Burdekin Community Action Plan Project Prospectus

NQ DRY TROPICS

Australian Government

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Great Barrier Reef Foundation

Reef Ecologic
For a better planet

Building reef resilience in the Burdekin Dry Tro

About this document

This prospectus contains a selection of projects developed by local communities that offer investors an excellent opportunity to support efforts to improve the health and resilience of the Great Barrier Reef (GBR). Each proposed project would be led by a local community group, supported by a range of collaborators.

We invite you to reach out to any of the community group project leads listed in this document to learn how an investment could result in positive outcomes for the GBR.

About the Burdekin Dry Tropics region

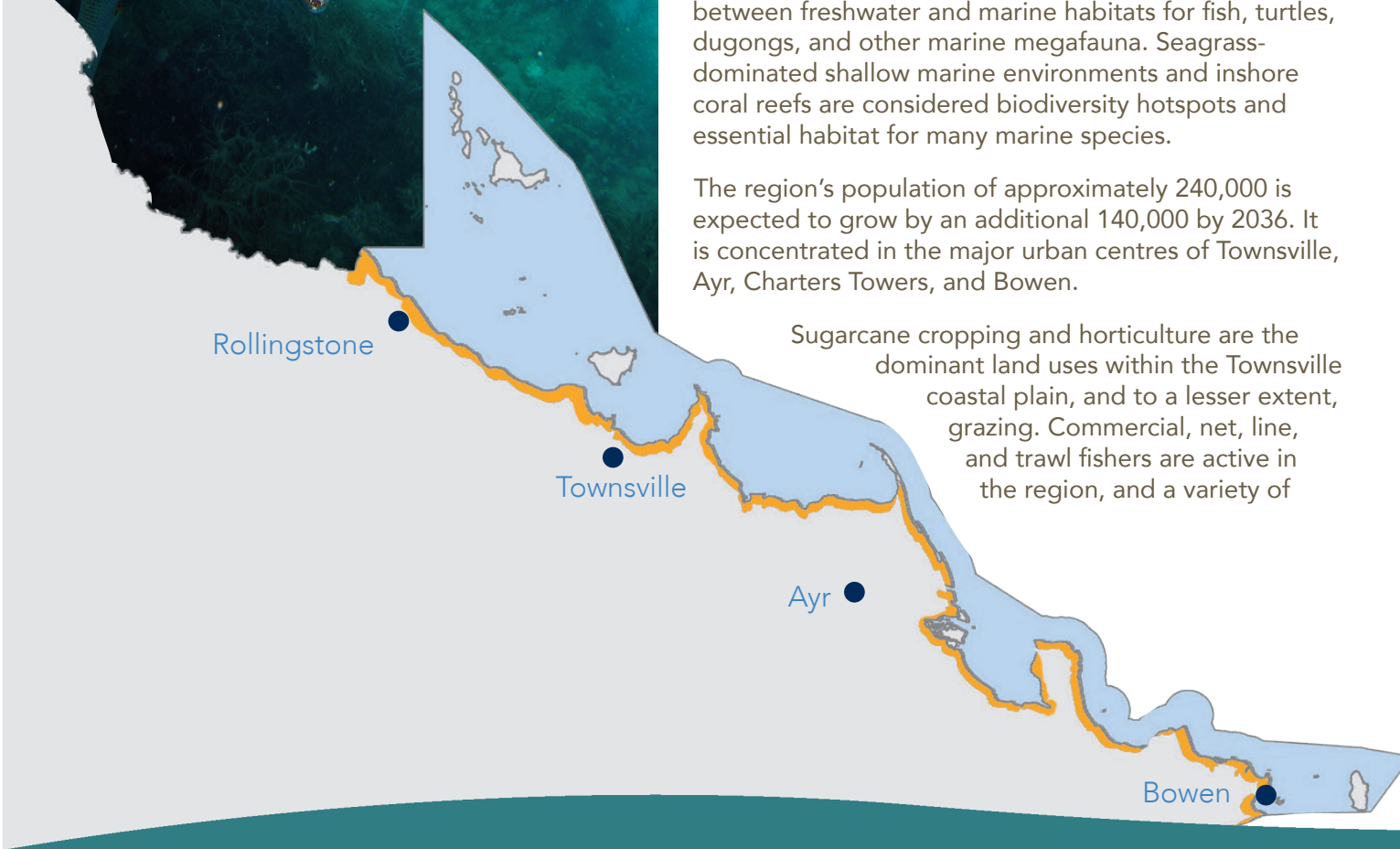
The Burdekin River is one of Australia's most important waterways, and a gateway to the Great Barrier Reef (GBR) World Heritage Area. Flowing into the Coral Sea at Upstart Bay, it has a catchment area of approximately 130,000km^2.

The Burdekin Dry Tropics coastal and marine area is dominated by the GBR, and a number of critically important wetlands, including internationally-recognised Ramsar-listed Bowling Green Bay National Park.

The region's coastal ecosystems are important links between freshwater and marine habitats for fish, turtles, dugongs, and other marine megafauna. Seagrass-dominated shallow marine environments and inshore coral reefs are considered biodiversity hotspots and essential habitat for many marine species.

The region's population of approximately 240,000 is expected to grow by an additional 140,000 by 2036. It is concentrated in the major urban centres of Townsville, Ayr, Charters Towers, and Bowen.

Sugarcane cropping and horticulture are the dominant land uses within the Townsville coastal plain, and to a lesser extent, grazing. Commercial, net, line, and trawl fishers are active in the region, and a variety of



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businesses, government, and community groups use coastal areas for industrial and recreational purposes.

Nywagi, Manbarra, Wulgurukaba, Bindal, and Juru Traditional Owners of sea country have the longest and deepest connection with the coastal region's natural resources, and play an important role in protecting them for future generations.

Developing the Community Action Plan

The Burdekin was one of five coastal regions along the GBR shoreline tasked with developing a Community Action Plan. Each plan aimed to engage local communities in strategically planning, implementing, monitoring, and celebrating actions to increase reef resilience in alignment with the Burdekin Dry Tropics NRM Plan.

The Great Barrier Reef Foundation engaged NQ Dry Tropics to develop the Burdekin Community Action Plan, in partnership with Reef Ecologic. The process used the Open Standards for the Practice of Conservation to develop projects that would help protect the GBR in the long term.

Workshops held at Townsville and Ayr supported Traditional Owners, coastal and marine community groups, young people, management agencies, natural resource management groups and local councils to collaborate and develop "roadmaps" for change. Community groups identified biological attributes across the GBR and associated coastal zones as "values" in need of protection. Significant pressures to these values were identified and categorised based on the IUCN Threat Classification scheme. During the situation analysis stage, human behaviors that contributed to pressures on values were identified and then shaped into roadmaps for change.

The projects

The pilot projects included in this prospectus use the roadmaps for change as a basis to develop projects to deliver long-term benefits. These projects are broadly supported by local community members and groups, Traditional Owners, conservation groups, relevant local and state government agencies, and other stakeholders.

Should they be funded, these community-driven projects would improve the condition and extent of biological values of the Great Barrier Reef, and deliver environmental, economic, and cultural benefits.

Four priority projects:

1. Improving Nesting Success for Sea Turtles at Cape Upstart in Abbot Bay:
   An integrated management program that protects turtle nests and reduces threats.
2. Upstart Bay Marine Megafauna Protection:
   A citizen science project to protect turtles, sawfish, dugongs, and other marine megafauna at Wunjunga Beach.
3. Community Wetland Restoration at Parker's Lagoon:
   A project focused on community plantings, weed management, and education at a wetland in Ayr.
4. Mundy Creek Natureway Regeneration Project:
   Improving the condition and extent of riparian networks in Townsville through community events and strategic partnerships.

Improving nesting success for sea turtles at Cap

This project aims to reduce impacts of feral predators on sea turtle nests Cape Upstart Beach in Abbot Bay, a known nesting "hotspot" in the Great Barrier Reef area.

Background and project information

Former cattle property Cape Upstart Station is the site of a privately-funded environmental restoration project on 4400 hectares, including 7km of turtle nesting beach.

Situated between two national parks with an additional 3km of beach, it includes endangered native beach scrub, and seasonal wetlands attracting more than 200 species of birds.

A survey conducted by the World Wildlife Foundation (WWF) in 2015 identified the Cape Upstart beach front as a flatback turtle "nesting hotspot", but also found evidence of feral predators (mainly pigs) near the nesting tracks.

Feral pigs' keen sense of smell allows them to locate buried turtle nests and subsequently dig up and consume their contents.

Reports suggest they are responsible for destroying up to 90 per cent of nests in some locations.

Other feral predators such as dogs and foxes are being controlled on the station, and adjacent National Park estates, by Queensland Parks and Wildlife Service.

Integrating existing pest management activities with a pilot pig trapping program would restore the balance of natural predation, giving the turtles a much better chance of reproducing on this beach.

Station staff would undertake nesting and predator track surveys using a drone during the start of nesting season to monitor the impact of these pest management activities.

Whitsunday Catchment Landcare

The project would be led by Whitsunday Catchment Landcare (WCL), which has delivered landcare activities in the Whitsunday region for more than 20 years.

Landcare staff and volunteers would undertake on-ground monitoring, and CSIRO staff would make available state-of-the-art artificial intelligence to geolocate the predator tracks.

This information would support WCL's efforts to install nest protection devices (in part, supplied by WWF).

If successful, this project would serve as an example of local communities using integrated pest management to support turtle nesting success along the Great Barrier Reef coast.

pe Upstart in Abbot Bay

Whitsunday Catchment Landcare

Project Lead

Whitsunday Catchment Landcare

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Key Activities:

- Community surveys (turtle nesting and feral predators).
- Train community members to survey for turtle nesting, and input data into a database to share with regulators.
- Build and install nest protection devices.
- Implement feral pig control through bait trapping.
- Measure the reduced impact of feral animals on turtle nesting at Cape Upstart.

Project Outcomes:

- Increased sea turtle nesting success at Cape Upstart Beach and Abbot Bay.
- Community participation in monitoring and on-ground activities.
- Reduced impact of feral predator population at Cape Upstart.

Long-term Outcomes:

- Increase in marine turtle population at Abbot Bay.
- Co-benefits to the terrestrial ecology of Cape Upstart (including endangered beach scrub) from controlling feral animal populations.
- Community stewardship for endangered species.

Indicative budget

- $72,000 annually, with $19,000 worth of in-kind support

Implementation partners:

Whitsunday Catchment Landcare, Cape Upstart Station, Department of Environment and Science — Queensland Parks and Wildlife Service, Commonwealth Scientific and Industrial Research Organisation, Great Barrier Reef Park Marine Authority, and World Wildlife Foundation.

Upstart Bay Marine Megafauna Protection

This is a *Citizen Science* project aiming to improve the current and long-term outlook for marine megafauna at Cape Upstart Bay, by establishing an accessible community monitoring and reporting system.

Background and project information

Cape Upstart Bay is a protected area for dugongs, frequented by endangered sawfish, as well as being a nesting and feeding ground for marine turtles.

This project would support the small community of permanent residents at nearby Wunjunga to monitor and report on megafauna activity and incidents on local beaches.

Project activities would include developing a phone application (for iOS and Android phones) that will be used to report all strandings and nestings, and automatically notify appropriate stakeholders or authorities; installing signage to promote the app and raise awareness of megafauna activities.

Wunjunga's residents are well-placed to monitor and report megafauna strandings, turtle nesting, and other incidents along the largest beach of Cape Upstart Bay.

A smartphone app would make it easier for them to collect and store information securely and reliably — and report issues to the relevant regulators or Traditional Owner Rangers.

At present, there is no central contact to receive this information, which may be relevant to one government body or Traditional Owner organisation, but not another.

Wunjunga Progress Association

Wunjunga Progress Association (WPA), the proposed lead for this project, has a longstanding commitment to improving the ecological health of Cape Upstart Bay.

WPA contributed important information to help develop the Burdekin Dry Tropics Community Action Plan, commissioned by the Great Barrier Reef Foundation in 2020.

WPA identified Cape Upstart Bay populations of sea turtles, sawfish, and dugongs as particularly important, and vulnerable to local threats.

Key Activities:

- Develop a free, accessible, smartphone application to provide reports to the Great Barrier Reef Marine Park Authority, Queensland Department of Agriculture and Fisheries, Department of Environment and Science — Queensland Parks and Wildlife Service and Partnerships, and Gudjuda Rangers.
- Install signs at the four beach access points and distribute a leaflet with a QR code to download the app and inform the community.
- Community groups at Mon Repos Turtle Centre to receive training.
- Hold a collaboration workshop with all stakeholders.

Project Lead

Wunjunga Progress Association

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Project Outcomes:

- Effective early citizen science warning system for regulators in Cape Upstart Bay.
- Increased local resident and visitor participation in monitoring marine megafauna at the beaches of Cape Upstart Bay.
- Increased capacity of Wunjunga Progress Association to undertake citizen science
- On-ground "proof-of-concept" implementation of a phone reporting application for possible use across the Great Barrier Reef.

Long-term Outcome:

To protect values, reduce threats, and improve the current and long-term outlook of marine megafauna of Upstart Bay.

Indicative budget:

Project costs for first year: $6000 with more than $32,700 in-kind support with an annual cost for additional years of $2500.

Implementation Partners:

Wunjunga Progress Association, Gudjuda Reference Group Aboriginal Corporation, Department of Agriculture and Fisheries - Queensland Boating and Fisheries Patrol, Department of Environment and Science - Queensland Parks and Wildlife Service and Partnerships, Great Barrier Reef Marine Park Authority, Sea Turtle Foundation, World Wildlife Foundation, and the Burdekin Shire Council.

Community Wetland restoration at Parker's Lag

This is a community-driven wetland restoration project to improve the ecological condition of Parker's Lagoon, a waterway in the Burdekin region connected to the Great Barrier Reef. Removing pest plants and restoring native riparian vegetation would improve water quality and wildlife habitat.

Background and project information

Parker's Lagoon is in Ayr, one of the major population centres in the Burdekin catchment area. It is part of Upper Lilliesmere Creek, which connects Plantation Creek and Liliesmere Lagoon — both of which release water into the Great Barrier Reef Marine Park.

Mangrove jack and barramundi are amongst the iconic fish species relying on these connections between wetlands and the Great Barrier Reef to complete their life cycle.

The Burdekin community values these wetlands, which deliver water to cropping areas, provide beautiful areas to visit, and support recreational activities such as birdwatching, fishing, and boating.

Local community group Lower Burdekin Landcare Association (LBLA) would lead this proposed project, supported by multiple stakeholders already working on complementary activities at the project site.

Project activities would include: managing weeds such as salvinia, hymenachne and paragrass; planting native trees along the riparian zone to provide bird habitat, and shade the creek — lowering water temperatures and reducing the chances of fish kills during periods of extreme heat; and creating an informative native plant walk for public enjoyment.

Youth and other community groups would be involved in multiple aspects of this project, such as tree planting and monitoring. A local school would adopt and maintain the site, supported by Burdekin Shire Council and LBLA.

Lower Burdekin Landcare Association

The Lower Burdekin Landcare Association leads local landcare efforts within the Ayr community. Since 1998, its volunteers have been involved with collecting and propagating plants native to the riparian zone of local waterways.

Priority areas for the group include ecologically important sites in the Ayr and greater Burdekin region such as the Bowling Green Bay Wetlands, listed as internationally-important under the Ramsar Convention, as well as other key areas for bird and fish habitat along the coast.

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Key Activities:

- Integrated weed management, including mechanical, biological, and chemical control methods to reduce weed and problematic native plant infestations.
- Planting and maintaining a minimum of 1000 native trees along the edge of the lagoon.
- Installing an interpretative footpath, including informational signage for the enjoyment and education of the general public
- Community water quality and habitat condition monitoring.

Project Lead:

Lower Burdekin Landcare Association

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Website: LowerBurdekinLandcare.org.au

Project Outcomes:

- Collective action undertaken by multiple stakeholders to achieve environmental outcomes at one site.
- Community participation in monitoring and on-ground activities.
- Increased capacity of a local Landcare group.
- Revegetation of the riparian zone of a waterway connected to the Great Barrier Reef.

Long-term Outcomes:

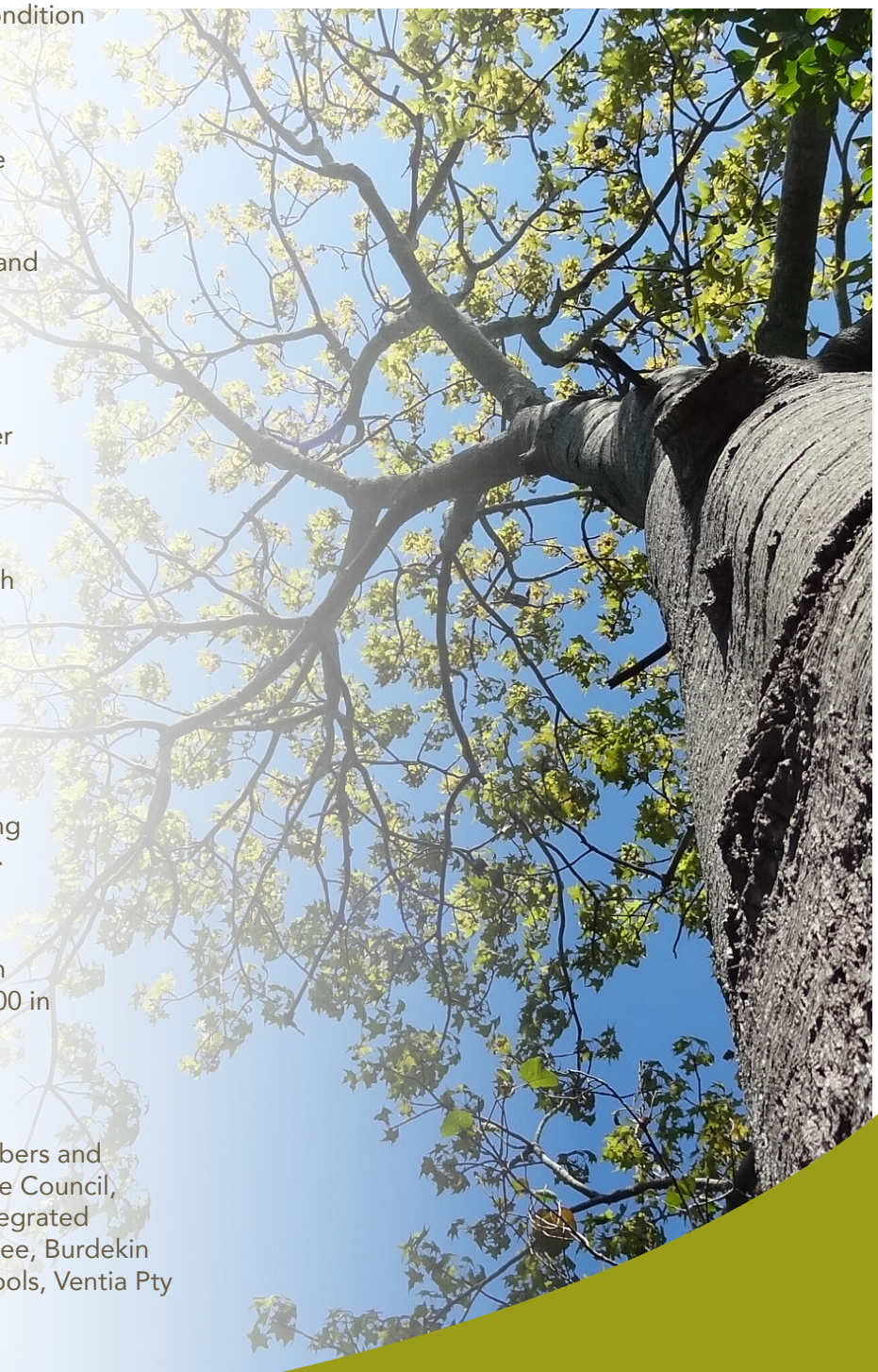
- Increased habitat for native species, both terrestrial and aquatic.
- Riparian vegetation provides refugia for aquatic life in extreme heat.
- Improved water quality in Upper Lilliesmere Creek through riparian planting.
- Reduced nutrients and sediment reaching the Great Barrier Reef Marine Park area.

Indicative Budget:

- $15,000 to implement the first year, with over $18,000 in-kind support, plus $2,000 in ongoing costs per additional year

Implementation Partners:

Lower Burdekin Landcare Association members and volunteers, local landholders, Burdekin Shire Council, Lower Burdekin Water, Burdekin Bowen Integrated Floodplain Management Advisory Committee, Burdekin Education Engagement Program, local schools, Ventia Pty Ltd, NQ Dry Tropics and local Traditional Owners.



Mundy Creek Natureway Regeneration Project

Healthy riparian ecosystems in North Queensland are highly-beneficial for the Great Barrier Reef. This project will use community resources to further improve the riparian zone of Mundy Creek — a waterway important to the Townsville community.

Background and project information

Riparian zones link terrestrial and aquatic ecosystems. Creekbank vegetation creates shade to keep water cool; reducing evaporation and providing fish with a refuge when oxygen levels may be low during hot summers. The vegetation's roots and debris also create important underwater habitat, and help capture litter and sediment before it ends up on the Great Barrier Reef (GBR).

The Ross catchment area, near Townsville, had the highest recorded proportion of riparian clearing in the Burdekin catchment between 2004 and 2008, with 415 hectares cleared (Reef Plan Report Card, 2009).The Ross River catchment also scored as "moderate" for native habitat and litter in the latest Dry Tropics Partnership for Healthy Waters Report Card (2018).

This project will directly reduce the pressures on riparian areas in the Ross River catchment by revegetating riverbanks and removing weed and rubbish from key project sites using community groups and volunteers.

Mundy Creek Landcare

Mundy Creek flows past well-used parks and open spaces, but the surrounding natural vegetation was substantially degraded during the past century, and remained largely neglected until 2012, when ecological restoration efforts began, led by Coastal Dry Tropics Landcare Incorporated (CDTLI).

The success of early planting at Mundy Creek is clearly visible as the first batch of trees has already matured. Despite the project's excellent progress there is still a large section of the creek without riparian vegetation, and a constant stream of litter provides an ongoing maintenance burden for volunteers

Additional funding would allow the Mundy Creek Natureway Regeneration Project to further reinvigorate, develop, maintain and protect this important riparian zone.

The project takes a multi-disciplinary approach, focusing on arts, environment, health and cultural heritage. There is already plenty of momentum to harness, with a large group of community stakeholders and volunteers already invested in the project.

CDTLI has been working to improve riparian vegetation through native plantings at multiple sites across the Townsville region since 1994.

Volunteers would clear weeds and litter, plant successive areas with new native trees, and monitor the health of the creek in partnership with the local Creekwatch group.

The project would partner with Townsville City Council to install litter traps to reduce the impact on volunteers and the GBR.

Key Activities:

- Remove weeds at key project sites and replace with native vegetation.
- Remove rubbish along and around key sites and prevent it from returning.
- Institute a long-term monitoring program that will measure the health of riparian and adjacent aquatic habitats.
- Record and share information collected at sites with Townsville City Council and NQ Dry Tropics Partnership for Healthy Waters to feed into the annual report card for the Ross catchment.

Project Lead

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Project Outcomes:

- Collective action undertaken by multiple stakeholders to achieve environmental outcomes at one site.
- Community participation to deliver and monitor on-ground activities.
- Increased capacity for local landcare group.
- Native plantings on riverbank and riparian areas.
- Reduced rubbish in the waterway and subsequently the GBR.

Long-Term Outcomes:

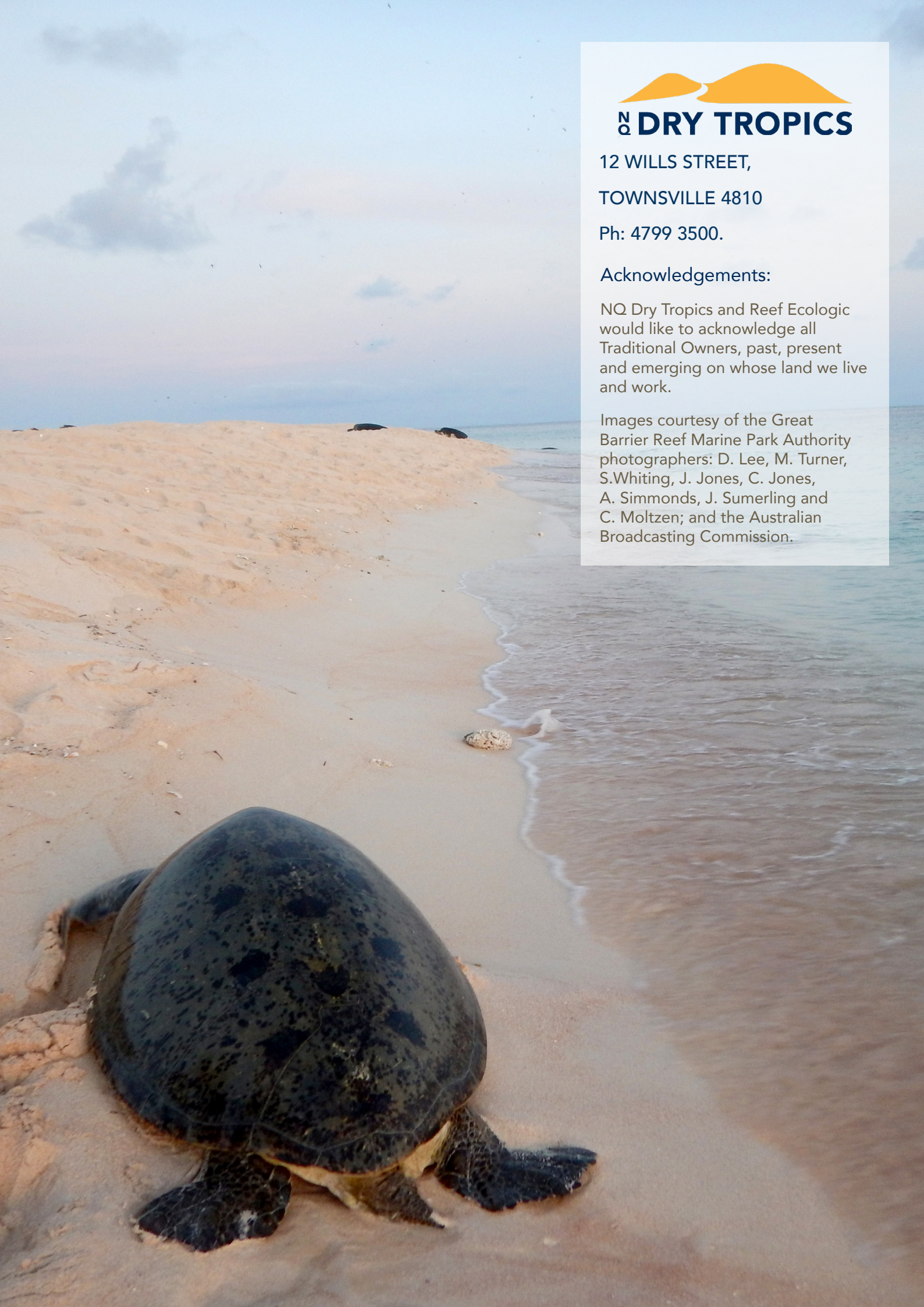
- Increase in habitat for native birds and fish.
- Lower water temperatures through vegetation shading to support healthy aquatic life.
- Increase in creek water quality through riparian planting.
- Reduced nutrients, sediments, and marine debris reaching the GBR.

Indicative Budget:

$42,050 with over $29,060 in in-kind support

Implementation Partners:

CTDLI, OzFish, Creekwatch, Mundy Creek Coast Care, Townsville City Council, Tangaroa Blue, Dry Tropics Partnership for Healthy Waters, Ergon Energy.



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Acknowledgements:

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Images courtesy of the Great Barrier Reef Marine Park Authority photographers: D. Lee, M. Turner, S.Whiting, J. Jones, C. Jones, A. Simmonds, J. Sumerling and C. Moltzen; and the Australian Broadcasting Commission.