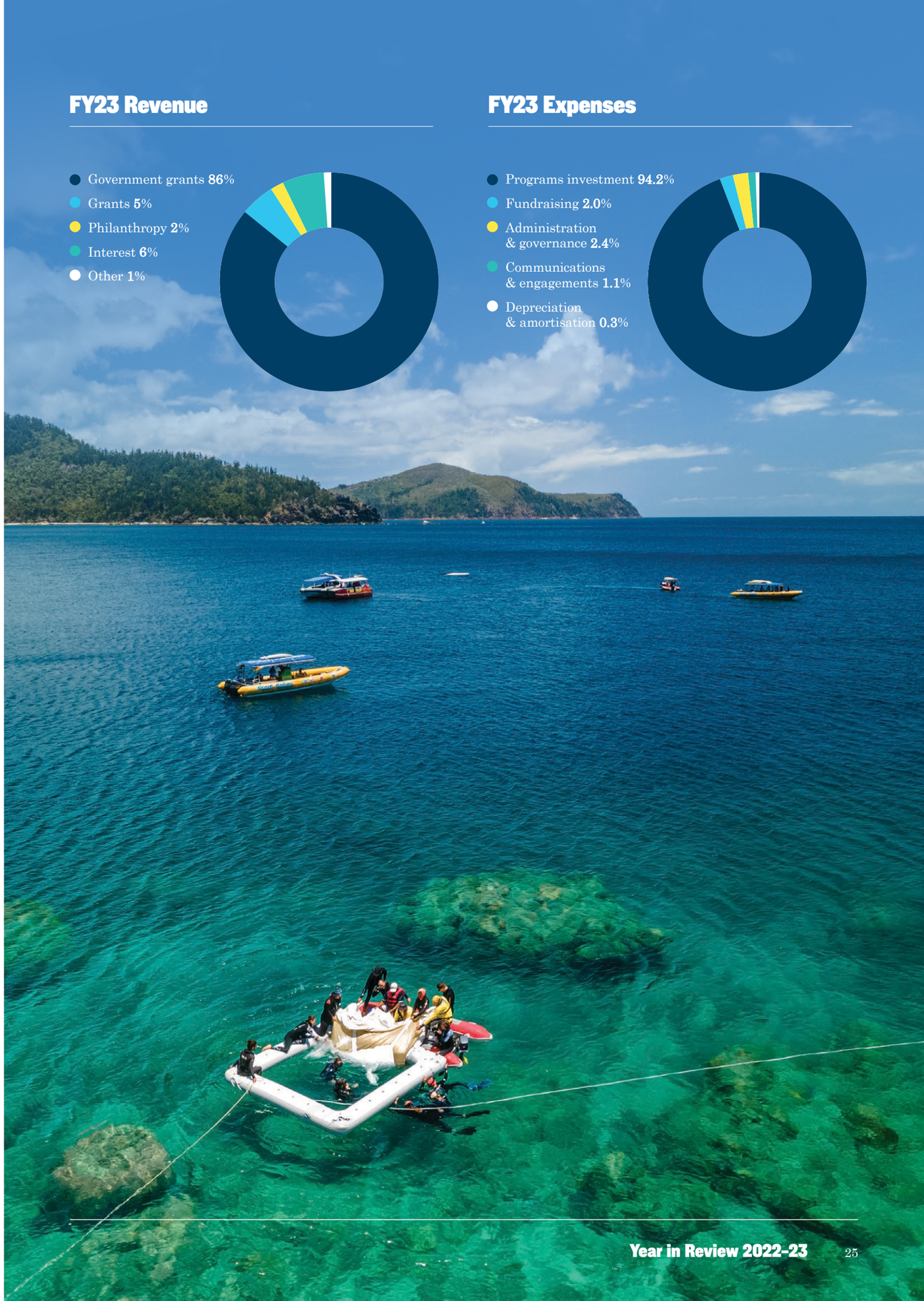
In FY23 the Foundation achieved an operating surplus of $3.5M, $2.8M of this surplus represents funds received during the year restricted for use on priority programs to be delivered in the coming years.

Government-funded initiatives such as the RTP program and the Reef Island program continued to constitute the primary focus of our program investment in FY23 and are projected to remain prominent in FY24.

Our strong financial results, supported by strategic investments and targeted funding allocation, position us well to sustain and expand our impact in safeguarding and restoring the reef ecosystem.

This annual report underscores our dedication to transparency, responsible financial governance and environmental stewardship.

* The Foundation is required to generate interest from funds held in advance for the RTP to fund administration costs as outlined in RTP Grant. In its fifth year delivering the Reef Trust Partnership (RTP), the Foundation accessed $7.2M of this restricted interest.



Thank you for your support

Australians and supporters around the world have rallied behind the Great Barrier Reef, showing their passion and commitment in myriad ways from the school yard to the boardroom. Every one of our passionate supporters has generously contributed towards our shared vision of turning the tide on coral reef decline and safeguarding our precious natural wonder.

Our achievements this year, and every year, are only possible thanks to our dedicated family of project partners and supporters.

Hundreds of individual donors signed up to Plant a Coral, while everyday Australians, volunteers and supporters from around the world showed their passion on social media and at local events to help unlock critical funding for the Reef.

We received over $2m in donations from our major donors in Australia and the US, who were crucial in enabling us to replant seagrass meadows, support Traditional Owner-led conservation on the Reef, and scale our cutting-edge reef restoration and adaptation technologies. This included generous support from Oceankind, ICONIQ Impact's Ocean Co-Lab, Norman Family Foundation, Ferris Family Foundation, Paul M. Angell Family Foundation and Kissick Family Foundation.

In the corporate sector, our wonderful partners including Coles, Lendlease, Life-Space, XXXX, Qantas, Sankari, oOh! Media, YouTube, AECOM, QIC and the BHP Foundation continued to provide their capital and capability to help protect the Reef. In addition to their investment in on-ground and in-water programs, each of these partners elevated awareness amongst their staff and customers about the challenges facing the Reef, the great work being done by so many, and the role everyone can play to help ensure a future for coral reefs.

It's only through the collective impact of so many, that we can succeed in this critical decade for coral reefs.

Thank you for your critical contributions – they enable us to keep fighting for the survival of our Great Barrier Reef.

2022/23
Year in Review

Great Barrier
Reef Foundation