







ANNUAL REPORT
2016 – 2017

REEF CATCHMENTS LIMITED

Suite 1/ 85 Gordon Street, Mackay and 45 Main Street, Proserpine

www.reefcatchments.com

Australian Government

Queensland Government

REEF CATCHMENTS

A NOTE FROM THE CHAIR, **JULIE BOYD**

The past year in the life of Reef Catchments Limited has been an eventful one. Our ability to adapt to changes in funding for natural resources management shows the strength of the organisation. All of our staff, particularly our leadership team, Sally Young and Katrina Dent have been invaluable in providing information, advice and support.

I would also like to acknowledge the advocacy for NRM in the Mackay Whitsunday Isaac region by our Federal and State Government representatives. Over the year, I have endeavoured to meet many of our members and stakeholders. The organisation is no doubt stronger for having such fantastic supporters and I look forward to continuing our strong working relationships. I would like to acknowledge Rob Cocco, the CEO for nearly ten years. Rob has been a passionate advocate and tremendous source of knowledge that has been invaluable to RCL. His stewardship in guiding the organisation has seen the business grow from a small staff and turnover to a significant organisation in our region. Thank you to the Board members who have contributed a significant amout of time to the challenging decisions and for their thoughtful and considered approach to those problems. Long-standing Board member, Joy Deguara retired this year. Her passion, commitment and ongoing contribution to the NRM sector will be missed.

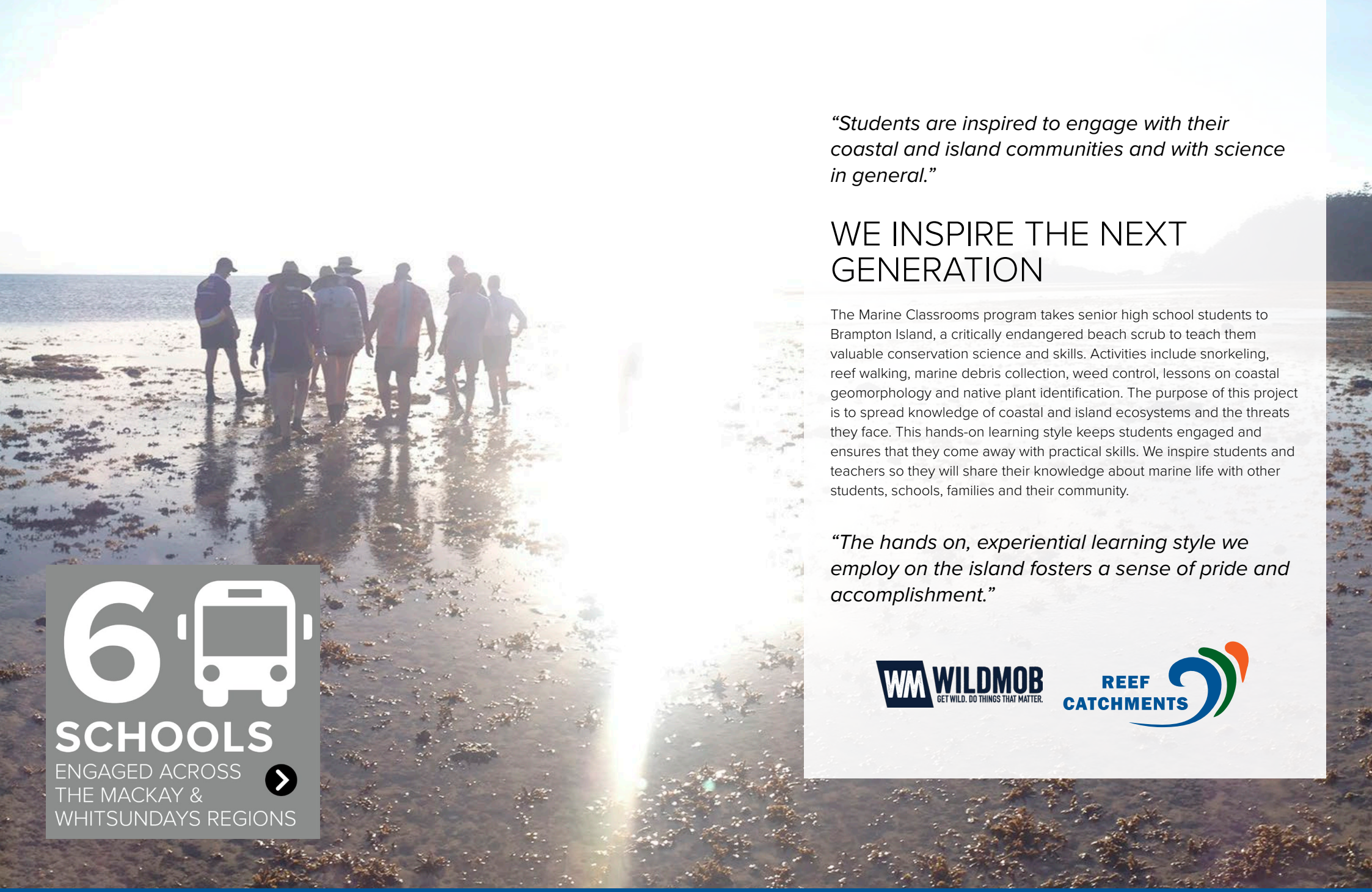
WE SUPPORT SUSTAINABLE DEVELOPMENT

Through the development, delivery, monitoring, and evaluation of the:

- Natural Resource Management Plan: Mackay Whitsunday Isaac 2014 – 2024
- Reef 2050 Plan Long-Term Sustainability Plan
- Water Quality Improvement Plan 2014 – 2021
- Climate Sustainability Plan: Mackay Whitsunday Isaac 2016 – 2020

WE ACT ON CLIMATE CHANGE

Our Regional Climate Sustainability Plan was released in December 2016. This highly collaborative plan was developed in partnership with CSIRO, James Cook University and regional stakeholders. It identifies local climate trends, forecasts, and predictions for rainfall, temperature, sea level rise and other climatic changes. You can see strategies and actions from this plan being delivered throughout this 2016/17 annual report.



6

SCHOOLS

ENGAGED ACROSS THE MACKAY & WHITSUNDAYS REGIONS

"Students are inspired to engage with their coastal and island communities and with science in general."

WE INSPIRE THE NEXT GENERATION

The Marine Classrooms program takes senior high school students to Brampton Island, a critically endangered beach scrub to teach them valuable conservation science and skills. Activities include snorkeling, reef walking, marine debris collection, weed control, lessons on coastal geomorphology and native plant identification. The purpose of this project is to spread knowledge of coastal and island ecosystems and the threats they face. This hands-on learning style keeps students engaged and ensures that they come away with practical skills. We inspire students and teachers so they will share their knowledge about marine life with other students, schools, families and their community.

"The hands on, experiential learning style we employ on the island fosters a sense of pride and accomplishment."

WILDMOB GET WILD. DO THINGS THAT MATTER.

REEF CATCHMENTS

Photo: hand stencils

"During the past year, members have become engaged, raising indigenous perspectives, where and when suitable. Initial introductions provide a unique opportunity for the group to apply an indigenous perspective and advocate for improved cultural heritage incorporation into NRM practices. Prolonged relationships allow group members to talk more personally about their connection to the land. The group's confidence to share Traditional Ecological Knowledge and more generally, an indigenous perspective has been openly encouraged at meetings."

WE CARE FOR COUNTRY AND ITS PEOPLE

The Traditional Owners Reference Group (TORG) have been working for over ten years to integrate cultural heritage and NRM. The Group supports Indigenous people to have a voice in decision making. Reef Catchments Indigenous project is funded by the Australian Government's National Landcare Programme (NLP).

We convene TORG meetings, facilitate attendance at NRM-focused advisory meetings, provide opportunities to reconnect to country, and tell the story of these project outcomes. We also facilitate skills training in archaeology such as Cultural Heritage artefact knowledge, interpretation and recording techniques to capture storylines, as well as up-skilling in technology like GPS and GIS.

During the past year, we visited sites and / or recorded artefacts at Pioneer River Estuary, Bakers Creek Estuary, Yarrawonga, Shute Harbour, Haliday Bay, Armstrong Beach, Freshwater Point, Dungeon Point, Cape Palmerston, Green Hill, Carmilla, Lake Elphinstone, Mount Britton and DeMoleyns wetland, however no on-ground works were undertaken.

Some of the artefacts included hand stencil art and motifs, scar trees, shell middens, fish traps, stone and glass quarries, and a rock shelter.

Australian Government | National Landcare Programme

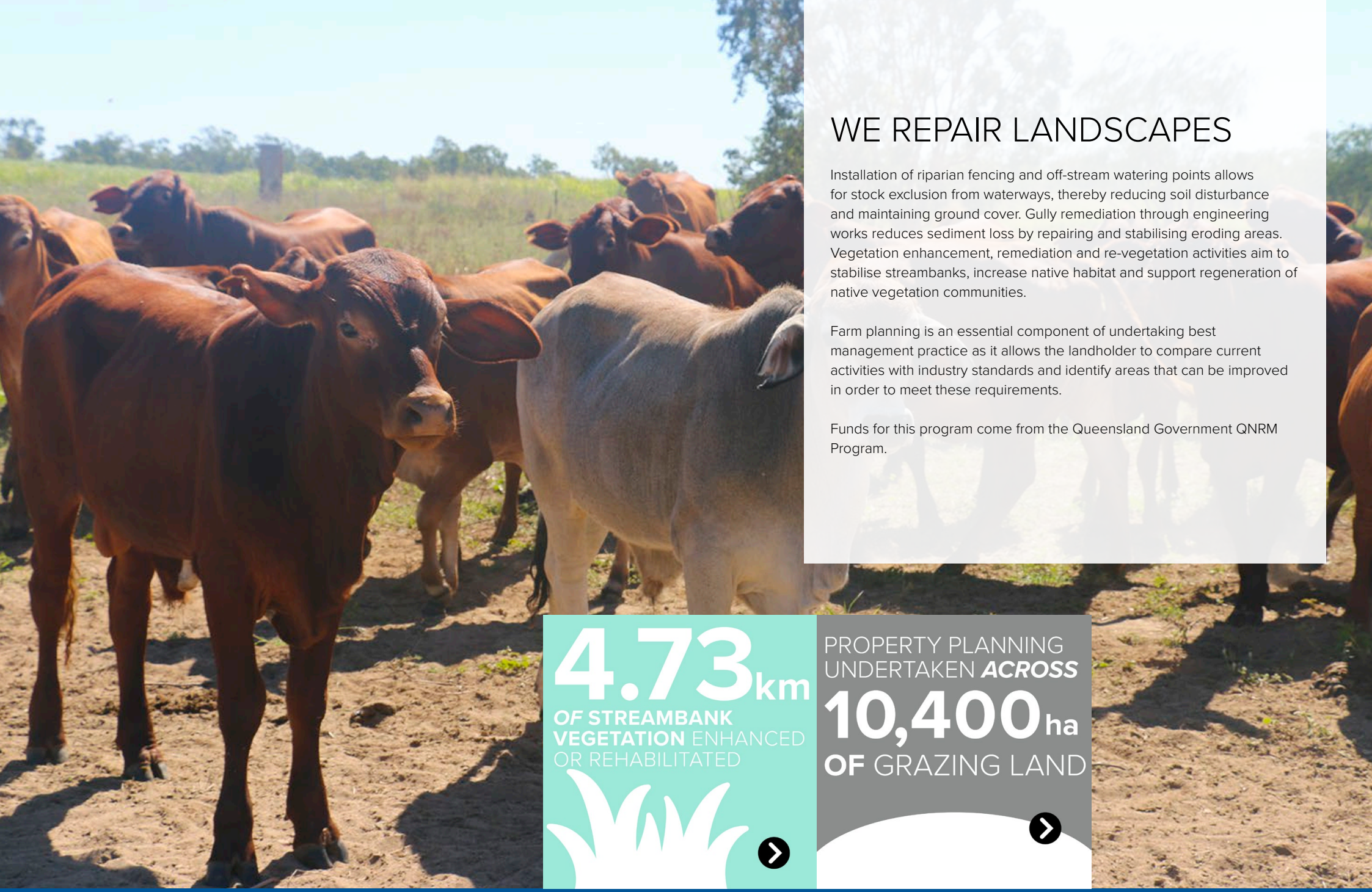
TORG Traditional Owner Reference Group Mackay•Whitsunday•Isaac

WE REPAIR LANDSCAPES

Grazing is the largest land use in our region. By adopting practices to stop erosion of top-soil on river banks and gullies we can regain productivity and protect the reef. The continued adoption of best management practices to improve water quality flowing out to the Great Barrier Reef is a key recommendation of the Mackay-Whitsunday Water Quality Improvement Plan 2014-2021.

We support on-ground activities including riparian fencing and off-stream watering points, riparian revegetation and enhancement, gully remediation and farm planning in 16 priority sub-catchments. Landholder participants receive direct funding assistance of up to 40% of total activity costs to undertake on-ground works and support from Reef Catchments' Grazing Project Officer to undertake farm planning.

14
OFF-STREAM
WATERING POINTS
INSTALLED



WE REPAIR LANDSCAPES

Installation of riparian fencing and off-stream watering points allows for stock exclusion from waterways, thereby reducing soil disturbance and maintaining ground cover. Gully remediation through engineering works reduces sediment loss by repairing and stabilising eroding areas. Vegetation enhancement, remediation and re-vegetation activities aim to stabilise streambanks, increase native habitat and support regeneration of native vegetation communities.

Farm planning is an essential component of undertaking best management practice as it allows the landholder to compare current activities with industry standards and identify areas that can be improved in order to meet these requirements.

Funds for this program come from the Queensland Government QNRM Program.

4.73km
***OF* STREAMBANK VEGETATION** ENHANCED OR REHABILITATED

PROPERTY PLANNING UNDERTAKEN ***ACROSS***
10,400ha
OF GRAZING LAND

2

INNOVATIVE GRAZING NETWORKING ACTIVITIES FOR GRAZIERS TO SHARE & **COLLABORATE**

WE CONNECT AND COLLABORATE TO MANAGE THE LANDSCAPE

The Regional Landcare Facilitator (RLF) Programme promotes the Landcare ethic and sustainable agriculture through connections with primary producers. We are reaching out to producers and consumers in new ways by providing local leaders in their field with funding and support to run activities that promote best practice farming such as the Sunset Symphony in the Sunflowers by cane farmer and soil health innovator Simon Mattsson and the Greater Whitsunday Food Network, Farm to Plate Dinner & Bus Tour.

We enable community leaders to attend nationwide conferences to introduce new concepts and ideas to our region to be adopted by local producers, like the No-Till annual conference and the annual Weed Conference.

"You are not trying to sell me a product but teaching a new ideology around farming techniques and it's a flexible system worked around your capabilities and end goal."

50

SUSTAINABLE
LAND MANAGEMENT
EVENTS

We also bring speakers to the region to inspire and educate. The Annual Grazing Forum this year attracted 120 attendees, to share efficiency in beef production, pasture and weed management, explore market choices and organic accreditation. A subsidised three day course on how to asses the needs of a crop through analysis techniques and address deficiencies with on farm liquid bio-fertilliser production was also a huge success.

Following Tropical Cyclone Debbie, we held a forestry field day to identify what we have learnt about forestry in our cyclone prone region and held a climate resilience workshop for graziers to prepare their business and management practices for a changing climate as well as opportunities to store soil carbon for potential carbon credit, a potential additional income stream.

We bring industry groups together in forestry, horticulture and grazing to identify changes of practice standards. These changes will be reflected in the ABCD Framework, a scale of best management practice and regional guide to sustainable farming.

"Absolutely attend, as a farmer it will be the best money spent all year."

"It was interesting to see a farm that has found success in transitioning to organics. Definitely gave us hope for our future."

WE FACILITATE INNOVATIVE IDEAS TO SHARE KNOWLEDGE

Horticulture growers were given the opportunity to see some innovative techniques at a diversified organic farm encompassing cane, cattle, fruit and vegetable production with direct-to-consumer sales.

We travelled together by bus to Inkerman, the home of Gary and Angela Spotswood at Mt Alma Fresh Organics. The family farmers demonstrated how the addition of bio-fertilisers and mixed species planting have improved overall soil health, soil carbon capture and therefore water retention and reduced run-off.

Guests were able to see the cattle grazing on multi-species fallow crops to put on kilos, then return valuable nutrients into the soil. The take home message for participants was that incorporating ruminant grazing animals into a diversified farming system can be highly productive and profitable. Also that you can take on the principles of organic farming without being certified.

WE PROMOTE BEST MANAGEMENT PRACTICE

We assist growers to transition to above industry best practice for nutrition and herbicide management to improve water quality leaving farms and flowing into the Great Barrier Reef. The Reef Trust 3 Programme helps cane farmers to benchmark their current practices and move above industry best practice in nutrition and herbicide use.

Agronomists contracted by Reef Catchments work with growers to talk through current practices and identify practice changes to improve water quality and at same time maintain or enhance the grower's productivity. Some tools used by the agronomists include using field mapping to identify different soil types and specific machinery to apply fertiliser amounts that match crop needs. Practice change examples include growers considering nitrogen needs for crops harvested late in the season or older ratoons where the potential to produce a good crop is reduced.

For herbicides the main target is the residual type chemicals as these chemicals have dominated waterways feeding the Reef. The programme encourages growers to apply residuals through band spraying rather than broadcast spraying or moving completely away from residuals and only use knockdowns. The programme also offers growers grants to assist with practice change as typically practice change involves new or modified equipment or machinery. We are working in the Proserpine, Mackay and Plane Creek sugarcane growing areas.

The Reef Trust 3 Programme commenced in July 2016 and ends June 2019. It is funded by the Australian Government.

9,942 ha

OF **CANE MANAGED** BY THESE GROWERS

13

MAJOR GRANTS FOR MACHINERY OR EQUIPMENT HAVE BEEN AWARDED TO ***VALUE OF***

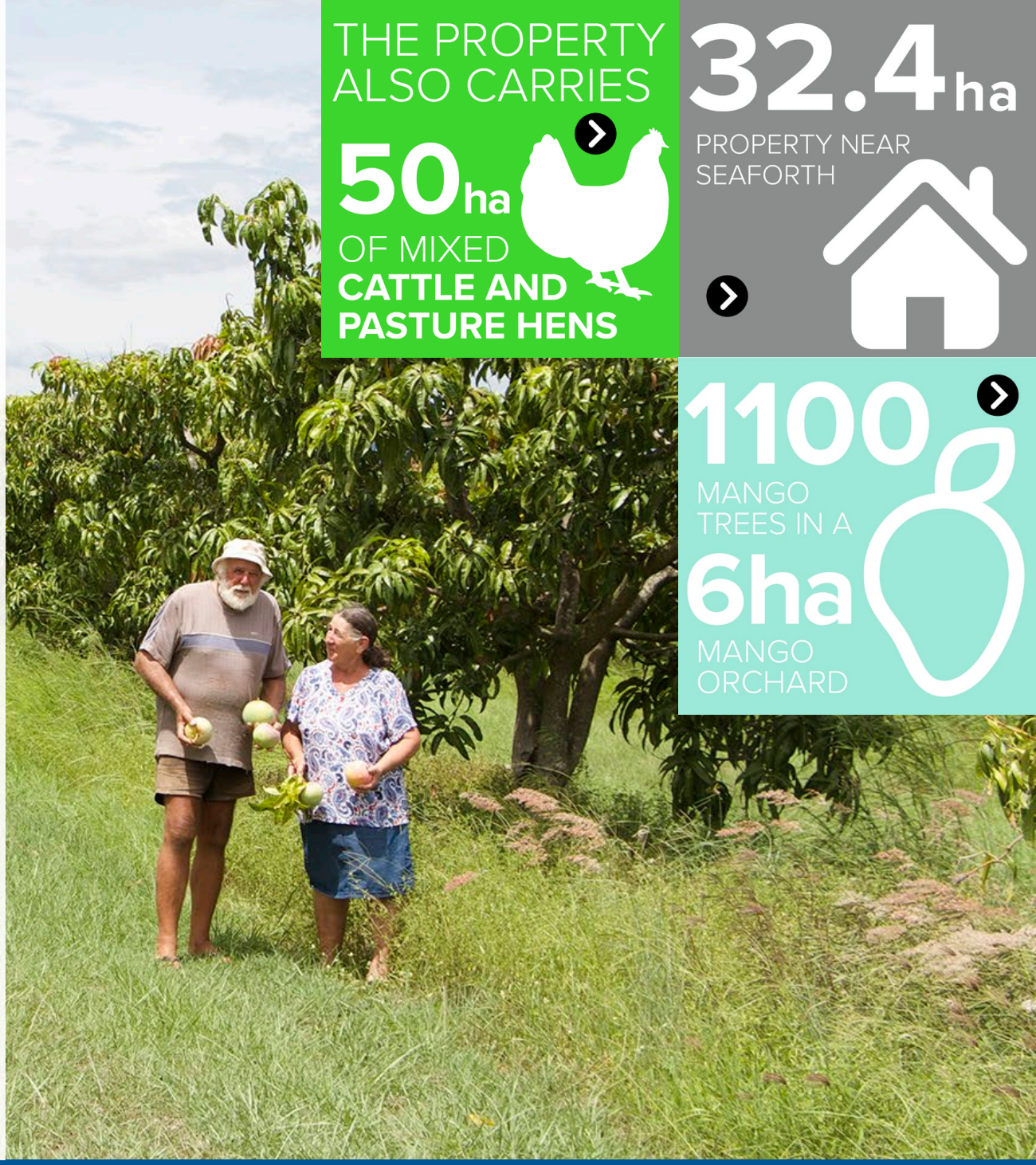
$111,322

WE TRIAL & INNOVATE

Trials of biofertilisers have been underway at Longmile Mangoes, near Seaforth for approximately 3 years. Ken and Mary Ede brew their own fertilisers, combining an application of minerals, nutrients and microbes in a stable format that is both beneficial to the fruit trees and supportive of the soil they grow in. The Ede's property is one of the sustainable agriculture trial sites showing promise under the Queensland Government QNRM program.

The aim is to demonstrate improvements in soil health and tree crop productivity with the application of bio-fertilisers. Under-tree mulching is practised in the orchard, whereby the inter-row cuttings are deposited under the trees by a side-throwing mower. Soil and leaf sampling are conducted yearly to measure changes in soil health across the orchard. The reduction of artificial fertilisers has resulted in increased nutrient availability and enhanced soil quality. The success of the bio-fertiliser treatment for the fruit trees has led to Ken and Mary applying the same principles to their grazing paddocks. Application of bio-fertilisers shortly after paddocks have been intensively grazed has greatly improved 3P grasses and dung beetle populations have multiplied. Reef Catchments has engaged expert advice from Growcom to assist with developing the site for the next 12 months.

"We looked at all these different kinds of farming systems, but I didn't want to jump in until we found something that could be commercially viable. We've reduced our fertiliser by 85% and that's with a slight rise in productivity most years."
Ken Ede



WE PARTNER FOR STEWARDSHIP AND SCIENCE

As a partner and the host organisation for the Mackay-Whitsunday Healthy Rivers to Reef Partnership, we have come together along with 23 diverse organisations with a shared vision for healthy rivers and reef.

These members from the community, Traditional Owners, farmers and fishers, industry, science, tourism and government recognise that more can be delivered by working together than as individuals.

During 2016/17 the Partnership released the first full report card specifically for the Mackay Whitsunday region which provides A – E scores on the condition of freshwater, estuarine, inshore and offshore waters. The reporting process spans 18 months including result verification assessments by an independent panel of scientists.

HEALTHY RIVERS TO REEF PARTNERSHIP
MACKAY-WHITSUNDAY

WE MANAGE PESTS & WEEDS

Pond apple (Annona glabra) is a small to medium tree that threatens mangroves, rainforests, and drainage systems including creeks, riverbanks, coastal dunes and wetlands. Seeds are primarily spread by water, with the buoyant green ball-like fruit floating through watercourses. Animals, including feral pigs, are also known to eat pond apple fruit and spread seeds across the landscape.

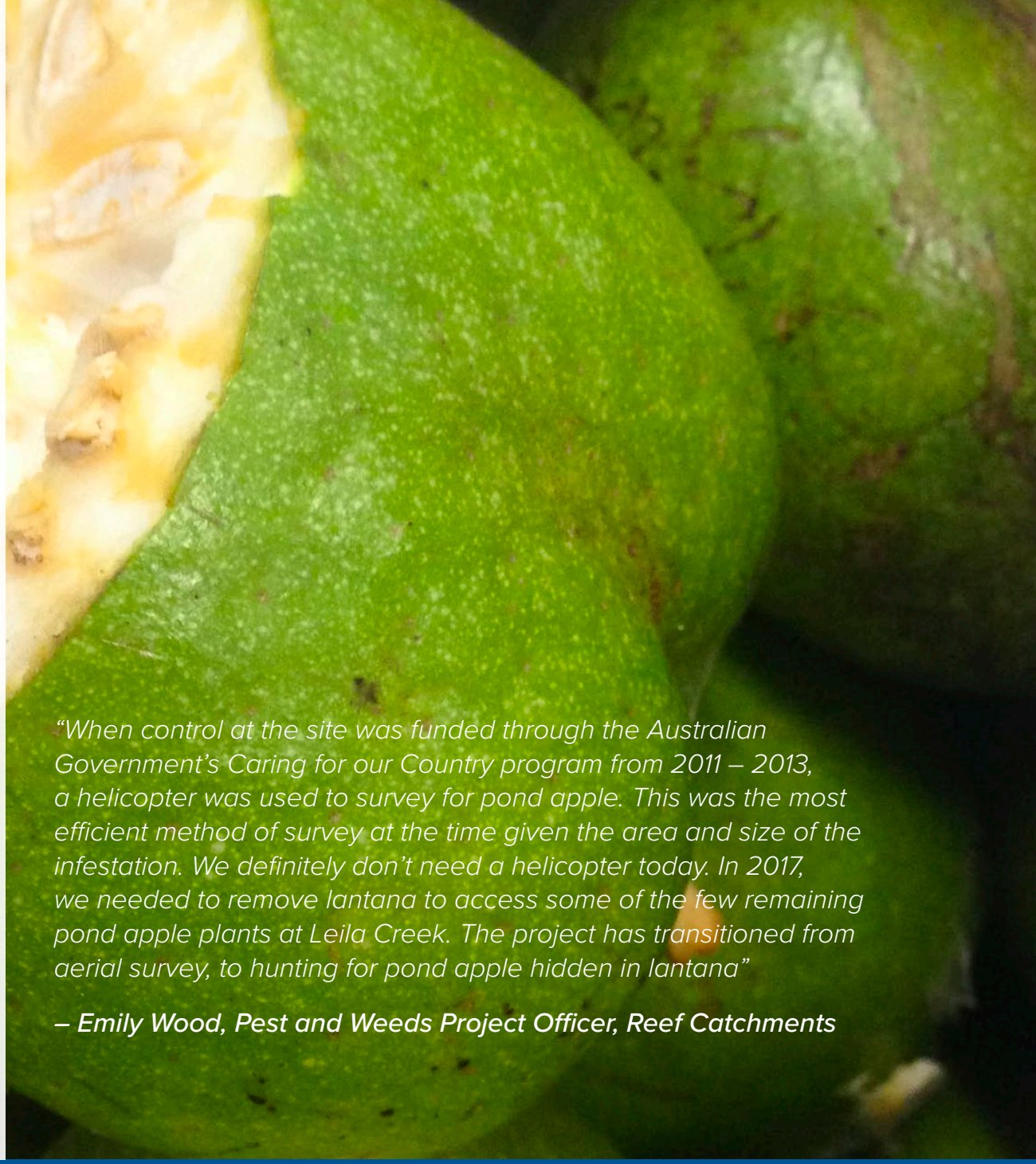
Pond apple is classified as a Weed of National Significance and declared as a Restricted biosecurity matter in Queensland. It was originally imported to Australia in 1912 as rootstock for custard apple.

Unfortunately, the invasive nature of pond apple was not understood until it was found growing in dense clumps in mangrove systems in Northern Queensland. Scattered dense infestations occur along the eastern coast and at the tip of the Cape York Peninsula.

Two known infestations have been identified in the Mackay Whitsunday region. The two infestations are located at Gailbraith Creek, near Cannonvale in the Whitsunday region, and Leila Creek, just north of Mackay.

Control at both of these sites has been supported through funding from the Queensland Government QNRM Program since 2014. Both sites are tracking well towards being the first infestations to be eradicated in Queensland.

Pond apple was first identified in the Leila Creek catchment in 2008. Since that time, key stakeholders, including Mackay Regional Council, Pioneer Catchment Landcare, Reef Catchments and other members of the Mackay Regional Pest Management Group have identified and secured resources to assist with the ongoing monitoring and control of pond apple at these sites.



"When control at the site was funded through the Australian Government's Caring for our Country program from 2011 – 2013, a helicopter was used to survey for pond apple. This was the most efficient method of survey at the time given the area and size of the infestation. We definitely don't need a helicopter today. In 2017, we needed to remove lantana to access some of the few remaining pond apple plants at Leila Creek. The project has transitioned from aerial survey, to hunting for pond apple hidden in lantana"

– Emily Wood, Pest and Weeds Project Officer, Reef Catchments

WE SUPPORT BIODIVERSITY

The Cairns Birdwing Butterfly is Australia's largest endemic butterfly and is one of the species protected the Reef Catchments Inland sub-project, funded through the Australian Governments' National Landcare Program.

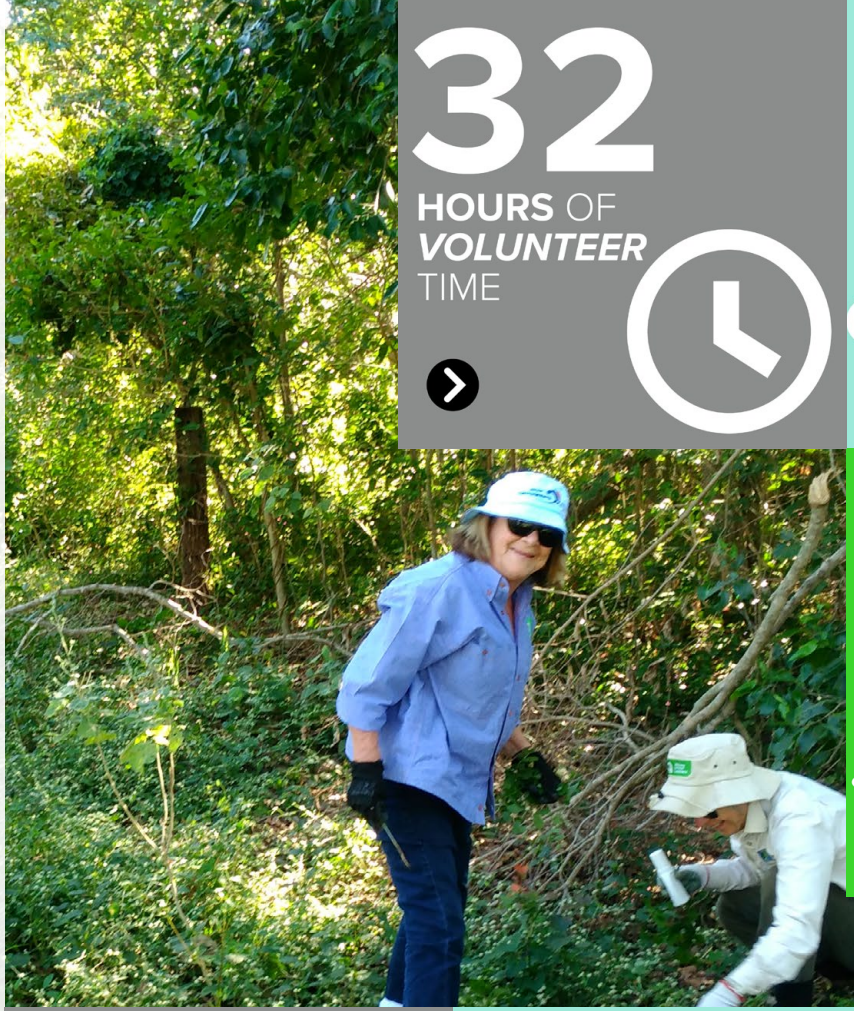
The native Dutchman's Pipe (Aristolochia acuminata) is a food source for the birdwing larvae. However, a garden plant, the invasive Dutchman's Pipe (Aristolochia littoralis) mimics the chemical receptors of the native Dutchman's Pipe, and the butterfly lays eggs on it. When they hatch, the caterpillar cannot survive on the invasive plant.

A member of Whitsunday Catchment Landcare spotted an invasive Dutchmen's Pipe in the upper Lethebrook area. A follow-up survey showed that the invasive has escaped down the Lethebrook sub-catchment from a source in the headwaters. Reef Catchments supported Whitsunday Catchment Landcare in surveying for the plant, communicating the problem, and engaging local community members to actively participate in removing the invasive plants. The next step is to expand the project area, replant with the native species and promote the native species to local nurseries.

Since 2013, the Inland sub-project has delivered good outcomes for local biodiversity values in the Mackay Whitsunday Isaac region. This has been good news for vulnerable plants and animals. As the project approaches the final year, it is on track to improve an impressive 80,000 hectares of Matters of National Environmental Significance.

Australian Government | National Landcare Programme

Whitsunday Catchment Landcare



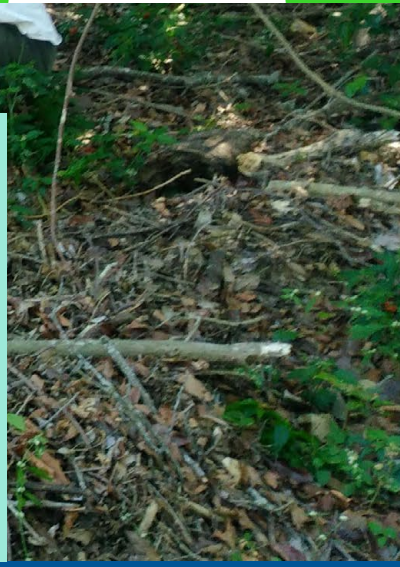
32 HOURS OF *VOLUNTEER* TIME

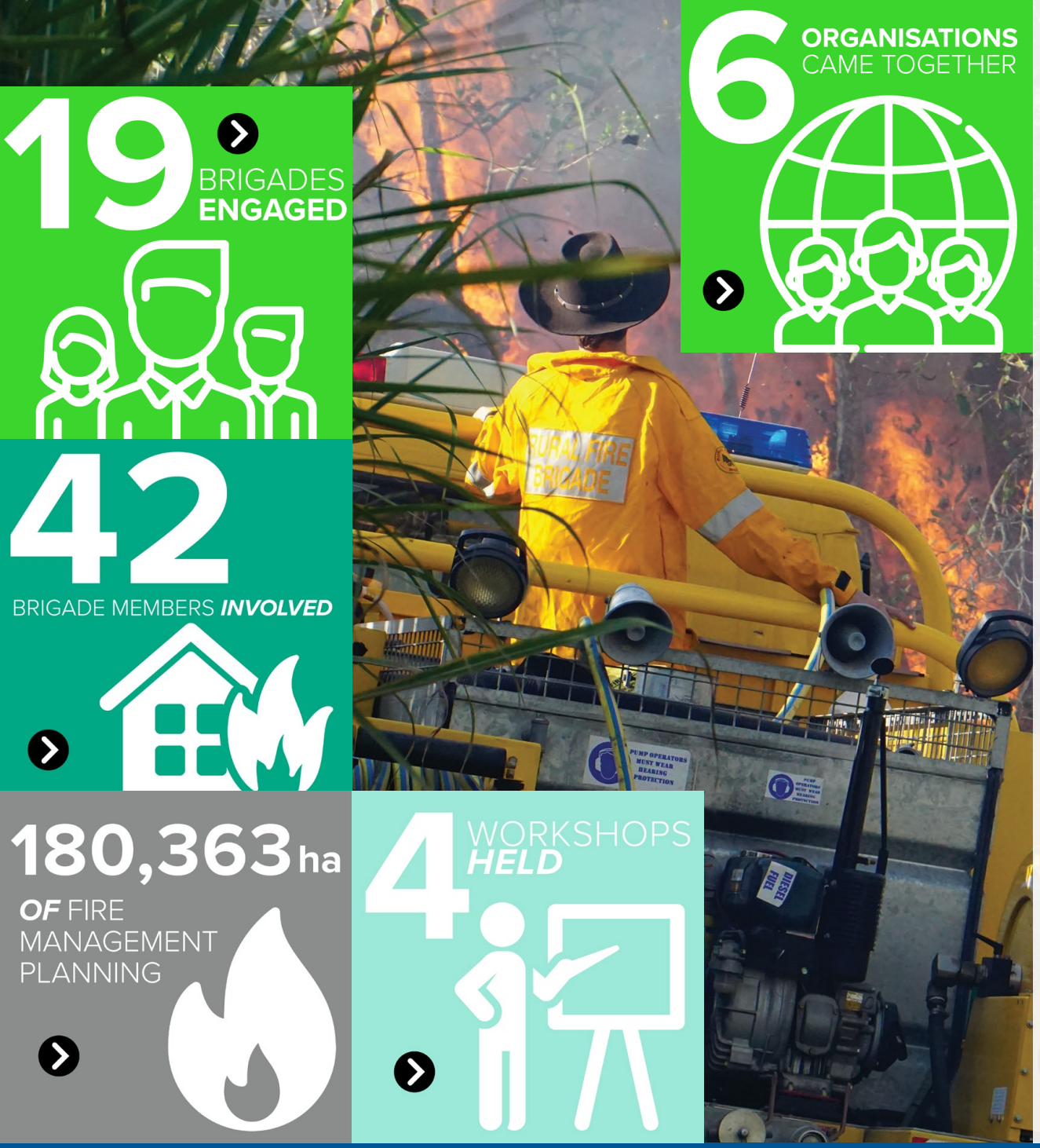
3 *INFESTATIONS* FOUND

180 PLANTS **TREATED**

10,000 m² *OF* PLANTS DESTROYED

6.3 km *OF* CREEK LINE **SURVEYED**





WE SUPPORT COMMUNITY GROUPS MANAGING LANDSCAPES THROUGH FIRE

Since 2013 we have worked with volunteer rural fire brigades to promote responsible and environmentally friendly fire regimes. The project has historically promoted the Clarke Connors Guideline, used by land managers involved with the rural brigades. The project promotes the Clarke Connors Guideline, used to assist land managers in understanding and implementing appropriate burning for an ecosystem.

Queensland Rural Fire Services partnered with Reef Catchments to discuss appropriate burning for the different ecosystems in the region. Reef Catchments held workshops in community centres and fire sheds to involve local members in fire management planning, deliver mapping training to help brigades document and plan burns in their area. Following the consultation with the brigades, we produced management planning documents for each brigade involved. These plans store information on fire history, hazardous areas and future plans in one location to be used by the brigades and Reef Catchments to discuss fire management planning with private landholders and Government bodies into the future. As part of the National Landcare Programme, the Coastal sub-project and Inland sub-project aim to support and empower community organisations.

“The Coastcare Kids event at Bucasia Beach this year alone had more than 60 children aged from 4-12 years participating in events.”productivity most years.”

WE CARE FOR OUR COASTLINE

Coastcare is a branch of Landcare that is active Australia wide. Its purpose is to connect communities with their local beaches to teach them about the environment and many of the threats that it faces. Our hope is that by hosting educational activities, we can inspire people to take action and implement new behaviour to better protect the coast. Coastcare events are run throughout the Whitsundays, Mackay and Isaac regions at many different beaches and with many different communities. The impact of these events is largely educational, though often the participants will help us to clean a beach or remove some weeds, or be involved in other hands-on activities. Our partners, including Birdlife Mackay, Great Barrier Reef Marine Park Authority, Mackay Regional Council, Conservation Volunteers Australia, Mackay District Turtle Watch and Pioneer Catchment Landcare have helped us deliver three Coastcare events.

In addition to Coastcare activities, Reef Catchments funds other organisations to conduct weed management along the shores to protect our native vegetation and enhance the natural values of the area.

We work with local governments to create management plans for our beaches to ensure a balance between users desires and environmental values. This year Mackay Regional Council adopted three Local Coastal Plans for Bucasia, Blacks and Lamberts Beach.

“There is a Coastcare event for everyone, whether your interests are in native plants, birds, weeds or photography.” Cass Hayward, Coastal Project Officer

WE VALUE OUR TEAM MEMBERS

“Our employees are our greatest assets. I am pleased to be leading a team of enthusiastic individuals who bring their expertise and commitment to the opportunities and challenges we face in NRM.

We appreciate the support of our investors, partners and stakeholders, and look forward to working together in the delivery of Natural Resource Management in this new phase for Reef Catchments.” – Katrina Dent General Manager

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Australian Government

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