

# GRASS

## Grazing Resilience and Sustainable Solutions



Final Report:  
Grazing Resilience and Sustainable Solutions Program (GRASS) 2019 – 2022 -  
supporting graziers in the Burdekin, Fitzroy and Burnett Mary regions.

October 2023

Prepared by Queensland Department of Environment and Science,  
Queensland Department of Agriculture and Forestry,  
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Prepared by: Office of the Great Barrier Reef and World Heritage, Environment and Heritage Policy and Programs,  
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October 2023

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## Executive Summary

The Grazing Resilience and Sustainable Solutions (GRASS) program is a 2019 initiative of the Queensland Government Reef Water Quality Program (through the Department of Environment and Science (DES)) delivered in partnership with the Queensland Department of Agriculture and Fisheries (DAF) and Natural Resource Management (NRM) groups, NQ Dry Tropics Ltd (NQDT), Fitzroy Basin Association Ltd (FBA) and Burnett Mary Regional Group for Natural Resource Management Ltd (BMRG).

GRASS, accessible to all graziers in the Burdekin, Fitzroy and Burnett Mary regions, increased the adoption of management practices that improve degraded land condition, sustain productivity and minimise soil loss to waterways flowing to the Great Barrier Reef.

GRASS supports graziers in the Burdekin, Fitzroy and Burnett Mary regions with areas of poor (C) and degraded (D) land condition to develop and implement tailored Action Plans for Land Management (APLM). An APLM provides graziers with the tools and information to identify, improve and maintain their land condition with specific focus on how to improve ground cover and reduce soil loss from their farm into the Great Barrier Reef basin.

A grazier whose Action Plan identifies an area of their farm operations that needs improvement can then apply to access complementary GRASS financial incentives for infrastructure improvement, or landscape restoration projects involving minor or major erosion works.

Under the enhanced Reef protection regulations, supported by a regional compliance program, grazing, banana and sugarcane businesses are subject to industry specific minimum practice agricultural standards. Through the efforts of delivery partners, GRASS provides one-on-one support to graziers and producers to better understand their obligations to meet the government's Reef protection regulations.

### Outcomes and successes:

At the end of December 2022, the GRASS team successfully delivered the GRASS program, meeting and overachieving the targets.

- GRASS delivery partners delivered 449 Action Plans (against the 374 target), and 2.92 million hectares of grazing land was covered by Action Plans to guide improved management of 720,890 hectares of poor and degraded land.
- The GRASS team worked with 150 graziers to put in place works that implemented their Action Plans including 40 gully remediations, 42 riparian fencings, and 52 watering point projects, as well as improving ground cover and land management with ability to adopt improved practices with respect to managing stocking rates, spelling regimes and excluding stock from riparian and wetland areas in frontage country.
- The incentive program saw graziers co-contribute over \$2.65 million in cash and in-kind to leverage the Queensland Government investment of just over \$1.7 million, with a total on ground works worth of over \$4.35 million.
- The project also provided support to graziers to ensure that they understood and met the regulations, with graziers reporting that the 'Extension officers significantly reduced grazier anxiety around the minimum standards' (Ernst and Young (EY) Report 2021). The project was also an acknowledged practice change project by DES enabling GRASS participants to opt into being considered a lower priority under the Reef regulations compliance program, as they were recognised as taking efforts to improve on farm management in line with regulations.

Overall, the GRASS program was seen as a useful and effective engagement system providing foundational advice and tools for graziers to plan and implement actions to improve their grazing lands, with benefits being improved ground cover and reduction of sediment loads of over 20,000 tonnes to the Great Barrier Reef.

The program was viewed as fit for purpose, but improvements identified for the next phase of GRASS including: enhanced guidelines for program delivery and reporting, inclusion of a check-in process at 18 months with graziers to support ongoing APLM implementation and reporting, as well as improved project management tools to improve reporting and financial tracking.

## 1.0 Introduction

The Grazing Resilience and Sustainable Solutions (GRASS) program is a 2019 initiative of the Queensland Government Reef Water Quality Program delivered in partnership with the Queensland Department of Agriculture and Fisheries (DAF) and Natural Resource Management (NRM) groups, NQ Dry Tropics Ltd (NQDT), Fitzroy Basin Association Ltd (FBA) and Burnett Mary Regional Group for Natural Resource Management Ltd (BMRG).

The Office of the Great Barrier Reef and World Heritage (OGBR&WH) within Queensland Department of Environment and Science (DES) leads the Queensland Government's delivery of the Queensland Reef Water Quality Program (QRWQP) as its key response to addressing water quality impacts affecting the Great Barrier Reef. Under the enhanced Reef protection regulations, supported by a regional compliance program, grazing, banana and sugarcane businesses are subject to industry specific minimum practice agricultural standards.

GRASS was built on expertise and relationships from the previous industry led Grazing Best Management Practice (BMP) program which ran from 2013 to 2019. Following the formal conclusion of the Grazing BMP in June 2019, an alternative project was designed to continue to provide extension support and incentives for practice change to graziers in the catchments previously serviced by the Grazing BMP.

The Queensland Government funded the Grazing Support Program now known as the GRASS program in August 2019 to June 2022 (\$6.073 million), which was then extended to December 2022 with additional investment of \$700,000 towards the incentive program in 2020/21.

### **Box 1. Grazing and the water quality of the Great Barrier Reef**

The Great Barrier Reef is an Australian and international icon and considered one of the natural wonders of the world. It contains the world's largest collection of coral reefs and is the World Heritage List's most biodiverse site. Poor water quality from river discharge, including nutrients, sediments and pesticides places significant pressure on the health of the Reef. Reduced water quality from nutrients encourages the growth of algae, feeding crown-of-thorns starfish outbreaks. Sediment run-off reduces the available light to corals and seagrass beds.

The reduction of such pollutants and thus the improvement of water quality entering the Reef is pivotal in supporting and improving the ongoing health of the Reef. The Reef 2050 Water Quality Improvement Plan 2017-2022 aims to reduce sediment by 25% and nitrogen by 60% by 2050 through addressing pollution.

The Great Barrier Reef receives run-off from six natural resource management regions: Cape York, Wet Tropics, Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary. Within these regions, 35 major catchments flow to the Great Barrier Reef lagoon. Grazing (77%) is the dominant agricultural land use, particularly in the Burdekin and Fitzroy regions.

## 1.1 GRASS program and its goals (September 2019 - December 2022)

The GRASS program supports graziers in the Burdekin, Fitzroy and Burnett Mary regions with areas of poor (C) and degraded (D) land condition to develop and implement tailor made Action Plans for Land Management (APLMs). These provide graziers with the tools and information to identify, improve and maintain their land condition with specific focus on improving ground cover and reducing soil loss from their property.

GRASS, accessible to all graziers in the Burdekin, Fitzroy, and Burnett Mary regions, aimed to increase the adoption of management practices that improve degraded land condition, sustain productivity and minimise soil loss to waterways flowing to the Great Barrier Reef.

GRASS is a foundational activity assisting landholders to understand, meet and exceed regulatory requirements and aims to shift landholders' behaviour to create a permanent change in farm practices resulting in sustained reductions in nutrient and sediment losses from farms.

The goals were to:

- Adopt key agricultural practices relating to water quality and land management (Grazing Land Management).
- Support a culture of Reef stewardship by landholders.
- Support industry collaboration and engagement with graziers, capacity building and continued development of extension networks.
- Boost local skills and knowledge, enabling on-going local delivery.
- Implement data sharing with the Queensland Government.
- Communicate and report on project impacts to industry, government, investors and the wider community.

## 1.2 GRASS objectives

GRASS, between September 2019-December 2022, aimed to:

- Support at least 374 producers in the Burdekin, Fitzroy and Burnett-Mary regions by providing practical APLMs with the focus on improving the management of disturbed (C and D condition) land.
- Provide a clear pathway for producers to meet minimum agricultural Environmentally Relevant Activity standards under the new Reef regulations and be recognised under the 'Project Recognition Criteria' (and be considered a low priority for compliance inspections).
- Provide incentives and facilitate contracts to implement on-ground works to improve, rehabilitate and/or reduce further land degradation (up to 150 projects underpinned by government investment of \$1.78 million).
- Improve evaluation and monitoring of improvements in land condition for reporting to Paddock to Reef (P2R) Integrated Monitoring, Modelling and Reporting Program.

## 1.3 Project outcomes:

- Maintain extension and engagement of grazing land managers following the end of the Grazing BMP program, supporting landholders to better understand land management impacts and opportunities to improve in the key areas of ground cover, land condition and sediment erosion control.
- Reduce soil loss from grazing properties through improved land management of C and D condition land.
- Support graziers to understand their obligations and access support to meet the Reef regulations and potentially be recognised as being low priority for on-ground compliance efforts.
- Improve reporting of grazing land management practices and practice change outcomes through the Reef Water Quality Report card (via P2R) for impact on water quality.
- Improve understanding of, and measures taken to address, barriers to adoption of improved practices and infrastructure in the broader grazing industry.

## 1.4 GRASS delivery and partners

### 1.4.1 Department of Agriculture and Fisheries (DAF)

The Department of Agriculture and Fisheries vision statement is that Queensland is a world leading provider of high quality, safe and sustainably produced food and fibre. DAF's purpose is to create value for Queensland by connecting industries, the community and government to grow our economy and safeguard our natural environment.

Through funding from the QRWQP, DAF has successfully run whole of beef business extension and education programs to accelerate on-ground practice change within Reef catchments.

GRASS has formally linked with DAF's Grazing Extension Support Project. This project's business group (Animal Science) objective is, "to lift the productivity of Qld's food and fibre businesses." With the goal to, "improve the productivity, competitiveness, profitability and sustainability of Qld's livestock industries and management options for its freshwater and marine fisheries."

### 1.4.2 NQ Dry Tropics Ltd (NQDT)

NQ Dry Tropics Ltd is the leading independent, not-for-profit NRM organisation for the Burdekin Dry Tropics and has operated in the area since 2002, with its primary office based in Townsville. NQDT is committed to sustaining land and water resources for the benefit of current and future generations, and extends its services throughout the 146,000km<sup>2</sup> Burdekin Dry Tropics region.

NQDT links dedicated individuals, landholders, Traditional Owners and community groups with funding opportunities to assist them to make positive and lasting contributions to the environment. Its Sustainable Agriculture program provides various forms of support to landowners who want to plan and implement sustainable practices on their properties.

NQDT delivered GRASS in partnership with DAF, reaching out to an established landholder network through a combination of one-on-one engagement, public events and workshops, and attendance at community events. The GRASS program was closely integrated with other Reef Water Quality programs run by NQDT in the Burdekin, which maximised resourcing efficiencies and extended the range of services able to be offered to landholders at all stages of their personal journeys.

### 1.4.3 Fitzroy Basin Association Ltd (FBA)

Fitzroy Basin Association Ltd is central Queensland's leading NRM body and has an outstanding reputation locally, across Queensland and nationally for developing and delivering effective and efficient programs that work with local community, stakeholders and investors to protect the Region's natural assets. FBA is uniquely placed geographically, strategically and operationally to deliver priority environmental and agricultural outcomes.

FBA works with stakeholders across central Queensland to provide planning direction, information, advice and practical support. Through a regional network, FBA provides information, resources and technical assistance to farmers and graziers to adopt improved land management practices. Through this approach FBA is ensuring more sustainable and profitable production, improving water quality, and protecting the diversity of local flora and fauna in the Fitzroy Basin.

FBA's delivery of GRASS utilised existing networks, landholder client contact and services, integration with other programs, community events and broader communications. FBA engaged landholders with GRASS through a combination of one-on-one property visits, group events funded through alternative funded programs and word of mouth. This simple and consistent methodology enabled FBA extension officers to be flexible and engage a wide variety of landholders in a voluntary manner.

#### 1.4.4 Burnett Mary Regional Group for Natural Resource Management Ltd (BMRG)

Burnett Mary Regional Group for Natural Resource Management Ltd is the peak NRM body for the Burnett Mary region. Established in 2001, BMRG provides an essential link between the community, primary producers and various programs procured by government and other funding sources to improve land management practices and improve water quality across the region.

BMRG's vision is "to protect and enhance the agricultural and natural environment of the Burnett Mary region for future generations". This is achieved by directing investment into a wide range of community-based programs that deliver positive outcomes in the areas of ecological diversity, sustainable land management, water quality, cultural heritage values and coastal and marine management. Community collaboration and partnerships are paramount to achieving their vision.

BMRG has been an established contact for Burnett Mary landholders through past projects and programs and groups such as Landcare. BMRG was previously involved in delivering the Grazing BMP program working collaboratively with DAF including Reef Rescue, Better Catchments, Better Beef for the Reef, Reef Trust III, Soil Health and Resilient and Productive Farmers. Working with these projects provided a network from which to promote GRASS. Expressions of Interest (EOI) through social media groups, email contact lists, BMRG workshops, industry social catchups and by word of mouth from neighbours provided further opportunities to promote GRASS and target catchments. Landholders who contacted BMRG seeking property maps or funding options were encouraged to join GRASS as a means of accessing these resources.

#### 1.4.5 Department of Environment and Science (DES)

The Department of Environment and Science was the government investor through the QRWQP, the lead partner, program manager and provided overall coordination. In addition to contract administration, finance and facilitating development of guidelines and communications, DES led the development of the GRASS Communication Plan and provided support in its implementation. DES also supported annual workshops conducted in person, and on-line during the pandemic, commissioned the mid-term review, and led the final report, program acquittal and contract review.

### 1.5 Delivery model

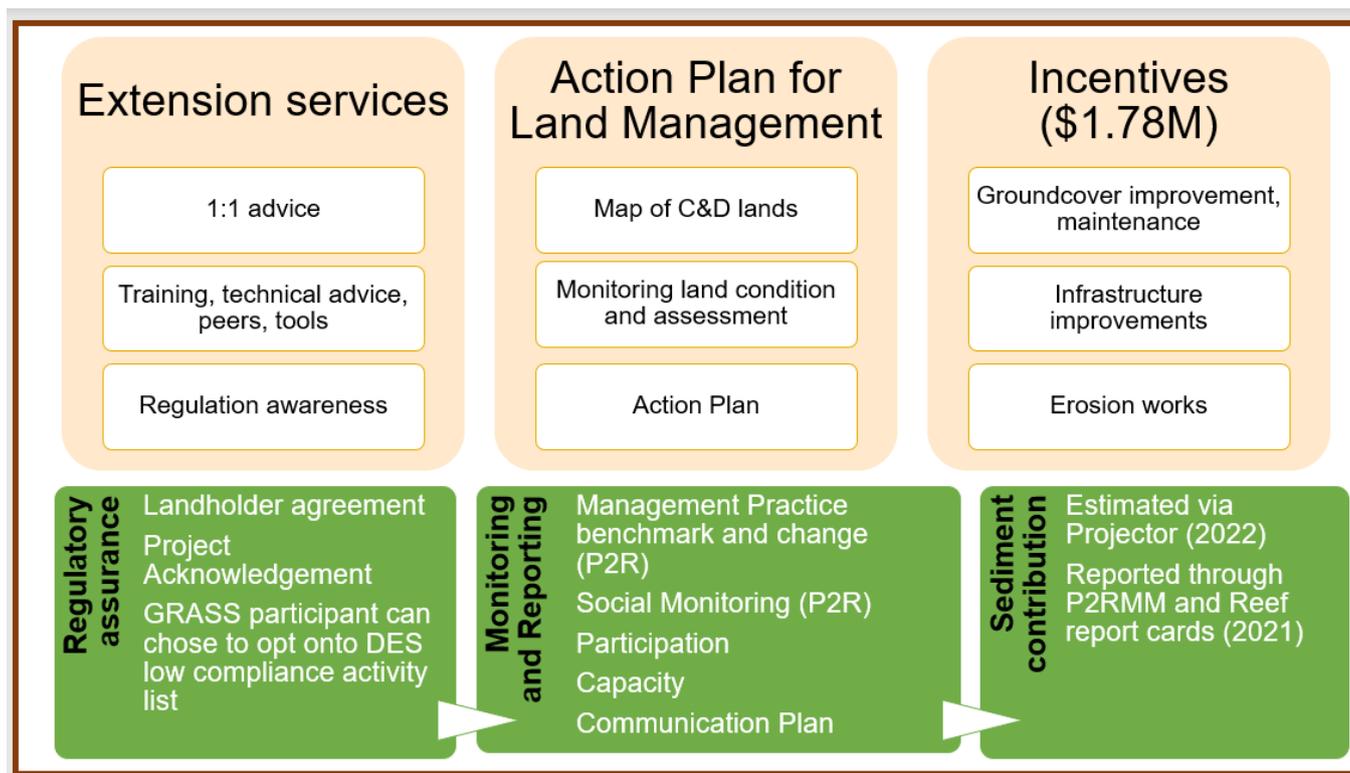
The delivery program was based on behavioural science models and on-ground expertise, a hallmark of other QRWQP investment, which incentivised and encouraged grazier participation and commitment through:

- Trusted **advisors with regional knowledge** drawing on the best available science and industry knowledge to work with graziers to manage their land.
- **Benchmarking current performance** and **identifying solutions** with the landholder.
- **Landholder commitment** through signing a Memorandum Agreement to develop, put in place and implement an action plan for management of their land.
- **Personalised advice** included land mapping and advice on land condition monitoring.
- **Opportunity to co-invest in solutions on their land** through the incentives to implement their action plan.
- **Support landholders to understand the new regulations** and the **opportunity to be listed on the low priority compliance register**.
- **Peer to peer support and interaction (to be investigated under the project)**
- Effective reporting on outcomes and practice change.

This package was initially costed at a value of approximately \$13,000 in extension services and support to each GRASS participant, which supported improved land management and regulatory compliance.

Figure 1 below presents the GRASS Program model, with additional information in the following sections.

**Figure 1.** GRASS delivery model (2019-2022)



### 1.5.1 Action Plan for Land Management development

Graziers with land in C and D condition were supported to develop a tailored Land Management Plan also known as an APLM, to manage areas of land in poor or degraded condition. An APLM seeks to improve groundcover, sediment run-off and land condition from grazing properties. The program had a target of 374 APLMs with the partners engaging as many graziers as possible.

An APLM (as a minimum) contributed to addressing the minimum standards outlined in the regulations. The plans can also assist graziers to satisfy record keeping requirements, enabling them to demonstrate the measures undertaken as part of meeting the standards and provide relevant training to instil best practice land management.

As part of the process, graziers were provided with paddock map/s identifying waters, land types, grazing radius and current infrastructure. This included FORAGE reports and Land Condition Assessments (cover imagery and ground truthing). The documented APLM detailed total area of property (hectares), including the proportion of land in poor or degraded condition to be actioned for reporting purposes, and completed P2R survey questions for benchmarking.

One-on-one technical advice assisted graziers to adopt measures that would improve land condition, helping to achieve sufficient residual pasture by the end of the dry season, as well as preventing areas of degraded land from further degradation or expansion.

### 1.5.2 Grazier selection and prioritisation for incentives funding

Graziers interested in addressing degraded land had the opportunity to seek incentives for on-ground works to implement their APLMs. The GRASS team developed the grazing incentive guideline early in the project with Grazing BMP accredited graziers initially given priority.

Funding applications were assessed on the appropriateness of the activities and potential water quality and practice change outcomes, with the process led by each NRM body in their respective region.

A regionally based Technical Assessment Panel, with representatives from DAF and each NRM, assessed the applications and reviewed suitability and alignment with the program objectives in each region. Proposed activities needed to define a quantifiable objective in achieving water quality improvement and practice change that could be reported and modelled by the Queensland Government P2R program.

Each application was required to propose establishment of a positive management practice change, demonstrate the ability of the practice change to reduce sediment run-off and/or address the likely causal factors of sediment run-off from the identified site/s. Priority was given to:

- Paddocks with consistently low groundcover in September (i.e. below 50%) compared to similar types of land surrounding the property.
- Paddocks with large areas of bare ground between patches of groundcover.
- Areas with steep slopes, actively eroding soils, or highly erodible or dispersive soils.
- Paddocks in poor or degraded condition including those closely connected to a gully, river, creek or other watercourse.

Remediation works of large and actively eroding gullies were excluded from the incentive program, however landholders could apply for support to take measures designed to stop them from further expanding (for example - stock exclusion). A small number of projects addressed gullying through minor rehabilitation techniques such as leaky weirs and erosion control structures in combination with stock exclusion.

The P2R Projector (once available) was used to determine projected sediment savings and cost effectiveness. The GRASS team agreed upon regionally relevant guidelines to determine public private benefit which supported determination of appropriate cost contributions by landholders.

### 1.5.3 Regulatory support

Graziers in the Wet Tropics, Burdekin, Mackay Whitsunday, Fitzroy and Burnett Mary regions must comply with the standard conditions in the [Agricultural Environmentally Relevant Activity standard for beef cattle grazing](#). As of 1 December 2019, general record-keeping requirements took effect, with more record-keeping with standard conditions taking effect in the Burdekin from 1 December 2020, in the Fitzroy from 1 December 2021 and in the Burnett Mary from 1 December 2022.

The GRASS program provided support to graziers to understand the regulations through:

- Extension services, workshops and one-on-one advice on regulatory requirements; and
- Development of APLMs and advice on monitoring and record-keeping in line with the regulations.

DES also recognised GRASS as a practice change project which meant GRASS participants could consent to be acknowledged as a low priority for compliance inspections until the end of the program.

Further information: [project acknowledgement, regulatory map, resources about regulations; Agricultural Environmentally Relevant Activity standard for beef cattle grazing \(PDF, 1 MB\)](#).

## 1.6 GRASS Monitoring, Evaluation, Reporting and Improvement (MERI) and supporting data

The GRASS program was measured, evaluated and reported against the QRWQP (2019-2022) Evaluation Framework which is based on six evaluation criteria (impact, effectiveness, efficiency, appropriateness, program management and legacy) and has 10 associated key evaluation questions (refer **Table 1**).

This information enabled:

- reporting on the Queensland Government's investment through the QRWQP towards meeting the 2025 water quality and land management targets in the Reef 2050 Water Quality Improvement Plan.
- OGBR&WH to report quickly and clearly on the use of the investment, outcomes and achievements of the program to internal and external stakeholders.
- program proponents to evaluate their performance, identify opportunities for improvement and adaptively manage the program to meet the needs of industry and Reef water quality outcomes.

Table 1. QRWQP program evaluation criteria and key evaluation questions	
Criteria	Key Evaluation Questions (KEQs)
Effectiveness	KEQ 1: How well has the project delivered on outputs?
	KEQ 2: What measurable progress has been made towards the stated Project Objectives (as a result of the methods and outputs)?
	KEQ 3: What extent has this program contributed to the WQIP intermediate outcomes
Efficiency	KEQ 4: Were the project outcomes achieved proportionate to the investment?
Impact	KEQ 5: What evidence is there that the project has contributed towards Reef 2050 WQIP land management and water quality targets?
	KEQ 6: What progress would have been made anyway, in the absence of the QRWQP funding this project?
	KEQ 7: What, if any, unanticipated positive or negative impacts have resulted from the project?
Legacy	KEQ 8: What are the long-term benefits to this project? What evidence is there to say this?
Project Management	KEQ 9: How well are the project management, systems and processes performing?
	KEQ 10: What processes and evidence is there of adaptive management and learning and active implementation of MERI?

### 1.6.1 GRASS Data (2019-2022)

Data and information collected under the program and supporting adaptive management included:

1. Program reporting, where the GRASS program was monitored and data collected through delivery partners providing:
  - a. Reporting data sheets (introduced June 2020) and delivery partners' monthly webinar with OGBR&WH with respect to extension and engagement, APLM and incentives.
  - b. Milestone, progress, risk and issue reporting.
2. Given the limited data provided under the predecessor program, the GRASS program also put in place P2R benchmarking and assessment which met the recommendation of the Auditor-General (Report 16: 2017-2018 Follow-up of Managing Water Quality in Great Barrier Reef catchments) to support improved reporting on practice change. This included:
  - a. P2R data benchmarking before for APLM.
  - b. P2R data before and after incentives.
  - c. Any P2R 'relevant' after-management practice data where available.

Annual de-identified data was provided for year 2 (2020/21) and 3 (2021/22) noting that year 1 (Sept 2019- June 2020) was an establishment year. Data was not available at the time of the report for the July - December 2022 period (required submission end-July 2023).
3. Social monitoring was initiated in 2020/2021 to record the change in perceptions both before and after practice change, noting that the survey and subsequent data sets were provided by NQDT and FBA only.
4. Mid-term review report: A mid-term evaluation of the program (EY Report 2021) was commissioned by DES in October 2021 to assess progress against the KEQs (refer Table 1) and identify potential improvements to the program. The report included:
  - a. Stakeholder feedback via 20 interviews with participating graziers in the Burdekin, Fitzroy and Burnett Mary regions, members of the Steering Committee (Steerco) from NQDT, FBA, BMRG, DAF and OGBR&WH as well as potential partners to test wider awareness of, and partnerships for, GRASS.
  - b. Analysis of progress against KEQs.
  - c. Methods to assess/verify legacy and outcomes in project context.

- d. Recommendations and opportunities.
5. DES Contract renewal process (2022) which identified improvements for the establishment of GRASS 2 in partnership with the GRASS committee through:
  - a. Collation of program statistics up to October 2022.
  - b. Review of GRASS guidelines, consistency of approaches and data, and emerging requirements.
6. Delivery Partners' final reports for the period up to June 2022 (the original end date under the contract), including summary of approaches, adaptive management, regional case-studies and lessons learnt.

The above information and data is consolidated to present program outcomes under:

- Section 2 – Outcomes for whole of GRASS Program and for each region.
- Section 3 – Case-studies.
- Section 4 – Improvements and lessons learnt.
- Section 5 – GRASS dataset (2019-2021).

## 2.0 Project outcomes - GRASS program

### 2.1 Highlights



- 2,917,789 hectares of land under 449 APLMs.
- 33% of businesses with APLMs put in place on-ground works supported by incentives.
- 150 incentive projects including:
  - >40 gully remediation projects
  - >40 riparian fencing projects
  - >50 projects established new waterpoints
- Average total project cost \$27,381.
- 3:5 Average incentive ratio of government: landholder contribution.
- Over 20,721 tonnes\* estimated sediment savings largely through incentive projects.

On-ground works:		APLMs	
\$4,216,700	Total Investment	449	Completed
\$1,588,334	Incentive	374	Planned
\$2,628,366	Landholder contribution		

\*12,090t in sediment savings in the Burdekin and Fitzroy were excluded from the results

### 2.2 GRASS extension, APLMs and incentives

In the first six months of the project, each regional NRM group worked with DAF to deliver tailored GRASS services in their respective regions with an overarching project plan, deliverables and guidelines. The project plan, deliverables, and guidelines ensured consistent, coordinated delivery, yet gave each group the autonomy to deliver their services cost-effectively within their region.

**In just over 3 years:**

- ❖ 766 Landholders engaged
- ❖ 5,909 Extension hours

A land condition resource package was developed by the delivery partners and included key grazing land management support tools, such as the Carrying Capacity Ready Reckoner. This focused on activities that address land management and water quality issues within a beef business context.

GRASS replaced Grazing BMP therefore past Grazing BMP accredited producers were contacted to ask if they wanted to be acknowledged as a low priority for compliance activities and be involved in the GRASS program. Grazing BMP producers were also then given priority for incentives for on-ground projects.

#### Extension services and APLMs

The NRMs and DAF worked 5,909 hours to deliver extension activities and work with 766 graziers, increasing land management awareness and understanding of the then incoming Reef Protection regulations for cattle grazing.

449 landholders put in place APLMs within the Burdekin, Fitzroy and Burnett Mary catchments in partnership with regional NRMs and DAF. By December 2022, 2.92 million hectares of grazing land was covered by APLMs to guide improved management of 720,890 hectares of C and D condition land. Table 2 below summarises APLM numbers by region and area. Appendix 6.1 presents the list of APLMs by catchment and organisations.

**Table 2. Summary of APLMs (number by region and area)**

Region	APLMs (#)	Area covered by APLM (ha)	Area of C&D condition land managed through APLM
Burdekin	133	1,921,839	443,353
Fitzroy	222	878,001	250,217
Burnett Mary	94	117,950	27,320
<b>Total</b>	<b>449</b>	<b>2,917,789</b>	<b>720,890</b>

The approach to engaging graziers within the GRASS program and the preparation varied between NRMs and DAF such as:

Partner	Extension and APLM engagement strategies
<b>NQDT</b>	<ul style="list-style-type: none"> <li>- NQDTs' most successful strategy was structuring APLMs as the first step to further engagement and integrating it with other regional programs. This streamlined the process of engagement significantly and both increased the appeal of completing an APLM as well as the prospects for following through with identified priority actions on-ground.</li> <li>- The GRASS program offered NQDT a valuable opportunity to connect with under-engaged properties and demographics such as properties outside of priority regions for sediment delivery, and those in the earliest stages of their practice change journey.</li> <li>- NQDT reported that it exceeded its target of 45 APLMs by 160%, which reflects both the willingness of Burdekin graziers to participate in the program and the success of the engagement strategies employed, particularly the utilisation of existing networks and collaboration with other programs.</li> </ul>
<b>FBA</b>	<ul style="list-style-type: none"> <li>- The most important aspect of the engagement approach used for GRASS was that it was delivered in a similar way to other past and existing programs/projects managed by FBA. The simple and consistent methodology enabled FBA extension officers to be flexible and engage a wide variety of landholders in a voluntary manner with minimal confusion. The GRASS program offered a flexible engagement strategy that could be tailored to the individual needs of grazing enterprises, greatly increasing its appeal.</li> <li>- Field officers were able to approach graziers through GRASS to address a variety of business interests, including property mapping.</li> </ul>
<b>BMRG</b>	<ul style="list-style-type: none"> <li>- BMRG project officers found that landholders were generally interested and committed to joining the GRASS program once first contact was made. To engage new landholders BMRG used EOI promoted through social media, email groups, word of mouth techniques or existing connections to spread knowledge of the program and grow the landholder base.</li> <li>- Others were informed about the program through events such as workshops and industry social catchups. Landholders who contacted BMRG asking for property maps or seeking funding were encouraged to join GRASS, as a means of accessing these resources. Word of mouth from neighbouring properties also contributed to landholder engagement, allowing BMRG to achieve targets throughout the program across the 3 years.</li> <li>- Over the course of the program BMRG staff noticed a decline in engagement with EOIs. This was particularly evident in the last year of the project (2021 – 2022) and can possibly be attributed to the EOIs not reaching new audiences due to the reliance on existing networks which had previously proved sufficient, however, may have reached its capacity. To maintain</li> </ul>

	engagement moving forward, BMRG has formed a close relationship with DAF extension officers.
<b>DAF</b>	<ul style="list-style-type: none"> <li>- The GRASS program has evolved and changed in the way that producers have been engaged to enter the program. When the program commenced in October 2019, staff engaged with producers who had completed the Grazing BMP program. From there the momentum grew as word spread amongst producers about the program, with producers contacting DAF wanting to participate in the GRASS program. In the last two years, DAF has moved into workshop delivery to facilitate workload logistics and property visits to complete APLMs and bring value to producers.</li> <li>- The program interlinked with other DAF projects such as Grazing Futures – Livestock Business Resilience Plans to provide producers with a whole of business approach, as well as supporting the feed base component of the Northern Breeding Businesses project.</li> <li>- Evolving from one-on-one engagement, DAF staff have implemented a workshop delivery process for the GRASS program. Specific areas are targeted where half day workshops are delivered by DAF staff. DAF staff are divided into teams to complete the associated property visits to complete APLMs and P2R before questions. The workshops are being combined with Grazing Futures – Farm Business Resilience Plans where content will be combined to allow producers to get enough information to complete their business plans and APLMs. The APLMs support the Natural Resource section of the Farm Business Resilience plan.</li> <li>- Producers appreciate the GRASS acknowledgement letter as they see value in using the letter for annual bank review of their financial borrowings.</li> <li>- Recognition of land as an asset also has been well received by producers. Producers are appreciative of this change of language by DAF.</li> </ul>

**Box 2. Value of GRASS to graziers (EY report 2021)**

- Grazing land managers have been appropriately supported to access information and extension services, and the tools to demonstrate land management compliance and stewardship have been made available.
- The GRASS partners have engaged with producers and promoted participation through all facets of the program providing information about Reef regulations and encouraging and facilitating the adoption of improved management practices to improve poor and degraded land and achieve better water quality outcomes for the Reef.
- One-on-one agronomic or extension support has been provided to graziers requiring assistance to improve land in C or D condition through on-ground works, and assistance has been provided with applications for funding support.

**Property Planning – Burdekin (NQDT, 2022)**



TL: NQ Dry Tropics staff and landholders selecting a site for inclusion in the APLM; TR: NQDT staff and landholders discussing plans for remediation.



TL: NQDT staff and landholders discussing property management onsite; TR: NQ Dry Tropics staff completing an LCAT at a degraded site.

### On-ground works through incentives

The NRMs were also responsible for the administration of the incentive component, working in partnership with DAF for a further 769 hours to identify, develop and put in place incentive projects for graziers, then acquit and report on project outcomes. The GRASS program was open to all graziers on a first come first served basis, with support provided to ex Grazing BMP participants and a focus of engagement activities within the high priority sub-catchments.

Table 3 presents Queensland Government's investment for on-ground works and practice change.

**Table 3. Queensland Government incentives investment on ground (2019-2022) (\$ excluding GST)**

Region	Expended \$ on ground	Grazier contribution (cash and in-kind)	Total investment by region
Burdekin	\$629,643	\$1,245,116	\$1,874,759
Fitzroy	\$645,314	\$1,082,446	\$1,727,760
Burnett Mary	\$323,017	\$312,650	\$635,667
<b>GRASS Program total</b>	<b>\$1,597,974</b>	<b>\$2,640,212</b>	<b>\$4,238,186</b>

DAF and the NRMs worked with 150 graziers to implement works that enhanced their APLMs including 40 gully remediations, 42 riparian fencings and 52 watering point projects, as well as 68 improving ground cover and land management projects.

The incentive program saw graziers co-contribute over \$2.64 million in cash and in-kind to leverage Queensland Government investment of over \$1.59 million (excluding administration).

The types of projects varied between regions:

- In the Burdekin, most projects were targeted towards grazing land management (GLM), for example the installation of exclusion fencing to keep cattle from vulnerable areas such as streambanks or scalds, or the installation of fencing and watering points to spread grazing pressure more evenly and introduce regular rest periods for degraded areas. There were also a number of earthworks projects aimed at erosion control

and landscape rehydration, including several gully remediation projects, and ripping and seeding to rapidly improve ground cover (NQDT, 2022).

- In the Fitzroy, projects were also targeted towards GLM, such as the installation of fencing and watering points to spread grazing pressure on vulnerable areas (FBA, 2022). Funded projects included riparian fencing to minimise stream bank erosion of major Fitzroy River tributaries. Off stream watering points were installed in conjunction with riparian fencing to limit stock access to significant water courses and encourage stock to evenly utilise available pasture. Paddock subdivision enabled practical grazing management such as spelling and stock rotation (DAF, 2022). There were also several earthworks projects aimed at erosion control and landscape rehydration, including several gully remediation projects, and ripping and seeding to rapidly improve ground cover (FBA, 2022).
- In the Burnett Mary, projects were well spread across the region despite the weather-forced prioritisation of incentive projects. These projects included:
  - riparian fencing along major catchment rivers such as the Burnett and Boyne, as well as other riparian area.
  - subdivision of paddocks to both control grazing pressure and encourage more even utilisation of pasture.
  - installation of off-stream water points to encourage even pasture utilisation and protect riparian areas.
  - extensive earthworks to restore several gully and hillslope erosion sites, which were then seeded with suitable pasture species to re-establish ground cover.
  - construction of diversion banks, contour banks and sediment trap dams to manage run-off and control sediment loss.
  - use of erosion control tools including concrete erosion mats, logs and mulch/hay bales in conjunction with earthworks to rehabilitate multiple eroded sites (BMRG 2022, DAF 2022).

### **Engaging Graziers for extension and incentives – the challenges.**

Several challenges in undertaking projects were raised by graziers and the NRM partners:

#### **Extreme events – pandemic and weather**

- Several challenges in undertaking projects were raised by graziers, including the effects of COVID-19, weather events (particularly throughout 2022, when there was flooding during what is typically the dry season), and resultant difficulties in the supply chain for materials, machinery, and contractors.
- The onset of COVID in early 2020 proved a challenge for engagement as all in-person events and field days were put on hold, and property visits were also restricted for some months. Several APLMs were conducted long distance during this period with graziers who had the capacity to participate in this method (NQDT, 2022).
- Weather did severely impact engagement of landholders for incentive projects, particularly in the Burnett Mary post October 2021. Many properties were too wet to do works on which caused BMRG to prioritise landholders that were in drier regions for incentive projects. Unfortunately, this caused landholders that had received above average rainfall to be deprioritised, even if they were good candidates.

#### **Timing - early and late in the program**

- Landholders who engaged later in the program also had no option for incentives projects simply as all funds had been committed (BMRG, 2022).
- The final round of incentive projects was conducted less than 12 months before the scheduled end of the program, and it was found this put significant pressure on landholders to complete projects on time, especially when considering unexpected conditions such as unseasonal rains and personal health issues.

It also reduced the available time to reutilise funds if projects began running overtime or had to be withdrawn (FBA, 2022; NQDT, 2022).

- Limited opportunities for ongoing property visits with landholders engaged in early stages or late stages of the program reduced the reportable impact of the GRASS program, as any follow up work is likely to be attributed to other programs.

### **Increased project costs**

- Graziers reported that prices had increased significantly within the program's lifetime, reducing the proportionate value of the grants (NQDT, 2022).
- In some cases, graziers opted out of participating on the grounds that it would be more convenient for them to waive the grant altogether and complete the infrastructure changes according to their own schedule (NQDT, 2022).

### **P2R reporting**

- P2R tools came online during the project and were recalibrated during the project life. As a result, regional prioritisation and reporting improved over the life of the project. Potentially it would have been better to share and discuss this in the operational committee more formally.
- Continued P2R training is recommended for all extension staff completing APLMs and/or incentive projects related to GRASS. There are still instances among Burdekin extension staff, where the level of understanding of the intricacies of the P2R reporting program could be improved.

### **Awareness of GRASS, peer to peer and grazier knowledge exchange**

- Whilst one of the identified strategies was peer to peer knowledge exchange and engagement for landholders, in practice this was not an organised component in any region under GRASS.
- The EY report 2021 identified that interviewed graziers thought peer to peer communication would be beneficial and identified low awareness outside existing engagement.
- GRASS delivery partners were challenged both in terms of project timing and team resources with the focus on one-on-one support for APLM and incentive delivery. It was acknowledged that graziers do not necessarily wish to share learnings until after they have taken action and can see improvement on their property.
- Creation of the monthly Grazing Update by DAF with the NRM partners enabled producers to keep abreast of events that are occurring within DAF & NRMs, as well as the partners communications activities e.g. case-studies supported the promotion of approaches within the GRASS participant networks.

*Directly supporting landholders through funding on ground projects was the highlight of the GRASS incentives program. It gives landholders the power to make changes to their productivity which influences a positive environmental shift. Most of the projects that were funded would never have been attempted by landowners because of the cost versus private benefit which is the biggest barrier to uptake of these projects without funding intervention. GRASS allows them to make changes with an environmental benefit while also giving them the resources (whether through connections, workshops, online resources, or direct funding) to assist with productivity. GRASS incentive projects also cause a passive diffusion of knowledge, because when undergoing a project, landowners will acquire knowledge that is recognised as best management. It is anticipated that upskilling in this way will have an impact over an extended period and will assist land managers with Reef regulation compliance. (BMRG, 2022)*

**Box 3. Lock down won't hold us back! Kylie Hopkin, Fitzroy Beef Extension team**

The COVID-19 pandemic has presented new challenges to the work that Beef Extension officers do, but since being in lockdown and working from home, the Fitzroy GRASS team has exceeded milestones and continued to help graziers on ground.

The GRASS project funded by DES is aimed at helping beef producers meet the minimum standards in the new Reef regulations. Beef Extension staff work with graziers to develop LMPs that identify areas of concern on their property and formulate a management strategy to maintain or improve land condition over time. LMPs involve Beef Extension staff conducting at least one property visit with a grazer and numerous follow up phone calls or emails. Several property maps are generated by the Spatial team for each grazer and combined, these form an LMP.

In the 2019-20 year, the Fitzroy GRASS team were tasked with completing 15 LMPs and as of mid-June 2020, they have completed 32. Three of these LMPs have been completed during the COVID-19 lock down that had staff working from home from 30<sup>th</sup> March.

Graziers that complete an LMP can apply to Fitzroy Basin Association for incentive funding to carry out project works that will improve land management. The Fitzroy GRASS team have prepared 12 applications, of which nine have already been contracted.

The Fitzroy GRASS team of Matt Brown, Mick Sullivan, Kylie Hopkins, Ryan Honor and Cindy McNaught engaged with 39 producers from 31 businesses in the 81 days of lock down up until 19<sup>th</sup> June. A variety of topics were covered in addition to LMPs, such as pasture budgeting, Land Condition Assessments, breeding and nutrition. These numbers don't include presentations at webinars and meetings, and other project activities that staff share their time on.

Despite working from home, property visits were still able to be conducted with travel approvals and social distancing measures in place. Although it was strange not being able to shake hands with graziers or sit with them in their utes, all producers were understanding of the situation and were very grateful that they could still access the free Beef Extension service from DAF.

**Graziers valued extension resources and best available science**

*75% of graziers and 100% of the GRASS Steering Committee have a positive sentiment as to whether best available science and knowledge had been applied on grazing land (EY Report 2021 – interviews).*

GRASS utilised the latest available resources to support extension and advice, one of the key objectives of the program. The strength was being able to map, discuss and apply at property level key resources such as FORAGE reports to prepare APLMs, and generate data for the landholder to make their decisions. Each regional partner also created bespoke resources and advice, and worked in collaboration to adopt new technologies and advice which also streamlined the GRASS delivery processes (e.g. adoption of Land Condition Assessment Tool (LCAT) to support initial mapping and monitoring, and drone technology).

All partners identified common gaps in knowledge and practices that were addressed through the one-on-one advice, extension resources and latest tools being made available to graziers. This varied with the skills, and knowledge of the graziers.

For instance, NQDT reported 'In the Burdekin there was a low-to-moderate understanding of best practice grazing methods for water quality amongst a significant portion of the Burdekin Dry Tropics grazing community.'

Graziers who had previously participated in programs and training, such as Grazing BMP or RCS Grazing For Profit, were more likely to benefit from GRASS as a way of recording and rewarding existing actions and plans. The incentive funding was able to accelerate plans to address vulnerable areas where infrastructure was required to

make the changes and provided an efficient method of recording works previously undertaken, and for those planned within an approximate 5-year period. Graziers in this group often expressed that they appreciated the assurance of having their efforts recognised under the Reef regulations (NQDT, 2022).

Specifically, the feedback identified that:

Feature	Valuable assets for graziers and extension officers
<b>Property map FORAGE reports</b>	<p>A high percentage of graziers were not familiar with resources like FORAGE, and many did not already have a property map.</p> <p>A majority of the landholders were not aware of the FORAGE service and appreciated being able to see the 'story' of their properties laid out in this fashion (NQDT, 2022).</p>
<b>Land condition monitoring</b>	<p>The translation of the use of the LCAT methodology assisted in streamlining condition monitoring to support the APLM, and supported graziers to understand their land condition and where to prioritise action.</p> <p>LCAT provides:</p> <ul style="list-style-type: none"> <li>• Rapid collection of fit for purpose land condition data and multipurpose results.</li> <li>• Greater consistency and confidence in data and results.</li> <li>• Ability to benchmark/baseline, monitor change and identify emerging issues.</li> <li>• Comprehensive data for analysis, research, product development, reporting, communication, and grazer support (DAF, 2022).</li> </ul> <p>An added benefit was that the GRASS program, through an arrangement with DAF, NRMs and the DAF Management Practice Adoption (MPA) team, contributed a significant dataset to land condition monitoring data for the P2R team for analysis and benchmarking (Feb workshop, 2023).</p>
<b>Training and workshops</b>	<p>Workshops on offer over the lifetime of the GRASS program included: Dung Beetles, Grazing Land Management, Pasture Dieback, Herd Health, Grant Writing/application.</p> <p>The GRASS expo 2022 included a paddock walk to view a rock chute project facilitated by DAF and John Day, and further discuss practical gully remediation structures.</p>
<b>Access to expertise and regional specific resources</b>	<p>Connecting farmers with experts in the field to give them confidence to implement their desired changes e.g. in the Fitzroy, pasture dieback management and soil erosion were major issues for graziers trying to maintain good land condition. Technical advice on these issues was well received with multiple graziers expressing interest in integrating different techniques into their land management (DAF 2022), In the Burnett Mary, six erosion field guides were created with John Day.</p>
<b>Satellite imagery and groundcover</b>	<p>Graziers also expressed appreciation for gaining a better understanding of how satellite systems and ground cover monitoring worked, which often helped resolve concerns around the Reef regulations (NQDT, 2022).</p> <p>NQDT was similarly able to develop innovative methods of compiling and communicating valuable data in the process of improving the APLM workflow, such as incorporating drones as a method of confirming land condition at a broad scale and utilising GPS mapping systems to more accurately capture information in the field for use by both the organisation and the landholders.</p>

### Burdekin Incentive Projects (NQDT, 2022)



*TL: Incentives funding assisted landholders to install new fencing and waters for rotational grazing; TR: New water infrastructure installed with incentives funding assistance; BL: Fencing installed to reduce paddock size and control grazing pressure under the GRASS incentives program; BR: Ripping and seeding under the incentives program for improved pasture. (NQDT, 2022)*

### Fitzroy Incentive Projects (FBA, 2022)



*Before and after ripping and seeding scalded hillslope (FBA, 2022)*

## **Implementing APLMs**

One of the challenges in understanding the value of APLMs was the inability to confirm the extent to which landholders were able to follow through and implement actions, and the ability of the partners to track, report and understand change that was occurring on property in response to participation in GRASS, beyond the 150 landholders who accessed support through the incentive programs.

The original model for GRASS provided for up to two site visits, one which occurred with the preparation of the APLM, and the other associated with incentive project design, delivery and /or acquittal. It was identified that within the resources and the timeframe that it was not possible to revisit all properties where there was not an incentive.

Each partner however continued to engage with many of the landholders as they sought to implement their APLMs and update them over time.

For instance, NQDT reported: *of the 72 properties that completed a plan with NQDT between June 2019 and June 2022, 41% completed an on-ground incentive project through GRASS to fulfill a priority action for improving land management that had been identified through their APLM. Additionally, 29 participants were involved with at least one other extension program through NQ Dry Tropics following their completion of an APLM. In total, 68% of GRASS 1 participants either completed on-ground works through GRASS, engaged another program to pursue improvements on their properties, or both.*

BMRG noted that: *Graziers in the area are wanting and reaching out for information and support to guide their grazing land management – this includes both existing and new land managers. Part of this is due to grazing extension support, especially at a one-on-one level available in the Burnett Mary region being less than the demand for this service from land managers.* (BMRG, 2022).

As the project was reviewed it was identified that we need to better understand the level of commitment by landholders to implementing their APLM, how the APLM was supporting action on ground, with what support, and to provide surety that through implementing their APLM, GRASS participants continue to comply with the requirement of beef cattle grazing minimum practice standards. GRASS would then be able to better communicate the benefits of the program.

For instance, BMRG reported: *working closely with 47 land managers developing a total of 54 APLMs with feedback showing landholders have implemented many of the suggestions. 15 of these land managers were also provided with an average \$11,788 and contributed an average \$13,648 of in-kind or their own funds to undertake targeted on-ground works addressing or rehabilitating erosion of either hillslopes, gullies or streambanks.*

## **2.3 Sediment savings method and contribution**

Fine sediment loads are estimated through the P2R Projector, the modelling approach developed by the Australian and Queensland Government's Paddock to Reef Integrated Monitoring, Modelling and Reporting Program. Only fine sediment loads are estimated for the grazing industry through two separate modelling exercises (streambank and pasture management). Gully management results are calculated through the Gully Toolbox.

Sediment savings for 2 years (2019-2021), amounted to 20,721.5 tonnes (Table 4). However, an additional 12,090 tonnes in sediment savings in the Burdekin and Fitzroy were excluded from the results pending further analysis.

This was viewed as one of the most successful sediment reduction projects by the DAF MPA P2R team.

**Table 4. Estimated sediment savings (2020/21;2021/22)**

Region	Hillslope Sediment (t)	Gully Sediment (t)	Streambank Sediment (t)	Total Sediment (t)
Burdekin	10,461.0	243.1	0.3	10,704.4
Fitzroy	9,277.0	-	4.1	9,281.1
Burnett Mary	244.7	486.9	4.4	736.0
Total	19,982.7	730.0	8.8	20,721.5

Universal Soil Loss Eq - G Cat and C Cat  
Source DAF MPA team May 2023

## 2.4 Regulatory support

A secondary purpose of GRASS was to increase the awareness of the Reef regulations within the grazing community and support the voluntary adoption of the minimum practice standards for grazing.

*In several cases graziers reported that they were aware of degraded land on their properties, but were unclear of their obligations under the Reef regulations or where to begin making a change on their land. In this respect the GRASS program was an ideal starting point for these conversations (NQDT, 2022).*

*Landholders were often informed about the low compliance register on their property through extension officers conducting Land Condition Assessments. Extension officers would take time to explain the purpose of GRASS program, Reef regulations, their implications to the landholder and the opportunity to join the low compliance register (FBA, 2022).*

Participating graziers who had completed an APLM could consent to be on the DES register as low priority for compliance inspection. Over the life of the program, 134 graziers opted onto the register largely in the Burdekin and Fitzroy region. The GRASS partners identified that not all graziers were interested in the opportunity, nor felt the need for post engagement in GRASS. Different strategies for getting graziers to opt on to the register were offered by the different partners – some used it as a routine first step, others as a key support tool, while sometimes it was simply a discussion point later in the engagement process. Uptake reflected when the regulatory standards took effect over the life of the project, and when compliance activity by the Reef compliance teams were visible in the region.

As the project progressed and the regulations took effect, the GRASS extension officers in the Burdekin also supported GRASS participants contacted by the Reef compliance team to check and update their records or APLM.

Feedback from GRASS partners with respect to the grazier's willingness to participate in the Low priority for compliance inspection identified:

Organisation	Perspectives regulations, project acknowledgement and engaging landholders
NQDT	The program proved a valuable mechanism for improving understanding of the Reef regulations within the Burdekin grazing community. One attendee at the Vegetation Management Day noted that: "Some of these regs aren't as big and scary as made out."
	On one occasion NQDT field officers had the opportunity to attend a compliance visit with a GRASS participant who had opted not to be on the register. Both the grazier and the DES compliance officers were very satisfied with the result of the visit and the use of the APLM in demonstrating the landholder's planned strategies for management of their degraded land.
	The vast majority of GRASS participants opted to join the acknowledgement register (78%). The register was regarded by a large proportion of this group to be a drawcard for GRASS participation. Reasons for not wanting to be listed on the register among the remaining 22% were varied - some did not see the purpose, some had reservations about being listed in a DES database, and some stated they preferred to have compliance officers come out to their property

	in order to talk to them directly about the actions they were undertaking.
	On several occasions there were issues with project acknowledgement forms being misplaced or not conveyed correctly. There may be merit in digitising the process to allow for more efficient capture and logging of this data. The acknowledgement forms were also reported by some graziers to be cumbersome in length, which may have impacted people's willingness to join the register.
<b>FBA</b>	Landholders were often informed about the low compliance priority register through word of mouth while extension officers were on property conducting Land Condition Assessments. While on property with the landowner/s FBA extension officers would take time to explain the purpose of the GRASS program, Reef regulations, their implications to the landholder and the opportunity to join the low compliance priority register.
	Some graziers did not see the purpose, some had reservations about being listed in a DES database (landholders not wanting to give away the details of their property to the government), and some stated they in fact preferred to have compliance officers come out to their property to talk to them directly about the actions they were undertaking (FBA 2022).
	The documentation for GRASS and the Memorandum of Understanding (MOU) with landholders was reported by some graziers to be cumbersome in length, very politically worded and confusing. This largely impacted Fitzroy graziers' willingness to join the register as well as participate in the GRASS program as the MOU was too contractual.
<b>BMRG</b>	Another factor which disengaged graziers from joining the register is its name, "low compliance" is generally interpreted as a register for those who have low compliance with the regulations. It was suggested that the name be changed to the high-compliance register, influencing the way the name is interpreted.
	While on property with the landowner/s BMRG extension officers would take time to explain the purpose of the low compliance register. At the completion of the property visit the landholder would usually be asked if they would like to participate. This method of engagement was completely unsuccessful in adding landholders in the BMRG region to the register. This can be attributed to the landholders not wanting to give away the details of their farm to the government and the engagement strategy employed by BMRG.
	There has been an increasing interest from farmers about the Reef regulations, how they will come into effect in the Burnett Mary region, and what this means for them. Information sessions across the district will help answer questions in person. (BMRG, 2022)
<b>DAF</b>	Creation of the GRASS acknowledgement letter – GRASS program participants receive recognition of good land management through a letter from the Queensland Government that identifies participants' commitment to key sustainable practices.

The above, reflects the findings of the mid-term review. The EY Report 2021 examined the evidence of the application of minimum practice standards and the extension support provided, through stakeholder interviews. The EY Report 2021 found that:

- *all graziers interviewed stated that involvement in the program increased their knowledge of the grazing minimum standards, particularly due to efforts of extension officers and workshops.*
- *Extension officers significantly reduced grazier anxiety around the minimum standards and assisted in understanding the relative ease of implementing them. One grazier even said that the minimum standards are "very minimum", and some graziers stated that they see themselves as operating far above 'minimum'.*
- *some graziers identified that some work is still required to engage with the broader grazing community on the ground to enhance understanding of the 'why' behind regulations and common goals and outcomes to inspire change. Despite this, it is apparent that the extension within the GRASS program is resulting in the*

*necessary change and education around standards and it is those not involved with GRASS that are having an issue <with understanding the regulations>.*

The EY Report 2021 also noted that ‘graziers did not identify minimum standards education as a primary driver for involvement within GRASS and should therefore not form the basis of any attraction strategy.’ However, it also stated that: ‘The rollout of on-farm inspections by compliance officers under the Reef regulations has contributed to several engagements as landholders were directed to undertake an APLM as part of their strategy for addressing degraded land.’

## 2.5 Supporting a culture of change and stewardship

Attitude change by participating graziers was monitored to ascertain improvements in cultural stewardship, specifically:

1. changes in graziers’ attitudes towards adopting improved grazing land management.
2. increases in graziers’ capacity to undertake improved grazing land management.
3. confidence of graziers to comply with Reef regulations as a regulatory assurance program.

Sources of data included: a) social monitoring data; b) management practice as documented in APLMs and the Grazing projector tool; c) grazer feedback - EY Report (2021); and d) delivery partner reports.

*Some stakeholders stated that they were not aware they had any C or D condition land until they were supported to do land assessments. Therefore, for these graziers, the outcomes would not have happened without GRASS. This increased awareness and skills has allowed for lasting practice changes and projects to be rolled out.*

EY Report 2021

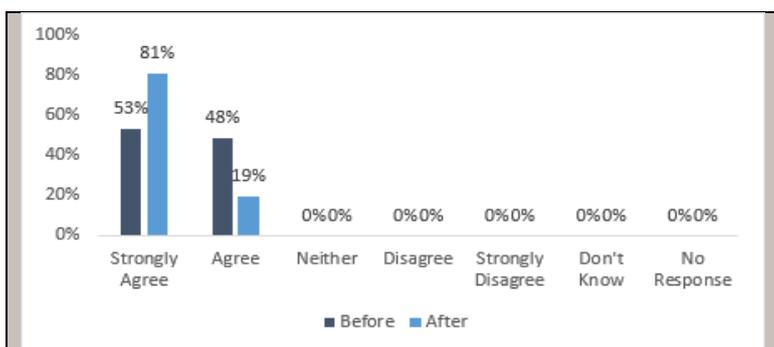
### 2.5.1 Participating graziers’ attitudes

Social monitoring data (106 records) collected in the Burdekin, Fitzroy and Burnett Mary by BMRG, DAF, FBA and NQDT were analysed by the P2R human dimensions team. Between 2020 and June 2022 (original project end-date), 66 ‘before’ and 36 ‘after’ surveys were collected. The full report is provided in Attachment A.



In measuring **attitudes** towards practice change, all respondents agreed to the statement: “I think that this farming practice is a positive thing to do on my farm” (Figure 2). 53% of graziers indicated strongly positive attitudes before the project and this increased to 81% after.

This result indicates that participating graziers had positive attitudes towards their nominated practice change when they joined the project, which was then further strengthened through their engagement in the project. Positive attitudes are a good first step in achieving long-term practice change.



**Figure 2.** Proportion of scores for graziers’ attitudes towards changing their nominated practice (Before n = 66, After n = 36)

**Self-efficacy** is a strong predictor of long-term practice change, so it is important that landholders feel comfortable

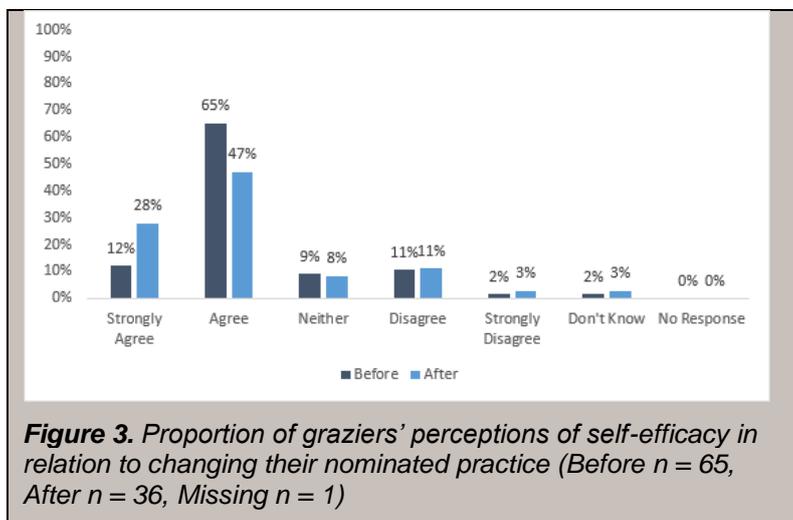


in continuing with the practice change after the initial project.

Most GRASS Participants responding to the statement: “I feel that this farming practice is easy to do on my farm” held positive perceptions of their self-efficacy i.e. felt that their nominated practice change was easy to do on their farm (Figure 3) both before (77%) and after (75%) involvement in the program.

There was an increase in the proportion of graziers indicating Strongly Agree (Before 12%, After 28%) which corresponds with a decrease in Agree responses (Before 65%, After 47%).

This result may indicate that some graziers’ perceptions of self-efficacy were strengthened through their engagement in the project.



## 2.5.2 Practice change - Improved grazing land management

### P2R management practice change

In the context of the management practice adoption target, best management practices for water quality outcomes are defined in the P2R program water quality risk frameworks for each major agricultural industry. For grazing systems, the **water quality risk framework** describes practices impacting upon land condition, soil erosion (pasture – hillslope, streambank and gully) and water quality.

The management practice attributes include a ‘before the intervention’ assessment and an ‘after the intervention’ assessment that identifies which practice/s have changed resulting from the intervention. This is based on a set of questions against each practice that benchmarks the level of practice as low, moderate or high water quality risk. Generally, these questions are contextualised by being attached to the specific location, farm practice change and spatial attributes to support P2R modelling outcomes.

In consultation with the DAF MPA and GRASS teams, review of the P2R questions identified which survey questions could be compared to identify a shift in practice and grazer capability, and:

- were most likely to change through the APLMs and incentives; and
- made sense, recognising that any consolidated dataset was de-identified and not able to be considered in the context of specific sites spatial location/attributes.

The four aspects of land management where P2R data could be analysed were:

- identification/management lands in poor (C) or very poor (D) condition (APLMs, incentives)
- carrying capacity (incentive projects).
- stocking rate (incentive projects)
- management of paddocks with frontages and wetlands (incentive projects).

#### Box 4. P2R data – management practice benchmarking and GRASS – in practice

- As of July 2022 (the last reportable dataset), 235 ‘before’ surveys benchmarking GRASS participants’ practices were reported through projector for the 2020/21 and 2021/22 years.
- Some differences were identified in terms of the spatial representation of ‘grazing land area’, with some creating spatial area to the nearest paddock and others creating a whole-of-property polygon.

- A key difference was whether the APLM was viewed in itself as supporting practice change, with all organisations agreeing that APLMs supported ‘the identification of lands in poor and degraded condition’ and identified strategies to improve those areas.
- However, three out of four organisations viewed that there was insufficient evidence that the establishment of an APLM supported change of carrying capacity across the entire area identified. As a result, an ‘after’ survey dataset was not always collected, or where other benchmarks might differ between paddocks (for example, in question 2, grazing charts being used for some paddocks but not others), the property was benchmarked at the lower end so as not to over-report practice change (NQDT).
- It was agreed that the most appropriate method of benchmarking would be to record an incremental change in question 5 (‘How do you manage areas that are in poor or very poor condition’). Therefore where a property was benchmarked at 5.1, it then moved to 5.2 when an APLM was completed (refer Figure 4).
- Generally, practice change was linked to on-ground works supported through GRASS incentives and/or in a few cases, additional actions related to APLM strategies supported e.g. through DAF extension services.
- Following the release of the Truii Sediment Projector Tool (2020), there was a move to report P2R practice change data through this system. Data was therefore submitted for hillslope benchmarks (questions 1-5), Data was not submitted for streambank or gully benchmarks as this would require data not practicable at a whole of property scale, e.g. a gully toolbox would need to be completed for every gully on the property (NQDT, 2022).

### Mapping and management of poor and degraded land (APLMs)

**Figure 4:** The reported P2R change from 5.1 to 5.2 is an accurate representation of the change accomplished through completing a whole of property APLM

5	0.2	How do you manage areas that are in poor (C) or very poor (D) condition?
5.1	0	These areas are not identified or there has been no actions made to remediate.
5.2	5	Most areas on the property that are in poor (C) or very poor (D) condition have been identified. Some actions including reduced stocking rates have been implemented.
5.3	10	Areas in poor (C) or very poor (D) condition across the entire property have been identified. Stocking rates have been reduced and in some areas stock have been fully excluded.
5.4	15	Stock have been fully excluded from all areas in poor (C) or very poor (D) condition across the property. Additional actions including diversion banks, ripping and seeding of bare or scalded areas as well as regularly spelling is undertaken.
5.5	20	NA - No land in declining condition

GRASS supported landholders to put in place an APLM that identified areas of poor (C) and degraded (D) condition land. However, the data identified that out of the 234 graziers who completed the survey, 120 participants who had not previously had a plan in place had shifted in practice levels under the P2R Grazing WQRF to at least practice level 5.2 (*After*) as a minimum practice standard [Source: *APLM management of lands in poor or very poor condition (Before n = 234, After n = 234) GRASS data 2020/21, 2021/22*]

It was also reported that a subset of participants who mapped and took some action, including reducing stocking rates (P2), have increased the number of participants at P5.2 from just under 100 (*Before*) to 140 (*After*) as with those participants benchmarked at P5.3 (adjust stocking rates and remove stock, if possible, on C and D land) trebled to over 60 (*After*).

Over 30 graziers at P5.1 (no identified areas or have made no actions), post completion of the APLM used the incentive funds to implement their APLMs and adjust stocking rates and remediating scalds, representing a shift to either P2 or higher practice level (*After*) against the Grazing WQRF. This 61% change in practice level was representative of the change across each region. [Source: *Incentives supported changes in practice for mapping and taking actions to manage lands in poor or very poor condition (Before n = 114, After n = 115, P2R GRASS data 2020/21, 2021/22)*]

### Carrying capacity (incentives)

As graziers used incentives to successfully integrate new infrastructure, *such as new fencing to spell paddocks and watering points to better manage carrying capacity*, this enabled a corresponding 40% increase of participants (*After*) to implement strategies to improve practice levels P3,P4 and P5 relating to carrying capacity [Source: *Incentives carrying capacity practice level change (Before n = 115, After n = 115) , P2R GRASS data 2020/21, 2021/22)*].

### Stocking rate (incentives)

Implementing an incentive project enabled improved management of stocking rates overall with reportable shift by half the participants (*After*) from practice level P1 to P2, and at least 15 from P2 to double the participants at P3 with a further 10 at practice level P4 now routinely using forage budgets, grazing charts and stock records to adjust stock numbers to ensure adequate groundcover at break of season. [Source: *Incentives stocking rates practice level (Before n = 115, After n = 115) P2R GRASS data 2020/21, 2021/22)*]

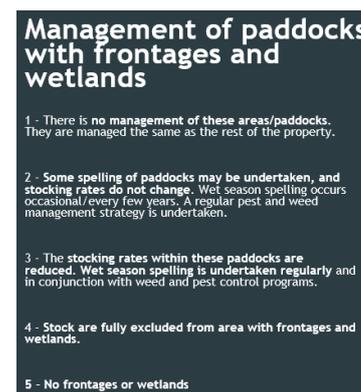
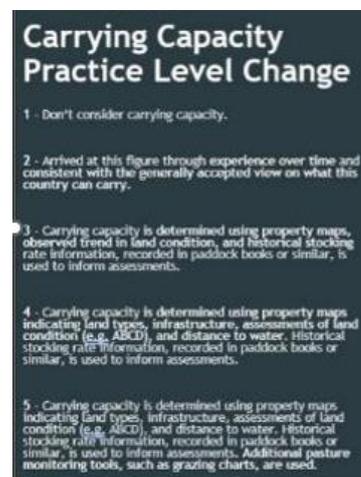
*Landholders across the three years have reached out to BMRG officers on multiple occasions asking for updated property maps as they split up paddocks and adopt rotational grazing practices. We see this as not only a recordable P2R practice change, but also a positive impact that the GRASS program has had on the landholder (BMRG, 2022)*

### Management of paddocks with frontages and wetlands (APLMs & Incentives)

APLMs and incentives supported the improvement in the management of paddocks with frontages and wetlands (e.g. through fencing, watering points, etc) which reflected in the data.

Where there is frontage country, 25% of participants moved their management practice (Before survey) from either: P1 (no different to the rest of their property) or P2 (undertook some spelling), to actively reducing or excluding stock, increasing wet season spelling capability (P3 and P4)(*After* survey). Overall, 45% of participants shifted their management practices to P3 and P4 (*After*). [Data: *P2R GRASS data 2020/21, 2021/22)*]

Education and land condition assessment, coupled with incentives projects such as riparian fencing provided legacy practice change able to be continued over the long term.





*Before and after implementation of wet season spell (in-kind contribution) practice change reported via P2R (FBA, 2022)*

### 2.5.3 Mid-term review (2021)

In reviewing the question “Is there evidence of a culture of innovation and stewardship being developed in Queensland landholders” The EY report 2021 identified that ‘Graziers interviewed and those that have participated in the program have shown a willingness to learn and adopt sustainable grazing practices that limit the impact on sediment run-off and have identified the benefits in participating in the program’. EY reported that evidence for this included:

- *Grazier and Steering Committee (‘Steerco’) interviews indicated that a culture of stewardship is being developed as a result of GRASS with many having practices consistent with GRASS objectives.*
- *Evidence of best practices being adopted is apparent, this in particular is evidence of a culture of innovation being adopted as they are breaking away from the standard modus operandi. Additionally, several Steerco interviewees pointed to the demand for the program, indicating a willingness to change within the grazing community.*
- *Overall, it appears that the program has been successful in developing a culture of practice change, centralised around extension activities. There is some evidence of change that may have occurred anyway (deadweight) but overall the feedback received points to positive change. It was acknowledged that the program brought change forward.*

### 2.5.4 GRASS extension team capability

GRASS was delivered by a highly skilled team and organisations with experience in GLM. As to be expected over three years, staff changeover did occur, supported by a framework for engagement and collaboration. Having DAF working across the three regions was seen as a strength of the project, facilitating collaboration, and supporting new and existing staff. Teamwork and consistency of approach to the program was supported by annual workshops in 2019, 2020 and 2021 (the latter two on-line due to COVID) and regular meetings.

NQDT reported that the GRASS project provided a valuable framework for early engagement, with the processes developed likely to be continued through future programs.

The BMRG had significant staff changeover in 2021, and they acknowledged that: *Over the lifetime of the project, BMRG project officers have significantly increased their capacity and experience in landholder engagement. For project officers, this has also been a highlight of the program. The GRASS project has given BMRG extension officers the opportunity to learn the most effective techniques for engagement in the Burnett Mary Region. Another highlight was being able to spread BMRG’s reach through the various catchments in the region. Finally, a positive aspect of promoting the project through EOIs was that we could target catchments and received an even spread of landholder engagement across the region.*

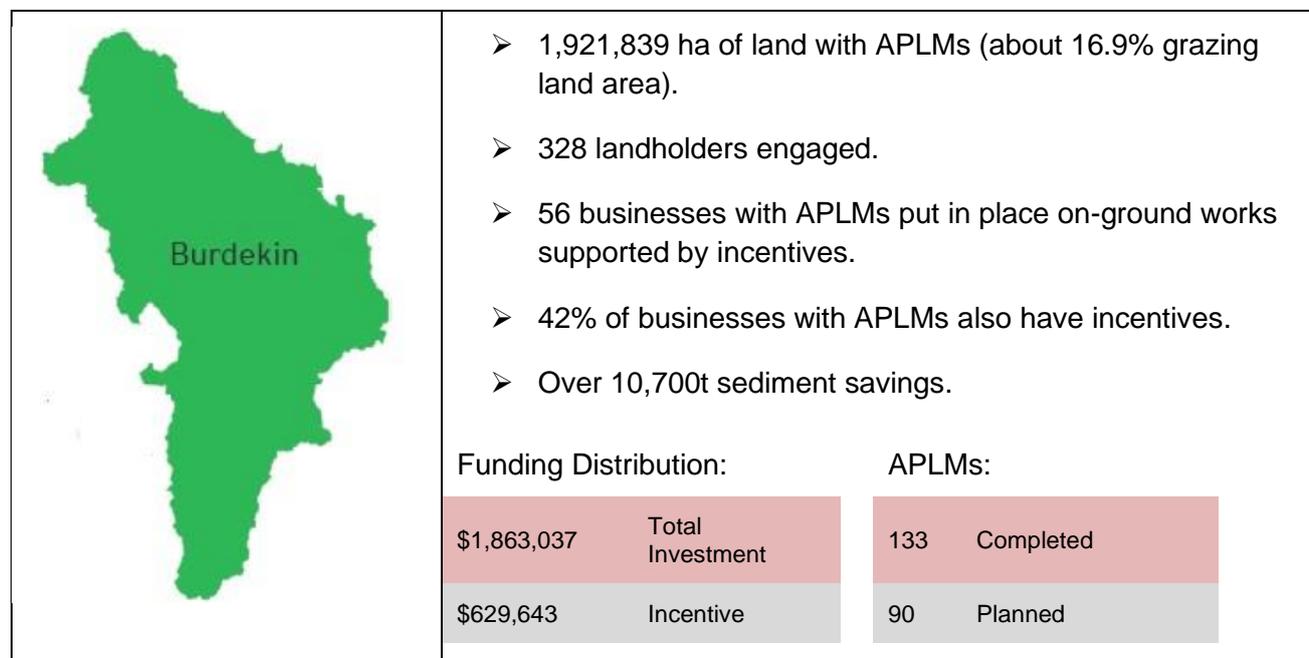
DAF and the GRASS partners acknowledged a learning curve for partners in terms of delivery of a program by

each NRM with co-delivery and project management with regional DAF officers. This saw an upskilling of DAF staff in the design, establishment and delivery of incentive projects.

Overall, the team were highly adaptive with the bringing of new technology, skills and approaches across the life of the project.

## 2.5.5 Outcomes by region

### 2.5.5.1 Burdekin region



### Extension delivery and engagement

NQDT reported engagement with 215 landholders through a combination of one-on-one property visits and group events over the length of the GRASS program. 112 landholders were also reported to have attended 8 separate GRASS funded field days covering innovation, soil health, grazing and vegetation management.

DAF reported 105 engagements, hosted a GRASS dedicated workshop and collaborated in the production of a Turf 'n' Surf podcast to discuss GRASS with a producer who has participated in the program. This podcast was launched at Beef 2021.

**NQDT - 328 landholders engaged  
>2,024 FTEs**

**DAF - 105 landholders engaged  
> 1,138 FTEs**

### 2.5.5.2 Fitzroy Region



- 878,001 ha of land with APLMs.
- 5.6% of area with APLMs.
- 67 businesses with incentives.
- 30% of businesses with APLMs also have incentives.
- 9,280t sediment savings.

Funding Distribution:		APLMs:	
\$1,695,477	Total Investment	222	Completed
\$608,949	Incentive	138	Planned

#### Extension delivery and engagement

The GRASS program offered a flexible engagement strategy that could be tailored to the individual needs of grazing enterprises, greatly increasing its appeal. Field officers were able to approach graziers through GRASS to address a variety of business interests, including property mapping, pasture and weed identification, grazing systems, remote sensing, soil conservation and forage budgeting.

FBA’s Project Management and Customer Relationship Management Tool LINK recorded the program and engagement progress along with capturing landholder and individual project information, including description funding and landholder in-kind contribution.

**FBA - 120 landholders engaged over 404 FTEs**  
**DAF - 170 landholders engaged over 2,334 FTEs**

DAF contributed in the Fitzroy with a reported 170 engagements and hosted a further GRASS dedicated workshop.

### 2.5.5.3 Burnett Mary Region



- 117,950 ha of land with APLMs.
- 2.2% of area with APLMs.
- 27 businesses with incentives.
- 29% of businesses with APLMs also have incentives.
- 736t sediment savings.

Funding Distribution:		APLMs:	
\$666,424	Total Investment	94	Completed
\$336,528	Incentive	93	Planned

Burnett Mary Regional Group for Natural Resource Management Ltd (BMRG) and the Queensland Department of Agriculture and Fisheries (DAF) had combined targets of 31 Action Plans for Land Management (APLMs) per year with BMRG contracted to deliver 15 of these. BMRG and DAF continued to take a collaborative approach to deliver the GRASS Program across the Burnett Mary region as they have done with Grazing Best Management Practice (BMP) previously. The overarching extension philosophy will be to position the producer front and centre, removing obstacles for participation in the Grazing Resilience and Sustainable Solutions (GRASS) program and meeting them where they are at. The delivery approach was flexible as the previously unengaged producers often required the most support and time when building symbiotic relationships.

**BMRG - 74 landholders engaged one-on-one over 385 FTEs**

**DAF - 74 landholders engaged one-on-one over 760 FTEs**

## 3.0 Case studies

### 3.1 Kirkland Downs (Burdekin, NQDT)

Kirkland Downs graziers Stacey Kirkwood and Ian Collins have never been so happy to be wrong.

They have a lush new productive paddock on their property where previously there was scalded, bare ground, unloved by cattle and capable of growing very little. Effectively, it's a gift because all they did was rest it and allow nature to take its course.

The area - about 176ha in a corner of Rock Hole Paddock - had, for years, been scalded, unattractive ground growing little.

They believed it would never improve. Ian and Stacey had a plan to contour-rip along those bare ridges about one-third of the way down the slope, then seed the whole area before the 2021 wet season.



*Stacey Kirkwood and Ian Collins*

But they didn't implement the plan, opting instead, for the time being, to go with NQ Dry Tropics Grazing Team Leader Josh Nicholls' suggestion: "Shut the gate".

When he made that suggestion, there was no gate to shut and no fence, but Stacey, Ian and nephew Tristan McCaul made short work of carving off about 10 per cent of the 1700ha Rock Hole paddock.

Stacey said they did the fencing, with support from the Grazing Resilience and Sustainable Solutions (GRASS) program and locked cattle out of the area



*Rock Hole Paddock Jan 2020*



*Rock Hole Paddock April 2022*

The Grazing Resilience and Sustainable Solutions (GRASS) program aims to help land managers improve land in poor or degraded condition, and is funded through the Queensland Government's Reef Water Quality Program

It provides one-on-one support to ensure graziers meet the requirements of the Reef protection regulations introduced in December 2019.

Graziers with C and D condition land may be eligible for incentive funding for works identified in tailored APLMs developed in conjunction with an extension officer. Participating landholders will be considered a low priority for Reef regulation compliance visits.

"We went back with Josh 10 months later to work out a plan for ripping and seeding the new paddock," Stacey said, but they knew at first glance ripping and seeding was not the answer. After what was a fairly average wet season, the trio was astonished to see what those miserable, scalded patches of ground could grow. Even the worst areas had some established vegetation, with much of it desirable pasture species.

"It was just because we were able to give it a rest. It's fantastic," Stacey said. "The amount of feed there now in a corner we thought really wasn't useful, is amazing to see."

The other thing that surprised them was the diversity of species already evident. Black speargrass (*Heteropogon contortus*), was predominant, but there were also legumes - indigoferas and *Seca stylo* - as well as some of the less desirable species like couch and wiregrass.



*Newly christened Handy Paddock today*

The new paddock, christened Handy Paddock by Tristan because it would be handy to have, is likely to be duplicated across the property where there is opportunity to exclude cattle from damaged areas.

With support from GRASS, they also installed a watering point for the paddock so it could be grazed, and it is now the temporary home to about 30 heifers and a bull.

"It's manageable now," Stacey said. "We can lock cattle out when it needs to be rested and put cattle in when it's ready."

Josh said the degraded area in Handy Paddock was initially assessed as being in D condition in October 2020 using the Land Condition Assessment Tool (LCAT). A third LCAT survey in April 2022 after a second, albeit poor, wet season returned a score that put the paddock in B condition and knocking on the door of A condition.

"The increase in LCAT score is because of the increased ground cover, the predominance of a desirable pasture species (Black speargrass) and the absence of impacts from plant or animal pests," Josh said. "It's a great result and testimony to what can be achieved by giving the land a break."

The shock of having to fight to prevent Kirkland Downs being compulsorily resumed so the Australian Defence Force could expand its Townsville Field Training Area at High Range in 2017 prompted Ian and Stacey to re-evaluate their Kirkland Downs operation.

"We sent most of our breeders away on agistment during the drought," Stacey said. "In 2017, we decided to keep them off the property and to concentrate on finishing cattle here."

As of 2017 Ian said the plan was to get all the paddocks on the property back in top condition after the long dry, all the while turning off marketable cattle.

They have succeeded in lifting their average sale weight from 300kgs to an average of 460kgs, and this year they think that will reach 480kgs. They send cattle to market at about 18 months to 2 years old.

"They're definitely no older than two teeth, but most of them are milk and two teeth," Ian said.

While the improvement in weight-for-age in their cattle is satisfying, the most pleasing aspect of the changes they have made is the condition of their paddocks at the end of the dry season.

Ian said every part of the property was rested for 50% of the year at least. "We know what the paddocks will handle, and we try to maintain them in good condition" he said.

"We try to keep them looking pretty all the time, even at the end of the dry season."

## 3.2 GRASS program helps break big problems into manageable pieces (Burdekin, NQDT)

Caerphilly Station graziers Mick Duckett and Emma Robinson have some great ideas about how to improve productivity and land condition on their 59,000ha property 200km south of Charters Towers, And accessing the Queensland Government's Grazing Resilience and Sustainable Solutions (GRASS) program is helping them to implement those ideas to improve ground cover and herd production.



*Emma Robinson and Mick Duckett in the yards at Caerphilly Station.*

GRASS has provided them with extension support and a little funding to help them target areas needing improvement on their property.

Mr Duckett welcomed the support through the GRASS program as he believed he could not previously get extension help in his area (as it was not a priority for reducing fine sediment).

NQ Dry Tropics Senior Project Officer Josh Nicholls is responsible for delivering the program in the Burdekin NRM region.

“Landholders who have previously earned accreditation under the Grazing Best Management Program, like the Caerphilly team, were first to be considered for support under the GRASS program,” Mr Nicholls said.

Mr Duckett said the support helped them to break big challenges down into paddock-scale solutions which was invaluable.

Using satellite imagery and the latest spatial data software, Mr Nicholls and Field Officer Carleigh Drew were able to help the couple assess land condition across the whole property and target areas of land with poor groundcover.

Of particular interest were areas of gully erosion caused by poorly designed table drains beside a major public road running through the property. Every rain event meant more soil lost down the table drain.

Five years ago Mr Duckett and Ms Robinson changed from rotational grazing to a time-controlled grazing program and have seen the positive impact this has had on their land condition.

That success motivated them to apply the same principles to improve land damaged by preferential grazing.

They mapped the scalded area that could be rehabilitated with a controlled grazing program and the NQDT team recommended mechanical intervention to catch and slow water running off from the roadway.

Mr Duckett said identifying the problem areas and having tools to monitor change was a big step forward.

Collaboratively, the graziers and extension officers developed a strategy for the gully system incorporating a series of 100m long contour banks.

The banks will slow the flow of water by catching and diverting it to stable areas where it will be able to infiltrate and grow pasture - a win-win situation.

The scalded paddock would be fenced into four paddocks, each of which would be grazed intensively by a 1000-strong mob for little more than a week to get the desired effect before the area was rested for about 12 months.

The couple has been successful with the short intensive grazing rotations across the rest of the property, and they

are confident they can return the scalded areas to full production, given a few reasonable rainy seasons.

NQ Dry Tropics will provide some funding to help with the earthworks and fencing, but the real value will be in the ongoing support provided to the Caerphilly management team to help them monitor and bring poor and degraded areas of the property back to good condition.

The GRASS program, funded through the Queensland Government's Reef Water Quality Program, helps graziers meet their obligations under the Reef protection regulations to maintain land condition, reduce erosion and ultimately protect the Great Barrier Reef.

Graziers participating in the program will have the opportunity to be considered a lower risk for compliance inspections until June 2022.

Those graziers who held a current Grazing BMP accreditation at June 2019 would have the opportunity through GRASS to be considered a lower risk for compliance inspections until December 2024.

Contact Senior Grazing Project Officer Josh Nicholls ([josh.nicholls@nqdrytropics.com.au](mailto:josh.nicholls@nqdrytropics.com.au)) or visit the NQDT website at [www.nqdrytropics.com.au](http://www.nqdrytropics.com.au) for more details.

### 3.3 No gully too deep (Fitzroy, FBA)

New to the world of best practice land management, the owners of 'Glen Elgin' jumped in with their best foot forward on their 10,403ha breeding and fattening property, where they are now applying the GRASS program principles and solutions.



Glen Elgin's owners reached out to FBA after viewing FBA's erosion videos on YouTube. The property has been in the family for approximately 40 years, and the owners decided it was time to make some sustainable changes to rehabilitate existing erosion and prevent further loss of land.

FBA's Land Management Officer, Kate Woolley attended the property with the owners on multiple occasions to create an APLM which assesses the areas of concern and identifies priority sites. FBA has also discussed the basics of land management (including managing stocking rates to the country's carrying capacity and understanding the role of grass cover and its effects on erosion) with the enthusiastic owners.

"The main areas of concern were identified inside a paddock that covers approximately 132ha. This area has historically suffered from scalding and gullies. The soil type found here (a sodosol) generally has a low nutrient status and is very vulnerable to erosion," said Kate.

Kate suggested starting by fencing out the eroded areas to restrict stock access and allow the pasture to regenerate. Following this, Kate suggested very shallow ripping on the contour, and seeding the scalded area to promote pasture growth after a wet season spell. The owners were also advised to fence the remaining area of the paddock to land types to allow each area to be managed according to the land types capabilities and limitations.

Fencing work of this nature is something that can be funded through the GRASS incentive funding, however unfortunately for Glen Elgin, the available incentive funding was exhausted by the time the project came to be implemented.

Given the scale of work needed, Kate approached John Day, a regional soil conservation expert to assess the site and provide a more comprehensive rehabilitation plan.

The owners of 'Glen Elgin' and FBA will monitor the progress of the project and continue working toward their goals listed under the APLM created for them through GRASS.

### 3.4 Gully restoration M200013 (Burnett Mary, BMRG)

Landholders have owned this property for 4 years and they are both experienced operators having worked in agricultural jobs outside of their grazing business. They currently run 100 brahman breeders on the property with 2 charolais bulls. Their grazing management includes rotational grazing across native and improved pastures as a single herd. Currently the 300ha property is split into 15 paddocks and has 7 dams and 5 troughs. The landholders have plans in the future to further break up the paddocks with fencing to land types, and they also plan to fence off dams and install a trough system throughout the property. This project involved remediating 3 separate gullies that formed over the property as well as riparian fencing. John Day was contracted to produce a soil erosion remediation field guide, and the remediation works were developed according to the guide.



*Site 1 Collapsed contour bank*



*Site 2 Dam and contour bank construction*



*Site 2 Contour bank construction*



*Site 3 Knoll rehabilitation & contour bank*

#### **Site 1**

The project at this site was to reinstate a diversion bank at the bottom of the slope to gather and direct the water to the western end and safely dispose of it across the road on a level sill. A second small bank to divert water can be constructed approximately 15m upslope delivering to the grassed waterway on the western side.

#### **Site 2**

At this site there were 2 main erosion sites at either end of the block where several contour banks end. These banks were constructed prior to current management. The contour banks were systematically broken to form small pondage dams approximately every 30m in a checkerboard pattern down the slope, so no breaks line up or allow water to flow unimpeded down the full slope length. A section of the second bottom bank at the southern end can be repaired to block the gully which has formed there. The bottom bank was rebuilt on the southern end to block the gully and deliver that water around the slope to a 20m level sill outlet. At the northern end, a new diversion bank was constructed to block a gully that ran down the fence to deliver the water around the slope to a small plateau where a small dam was constructed with a by-wash delivering into a wide stable grassed depression.

### **Site 3**

This site had a scald on one knoll which was rehabilitated, and a contour bank was rebuilt so that all the top water was delivered to the waterway on the eastern side of the area. The two contour banks below were broken and flattened for 10m directly downslope from each other which effectively made a new waterway. The gullies to the north of the scald which resulted from the contour break below the scald were filled and compacted with Lantana brush which was stockpiled close by.

The erosion remediation works have been completed successfully to the specifications of the erosion field guide provided by John Day. The landholders are already seeing the benefits of the erosion works as the property has been subject to multiple flood events, which most of the works have withstood and performed well under. Site 1 is the only site which has failed, where both contour banks have collapsed, however the landholders have shown an ongoing commitment to erosion control and will remediate these. The landholder plans to go through with the original erosion plan and remediate several gullies over the property.

### **3.5 Glenmaggie - Gully remediation (Fitzroy, FBA)**

Thangool graziers, Anthony and Helen Webb have taken a progressive step towards improving and conserving soil on their fattening property at Glenmaggie by joining the GRASS program.

Anthony and Helen are passionate about improving their property and remediating areas of erosion, however over the past decade, extreme weather events have caused significant soil erosion and gullying on Glenmaggie. The GRASS program helps graziers like the Webbs to develop an APLM.

By completing an APLM, Anthony and Helen were able to examine specific areas of concern in detail and discuss a way forward with DAF soil conservation officer Bob Shepherd, and soil conservation consultant John Day. At the front of the property, an actively eroding gully was examined. The topography was assessed, and a hydrologic design was developed to assess practical remediation options.



Despite the good land condition surrounding the gully, recent heavy rainfall events had caused large volumes of alluvial soil to separate from the gully head and wash down the adjacent creek. To effectively remediate the gully (pictured above) they decided to construct a rock chute.

Remediation involved reshaping the head of the gully with a gradient that could handle a peak flow of approximately 20m<sup>3</sup>/sec in a 1 in 50-year rainfall event.

Halfway through the earth works geo-textile fabric was laid down and keyed in by a trench full of 600mm quarry rock. Trenches were then excavated at the top and bottom of the gully and a layer of geo-textile fabric was keyed into the compacted gravel.

The next step involved placing 600mm diameter quarry rock on top of the geo-textile fabric to break the velocity of catchment water moving over the head of the gully.

The rock chute will be monitored over the coming wet season to assess sediment loss reductions.

### 3.6 Producers use GRASS program to protect riparian zones (Fitzroy, DAF)

When Justin and Bronwyn Tait of 'Palmtree', Canal Creek, heard about Grazing Resilience and Sustainable Solutions (GRASS) program, they jumped at the chance to be involved.



*Justin and Bronwyn Tait, Palmtree, Canal Creek*

They said that the program complemented their on-property goals for long term sustainability and provided a financial incentive for work that was already on their 2020 'to do list'.

The Tait's purchased the property in 2007, and currently run 130 Droughtmaster breeders and replacement heifers. The property is 1650ha and is dominated by coastal Eucalypt forest woodlands, loamy alluvial and river gum flats. The cattle like the river gum flats along the creek system, and these are selectively grazed, particularly in the wet season.

Since they purchased the property, the Tait's have been passionate about improving grazing land condition, with a focus on off-stream watering points, land type fencing and managing vegetation regrowth. As a part of the GRASS program, Justin and Bronwyn have had the opportunity to work closely with the

Department of Agriculture and Fisheries (DAF) to develop a Land Management Plan. In April this year, DAF extension officers assisted the Tait's to plan to fence the riparian areas and distribute watering points away from the riparian zone.

The Tait's then took advantage of the \$1.4 million funding that has been made available to GRASS participants across the Burdekin, Fitzroy and Burnett Mary regions, and applied for funding to assist with implementing their Land Management Plan. Their application for funds was successful and the Tait's have now installed water tanks, troughs and fencing infrastructure to protect the riparian zone and allow cattle to graze more sustainably across other land types.

In addition to the GRASS Program, Justin and Bronwyn have continued to work with DAF, focussing on other areas in their beef operation, including pasture budgeting and monitoring during the dry season and tailored advice on herd supplementation options.

### 3.7 Southlands - Producer benefits from the GRASS program (Fitzroy, DAF)

Chris and Chantal Booth took over the management of their family's property 'Southlands' just west of Rockhampton in 2013. The property prior to the transition of management had been exposed to years of high grazing pressure and this combined with previous management resulted in a severe degradation of the majority of the properties pastures. This low land condition had left 'Southlands' prone to erosion and severely reduced the property's productivity and profitability.

Chris and Chantal's desire to improve 'Southlands' motivated them to participate in the GRASS program. GRASS focuses on identifying actions to improve land that is in C and D condition and involves jointly developing an Action Plan for Land Management (APLM) with the grazier. Participating in GRASS will also ensure graziers comply with the requirements of the new Reef protection regulations.



*Southlands prior to management change*



*Fence construction to control grazing pressure and allow for rotational grazing*



*Southlands after management change and the introduction of GRASS*

Through completing an APLM on ‘Southlands’, Chris and Chantal were able to identify specific areas of concern in detail and work with DAF Staff to identify and apply suitable management options. One option used was to install dividing fences to reduce paddock sizes to allow for greater control of grazing pressure, increased rotational grazing frequency and wet season spelling of degraded locations. These strategies have promoted pasture regeneration, thus reducing run off and increase the productivity and profitability of the business.

Since taking over the management of the property, Chris and Chantal have actively adjusted the stocking rate to suit the land types and seasons. This has already made a significant difference to the overall land condition resulting in greater productivity.

Chris and Chantal both agree that participating in the GRASS program and the APLM completed for ‘Southlands’ will lead to an overall improvement in land condition, ground cover and productivity of their property. Another benefit of the APLM is that graziers will be able to demonstrate how they are limiting sediment run-off into the Great Barrier Reef catchments.

DAF GRASS program leader Matt Brown said graziers participating in the program have access to a range of targeted decision support tools and strategies to manage their degraded land and re-establish ground cover, demonstrating their part in a sustainable grazing industry.

### 3.8 Burnett Mary Hosts GRASS Workshop in Teebar (Burnett Mary, DAF)

On Tuesday the 7<sup>th</sup> of September the Burnett Mary Team consisting of Beef Extension Officers Roger Sneath, Kate Brown and Megan Gurnett held their first ever GRASS workshop at Teebar. They were joined by Brian Pastures Research Stations Technical Officers Joanne Campbell and Melissah Dayman, Department of Environment and Science Community Engagement Officers Kylie Dunlop and Krystle Hohn, Burdekin Beef Extension Officer Alex Thomson, Fitzroy Basin Extension Officers Ryan Honor, Matthew Richardson, and GRASS project leader Matt Brown.



*Image 1 – GRASS leader Matt Brown giving and overview of the GRASS project to the producers in attendance.*

Extension officers from all reef catchments worked together to deliver a successful and beneficial GRASS workshop for all 15 families/businesses which were in attendance. The producers who attended ranged from small hobby/lifestyle clocks right up to large multi-property enterprises.

Tuesday morning started with an introduction to the GRASS project, what it consists of and the added benefit of the project. Those who completed GRASS will be considered as lower priority for compliance under the new Reef protection regulations. Following the introduction to GRASS the team then explained the producers individual GRASS kits which contained individual property mapping, land type mapping, Veg Machine and Forge budget reports as well as several other useful handouts.

The team also outlines how simple it is for producers to comply with the new Reef legislations. All producers must to is:

- Continue to maintain land in good (A) condition (with over 50% ground cover).
- Take action to improve land in poor (C) (less than 50% ground cover).
- Take action to improve land in degraded (D) condition (less than 20% ground cover) or prevent this land from further degrading or expanding.
- Keep records of actions taken and chemical and fertiliser products applied.

At the completion of the GRASS Workshop the DAF staff split into 4 teams. These 4 teams then went to their respective properties over the next two and a half days and completed the property visits. During the property visits several land condition assessments were taken on each property using the land condition assessment tool (LCAT). During the property visits staff used their skills and knowledge to provide producers with a variety of information, not just grazing land management. For producers with severe erosion problems, John Day was enlisted to aid producers with gully remediation plans.

GRASS is a 3-year project funded through the Queensland Government Reef Water Quality Program and is delivered by the Department of Agriculture and Fisheries, NQ Dry Tropics, Fitzroy Basin Association, and Burnett Mary Regional Group.

For more information on support for graziers please visit: <https://www.qld.gov.au/environment/agriculture/sustainable-farming/reef/support-programs/grazing>

### 3.9 Mardale - Producers benefit from GRASS program (Fitzroy, DAF)

Mat and Tara Pavey purchased their property 'Mardale' in the Biloela district in 2014. The property has a lot of steep undulating country that was encountering areas of degraded land, some with no ground cover at all and subject to fast overland running water which had formed deeply eroded gullies.

Mat and Tara's passion to restore these areas inspired them to participate in the Grazing Resilience and Sustainable Solutions (GRASS) program. The GRASS program focuses on identifying actions to improve land that

is in C and D condition and involves jointly developing a Land Management Plan (LMP) with the grazier.

Through completing an LMP on 'Mardale', Mat and Tara were able to examine specific areas of concern in detail and apply the best management options. One option used was to fence off eroded gullies to exclude stock and allow the gullies to revegetate naturally and thereby slow the water flow through them. Another strategy they adopted was to use mechanical intervention to widen the path of water flow in a small gully and reduce its intensity, allowing water to move more slowly through grass and minimise erosion.

Since taking over the property, Mat and Tara have adjusted the stocking rate to a sustainable level and have introduced rotational grazing to rest the land and keep ground cover levels high.

Tara believes that implementing the changes identified in the LMP will lead to the establishment of good ground cover in degraded areas and limit runoff, preventing further erosion. She said that another advantage of using an LMP is that graziers will be able to demonstrate how they are limiting sediment run-off into the Great Barrier Reef catchments.

Department of Agriculture and Fisheries GRASS program leader Matt Brown said that graziers participating in the program have access to a range of targeted decision support tools and strategies to manage their land and re-establish ground cover, demonstrating their part in a sustainable grazing industry.

For more information on support for graziers please visit: [www.qld.gov.au/environment/agriculture/sustainable-farming/reef/reef-regulations/producers/grazing/support-programs](http://www.qld.gov.au/environment/agriculture/sustainable-farming/reef/reef-regulations/producers/grazing/support-programs).

## 4.0 Improving GRASS delivery

### 4.1 Adaptive management (2019-2022)

The GRASS program and its delivery systems continue to adapt and improve over the life of the project.

Improvements to date	Benefit to the customer/supplier
Establishment of underpinning systems, procedures and templates (in partnership with suppliers)	<ul style="list-style-type: none"> <li>• Development of project agreements, including landholder MOUs, consent to share information.</li> <li>• Creation of shared workspace on-line to store documents and templates.</li> </ul>
Improved project reporting against targets and objectives	<ul style="list-style-type: none"> <li>• Conversion of the MERI templates to Microsoft Excel increased ease and efficiency of progress reporting of data against milestone periods (2020).</li> </ul>
Inclusion of incentives under the program in November 2019	<ul style="list-style-type: none"> <li>• Provide direct support to growers – agreed guidelines and procedures established in revised project plan.</li> </ul>
Enhanced extension services delivering better services to graziers and improving GRASS outcomes	<ul style="list-style-type: none"> <li>• Delivery agents engaged local and regional specialists to provide advice to landholders on action response and grant project delivery.</li> <li>• LCAT adopted as a tool to support consistent delivery by partners in terms of land condition monitoring and identification of C and D lands (all partners).</li> <li>• Use of drones to support design of soil conservation incentive projects more accurately (NQDT, BMRG, FBA).</li> <li>• Delivery partners accessed and partnered with local initiatives (as per Mid-term review advice).</li> </ul>
Improved regulatory support to graziers Refined budget allocations under the Project Plan and relevant deed/deed variations	<ul style="list-style-type: none"> <li>• Referral from DES i.e. the rollout of on-farm inspections by compliance officers under the Reef regulations has contributed to several engagements as landholders were directed to undertake an APLM as part of their strategy for addressing degraded land.</li> </ul>
Introduction of the Grazing projector tool through P2R program Initial reporting of practice change in relation to incentives implementation	<ul style="list-style-type: none"> <li>• Improved data collection under the program (final P2R data (including geospatial practice change areas) submitted to P2R (within 12 months)).</li> </ul>
Project acknowledgement procedures put into place	<ul style="list-style-type: none"> <li>• Project acknowledgement procedures were put into place, and GRASS was formally acknowledged in 2020 with the first landholders on the register in 2020.</li> <li>• DAF and NQDT developed project acknowledgement letter for participating graziers.</li> </ul>
Communications	<ul style="list-style-type: none"> <li>• Revision of comms messages add engagement.</li> <li>• Improved turnaround by DES and development of standard text and approaches (more to do).</li> </ul>
Mid-term review	<ul style="list-style-type: none"> <li>• Offered the opportunity to present whole of project rather than individual projects and present on regional outcomes.</li> <li>• Also provided emphasis of integration and role played with regions as fundamental resource.</li> </ul>

Incorporation of social monitoring	<ul style="list-style-type: none"> <li>The introduction of social monitoring occurred in 2020 and was inconsistently adopted. This can be built on in the next phase.</li> </ul>
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## 4.2 Proposed improvements for next phase of GRASS

The following improvements or streamlining were identified for inclusion in a future GRASS phase.

New improvements	Benefits
Objectives and priorities under GRASS 2	<ul style="list-style-type: none"> <li>Enhanced guidelines – priorities and objectives clarifying the balance of providing regulatory support across all catchments, practice improvement and driver of sediment savings in priority catchments.</li> </ul>
Insight into incentive delivery and assessment and alignment with wider Reef programs	<ul style="list-style-type: none"> <li>To reflect a more granular view of proposed and actual budget spend.</li> </ul>
<p>A contemporary MERI Scheme with an enhanced streamlined reporting template, with quarterly reporting of data, and reduce frequency of performance reporting to six monthly aligned to payments</p> <p>Clarify P2R reporting requirements to be reported through the Sediment Projector Tool (noting a risk in under and over reporting practice change and implications with respect whole-of-property risks conflicting with other programs funding actual on-ground change).</p>	<ul style="list-style-type: none"> <li>In line with 2022 – 2026 QRWQP requirements.</li> <li>To give customer and supplier a better ability to respond and promote the project to key stakeholders.</li> <li>Reduced duplication and simplify data reporting whilst maintaining data rigor under KPIs in line with 2022-2026 QRWQP requirements.</li> <li>Improved P2R reporting: <ul style="list-style-type: none"> <li>refine reporting of incremental practice change for APLM to avoid over reporting in some cases.</li> <li>Continue to monitor to ensure that consistency in reporting, adaption as new tools are released and implications of reporting approaches.</li> </ul> </li> </ul>
Increased incentive funding and consider pricing schedule	<ul style="list-style-type: none"> <li>Consider raising the cap to \$15,000 (ex GST), to respond to cost increases and maintaining cost benefit ratio in facilitating the individual projects.</li> </ul>
	<ul style="list-style-type: none"> <li>Review price schedules associated with increases to the cost of supplies to landholders.</li> </ul>
An additional 'check in' with land managers	<ul style="list-style-type: none"> <li>An additional 'check in' with land managers on how actions for improving C and D condition land identified in the APLMs are being implemented. The status of works funded through incentives will allow for better targeted assistance and ongoing extension focus thereby improving value for original investment in landscape improvement.</li> </ul>
Additional practice change information capture through process outside of P2R framework	<ul style="list-style-type: none"> <li>Additional practice change information captured through processes outside of the P2R framework, providing for a better understanding of practice change improvement and social influences, allowing for greater targeting of government investment.</li> </ul>
Social monitoring	<ul style="list-style-type: none"> <li>Look to access the data and streamline the process in partnership with OGBR&amp;WH social monitoring team to best reflect GRASS outcomes.</li> </ul>
Inclusion of OGBR&WH on incentive	<ul style="list-style-type: none"> <li>Responding to mid-term review recommendation.</li> </ul>

assessment panel	
Yearly financial acquittal	<ul style="list-style-type: none"> <li>Increased financial reporting and scrutiny around the technical advisory panel allowing for increased government visibility of incentive distribution – with learnings providing for ongoing refinements to associated or similar programs.</li> </ul>
Introduction of a guideline as a standard that must be complied with in the contract	<ul style="list-style-type: none"> <li>Introduction of the Grazing Guideline as a standard that must be complied with in the contract, providing for increased consistency and greater confidence in the extent of service delivery.</li> </ul>
Reporting requirements to OGBR&WH for departures from agreed methodology (guideline)	<ul style="list-style-type: none"> <li>A requirement to inform OGBR&amp;WH where departures from the guideline are necessary (which functions effectively as a standard operating procedure), allowing for similar issues and requirements for departure to be addressed in a proactive fashion in other regions (where necessary). This will allow more effective and better timed use of available customer and supplier resources.</li> </ul>
Streamlining landholder engagement and prioritisation for APLM development	<ul style="list-style-type: none"> <li>Streamlining of landholder engagement and prioritisation for APLM development. This ensures that learnings from GRASS around the timing and nature of property visits and APLM development can be implemented in GRASS 2, allowing more effective use of resources, for example in increasing the ability of staff to undertake broader extension services.</li> </ul>
Clarifying the criteria around land manager eligibility	<ul style="list-style-type: none"> <li>Clarifying the criteria around land manager eligibility to maximise the distribution of services as much as possible across potential GRASS 2 participants.</li> </ul>
Revision of communications plan	<ul style="list-style-type: none"> <li>Revision of the GRASS communications plan will provide for greater visibility and engagement in the program for the previously unengaged component of the grazing community in the Burdekin, Fitzroy and Burnett Mary.</li> </ul>

## 5.0 GRASS 1 Final Data Sets

### 5.1 APLM data

Year	Org	Catchment	Landholders Engaged (#)	APLMs (#)	Accredited Grazing BMP producers with APLMs (#)	Total APLMs (#)	Area poor and degraded condition land (ha)	Area Property (ha)	De-identified survey response provided to DES (before) (#)	De-identified survey response provided to DES (after) (#)	Extension Services (APLMs only) and total FTEs (hrs)	Total FTEs (#)	Graziers acknowledged for participating in a recognised project (#)
2019-2020	DAF	Burdekin River	29	6.0	10.0	16.0	28,944.0	359,813.0			336.0		15
2020-2021	DAF	Black River										4.1	
2020-2021	DAF	Ross River										4.1	
2020-2021	DAF	Haughton River										4.1	
2020-2021	DAF	Don River										4.1	
2020-2021	DAF	Burdekin River	15	1.0		1.0	500.0	14,400.0			21.0	4.1	1
2020-2021	DAF	Burdekin River	23	15.0		15.0	72,498.0	72,498.0			315.0	4.1	
2021-2022	DAF	Burdekin River	11	7.0		7.0	6,765.0	78,541.0			147.0		7
2021-2022	DAF	Burdekin River	11	7.0		7.0	6,765.0	78,541.0			147.0		
2022-2023	DAF	Black River											
2022-2023	DAF	Ross River	2			1.0	795.0	1,725.0			21.0		
2022-2023	DAF	Burdekin River	14			6.0	21,036.0	86,107.0			126.0		1
2019-2020	DAF	Styx River	2			1.0	32.0	6,703.0			42.0		
2019-2020	DAF	Fitzroy River	28	21.0	2.0	23.0	13,675.0	73,586.0			588.0		
2019-2020	DAF	Calliope River	4		2.0	2.0	31.0	361.0			84.0		
2019-2020	DAF	Boyne River	2	1.0		1.0	100.0	4,616.0			21.0		
2020-2021	DAF	Styx River										4.1	
2020-2021	DAF	Shoalwater Creek										4.1	

Year	Org	Catchment	Landholders Engaged (#)	APLMs (#)	Accredited Grazing BMP producers with APLMs (#)	Total APLMs (#)	Area poor and degraded condition land (ha)	Area Property (ha)	De-identified survey response provided to DES (before) (#)	De-identified survey response provided to DES (after) (#)	Extension Services (APLMs only) and total FTEs (hrs)	Total FTEs (#)	Graziers acknowledged for participating in a recognised project (#)
2020-2021	DAF	Waterpark Creek										4.1	
2020-2021	DAF	Fitzroy River	16	8.0		8.0	7,603.0	23,163.0			168.0	4.1	8
2020-2021	DAF	Calliope River										4.1	
2020-2021	DAF	Boyne River										4.1	
2020-2021	DAF	Styx River										4.1	
2020-2021	DAF	Shoalwater Creek										4.1	
2020-2021	DAF	Waterpark Creek										4.1	
2020-2021	DAF	Fitzroy River	37	24.0		24.0	83,893.0	89,761.0			504.0	4.1	
2020-2021	DAF	Calliope River	1	1.0		1.0	2,094.0	2,094.0			21.0	4.1	
2021-2022	DAF	Fitzroy River	22	13.0		13.0	12,461.0	71,823.0			273.0		13
2021-2022	DAF	Fitzroy River	18	11.0		11.0	30,149.0	70,234.0			273	2.05	13
2021-2022	DAF	Fitzroy River	22	13.0		13.0	12,461.0	71,823.0			273.0	4.1	13
2022-2023	DAF	Fitzroy River	18			15.0	53,748.0	134,779.0			315.0		
2019-2020	DAF	Burnett River	12	6.0	2.0	8.0	100.0	20,771.0			168.0		8
2019-2020	DAF	Burrum River											1
2019-2020	DAF	Mary River	4	2.0		2.0	263.0	303.0			42.0		2
2020-2021	DAF	Mary River	12										
2020-2021	DAF	Burnett River	28	16.0		16.0	8,692.0	9,978.0			336.0	4.1	
2021-2022	DAF	Burnett River	4	3.0		3.0	2,604.0	2,604.0					
2022-2023	DAF	Baffle Creek	1			1.0	450.0	450.0			21.0		
2022-2023	DAF	Burnett River	10			8.0	1,000.0	7,491.0			168.0		
2022-2023	DAF	Mary River	3			1.0	50.0	746.0			21.0		
2019-2020	NQDT	Burdekin River	24	15.0	9.0	15.0	54,878.0	282,993.0	20.0		160.0		

Year	Org	Catchment	Landholders Engaged (#)	APLMs (#)	Accredited Grazing BMP producers with APLMs (#)	Total APLMs (#)	Area poor and degraded condition land (ha)	Area Property (ha)	De-identified survey response provided to DES (before) (#)	De-identified survey response provided to DES (after) (#)	Extension Services (APLMs only) and total FTEs (hrs)	Total FTEs (#)	Graziers acknowledged for participating in a recognised project (#)
2019-2020	NQDT	Ross River	2	2.0		2.0	826.0	1,001.0	2.0		21.0		2
2019-2020	NQDT	Haughton River	0	2.0	1.0	2.0	5,821.0	34,639.0			15.0		1
2019-2020	NQDT	Don River	0	1.0	1.0	1.0	120.0	620.0	1.0		12.0		
2019-2020	NQDT	Burdekin River	6	3.0		3.0	24,582.0	31,582.0	3.0		87.0		13
2020-2021	NQDT	Don River	2	2.0		2.0	467.0	541.0	2.0		30.0	0.3	0
2020-2021	NQDT	Burdekin River	4	4.0		4.0	27,187.0	66,201.0	4.0		66.5	1.1	3
2020-2021	NQDT	Ross River	1	1.0		1.0	120.0	120.0	1.0		6.0	0.2	1
2020-2021	NQDT	Don River	2	2.0		2.0	513.0	3,749.0	2.0		13.0	0.2	2
2020-2021	NQDT	Burdekin River	23	3.0		3.0	7,827.0	35,436.0	3.0		2.0	0.9	3
2020-2021	NQDT	Ross River	1	1.0		1.0	695.0	865.0	1.0		6.0	0.1	1
2020-2021	NQDT	Haughton River	1	1.0		1.0	124.0	454.0	1.0		4.0	0.1	1
2020-2021	NQDT	Don River	1	2.0		2.0	5,140.0	16,595.0	2.0		11.0	0.2	2
2020-2021	NQDT	Burdekin River	51	11.0		11.0	43,634.0	232,197.0	11.0		160.0	1	9
2021-2022	NQDT	Ross River	1										
2021-2022	NQDT	Haughton River	1	1.0		1.0	428.0	1,430.0	1.0		4.0	0.1	0
2021-2022	NQDT	Don River	3	1.0		1.0	2,269.0	6,300.0	1.0		11.0	0.3	1
2021-2022	NQDT	Burdekin River	34	5.0		5.0	22,369.0	131,193.0	5.0		57.0	1	5
2021-2022	NQDT	Black River	2	1.0		1.0	286.0	416.0	1.0		4.0	0.1	1
2021-2022	NQDT	Haughton River	10	1.0		1.0	5,687.0	33,865.0	1.0		10.0	0.3	1
2021-2022	NQDT	Burdekin River	11	8.0		8.0	69,722.0	199,660.0	9.0		68.0	1	7
2021-2022	NQDT	Haughton River	6	2.0		2.0	2,985.0	15,125.0	2.0		15.0	0.75	1
2021-2022	NQDT	Don River	1										
2021-2022	NQDT	Burdekin River	11	3.0		3.0	2,358.0	33,918.5	3.0		4.0	0.75	2

Year	Org	Catchment	Landholders Engaged (#)	APLMs (#)	Accredited Grazing BMP producers with APLMs (#)	Total APLMs (#)	Area poor and degraded condition land (ha)	Area Property (ha)	De-identified survey response provided to DES (before) (#)	De-identified survey response provided to DES (after) (#)	Extension Services (APLMs only) and total FTEs (hrs)	Total FTEs (#)	Graziers acknowledged for participating in a recognised project (#)
2022-2023	NQDT	Haughton River	1			1.0	8,969.1	14,471.5	1.0	1.0	9.0	0.2	1
2022-2023	NQDT	Don River	3			3.0	14,368.0	67,618.8	3.0	3.0	30.0	0.5	3
2022-2023	NQDT	Burdekin River	4			4.0	4,675.1	19,222.9	4.0	4.0	21.0	0.8	4
2019-2020	FBA	Fitzroy River	37	29.0	2.0	31.0	9,845.0	79,302.0					
2019-2020	FBA	Calliope River	1	1.0		1.0	15.0	529.0					
2020-2021	FBA	Fitzroy River	19	15.0		15.0	6,443.0	44,691.0			196.0		
2020-2021	FBA	Boyne River	1	1.0		1.0	5.0	769.0			13.0		
2020-2021	FBA	Fitzroy River	16	16.0		16.0	8,495.0	32,721.0	31.0	31.0	131.0		
2021-2022	FBA	Fitzroy River	1	1.0		1.0	9.5	341.0			8.0		
2021-2022	FBA	Styx River	1	1.0		1.0	54.0	1,563.0			8.0		
2021-2022	FBA	Fitzroy River	6	6.0		6.0	1,103.0	14,196.0			48.0		
2021-2022	FBA	Fitzroy River	5	5.0		5.0	288.0	6,642.0					
2022-2023	FBA	Fitzroy River	18	18.0		18.0	2,830.0	62,823.0					
2022-2023	FBA	Styx River	1			1.0		1,001.0					
2022-2023	FBA	Fitzroy River	14			14.0	4,882.0	84,480.0					
2019-2020	BMRG	Baffle Creek	2	2.0		2.0	0.5	545.0	2.0		2.1	1.5	
2019-2020	BMRG	Kolan River	3	6.0	3.0	9.0	4,432.5	21,048.4	9.0		8.8	1.5	
2019-2020	BMRG	Burnett River	1	3.0		3.0	55.8	828.7	3.0		2.5	1.5	
2019-2020	BMRG	Burrum River	2	1.0		1.0	29.6	148.0	1.0		2.0	1.5	
2019-2020	BMRG	Mary River	1									1.5	
2020-2021	BMRG	Baffle Creek	1					938.6				1.5	
2020-2021	BMRG	Kolan River	6					10,270.9			21.0	1.5	
2020-2021	BMRG	Burnett River	0										
2020-2021	BMRG	Burrum River	1					479.9				1.5	

Year	Org	Catchment	Landholders Engaged (#)	APLMs (#)	Accredited Grazing BMP producers with APLMs (#)	Total APLMs (#)	Area poor and degraded condition land (ha)	Area Property (ha)	De-identified survey response provided to DES (before) (#)	De-identified survey response provided to DES (after) (#)	Extension Services (APLMs only) and total FTEs (hrs)	Total FTEs (#)	Graziers acknowledged for participating in a recognised project (#)
2020-2021	BMRG	Mary River	1					35.9				1.5	
2020-2021	BMRG	Baffle Creek	1	1.0		1.0	938.6	938.6			6.3	1.5	
2020-2021	BMRG	Kolan River	6	1.0		1.0	158.5	10,270.9			5.5	1.5	
2020-2021	BMRG	Burnett River	0								4.5	1.5	
2020-2021	BMRG	Burrum River	1					479.9				1.5	
2020-2021	BMRG	Mary River	2	1.0		1.0	25.1	240.8			12.5	1.5	
2020-2021	BMRG	Baffle Creek	3	3.0		3.0	494.7	906.2	4.0		33.5	1.5	
2020-2021	BMRG	Kolan River	3	3.0		3.0	5,108.9	14,111.8	4.0		83.2	1.5	
2020-2021	BMRG	Burnett River	2	2.0		2.0	719.5	4,281.6	2.0		8.5	1.5	
2020-2021	BMRG	Burrum River	1	3.0		3.0	464.4		3.0		15.0	1.5	
2020-2021	BMRG	Mary River	2	1.0		1.0	158.0		2.0		10.0	1.5	
2021-2022	BMRG	Baffle Creek	0								14.0	1.5	
2021-2022	BMRG	Kolan River	0								22.0	1.5	
2021-2022	BMRG	Burnett River	0								8.3	1.5	
2021-2022	BMRG	Burrum River	0									1.5	
2021-2022	BMRG	Mary River	0									1.5	
2021-2022	BMRG	Baffle Creek	1	1.0		1.0	14.1	16.2	1.0		5.7	1.5	
2021-2022	BMRG	Kolan River									0.5	1.5	
2021-2022	BMRG	Burnett River	8	4.0		4.0	726.7	1,916.5	4.0		25.2	1.5	
2021-2022	BMRG	Burrum River	0									1.5	
2021-2022	BMRG	Mary River	2								4.8	1.5	
2021-2022	BMRG	Baffle Creek	1									1.5	
2021-2022	BMRG	Kolan River										1.5	
2021-2022	BMRG	Burnett River	8	5.0		5.0	0.7	148.6	5.0		5.6	1.5	
2021-2022	BMRG	Burrum River										1.5	

Year	Org	Catchment	Landholders Engaged (#)	APLMs (#)	Accredited Grazing BMP producers with APLMs (#)	Total APLMs (#)	Area poor and degraded condition land (ha)	Area Property (ha)	De-identified survey response provided to DES (before) (#)	De-identified survey response provided to DES (after) (#)	Extension Services (APLMs only) and total FTEs (hrs)	Total FTEs (#)	Graziers acknowledged for participating in a recognised project (#)
2021-2022	BMRG	Mary River	2	2.0		2.0	21.3	106.4	2.0		3.2	1.5	
2022-2023	BMRG	Baffle Creek										1.5	
2022-2023	BMRG	Kolan River										1.5	
2022-2023	BMRG	Burnett River	2	2.0		2.0	230.0	1,962.0	2.0		12.6	1.5	
2022-2023	BMRG	Burrum River										1.5	
2022-2023	BMRG	Mary River										1.5	
2022-2023	BMRG	Baffle Creek										1.5	
2022-2023	BMRG	Kolan River										1.5	
2022-2023	BMRG	Burnett River	7	7.0		7.0	340.8	5,160.0	7.0	6.0	1.3	1.5	
2022-2023	BMRG	Burrum River										1.5	
2022-2023	BMRG	Mary River	4	4.0		4.0	241.2	771.0	4.0	3.0	0.4	1.5	
<b>Total</b>			<b>766</b>	<b>372</b>	<b>32</b>	<b>449</b>	<b>720,889.57</b>	<b>2,917,789.24</b>	<b>170</b>	<b>48</b>	<b>5757</b>	<b>149.7</b>	<b>134</b>

## 5.2 Incentive data

Year	Submitted by	Catchment	Project Identifier	Date Assessed	Landholder In-Kind + Cash (\$)	Incentives Funding (\$)	Total Project (\$)	Technical Costs (\$)	Approved Project Area (ha)	Description of Works Primary	Description of Works Secondary
2019-2020	NQDT	Burdekin	4500	31/03/2020	\$26,952.00	\$13,984.00	\$40,936.00	\$0.00	884.0	Grazing fencing	
2019-2020	NQDT	Burdekin	4301	31/03/2020	\$10,308.00	\$7,952.00	\$18,260.00	\$0.00	500.0	Grazing Fencing	
2019-2020	NQDT	Burdekin	4302	31/03/2020	\$6,440.00	\$15,000.00	\$21,440.00	\$0.00	125.0	Gully remediation	
2019-2020	NQDT	Burdekin	4001	31/03/2020	\$10,300.00	\$15,000.00	\$25,300.00	\$0.00	3742.0	Riparian fencing	
2019-2020	NQDT	Burdekin	4002	31/03/2020	\$32,370.00	\$14,497.00	\$46,867.00	\$0.00	949.0	Grazing management	Water points
2019-2020	NQDT	Burdekin	4003	31/03/2020	\$31,100.00	\$15,000.00	\$46,100.00	\$0.00	5266.0	Grazing management	
2019-2020	NQDT	Burdekin	4101	31/03/2020	\$17,641.31	\$11,760.00	\$29,401.31	\$0.00	2113.0	Grazing fencing	
2019-2020	NQDT	Burdekin	4303	31/03/2020	\$29,020.00	\$15,000.00	\$44,020.00	\$0.00	600.0	Grazing fencing	
2019-2020	NQDT	Burdekin	4304	31/03/2020	\$51,680.00	\$15,000.00	\$66,680.00	\$0.00	768.0	Grazing fencing	
2019-2020	NQDT	Burdekin	4305	31/03/2020	\$13,645.00	\$15,000.00	\$28,645.00	\$0.00	20.0	Gully remediation	
2019-2020	NQDT	Burdekin	4306	30/05/2020	\$23,016.00	\$15,000.00	\$38,016.00	\$0.00	12001.0	Grazing management	
2019-2020	NQDT	Burdekin	4314	30/05/2020	\$113,800.00	\$15,000.00	\$128,800.00	\$0.00	563.0	Ground cover management	
2019-2020	NQDT	Burdekin	4308	30/05/2020	\$54,703.00	\$15,000.00	\$69,703.00	\$0.00	522.0	Ground cover management	
2019-2020	NQDT	Burdekin	4309	30/05/2020	\$23,898.15	\$15,000.00	\$38,898.15	\$0.00	63.0	Ground cover management	
2019-2020	NQDT	Burdekin	4310	30/05/2020	\$39,855.95	\$15,000.00	\$54,855.95	\$0.00	2730.0	Riparian fencing	
2019-2020	NQDT	Burdekin	4311	30/05/2020	\$28,768.18	\$15,000.00	\$43,768.18	\$0.00	1222.0	Grazing management	
2019-2020	NQDT	Burdekin	4312	30/05/2020	\$16,000.00	\$15,000.00	\$31,000.00	\$0.00	497.0	Gully remediation	
2019-2020	NQDT	Burdekin	4313	30/05/2020	\$20,928.00	\$13,952.00	\$34,880.00	\$0.00	417.0	Grazing management	
2019-2020	NQDT	Burdekin	4502	30/05/2020	\$26,760.00	\$15,000.00	\$41,760.00	\$0.00	946.0	Grazing management	

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2019-2020	NQDT	Burdekin	4407	30/05/2020	\$23,370.91	\$15,000.00	\$38,370.91	\$0.00	132.0	Gully remediation	
2020-2021	NQDT	Burdekin	4318	18/09/2020	\$53,818.18	\$10,000.00	\$63,818.18	\$0.00	1569.0	Gully remediation	
2020-2021	NQDT	Ross	4315	18/09/2020	\$2,898.00	\$6,762.00	\$9,660.00	\$0.00	145.0	Riparian fencing	
2020-2021	NQDT	Don	4406	18/09/2020	\$13,760.00	\$15,000.00	\$28,760.00	\$0.00	30.0	Gully remediation	
2020-2021	NQDT	Burdekin	4317	18/09/2020	\$5,077.10	\$10,000.00	\$15,077.10	\$0.00	32.0	Gully remediation	
2020-2021	NQDT	Burdekin	4503	18/09/2020	\$12,546.12	\$8,364.08	\$20,910.20	\$0.00	444.0	Grazing management	Water points
2020-2021	NQDT	Burdekin	4408	18/09/2020	\$14,441.42	\$9,627.61	\$24,069.03	\$0.00	1121.0	Grazing management	Water points
2020-2021	NQDT	Ross	4316	18/09/2020	\$26,078.18	\$10,000.00	\$36,078.18	\$0.00	45.0	Riparian fencing	Water points
2020-2021	NQDT	Don	4504	18/09/2020	\$14,584.92	\$9,723.28	\$24,308.20	\$0.00	130.0	Grazing fencing	Water points
2020-2021	NQDT	Burdekin	4200	4/04/2021	\$38,860.00	\$10,000.00	\$48,860.00	\$0.00	1134.0	Grazing fencing	Water points
2020-2021	NQDT	Burdekin	4201	4/04/2021	\$19,494.00	\$10,000.00	\$29,494.00	\$0.00	1061.0	Ground cover management	Water points
2020-2021	NQDT	Burdekin	4324	4/04/2021	\$2,070.00	\$4,830.00	\$6,900.00	\$0.00	550.0	Gully remediation	
2020-2021	NQDT	Don	4320	4/04/2021	\$8,280.00	\$5,520.00	\$13,800.00	\$0.00	289.0	Grazing fencing	
2020-2021	NQDT	Burdekin	4321	4/04/2021	\$17,100.00	\$10,000.00	\$27,100.00	\$0.00	1151.0	Grazing management	Water points
2020-2021	NQDT	Burdekin	4325	4/04/2021	\$18,160.00	\$10,000.00	\$28,160.00	\$0.00	672.0	Riparian fencing	Water points
2020-2021	NQDT	Burdekin	4322	4/04/2021	\$4,674.64	\$6,349.76	\$11,024.40	\$0.00	2631.0	Grazing fencing	Water points
2020-2021	NQDT	Ross	4326	4/04/2021	\$12,420.00	\$8,280.00	\$20,700.00	\$0.00	608.0	Grazing fencing	
2020-2021	NQDT	Burdekin	4803	4/04/2021	\$73,520.00	\$10,000.00	\$83,520.00	\$0.00	15006.0	Riparian fencing	Water points
2020-2021	NQDT	Houghton	4804	4/04/2021	\$16,220.00	\$10,000.00	\$26,220.00	\$0.00	1740.0	Grazing fencing	Water points
2020-2021	NQDT	Burdekin	4507	4/04/2021	\$2,844.00	\$6,636.00	\$9,480.00	\$0.00	150.0	Riparian fencing	
2020-2021	NQDT	Burdekin	4506	4/04/2021	\$21,936.00	\$10,000.00	\$31,936.00	\$0.00	2670.0	Grazing management	Water points
2021-2022	NQDT	Don	4330	5/09/2021	\$17,530.93	\$10,000.00	\$27,530.93	\$0.00	960.0	Grazing management	Water points
2021-2022	NQDT	Burdekin	4327	5/09/2021	\$16,178.89	\$10,000.00	\$26,178.89	\$0.00	3653.0	Grazing management	Water points

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2021-2022	NQDT	Burdekin	4202	5/09/2021	\$21,620.00	\$10,000.00	\$31,620.00	\$0.00	2510.0	Grazing management	Water points
2021-2022	NQDT	Don	4509	5/09/2021	\$12,080.00	\$10,000.00	\$22,080.00	\$0.00	1110.0	Riparian fencing	
2021-2022	NQDT	Haughton	4329	5/09/2021	\$4,400.00	\$10,000.00	\$14,400.00	\$0.00	75.0	Gully remediation	
2021-2022	NQDT	Burdekin	4332	5/09/2021	\$4,400.00	\$10,000.00	\$14,400.00	\$0.00	60.0	Gully remediation	
2021-2022	NQDT	Burdekin	4331	5/09/2021	\$17,020.00	\$10,000.00	\$27,020.00	\$0.00	1500.0	Grazing management	Water points
2021-2022	NQDT	Burdekin	4805	5/09/2021	\$9,577.50	\$10,000.00	\$19,577.50	\$0.00	152.0	Ground cover management	
2021-2022	NQDT	Haughton	4806	5/09/2021	\$37,800.00	\$10,000.00	\$47,800.00	\$0.00	405.0	Grazing management	Water points
2021-2022	NQDT	Don	4807	5/09/2021	\$17,960.00	\$10,000.00	\$27,960.00	\$0.00	360.0	Grazing fencing	Water points
2021-2022	NQDT	Don	4808	5/09/2021	\$36,715.45	\$10,000.00	\$46,715.45	\$0.00	864.0	Grazing fencing	Water points
2021-2022	NQDT	Burdekin	4809	5/09/2021	\$9,320.00	\$10,000.00	\$19,320.00	\$0.00	3922.0	Riparian fencing	
2021-2022	NQDT	Burdekin	4810	5/09/2021	\$2,745.00	\$6,405.00	\$9,150.00	\$0.00	40.0	Riparian fencing	
2021-2022	NQDT	Burdekin	4811	5/09/2021	\$18,800.00	\$10,000.00	\$28,800.00	\$0.00	1022.0	Grazing management	Water points
2021-2022	NQDT	Burdekin	4801	5/09/2021	\$15,807.27	\$10,000.00	\$25,807.27	\$0.00	99.0	Riparian fencing	Water points
2022-2023	NQDT	Burdekin	3322	31/08/2022	\$12,100.00	\$15,000.00	\$27,100.00	\$0.00	1001.0	Riparian fencing	Water points
2019-2020	FBA		GRASDB02	02/09/2019	\$14,520.00	\$5,880.00	\$20,400.00	\$0.00	737.0	Riparian fencing	
2019-2020	FBA		GRASDB01	02/09/2019	\$16,140.00	\$9,460.00	\$25,600.00	\$0.00	605.0	Riparian fencing	
2019-2020	FBA		GRASFB01	02/09/2019	\$15,700.00	\$15,700.00	\$31,400.00	\$0.00	714.0	Riparian fencing	
2019-2020	FBA		GRASDK05	02/09/2019	\$12,000.00	\$10,000.00	\$22,000.00	\$0.00	58.5	Ground cover management	
2019-2020	FBA		GRASFK05	02/09/2019	\$7,243.75	\$12,171.25	\$19,415.00	\$0.00	20.5	Gully remediation	
2019-2020	FBA		GRASDB05	02/09/2019	\$31,080.00	\$12,280.00	\$43,360.00	\$0.00	350.0	Ground cover management	
2019-2020	FBA		GRASDB04	02/09/2019	\$27,195.00	\$9,065.00	\$36,260.00	\$0.00	654.6	Grazing management	
2019-2020	FBA		GRASDB03	02/09/2019	\$25,912.50	\$24,037.50	\$49,950.00	\$0.00	91.6	Riparian fencing	
2019-2020	FBA		GRASDB07	02/09/2019	\$12,525.00	\$8,175.00	\$20,700.00	\$0.00	30.4	Gully remediation	

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2019-2020	FBA		GRASFB02	02/09/2019	\$7,950.00	\$7,950.00	\$15,900.00	\$0.00	65.3	Riparian fencing
2019-2020	FBA		GRASFK01	02/09/2019	\$24,375.00	\$8,125.00	\$32,500.00	\$0.00	67.5	Grazing management
2019-2020	FBA		GRASTF06	02/09/2019	\$8,520.00	\$8,520.00	\$17,040.00	\$0.00	150.4	Riparian fencing
2019-2020	FBA		GRASDF09-DAF	02/09/2019	\$8,625.00	\$25,875.00	\$34,500.00	\$0.00	31.2	Gully remediation
2019-2020	FBA		GRASFF04-DAF	02/09/2019	\$8,100.00	\$8,100.00	\$16,200.00	\$0.00	202.0	Riparian fencing
2019-2020	FBA		GRASFF03-DAF	02/09/2019	\$6,350.00	\$6,350.00	\$12,700.00	\$0.00	86.5	Riparian fencing
2019-2020	FBA		GRASDB08	02/09/2019	\$11,300.00	\$11,300.00	\$22,600.00	\$0.00	31.2	Riparian fencing
2019-2020	FBA		GRASCF09	02/09/2019	\$24,000.00	\$8,000.00	\$32,000.00	\$0.00	711.2	Grazing management
2019-2020	FBA		GRASFK07-DAF	02/09/2019	\$19,237.50	\$7,312.50	\$26,550.00	\$0.00	44.0	Ground cover management
2019-2020	FBA		GRASFB04	02/09/2019	\$19,350.00	\$9,350.00	\$28,700.00	\$0.00	67.5	Riparian fencing
2019-2020	FBA		GRASFK09-DAF	02/09/2019	\$4,792.50	\$3,517.50	\$8,310.00	\$0.00	26.0	Ground cover management
2019-2020	FBA		GRASDB09	02/09/2019	\$8,367.50	\$5,302.50	\$13,670.00	\$0.00	18.7	Gully remediation
2019-2020	FBA		GRASTK06	02/09/2019	\$28,050.00	\$9,350.00	\$37,400.00	\$0.00	591.0	Grazing management
2019-2020	FBA		GRASTK02	02/09/2019	\$6,500.00	\$6,500.00	\$13,000.00	\$0.00	40.0	Riparian fencing
2019-2020	FBA		GRASDK10-DAF	02/09/2019	\$25,235.70	\$14,911.90	\$40,147.60	\$0.00	50.0	Gully remediation
2019-2020	FBA		GRASFK11-DAF	02/09/2019	\$26,025.00	\$9,875.00	\$35,900.00	\$0.00	1595.0	Grazing management
2019-2020	FBA		GRASFG02	02/09/2019	\$5,000.00	\$5,000.00	\$10,000.00	\$0.00	6.6	Riparian fencing
2019-2020	FBA		GRASDK12-DAF	02/09/2019	\$21,292.50	\$17,017.50	\$38,310.00	\$0.00	29.3	Gully remediation
2019-2020	FBA		GRASDB11	02/09/2019	\$13,825.00	\$9,575.00	\$23,400.00	\$0.00	200.0	Riparian fencing
2019-2020	FBA		GRASCK01	02/09/2019	\$6,977.50	\$9,592.50	\$16,570.00	\$0.00	32.3	Gully remediation
2019-2020	FBA		GRASDB12	02/09/2019	\$19,057.50	\$6,832.50	\$25,890.00	\$0.00	39.0	Gully remediation
2020-2021	FBA		GRASFK13-DAF	14/09/2020	\$22,950.00	\$7,650.00	\$30,600.00	\$0.00	1103.0	Grazing management
2020-2021	FBA		GRASDK06	13/11/2020	\$5,580.00	\$10,740.00	\$16,320.00	\$0.00	11.9	Gully remediation

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2020-2021	FBA		GRASFK02	30/11/2020	\$3,170.00	\$9,510.00	\$12,680.00	\$0.00	34.3	Gully remediation	
2020-2021	FBA		GRASDB13	27/11/2020	\$7,200.00	\$7,200.00	\$14,400.00	\$0.00	59.2	Gully remediation	
2020-2021	FBA		GRASCK07	28/10/2020	\$3,480.00	\$6,540.00	\$10,020.00	\$0.00	24.8	Gully remediation	
2020-2021	FBA		GRASFB05	11/11/2020	\$2,055.00	\$5,085.00	\$7,140.00	\$0.00	2.9	Gully remediation	
2020-2021	FBA		GRASBB01	11/11/2020	\$11,250.00	\$11,250.00	\$22,500.00	\$0.00	37.2	Riparian fencing	
2020-2021	FBA		GRASDB14	11/11/2020	\$14,490.00	\$4,830.00	\$19,320.00	\$0.00	412.3	Gully remediation	
2020-2021	FBA		GRASDB15	2/11/2020	\$12,021.25	\$5,973.75	\$17,995.00	\$0.00	67.0	Gully remediation	
2020-2021	FBA		GRASDB16	2/11/2020	\$9,300.00	\$9,300.00	\$18,600.00	\$0.00	68.2	Gully remediation	
2020-2021	FBA		GRASDB17	17/11/2020	\$19,800.00	\$6,600.00	\$26,400.00	\$0.00	605.0	Grazing management	
2020-2021	FBA		GRASFK15-DAF	3/11/2020	\$25,012.00	\$8,337.50	\$33,349.50	\$0.00	479.0	Grazing management	
2020-2021	FBA		GRASSK12	21/06/2021	\$10,600.00	\$10,600.00	\$21,200.00	\$0.00	19.3	Riparian fencing	
2020-2021	FBA		GRASSK17	21/06/2021	\$17,425.00	\$9,975.00	\$27,400.00	\$0.00	304.3	Riparian fencing	
2020-2021	FBA		GRASSK16	21/06/2021	\$26,475.00	\$8,825.00	\$35,300.00	\$0.00	161.7	Riparian fencing	
2021-2022	FBA		GRASCK11	5/07/2021	\$11,350.00	\$11,350.00	\$22,700.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK13	5/07/2021	\$20,025.00	\$6,675.00	\$26,700.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK18	5/07/2021	\$31,500.00	\$10,500.00	\$42,000.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK17-DAF	5/07/2021	\$25,380.00	\$8,460.00	\$33,840.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK18-DAF	5/07/2021	\$19,475.00	\$11,725.00	\$31,200.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK19-DAF	5/07/2021	\$19,050.00	\$6,350.00	\$25,400.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK20-DAF	5/07/2021	\$20,400.00	\$6,800.00	\$27,200.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK21-DAF	5/07/2021	\$12,262.50	\$6,587.50	\$18,850.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK22-DAF	5/07/2021	\$28,312.50	\$9,437.50	\$37,750.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK23-DAF	5/07/2021	\$31,800.00	\$3,750.00	\$35,550.00	\$0.00		Grazing fencing	Water points

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2021-2022	FBA		GRASSK24-DAF	5/07/2021	\$11,250.00	\$3,750.00	\$15,000.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK26-DAF	5/07/2021	\$18,300.00	\$6,100.00	\$24,400.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK27-DAF	5/07/2021	\$22,012.50	\$7,337.50	\$29,350.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASDE07	5/10/2021	\$29,925.00	\$9,975.00	\$39,900.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASDE08	5/10/2022	\$14,775.00	\$9,175.00	\$23,950.00	\$0.00		Gully remediation	
2021-2022	FBA		GRASDC01	05/10/2022	\$4,425.00	\$9,125.00	\$13,550.00	\$0.00		Gully remediation	
2021-2022	FBA		GRASSK30-DAF	05/10/2022	\$11,625.00	\$5,775.00	\$17,400.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASSK31-DAF	05/10/2022	\$25,000.00	\$10,000.00	\$35,000.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA	Calliope	GRASSK32-DAF	05/10/2022	\$19,500.00	\$6,500.00	\$26,000.00	\$0.00		Grazing fencing	Water points
2021-2022	FBA		GRASDE10	1/11/2021	\$31,850.00	\$13,950.00	\$45,800.00	\$0.00	511.0	Grazing fencing	Water points
2021-2022	FBA		GRASTF08	1/11/2021	\$17,155.00	\$12,285.00	\$29,440.00	\$0.00	990.0	Grazing fencing	Water points
2021-2022	FBA		GRASDE05	6/12/2021	\$5,100.00	\$5,800.00	\$10,900.00	\$1,000.00	148.7	Gully remediation	
2021-2022	FBA		GRASALL 01	15/12/2022	\$0.00	\$26,724.50	\$26,724.50	\$0.00		FBA Advice – Technical expert costs associated with 67 Fitzroy Incentives projects	
2019-2020	BMRG		M200002	23/04/2020	\$2,940.86	\$4,948.40	\$7,889.26	\$1,570.00	0.4	Gully remediation	
2019-2020	BMRG		M200003	27/04/2020	\$16,622.60	\$14,318.18	\$30,940.78	\$0.00	0.2	Riparian Fencing	Water points
2019-2020	BMRG		M200004	23/04/2020	\$39,940.00	\$15,000.00	\$54,940.00	\$0.00	642.0	Grazing fencing	
2019-2020	BMRG		M200005	27/04/2020	\$14,900.00	\$15,000.00	\$29,900.00	\$0.00	134.0	Riparian Fencing	Water points
2019-2020	BMRG		M200006	25/08/2020	\$5,819.57	\$12,379.11	\$18,198.68	\$2,432.83	2.2	Gully remediation	
2019-2020	BMRG		M200008	15/05/2020	\$23,080.80	\$15,000.00	\$38,080.80	\$0.00	163.0	Riparian fencing	Water points
2019-2020	BMRG		M200010	11/05/2020	\$8,612.00	\$15,000.00	\$23,612.00	\$0.00	65.0	Riparian fencing	Water points
2019-2020	BMRG		M200011	15/05/2020	\$3,890.00	\$9,611.00	\$13,501.00	\$1,216.42	0.8	Gully remediation	
2020-2021	BMRG		M200013	18/12/2021	\$4,085.00	\$12,727.27	\$16,812.27	\$0.00			
2020-2021	BMRG		M200014	2020Q2	\$6,183.30	\$12,430.13	\$18,613.43	\$0.00	0.2	Gully remediation	

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2020-2021	BMRG		M210002	2020Q2	\$9,572.00	\$15,000.00	\$24,572.00	\$0.00	67.0	Riparian fencing	Water points
2020-2021	BMRG		M210003	2020Q2	\$9,200.00	\$14,980.00	\$24,180.00	\$0.00	200.0	Riparian fencing	Water points
2020-2021	BMRG		M210005	11/03/2021	\$4,161.30	\$9,709.70	\$13,871.00	\$1,586.00	0.1	Gully remediation	
2020-2021	BMRG		M210006	11/03/2021	\$11,241.82	\$15,000.00	\$26,241.82	\$0.00	6.5	Riparian fencing	
2020-2021	BMRG		M210011	11/03/2021	\$39,400.00	\$15,000.00	\$54,400.00	\$0.00	13.0	Riparian fencing	
2020-2021	BMRG		M210012	11/03/2021	\$6,405.00	\$14,945.00	\$21,350.00	\$0.00	0.6	Riparian Fencing	
2020-2021	BMRG		M210013	11/03/2021	\$14,330.00	\$9,397.00	\$23,727.00	\$1,000.00	7.0	Gully remediation	
2020-2021	BMRG		M210014	11/03/2021	\$13,750.00	\$13,659.60	\$27,409.60	\$1,579.60	0.2	Gully remediation	
2021-2022	BMRG		M210004	8/12/2021	\$29,723.60	\$15,000.00	\$44,723.60	\$0.00	310.4	Grazing fencing	
2021-2022	BMRG		M210007	8/12/2021	\$3,726.00	\$2,483.90	\$6,209.90	\$1,409.90	1.5	Gully remediation	
2021-2022	BMRG		M210017	8/12/2021	\$11,660.90	\$15,000.00	\$26,660.90	\$0.00	10.5	Riparian Fencing	Water points
2021-2022	BMRG		M210018	8/12/2021	\$5,850.00	\$5,609.09	\$11,459.09	\$0.00	0.5	Riparian Fencing	
2021-2022	BMRG		M210019	8/12/2021	\$9,918.00	\$6,612.00	\$16,530.00	\$0.00	5.0	Grazing Fencing	
2021-2022	BMRG		M220022	8/12/2021	\$5,378.00	\$12,954.55	\$18,332.55	\$750.00	24.0	Gully remediation	Water points
2021-2022	BMRG		M220020	10/04/2022	\$8,053.75	\$15,000.00	\$23,053.75	\$0.00	5.0	Riparian Fencing	Water points
2021-2022	BMRG		Gully Repair	15/12/2022	\$0.00	\$6,700.00	\$6,700.00	\$0.00			
2021-2022	BMRG		6 x Gully Guides	15/12/2022	\$0.00	\$9,552.07	\$9,552.07	\$0.00			
<b>Totals</b>					<b>\$2,628,366.30</b>	<b>\$1,588,333.63</b>	<b>\$4,216,699.93</b>	<b>\$14,760.05</b>	<b>97,016.0</b>		

### 5.3 Project budget (contracted)

Year		2019 - 2020	2020 - 2021	2021 - 2022	2022 - 2023	Total
Salaries	NQDT	\$195,000	\$195,000	\$195,000	\$107,500	<b>\$692,500</b>
	DAF (Burdekin)	\$195,000	\$195,000	\$195,000	\$75,671	<b>\$660,671</b>
	FBA	\$403,000	\$403,000	\$403,000	\$211,500	<b>\$1,420,500</b>
	DAF (Fitzroy)	\$195,000	\$195,000	\$195,000	\$75,671	<b>\$660,671</b>
	BMRG	\$195,000	\$195,000	\$195,000	\$150,000	<b>\$735,000</b>
	DAF (Burnett Mary)	\$208,000	\$208,000	\$208,000	\$75,671	<b>\$699,671</b>
Expenses	NQDT	\$10,000	\$10,000	\$10,000		<b>\$30,000</b>
Coms etc	FBA	\$10,000	\$10,000	\$10,000		<b>\$30,000</b>
	BMRG	\$10,000	\$10,000	\$10,000		<b>\$30,000</b>
	DAF	\$10,000	\$10,000	\$10,000	\$46,443	<b>\$76,443</b>
Incentives*	NQDT	\$330,666	\$190,666	\$190,666		<b>\$711,998</b>
	FBA	\$330,666	\$190,666	\$227,030		<b>\$748,362</b>
	BMRG	\$165,334	\$95,334	\$95,334		<b>\$356,002</b>
<b>Total</b>		<b>\$2,257,667</b>	<b>\$1,907,666</b>	<b>\$1,944,030</b>	<b>\$742,456</b>	<b>\$6,851,818</b>

\*Includes 10% administration

DATA QA – GRASS 1 Financial Acquittal Report (2023)

**Appendix 1 Example APLM – Burnett Mary (BMRG:M230008)**

**Appendix 2 Paddock to Reef Integrated Social Monitoring Survey summary**