

# ANNUAL REPORT

2022 - 2023



# Contents

Message from BMRG Chair . . . . .	3
Financial Summary . . . . .	4
Black Summer Bushfire Remediation and Resilience . . . . .	5
Burnett Mary Waterways Cleanup . . . . .	6
Carbon + Biodiversity Pilot and Enhancing Remnant Vegetation Pilot . . . . .	7
Emergency Flood Recovery for Wildlife and Habitat . . . . .	8
Grazing Resilience and Sustainable Solutions (GRASS). . . . .	9
Environmental Account . . . . .	10
Environmental Account . . . . .	11
Industry Recovery and Resilience Officers . . . . .	12
Integrated Habitat Restoration for the Discovery Coast . . . . .	13
Out and About . . . . .	14
Out and About . . . . .	15
Managing Weeds and Pests in Priority sub-catchments of the Barambah Creek Catchment . . . . .	16
Mary River Recovery . . . . .	17
Natural Resource Investment Program (NRIP). . . . .	18
Nest to Ocean Turtle Protection . . . . .	19
Paddock to Reef Integrated Monitoring, Modelling and Reporting Program . . . . .	20
Post Fire Monitoring of Wetland Threatened Species and Ecological Communities . . . . .	21
Protecting Saltmarsh and Marine Turtle Monitoring. . . . .	22
Regional Agriculture Landcare Facilitator . . . . .	23
Shorebirds Roost Trial . . . . .	24
Strait Expectations – Restoring the Great Sandy Ramsar Wetland. . . . .	25
BMRG Board of Directors . . . . .	26
Burnett Mary Region . . . . .	27

# Message from BMRG Chair



On behalf of the BMRG Board, management, and staff, I am honoured to present the 2022–23 annual report for the Burnett Mary Regional Group. As we reflect on this year, we recognise the undying spirit of perseverance, commitment, and unity that has propelled us forward, even in the face of adversity.

The Burnett Mary region faced Mother Nature's strength this past financial year, enduring significant flood events that deeply impacted many in our community. Particularly in July/August 2022, followed by notable events in October and December, these natural calamities tested our resilience but also showcased the collective strength and camaraderie of our region.

Our hearts go out to all those affected, and we are steadfast in our commitment to support recovery and fortification against future challenges.

This year brought its own set of internal challenges. As a business, we've journeyed through these times, and they have highlighted the resilience and dedication of our BMRG team. We have seen firsthand the unwavering commitment of our staff to our organisation and the Burnett Mary region, which truly has been the backbone of our successes.

Their drive and passion have been a beacon of light, and it's a foundation we are immensely proud of. This foundation is what we intend to build upon, nurturing the spirit of determination and unity as we forge ahead.

In our journey, we've had the privilege to collaborate with a multitude of esteemed partners across various sectors. From Higher Education institutions and scientific

experts offering their profound knowledge, to Landcare organisations and Traditional Owner groups ensuring sustainable and culturally sensitive practices, our partners have been integral to our achievements.

Their combined expertise, paired with support from both the Australian and State Governments, has allowed us to drive initiatives that create real, lasting impacts.

We are humbled by the lessons of this year and are imbued with a renewed desire to forge even stronger connections within our region. Recognising the richness and diversity of the many organisations that align with our core mission, we are enthusiastic about deepening these relationships and exploring new avenues of collaboration.

Looking ahead, we are driven by the hope and promise of a brighter future for the Burnett Mary region. We pledge our continued dedication to enhancing our natural ecosystems, supporting our communities, and fostering an environment where collaboration thrives.

With heartfelt gratitude, we thank every individual and organisation that has walked this journey with us. Your unwavering commitment, passion, and support are the pillars upon which BMRG stands. Together, we look forward to achieving even greater milestones in the upcoming year, always guided by our mission and the collective strength of our community.

Warm regards,

*Tony Ricciardi*  
Chairman

# Financial Summary

Total Funds Available

**\$14,627,706**

2022/23

Total Funds Expended

**\$10,670,803**

2022/23

Total Funds committed for ongoing work

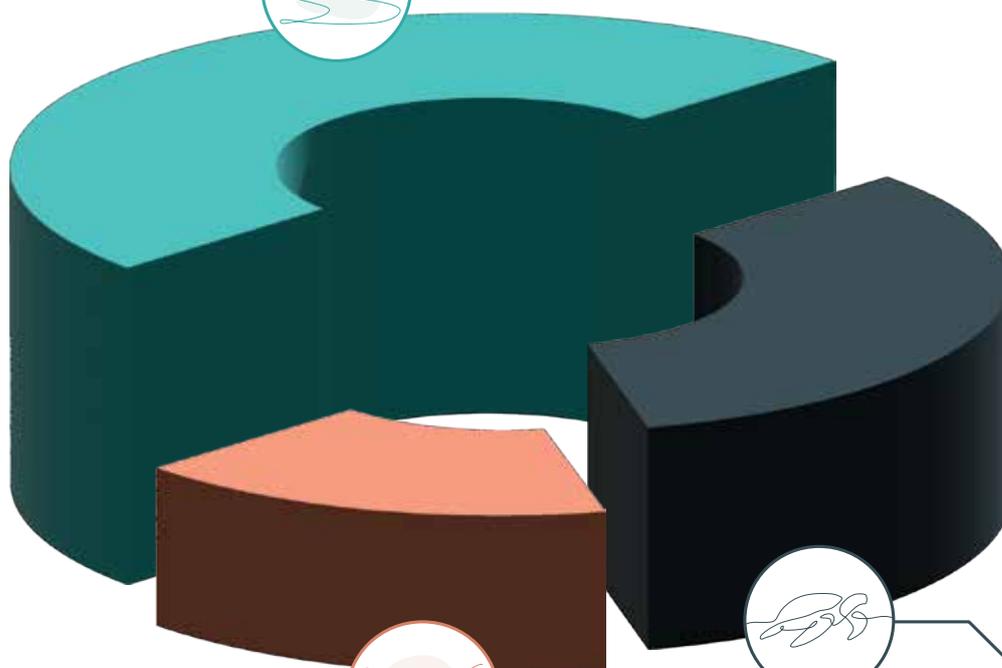
**\$3,956,903**

2022/23

## Water Quality

**\$7,088,983**

Reef Water Quality, Reef Trust (Discovery Coast), Mary River Recovery, Improving Land Management and Water Quality in the Burnett River



## Agricultural and Extension Services and Indigenous Engagement

**\$1,051,140**

Regional Agricultural Landcare Facilitator, Productive & Resilient Farmers, GRASS program



## Ecosystem Management

**\$2,530,682**

Saltmarsh and Turtles, Restoring Great Sandy Strait, Emergency Flood Recovery, Post Fire Monitoring on K'gari, Koala Habitat Restoration, Natural Capital, Minderoo Fire and Flood, Community Sustainability Action, Nest to Ocean, Shorebirds Roost Trial, Black Summer Bushfires, Riverine Recovery, Weeds and Pest Management, Industry Resilience and Recovery Officers



# Black Summer Bushfire Remediation and Resilience



**Australian Government**

**Funded by:** The Australian Government

**Partners:** Camp Gregory Veterans' Retreat, Alluvium Consulting, Engineering Plus, Gidarjil Development Corporation, Woodgate Rural Fire Brigade, Butchulla Native Title Aboriginal Corporation, Kabi Kabi People's Aboriginal Corporation.

## Background

The bushfires of late 2019 and early 2020 were among the most devastating natural disasters in recent Australian history, resulting in extensive loss of life, property and ecosystems.

This project aims to help rebuild community connectivity for those impacted by bushfires and increase the resilience and capacity through the Burnett Mary Region, including:

### Camp Gregory

- Building an aquatic evacuation centre
- Design and install a boat ramp for evacuation

### Cool Burns Workshops

- Increase the involvement of Traditional Owners in cultural burning and fire monitoring
- Knowledge transfer between Traditional Owners and landholders
- Develop Fire Management Plans

### Landowner/Traditional Owner Sessions And Capacity Building Workshops

- Provide local agricultural communities with fire regimes and guidelines for fire management in hazard reduction, asset protection, primary production and conservation
- Expanding on available fire detection technologies
- Assist Traditional Owners to purchase two drones to increase capacity to offer free fire-service advice
- Support Traditional Owners and landholders with fire safety equipment PPE.

## Project Update

The project scope was mapped out and the Camp Gregory Veterans' Retreat consortium was established. BMRG purchased 15 Sentrism sensors and began discussions with Origin Energy for their installation and ongoing maintenance.

## Future Work

Eight Cool Burns workshops were scheduled for 2023–24 and an online information hub will be developed.



**Photo:** Cool Burn at Scrub Hill

# Improving Land Management and Water Quality in the Burnett Catchment



Australian Government



**Funded by:** The Australian Government's Reef Trust

**Partners:** The Burnett River Water Quality Consortium includes Central Queensland University's Coastal Marine Ecosystems Research Centre, Gidarjil Development Corporation, Goondicum Pastoral Company and C&K Transport and Earthmovers.

## Background

BMRG is leading practical, on-the-ground action to improve land management and the water quality flowing from the Burnett River Catchment to the Great Barrier Reef as part of coastal habitat restoration and threatened species protection in the Burnett Mary region.

Approximately 20 per cent of the Reef 2050 Water Quality Improvement Plan sediment reduction target for the Burnett Catchment will be achieved through this project over three years.

More than 16,000 tonnes of fine sediment in the Burnett River Catchment area is adversely impacting water quality, coastal habitats and the universal value of the Great Barrier Reef.

High volumes of sediment flow are caused by poor land and riparian management, feral animals, and infestations of weeds destabilising streambanks.

The project scope identified and prioritised erosion sites that contribute the highest volume of fine sediment, restoring damaged sites, promoting sustainable cropping, and grazing land management, weed management, native revegetation, and feral animal control.

## Project Update

Priority sites for restoration were identified through Light Detection and Ranging (LiDAR) drone surveys and stakeholder consultation. The fauna present at each site was assessed using fauna surveys.

On-ground water quality monitoring sensors were installed and used by Central Queensland University to monitor water quality ongoing. Earthworks were completed at several sites, including the installation of erosion matting and rock chutes.

Some sites were fenced to prevent cattle access to stabilised streambank.

In the last six months of the project, January 2023 to June 2023, the following tasks were completed:

- Revegetation from seeds taken from the sites prior to the earthworks and grown in the Gidarjil Development Corporation native nursery
- Earthworks
- Control of feral pigs
- Continued water quality sampling.

The water sampling done at Rodds Harbour post-sediment and erosion control measures and stabilisation of the Kolan River streambank showed a marked reduction in suspended fine sediment flowing to the Great Barrier Reef.

## Future Work

There are no future works planned, as the project funding agreement expired on 30 June 2023.

# Carbon + Biodiversity Pilot & Enhancing Remnant Vegetation Pilot



*Photo: A fence installed through the ERV Pilot, fencing off remnant vegetation and reducing grazing pressure*



**Australian Government**

**Funded by:** The Australian Government's Department of Climate Change, Energy, the Environment and Water  
**Partner:** Australian National University

## Background

Two pilot programs were introduced in 2021 as part of the Australian Government's Agriculture Stewardship Package, developed in partnership with the Australian National University (ANU).

The Carbon + Biodiversity Pilot is a trial for farmers to provide biodiversity and carbon abatement services. By establishing biodiverse environmental plantings, the pilot aims to create a credible market mechanism that improves biodiversity and climate outcomes and new income opportunities for farmers.

The Enhancing Remnant Vegetation Pilot encourages and rewards participants for installing fencing, managing weeds and pest animals, and carrying out plantings on their land.

Historically, vegetation has been cleared on farmland, transforming the landscape from wooded areas to grassland. This destruction or degradation of remnant vegetation on farmland reduces biodiversity and abundance in flora and fauna species.

The pilots provide landholders with incentives to protect and enhance remnant vegetation on their land. Both pilot projects aim to put a value on remnant ecosystems and highlight the benefits associated with preserving them.

## Project Update

All successful project applications were contracted, with landholders getting the green light to start their projects. BMRG's role is to offer technical support to the landholders through regular catch-ups and property visits.

Species lists were also created for landholders undertaking revegetation projects on their properties. BMRG continues to offer support in project delivery for landholders involved in the pilot programs.

## Future Work

BMRG has acquired more funding to continue supporting landholders participating in the pilot program. There will be a greater focus on project delivery, monitoring and reporting.



*Photo: Landholders with project team members.*

# Emergency Flood Recovery for Wildlife and Habitat



**Photo:** A canoe trip was undertaken on the Mary River to map threatened species habitat, cultural heritage, flood impacts and riparian vegetation.



**Australian Government**

**Funded by:** The Australian Government

**Partners:** Mary River Catchment Coordinating Committee, Griffith University, Butchulla Aboriginal Corporation, Butchulla Native Title Aboriginal Corporation, Kabi Kabi People's Aboriginal Corporation, Jinibara People Aboriginal Corporation, Gidarjil Development Corporation and Elders Group, local landcare groups, Jennifer Firn (QUT / NESP) K'gari plant/fire/myrtlerust specialist

## Background

The Mary River from Conondale to Tiaro includes critical habitats for threatened species, remnant riparian habitat and cultural heritage. This project aims to undertake threatened species sampling at priority sites along the Mary River, and rapid assessments of select flood-impacted sites in the Mary, Burnett, Burrum, Kolan, Baffle and K'gari areas.

Methods include drone photogrammetry (LiDAR), exotic weed assessments, vegetation extent and condition, threatened species sampling and critical habitat assessments. A 10-year Resilience Plan for the Burnett Mary region encompassing threatened species and matters of national environmental significance will also be developed.

## Project Update

A successful canoe trip was undertaken in April 2023. This activity brought together stakeholders and experts in the Mary River including Griffith University, Mary River Catchment Coordinating Committee and Traditional Owners from Jinibara, Kabi Kabi and Butchulla groups. The cultural heritage, threatened species habitat, flood impacts and riparian vegetation were mapped for more than 200km of the Mary River from Kenilworth to Tiaro, creating an extensive database of the river.

This was paired with rapid assessments of the other catchments in the Burnett Mary Region (Kolan, Baffle, Burrum, Burnett and K'gari catchments). This included sampling the aquatic and terrestrial

fauna, conducting vegetation and flood impact assessments and conducting drone photogrammetry surveys.

A 10-year Resilience Plan was developed for threatened species and critical habitats throughout the Burnett Mary region, based on the learnings of Consortium members on this project.

## Future Work

The funding for this project has finished, however, now that we have a greater understanding of the river's habitat and flood impacts, there are several projects which can be advanced.

Spatial information gathered from this project will be overlaid with ongoing ecological datasets to inform future management interventions for our threatened species and habitats.



**Photo:** Threatened species were mapped and recorded on the Mary River canoe expedition.

# Grazing Resilience and Sustainable Solutions (GRASS)



Queensland Government

**Funded by:** Queensland Government's Queensland Reef Water Quality Program

**Partners:** Department of Agriculture and Fisheries, Fitzroy Basin Association, NQ Dry Topics

## Background

The GRASS program supports graziers in the Reef catchments of the Burdekin, Fitzroy and Burnett Mary regions, delivering one-on-one support to manage and improve land conditions and to minimise sediment delivery from the paddock to the Reef.

Through the GRASS program, landholders identify less productive areas of their property – poor (C) or degraded land (D) (via Land Condition Assessments, or LCATs), develop an Action Plan for Land Management (APLM) to improve paddock conditions, and gain an understanding of the requirements under the Queensland Government's Reef protection regulations and associated minimum standards for grazing.

BMRG, together with our partner DAF, is responsible for completing APLMs for the region. The GRASS team also engages with landowners and their preferred contractors to complete projects to improve land condition and pasture cover to enhance production, provide economic benefits and environmental outcomes.

## Project Update

The first phase of GRASS concluded in December 2022. The second phase is running from 2023–26, delivering action plans and incentive projects across the Burnett Mary Region.

In the first six months of the second phase, BMRG delivered 12 APLMs, and contracted five incentive projects.

## Future Work

BMRG will continue to support graziers, deliver extension services, and help landowners understand the Reef protection regulations in the Burnett Mary Region, delivering 22 APLMs and contracting 15 incentive projects in the 2023–24 financial year.



**Photo:** The GRASS program helps landholders to develop an Action Plan for Land Management (APLM) to improve paddock conditions.

# Burnett Mary Region Environmental Account



**Funded by:** Minderoo Foundation

**Partners:** Accounting for Nature, Traditional Owners, Central Queensland University, Queensland Parks and Wildlife Service, Gladstone Ports Corporation, Mary River Catchment Coordinating Committee, Burnett Catchment Care Association, Alluvium Consulting

## Background

There is growing recognition that Natural Capital underpins the prosperity and environmental health of Australia's regional communities. Natural Capital refers to the stocks of environmental assets such as native vegetation, fauna and freshwater. In November 2022, BMRG launched the Australian first, Regional Environmental Account at the National NRM Conference in Margaret River. The Account presented the culmination of 18 months work documenting the extent and condition of the Burnett Mary Region's terrestrial and freshwater assets. The Account was developed under the Accounting for Nature Framework and in partnership with regional stakeholders and Traditional Owners.

## The Environmental Account Has:

- Developed a suite of methodologies to assess the condition of vegetation, terrestrial fauna, aquatic fauna (eDNA) and waterway condition. These methods are open-source and available for other NRM Regions around Australia.
- Documented the condition of the Burnett Mary Region's environmental assets. This dataset is now being used to prioritise our environmental management programs.
- Identified opportunities for natural capital investment and catalysed discussions and partnerships with national and international funders.

## Project Update

On-ground measurements and expert elicitation workshops have utilised the capacity of BMRG's operations team, stakeholders and our network of regional experts:

- Waterway quality and eDNA samples were collected at 160 sites across the region – a complex logistical exercise. Repeat measures have been made to validate and document trends.
- Vegetation condition and terrestrial fauna were assessed using a combination of remote sensing and validation through a structured expert elicitation process.

## Future Work

The scope of the BMRG Environmental Account is now being extended to cover marine and coastal environmental assets, including inshore reefs, marine turtles, seagrass and dugongs, and coastal wetlands. A recent stakeholder workshop has prioritised these assets and methodologies are being developed under the AfN Framework.



**Photo:** The BMRG Environmental Account is being extended to cover marine and coastal environmental assets, including dugongs.

# Environmental Accounting Explained



Environmental accounting is an innovative approach that seeks to integrate environmental considerations into traditional financial accounting practices.

It involves the systematic recording, analysis, and interpretation of environmental data, often alongside financial data, to provide a holistic view of an organisation's performance and its impact on the environment.

This method allows for the quantification and reporting of environmental costs, benefits, and liabilities, enabling businesses and governments to make informed decisions that balance economic growth with environmental sustainability.

The importance of environmental accounting cannot be overstated.

As global environmental challenges such as climate change, deforestation, and water scarcity intensify, there is a growing need for organisations to understand and manage their environmental footprint.

Environmental accounting provides a framework for tracking environmental performance, identifying areas for improvement, and ensuring compliance with environmental regulations.

Moreover, it offers a means for organisations to demonstrate their commitment to sustainability, which can enhance their reputation and foster trust among stakeholders.

The Burnett Mary Region offers a compelling example of the application of environmental accounting. The Burnett Mary Regional Group has taken initiatives to measure the condition of environmental assets in the region according to the science-based Accounting for Nature® Certification Standard. This ensures transparency, credibility and consistency in environmental reporting.

The "Burnett Mary Region Environmental Account 2021–2022" provides a comprehensive overview of the environmental condition of the region, covering assets such as native vegetation, fauna, aquatic life, and waterway conditions. This account serves multiple purposes:

**Baseline data:** It offers baseline data on environmental assets, helping to understand longer-term trends in asset conditions.

**Informing strategies:** The data informs natural resource management investment and funding strategies.

**Communication:** It communicates the outcomes and benefits of environmental programs to the community and stakeholders.

**Alignment with global goals:** The account contributes to state, national, and international frameworks, such as the Sustainable Development Goals.

In conclusion, environmental accounting is a vital tool for the modern world, enabling a balanced approach to development that considers both economic and environmental factors.

The Burnett Mary Region's efforts exemplify the potential of environmental accounting to drive positive change and ensure a sustainable future.



# Industry Recovery and Resilience Officers



Australian Government



Queensland Government

**Funded by:** Jointly funded by the Australian and Queensland Governments under the Disaster Recovery Funding Arrangements (DRFA)

## Background

BMRG plays a key role in delivering the Industry Recovery and Resilience Officer (IRRO) program, which supports primary producers impacted by the southern Queensland significant rainfall events that occurred in 2021–22. Working in partnership with the Queensland Government, QFF and Growcom, BMRG's specialised Industry Recovery and Resilience Officers work directly with local primary producers to help them recover from natural disasters and plan for future severe weather events.

IRROs work collaboratively with primary producers from all industry sectors to develop plans based on flood scenario mapping, existing tools and methodology, workshops and face-to-face meetings.

The program is vital to increasing the preparedness and resilience of agribusinesses and farming properties for upcoming natural disaster seasons, and BMRG is proud to provide ongoing support to producers and their businesses.

## Project Update

Two IRROs were engaged by BMRG in the second half of 2022–23 to assist primary producers impacted by southern Queensland's 2021–22 rainfall events to provide specialised support.

## Future Work

In 2023–24, IRROs will assist 75 primary producers to complete a Flood Management Plan which can be incorporated into their Farm Business Resilience Plan. These plans are intended to identify the specific risks to the production enterprise associated with flooding using existing tools and methodologies (eg mapping of flood scenarios, seasonal agricultural production activities, management practices and current infrastructure) and outline new actions to respond to those risks and recover from these events.

IRROs can also help producers to develop a Farm Business Resilience Plan aimed at improving productivity and profitability, building resilience to future climate-driven events such as flood, bushfire and drought, and supporting applications to access government financial assistance.

IRROs will also connect farmers with mental health service providers, financial planning or business planning services.



**Photo:** BMRG's Industry Recovery and Resilience Officers at Agvention.

# Integrated Habitat Restoration for the Discovery Coast



**Funded by:** The Australian Government's Reef Trust  
**Partners:** Central Queensland University, Gidarjil Development Corporation, LESS Industries, Alluvium Consulting

## Background

The Discovery Coast area supports marine turtle nesting, fish habitat and contains coastal catchments that drain directly into the Great Barrier Reef.

Improving water quality, tidal connectivity, and ecosystem resilience is the aim of this project.

The Rodds Harbour Fish Habitat Area had three unlawfully installed earthen causeways restricting tidal flow. Site surveys also identified a heavy feral pig and weed presence, damaging the natural ecosystem, and competing with native species.

Large-scale erosion was identified in the tidal area of the Kolan River as a major contributor of fine sediment entering the Great Barrier Reef.

Kolan River riverbank remediation, stabilisation earthworks and subsequent revegetation were completed in early 2022.

Data was extracted on the mangroves, fauna, invasive species, sediment carbon content and particle size, and water quality to determine changes in ecosystem health before and during the earthworks.

## Project Update

The Discovery Coast Consortium completed several activities in 2022–23, collectively preventing more than 7000 tonnes of fine sediment entering the Great Barrier Reef each year including:

- The removal of the three illegal causeways
- Revegetation of habitat

- Implementation of monitoring regimes
- Weed removal
- Surveys into fauna and flora
- Sampling of water quality
- Shoreline restoration along the Kolan River.

The Discovery Coast Consortium monitored and surveyed the Rodds Peninsular Fish Habitat Area up until June 2023.

The learnings and experience gained from this project will inform future projects that aim to improve water quality, ecosystem health, and endangered species protection.

## Future Work

There are no future works for this project as the funding agreement expired on 30 June 2023.



**Photo:** The site of riverbank restoration works on the Kolan River.

# Out and About



BMRG Board members Tony Ricciardi and Gayle Minniecon with Christine Royan from the Butchulla Aboriginal Corporation at K'aari World Heritage anniversary celebrations.



At the Mon Repos documentary premiere.



Mary River canoe expedition.



Strait Expectations site visit at River Heads.



Nest to Ocean site visit with Shane Jackson.



Camp Gregory fire truck.



Mary River canoe trip



Marine debris – Great Sandy National Park



Shorebird monitoring



Paddock to Reef workshop, Kenilworth



EDNA Environmental Account – water sampling



Gidarjil - Butchulla boat handover

# Managing Weeds And Pests In Priority Sub-Catchments Of The Barambah Creek Catchment



Australian Government

**Funded by:** Assistance for this project is being provided through the jointly funded Commonwealth-State Disaster Recovery Funding Arrangements

**Partners:** Gympie Landcare and Ricky Rogers Pest Animal Management

## Background

This project was funded by the Australian and Queensland Governments following multiple significant rainfall and flooding events during the 2021–22 severe weather season.

As a result of those events, weed numbers exploded and feral pigs flourished.

The main goal is to support native flora and fauna species to establish into resilient habitat through the management of invasive weeds and pigs.

As many pigs as possible will be removed from five properties in the catchment, where they are harming the environment and impacting farm productivity.

The introduced feral pigs are treated humanely and disposed of safely.

Ricky Rogers Pest Animal Management was engaged to undertake the works.

## Project Update

Ricky Rogers Pest Management undertook an initial creek assessment to determine areas where feral pigs were more active to begin training the animals.

This education was to lure pigs with macadamia nuts or sweet corn to familiarise them with a particular feeding spot.

Gympie Landcare finished revegetation works on the first property and removed invasive weeds from a substantial section of the waterway. They are working in a second property.

## Future Work

Feral pigs will be captured and removed from the catchment. Workshops are planned to discuss feral pig management and biological weed control with producers and Traditional Owners. Landholders and community members will be invited to learn about feral pig management including the best techniques to monitor, evaluate and eradicate feral pigs from properties. Gympie Landcare will continue to remove invasive weeds and revegetate sections of the waterways.



*Photo: Panoramic view of Barambah Creek after weed control works.*

# Mary River Recovery



*Photo: Seven sites along the Mary River are being rehabilitated to reduce sediment flow to the Great Barrier Reef and restore habitat.*



**Funded by:** The Great Barrier Reef Foundation and the Australian Government's Reef Trust  
**Partners:** Burnett Mary Regional Group leads the Mary River Recovery Consortium, a formal delivery group partnership between Burnett Mary Regional Group, Mary River Catchment Coordinating Committee, and Alluvium Consulting

## Background

Australia's Great Barrier Reef ecosystem is under threat due, in part, to poor water quality runoff. The Mary River is one of the top five contributors of fine sediment into the Great Barrier Reef, and 70 per cent of the fine sediment from the Mary River that enters the Great Sandy Strait comes from streambank erosion.

The main aim of the Mary River Recovery Program is to stabilise and revegetate badly eroding sections of the Mary River by working directly with cooperative landholders over a four-year period.

Each year, 26,000 tonnes of sediment enters the Great Barrier Reef lagoon from just eight Mary River erosion sites. Streambank retreat and increased amounts of sediment impact the endangered Mary River cod and white-throated snapping turtle through the loss of nesting and feeding grounds, while the collapse of streambanks blocks the river systems, preventing fish movement and smothering food sources.

## Project Update

Through detailed engineering design, major earthworks, pile fields, revegetation, monitoring and evaluation, several sites have now been fully rehabilitated.

An aerial survey was completed to assess how rehabilitated sites withstood extreme weather, such as the recent Cyclone Seth and the subsequent flooding that followed.

Damage to unrehabilitated sites has been recorded for comparison. It was found that the rehabilitated sites had minimal

damage, demonstrating that the works have been successful in stabilising the streambanks.

Continuous monitoring of completed sites and the water quality at each will continue until the project's completion in June 2024.

Five of the seven sites have been fully remediated as at 30 June 2023 including streambank reprofiling, bank stabilisation using piling and then revegetation of the site.

## Future Work

The consortium will complete the remediation of all sites in 2023–24, followed by 12 months of maintenance funded by the GBRF.



*Photo: Riverbank stabilisation works at one of the selected sites.*

# Natural Resource Investment Program (NRIP)



Queensland Government

**Funded by:** Queensland Government

**Partners:** Mary River Catchment Coordinating Committee, Burnett Catchment Care Association (BCCA), Noosa & District Landcare, Gympie & District Landcare

## Background

Human activities such as land clearing, sand and gravel extraction, removal of riparian vegetation and grazing pressures significantly impact our natural resources. NRIP aims to rectify this through the sustainable management of our natural resources including land, water, vegetation and reef water quality, focusing on areas that will produce on-ground outcomes that can be measured by consistent state-wide methods.

Human activities have accelerated the rates of channel erosion and sediment and nutrient delivery. Catchment runoff, with the resulting pollutant loads and poor water quality, is considered to have the greatest overall impact on coastal and marine assets in the Burnett Mary region.

To counterbalance the issue, a focus is placed on revegetation and improving land management. Works include bank reprofiling and structural protection, active revegetation, weed management and fencing for stock exclusion along the entire length of where the works take place.

This project aims to improve grazing land management over 700 hectares in the Burnett region through:

- Improving the condition of 20 hectares of riparian vegetation
- Rehabilitating 600 metres of priority Mary River sites
- Improved function and condition of 200 hectares of wetlands in the Lower Mary (Susan) River

## Project Update

A range of projects to improve soil health and stability, enhance high-value native vegetation and reduce the amount of sediment flowing into the region's waterways have been completed.

## Future Work

The Paddock to Reef (P2R) is ongoing with workshops and engagement with graziers, community groups, Traditional Owners and other stakeholders. A series of stakeholder engagement activities is scheduled for 2023–24.



*Photo: Improving the condition of riparian vegetation is a major focus of NRIP.*

# Nest to Ocean Turtle Protection Program



Queensland Government

**Funded by:** Queensland Government's Department of Environment and Science

**Partners:** Silent Night Pest Management, Gidarjil Development Corporation, Invasive Plant and Animal Services, Bush to Bay Weed Control, Queensland Parks and Wildlife Service, Department of Environment and Science

## Background

The Burnett Mary region coastline is internationally renowned for its marine turtle nesting sites. These sites support significant breeding populations of loggerhead, flatback and green sea turtles. These iconic species experience a range of serious threats to their survival. One of the main dangers is the predation of eggs and hatchlings by invasive species, which have reduced marine turtle numbers.

The European red fox, introduced to the region, is a primary threat to the marine turtle nests and hatchlings on Queensland beaches. Foxes dig up eggs that turtles have laid under the sand or catch the hatchlings as they head down the beach toward the ocean.

Reducing the number of foxes is key to the turtle population's survival on Queensland beaches. Turtle beaches are monitored for fox activity and confirmed fox sightings prompt on-ground action to reduce their numbers. BMRG partnered with pest control officers and rangers who humanely and efficiently trapped and disposed of foxes in areas selected for their proximity to turtle nesting beaches.

Volunteers based in areas where the fox control work was being undertaken monitored the turtles, their nests and their hatchlings throughout the nesting season, and provided data on turtle numbers and behaviours in project areas.

## Project Update

Fox control activities were undertaken at Wreck Rock, Deepwater National Park, Moore Park Beach and along the coastal stretch of the Burnett River. These works engaged with local communities to educate people about the control work being done to protect the turtles.

## Future Work

New funding has been announced for three years from October 2023 to June 2026.



**Photo:** Conservation Detector Dogs help track and find foxes.

# Paddock to Reef Integrated Monitoring, Modelling and Reporting Program



Australian Government



Queensland Government

Funded by: Jointly funded by the Australian and Queensland governments

## Background

The Great Barrier Reef continues to face increasing threats from a range of pressures impacting its ecological significance and chance of survival.

The Paddock to Reef Integrated Monitoring, Modelling and Report Program (Paddock to Reef program) was established to support the Reef 2050 Water Quality Improvement Plan 2017–2022 (Reef 2050 WQIP), evaluating management practice adoption and effectiveness, catchment condition, pollutant runoff and marine condition.

The program aims to measure and report on water quality factors that impact Reef health and adopts an innovative approach to collecting and integrating data on agricultural management practices, catchment loads and the health of the Great Barrier Reef.

The Paddock to Reef program was established in 2009 to support the Reef 2050 WQIP via a robust monitoring and evaluation program. BMRG is one of 20 collaborative partners, including other natural resource management agencies, government, industry, private landowners, and research organisations.

The broader scope is to monitor, interpret and report on water quality status and trends, report on the progress towards the Reef 2050 WQIP targets, support adaptive management for actions within the Reef 2050 WQIP, provide knowledge and insights to partners, and provide the primary mechanism for evaluating the water quality theme of the Reef 2050 Long-Term Sustainability Plan.

## Project Update

BMRG has:

- Facilitated the 2023 Burnett Mary Regional Integrated Science Forum at Mimburi, Belli Creek
- Collected pesticide application rate data on sugarcane farms by delivery agents
- Held a workshop with key sugarcane industry representatives about current management practices in the industry
- Participated in workshops to develop and inform direction of the Paddock to Reef program for the next five years and to look at learnings from the past five years.

## Future Work

Sugarcane pesticide application data collected by the Paddock to Reef program will be supplied to the program water quality monitors and program modelers, ensuring accuracy of modelled data and water quality sample analyses.

The annual Regional Integrated Science Forum will be held in May 2024. This will be an opportunity to share learnings from the updated Scientific Consensus Statement for the Great Barrier Reef and water quality science across the region will be discussed.

# Post Fire Monitoring of Wetland Threatened Species and Threatened Ecological Communities



Australian Government

**Funded by:** Australian Government

**Partners:** Mary River Catchment Coordinating Committee, Queensland Parks and Wildlife Service, Department of Environment and Science, Griffith University, Butchulla Aboriginal Corporation, Department of Agriculture, Water, and the Environment (Heritage Branch)

## Background

K'gari is the largest sand island in the world and was inscribed on the World Heritage list in 1992.

The bushfires of 2019–20 significantly impacted parts of the island encompassing wetland habitats. Very little was known about how the fires impacted the island's wetlands and their dependent species of fauna and flora.

It is important to establish a baseline for monitoring and assessing impacts of future fire events in this unique environment. The first step was assessing the impacts of recent bushfires on the Outstanding Universal Value of K'gari and the ecological character of a range of wetlands including the globally unique patterned ferns.

Comprehensive data was collected to determine the impact of fire on various ecological features, with a view to establishing a baseline for monitoring and assessing impacts of future fire events.

The project outcomes will help prioritise potential future management interventions and improve the resilience of this area.

## Project Update

Baseline sampling has been completed across more than 100 sites on K'gari in water quality, fauna, flora and wetlands, and the existing values and threats to the wetlands on K'gari and Great Sandy Strait have been workshopped.

The data showed positive signs that the country is recovering after the 2019–20 fires. While there were some localised decreases in fish and frog populations, there were also some sites where these species had not been found in the past but were now present. These findings and recommendations for future monitoring (including site nominations and survey methodologies) were coordinated into a "Post-fire monitoring for K'gari" document. This was developed with key stakeholders, Traditional Owners, university researchers and wetland/species experts.

## Future Work

The funding for this project has finished. The project achieved the objectives it set to achieve.



**Photo:** This project showed positive signs K'gari is recovering after the 2019-20 fires.

# Protecting Saltmarsh and Marine Turtle Monitoring



National  
Landcare  
Program



**Funded by:** Australian Government's National Landcare Program

**Partners:** Turtle Care Volunteers Qld, Lady Musgrave Island Study, Lower Mary River Land and Catchment Care Group, Gidarjil Land and Sea Rangers, Bargara Beaches Turtle Monitoring Volunteers, Oaks Beach Turtle Monitoring Volunteers

## Background

Six of the world's seven species of marine turtles occur in Australian waters and are protected under the Commonwealth Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). Three are endangered — loggerhead, olive ridley, leatherback turtles — while another three are vulnerable — green, flatback and hawksbill turtles.

Turtle nesting numbers have declined since European settlement. In more recent decades, the decline has continued with contemporary threats including habitat degradation, fisheries bycatch, nest predation and marine debris.

Long-term monitoring of the trajectory of marine turtle species and hatchling success rates will be maintained through volunteer groups at Sandy Cape, Wreck Rock, Lady Musgrave Island, Moore Park Beach and Agnes Water beach.

Volunteers tag, identify and record turtles and assess and record the success of nesting activities, while on-ground actions such as the installation of wildlife-friendly fencing will protect 200 hectares of the saltmarsh sites from the threats of introduced and exotic pest species. Marine debris removal and surveys will also be carried out across the saltmarsh and marine turtle rookery sites.

## Project Update

Successful ongoing monitoring programs were undertaken with support from volunteer groups.

Community education and engagement programs were delivered to increase participation and build knowledge.

Livestock access to wetlands was controlled with fencing, installation of an off-site watering point and weed control. Continued public education on the impacts of marine debris raised understanding of the impacts of plastic on Australian marine wildlife. Nesting site predation was controlled with protection devices and proved successful where implemented.

BMRG funded volunteer groups at seven locations from Wreck Rock Beach at Deepwater National Park to K'gari and Hervey Bay.

## Future Work

There are no future works planned for this project as the funding agreement expired on 30 June 2023.



**Photo:** Community volunteers assist with monitoring turtles.

# Regional Agriculture Landcare Facilitator (RALF)



Australian Government

National  
Landcare  
Program



Funded by: The Australian Government's National Landcare Program

## Background

Regional Agriculture Landcare Facilitators (RALFs) support farmers, industry, and community groups to adopt new and innovative sustainable agriculture practices.

RALFs are funded under the Australian Government's National Landcare Program – a key part of the commitment to natural resource management (NRM).

There is at least one facilitator in each NRM region across Australia, providing a national service. Their role is unique, they connect people and information, and are out on the ground as the key contacts for sustainable agriculture in their community.

RALFs support the adoption and awareness of sustainable agriculture in Australia, contributing towards the following agricultural outcomes under the Regional Land Partnerships program:

- Increasing awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation.
- Increasing the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production.

The RALF works closely with Landcare, catchment and producer groups, and the various agricultural industries to deliver these services. Establishing and building partnerships with these key groups is central to the RALF role.

RALFs also help farming communities and agriculture industry groups to develop new projects and seek new funding opportunities.

## Project Update

The RALF worked with community organisations to facilitate workshops on topics including regenerative agriculture, cleaner farm dams and carbon credits.

The RALF also attended various industry and community events to promote innovative sustainable agriculture practices.

## Future Work

If funding is provided for a new round of the program, BMRG will continue to work with landholders and community organisations to promote new and innovative sustainable agricultural practices.



**Photo:** The RALF works with Landcare and community groups to promote sustainable and innovative agricultural practices.

# Shorebirds Roost Trial



**Funded by:** Gladstone Ports Corporation

**Partners:** Gladstone Ports Corporation, Gidarjil Development Corporation, Birdlife Bundaberg

## Background

BMRG is leading a ground-breaking project to shore up the future of migratory birds along the coast near Bundaberg. Artificial roosts will be established at Barubbra Island to provide safe habitat for shorebirds and assist with monitoring.

Long-line oyster bags will be installed as a low-cost, low-impact, semi-permanent alternative to previous methods.

Critically endangered species known to nest in the area included the Bar-tailed Godwit, Curlew Sandpiper and Australia's largest shorebird, the Eastern Curlew.

The Eastern Curlew takes an annual migratory flight to Russia and north-eastern China to breed, returning to Australia in August to feed on crabs and molluscs in intertidal mudflats.

Gladstone Ports Corporation is funding and supporting the project, while volunteers from Birdlife Bundaberg will assist with monitoring the shorebirds.

Gidarjil Development Corporation land and sea rangers will help to assemble and install the floating roosts.

The trial is modelled on work successfully undertaken by BirdLife Australia at three other sites.

Bundaberg serves as a major feeding and roosting ground for shorebirds, receiving 42 species of migratory shorebirds along our shoreline from September to April.

Monitoring over the 2020 season showed that Bundaberg received 2000 birds across 22 species with six of these species being under threat.

Shorebirds have experienced extreme loss of habitat over recent decades due to global urbanisation.

They need large areas of suitable habitat protected or built to breed, feed and roost.

## Project Update

Monitoring of the shorebirds began with equipment purchased and surveys undertaken at the site of installation.

## Future Work

The roost construction is planned for completion by the end of 2023. Shorebird numbers will be monitored and are expected to grow.



*Photo: Eastern Curlew by John Gately*

# Strait Expectations – Restoring The Great Sandy Ramsar Wetland



National  
Landcare  
Program



**Funded by:** Australian Government's Regional Land Partnerships

**Partners:** Butchulla Aboriginal Corporation, Noosa & District Landcare, Lower Mary River Land & Catchment Care Group, Hinterland Bush Links, Mary River Catchment Care Committee, Bush to Bay Weed Control

## Background

Great Sandy Strait is a double-ended sand passage estuary between the mainland and the World Heritage listed K'gari (Fraser Island). Of three such passages in Queensland, it is the least modified and is the largest area of tidal swamps within the Southeast Queensland bioregion. A major part of the Strait consists of intertidal sand and mud flats, seagrass beds, mangrove forests, salt flats and saltmarshes, wetlands and coastal wallum swamps. As such, the Strait is an exceptionally important feeding ground for migratory shorebirds and important for a wide range of other shorebirds, waterfowl and seabirds, marine fish, crustaceans, oysters, dugongs, sea turtles and dolphins.

Sedimentation mobilisation from the Mary River in the Ramsar wetland is contributing to the loss of benthic marine habitats in the Great Sandy Strait. Invasive weeds cause loss and degradation of native ecosystems and animal habitat through competition with native vegetation, while pest animals, namely feral pigs, are causing predation, habitat degradation, competition and disease transmission. Finally, human activity and grazing stock are disturbing, degrading and adding to pollutants in riparian and aquatic habitats.

To address the issues, Strait Expectations will reduce sedimentation mobilisation to the downstream wetlands through bank stabilisation, feral pest control, species surveys and flow dispersion works at sites on the Mary River. Bank restoration works will also enhance nesting habitats for the endangered Mary River turtle and Mary River cod. Community and stakeholder

engagement is another component of this program which includes conferences, site demonstrations, training, workshops events and capacity building for Traditional Owners.

BMRG and partners are delivering on-ground works, including revegetation, erosion control, weed removal and feral pig control along the Mary River.

## Project Update

Strait Expectations has achieved erosion management of 600m of Mary River, riparian and aquatic area remediation, weed removal, revegetation of habitats, pest control, collecting and synthesizing baseline data, community and stakeholder engagement and establishing agreements with stakeholders.

The final year of this program involved follow-up control for weeds of national significance along the Mary River and native habitat revegetation to benefit Matters of National Environmental Significance (MNES), also coordinating the Ramsar Management Advisory Group (RMAG) meetings and establishing new agreements with stakeholders and Traditional Owners.

## Future Work

The funding for this project has finished.

# BMRG Board of Directors



*Photo: Tony Ricciardi, Gayle Minniecon, Jeanette Harrold, Brent McLellan*



The BMRG Board of Directors thanks our members, Federal, State and Local Government, Traditional Owners, Landcare Groups, industry partners and the Burnett Mary community for your ongoing support.

# Burnett Mary Region





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**Australian Government**



**Queensland Government**