

NRM & CLIMATE RESILIENCE PLAN 2030



Burnett Mary
REGIONAL GROUP
Practical Solutions for Natural Resource Management

PART 1 - NRM OUTLOOK 2030 & BEYOND

Planning for natural resource management at the regional level in the Burnett Mary has focused on a five-year NRM Plan review cycle. Since 2015, the Region's NRM Plan has explicitly addressed climate change adaptation and resilience. The most recent review was completed in mid 2021 as part of the updating process for the Region's NRM and Climate Resilience Plan for which a 2030 planning horizon has been set. The decadal planning horizon provides a better context for informing current and future Queensland and Australian Government funding program investments of less than 10-year duration that have non-aligned reporting timeframes. Keeping the planning horizon ahead of the investment timeframes better supports investment priority setting and allows the Monitoring, Evaluation, Reporting and Improvement (MERI) framework to provide periodic reporting for a range of purposes.

At a glance, the near to mid-term outlook for NRM in the Burnett Mary is characterised by complex market and industrial relations pressures in horticulture, and emerging recognition of Indigenous NRM knowledge, perspectives and practices, especially in response to increasingly harsh bushfire weather as anticipated in response to climate change. The Region's below average social and economic status amplifies the challenges with community concern for environmental and NRM outcomes being overshadowed by the pressing concerns of day-to-day living.

1.1 Assets within scope

The updated NRM Plan carries forward the asset focus on Aboriginal Cultural Heritage, Climate & Air, Coastal & Marine, Freshwater, Land & Soils, and Plants & Animals established in the 2015-20 NRM Plan. However, these are adjusted and augmented to include Catchment Community and Landscape function, and to specify a risk focus for Climate Risk & Air and narrow the air asset to a focus on greenhouse gases.

Of particular importance are the Queensland and Australian Government priorities that underpin the major contemporary public NRM investment programs. These are set out below under the heading of Contemporary Policy Settings. Under the Australian Government's Regional Land Partnerships Program as part of Phase 2 of the National Landcare Program, the critical assets are Ramsar Wetlands of International Significance, threatened species, World Heritage Areas, threatened ecological communities, and agriculture with respect

to sustainable practices and resilience to climate and market risks.

At the State level, the Queensland Government's Natural Resources Investment Program targets land, water, people & communities, and science & knowledge.

1.2 Contemporary drivers of NRM risk and opportunity

The enduring and emerging forces driving change in natural resource management in the Burnett Mary Region merge the global influences of climate change, agricultural markets and the consequences of the COVID-19 pandemic with local forces stemming from the costs of and constraints on production inputs including water and electricity, regulatory requirements, labour conditions, and a range of socio-economic concerns around social dysfunction relating to displacement, limited opportunity, and welfare dependence.

For stakeholders in horticulture there is an underlying concern about their childrens' future in family enterprises and local jobs in the industry, as well as the cost of production inputs – electricity and water – and water security. Large grower enterprises are emerging with substantial market share (domestic market and export) – macadamias, avocados, sweet potatoes and chillies – with a strong focus on innovation and technology eg. wastewater reuse. Increasingly, the small operators supply the big operators supporting consolidation of enterprise with increasing corporate focus and influence on change.

Concern exists about expanding market access and the constraints of 'red tape' – eg. FreshCare, Hort360, resulting in a very competitive market with little sharing (very protective) of improved practice or lessons learnt.

The citrus industry has mainly small and medium-scale operators, that are critically important to local communities. For them the logistics of market access have become increasingly challenging.

Horticulture (and citrus) has a difficult workforce environment. The 24/7 demand for labour relies upon a highly transient workforce that draws on workers who are low skilled with unreliable availability. The substantial and disruptive impact of the COVID-19 pandemic has exposed unsustainable practices and highly constrained substitutability of local workers for itinerant workers not currently available from overseas.

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Warming climate conditions are being reflected in changing work patterns to protect workers from heat exposure.

In the sugar industry, pressure for conversion of the most productive land to tree crops, especially macadamias, has placed consequential pressure on more marginal areas for sugar production. The sale of the Isis Sugar Mill to international interests adds further uncertainty to the concerns of growers. The noticeable shift in the crushing season in recent years raises concerns about the scale and immediacy of climate change impacts on the industry.

The Region's grazing industry comprises mostly small-scale operations. The local industry has been seriously impacted by drought and by an observed shortening of the growing season, that may reflect a shift in the regional climate regime in response to climate change.

In the Great Barrier Reef Science Consensus Statement 2018, the Mary catchment is identified as a hotspot for contributions of fine sediment to the GBR lagoon. For this reason, the grazing industry in the Mary catchment attracts significant effort and investment to modify grazing practices to reduce soil loss. Initial estimates indicated that ~30% of eroded fine sediment reached the end of the catchment. However, this estimate has been revised in 2021 to a figure of 67% effective delivery of eroded fine sediment to the GBR lagoon from the Mary catchment.

Opportunities are emerging for the Region's First Nations with Elders seeing a better quality of life emerging for kids and building a renewed sense of purpose and focus on Country, including Aboriginal NRM. There is strong TO/Elder leadership eg. Fraser Coast - K'gari, better housing, and rising self-esteem and pride with respect to participation in and achievement by ranger teams. People are actively engaged in Reef monitoring, water quality monitoring, and carbon farming programs, and in testing new technologies eg. drone use.

Cultural burning practices are receiving attention and recognition in the wake of the disastrous 2019-20 bushfires, resulting in old knowledge re-emerging into contemporary natural disaster and NRM practice. Much opportunity remains to be explored. A Traditional Owners' Fire Management Plan has been prepared and two initial cultural burning programs have been established for roadsides, and National Parks and

adjoining lands. Drones are being used to monitor burning results with up to 70 rangers (four groups) being trained to Commonwealth Air Safety Authority (CASA) Certification.

Indigenous successes in breaking down the welfare cycle are starting to compare favourably with progress within the non-Indigenous cohort. Native Title is well progressed. Governance arrangements within Indigenous organisations are strengthening and capacity is growing eg. K'gari/Bundaberg building cohesive relationships. There is increased openness among T/O groups for cultural immersion of non-Indigenous people and this is linked to the broader reconciliation agenda. Links are building with other NRM groups eg. Cape York and Southern Queensland, around training, governance, business management, workplace health and safety, administration, review of NRM Plans, facilitation of stakeholder management (incl. QG relationship management) and there are prospective links with interstate NRM groups.

The Region shares the enduring challenges arising from the declining condition of the Great Barrier Reef, the southernmost extent of which extends into the Burnett Mary Region. While the globally driven effects of climate change are the most significant threat to the Reef, the locally driven risks from coastal development and the water quality of run-off from coastal catchments directly impact the Outstanding Universal Value for which the Reef is listed as a World Heritage Area.

The Region has five threatened ecological communities listed under the EPBC Act 1999 (C'wealth) and about 100 listed threatened species, one of which, the Nangur Spiny Skink (*Nangura spinosa*) is listed as critically endangered. The Region's is used by all six Australian species of marine turtles, three of which are endangered and three listed as vulnerable. Predation of eggs on nesting beaches is a specific threat, as is the trend towards warming sand temperatures, which affects sex determination in marine turtle hatchlings as the eggs incubate. The conservation needs of the Mary River Cod, the Mary River Turtle, the Freshwater Mullet and the Australian Lungfish populations in the Region are also widely recognised as of stakeholder concern. The breeding success of the Mary River Cod appears to be being adversely affected by the regional shift in water temperature regime, which is no longer providing the necessary low temperature environmental signals and moderation of high water temperature to which the species is adapted.

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Climate change – pervasive both direct and indirect

Central to NRM planning is recognition and response to the observed and projected effects of climate change. Based on the 'Business-as usual' modelling of climate change – the IPCC's RCP 8.5 projection - The Burnett Mary can expect significant impacts over the course of this Century, as set out below. However, the effects of climate change are not delayed until 2100. Many climate change driven phenomena are already occurring, significantly impacting people's health and wellbeing, damaging infrastructure and enterprises, and disrupting natural ecosystems and species. The trend towards increased evaporation in the Region has implications for the review Mary Basin Water Plan, due for completion in 2024.

The catastrophic bushfires and major floods that have occurred in the Region in the past decade are consistent with the projected effects of a warming climate and have heightened community concern about disaster risk. In consequence, the Queensland Government and the Region's Local Councils have actively driven planning for disaster management and resilience-building for the observed and projected increase in the severity of weather-related natural disasters.

The climate summary for the Region – [The Burnett Mary Regional Weather and Climate Guide – Bureau of Meteorology 2019](#) advises the observed trends as "In the last 30 years in the Burnett Mary:

- Annual rainfall has been relatively stable
- Dry years have occurred 13 times and wet years five times
- Rainfall has decreased in the summer months on the coast
- Rainfall has decreased in the winter, spring and summer months in the inland parts of the Region
- Wet season rainfall is reliable; dry season rainfall is unreliable
- On average, heavy rain events have occurred twice a year
- There have been more hot days, with more consecutive days above 35 °C
- Severe heat stress days for livestock are increasing"

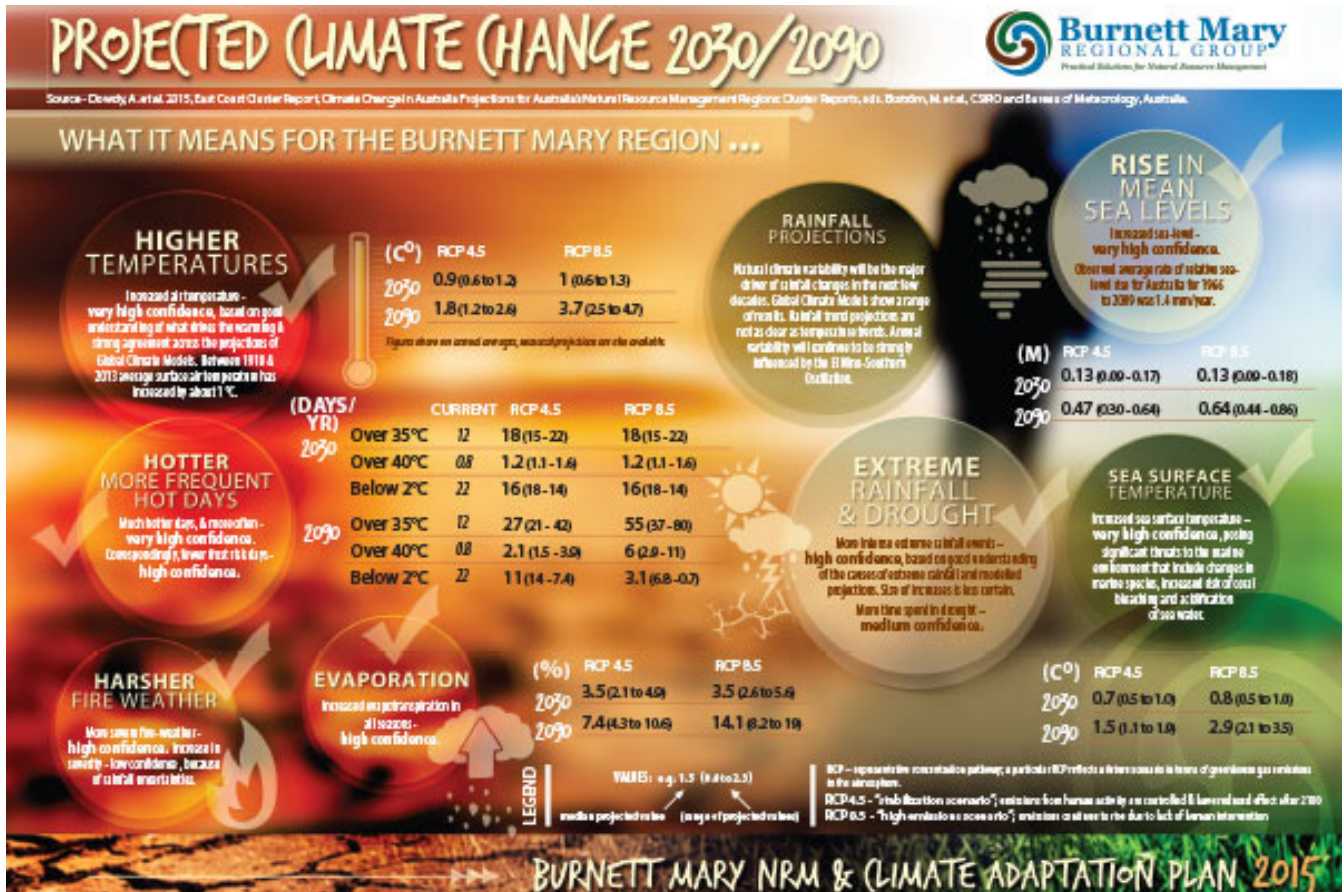
The State of the Climate 2020 report prepared by the Bureau of Meteorology observes "In the coming decades Australia will experience ongoing changes to its climate. Australia is projected to see:

- Continued increases in air temperatures, more heat extremes and fewer cold extremes.
- Continued decrease in cool season rainfall across many regions of southern and eastern Australia, likely leading to more time in drought, yet more intense, short duration heavy rainfall events.
- A consequential increase in the number of dangerous fire weather days and a longer fire season for southern and eastern Australia.
- Further sea level rise and continued warming and acidification of the oceans around Australia.
- Increased and longer-lasting marine heatwaves that will affect marine environments, such as kelp forests, and raise the likelihood of more frequent and severe bleaching events in coral reefs around Australia, including the Great Barrier and Ningaloo reefs.
- Fewer tropical cyclones, but a greater proportion projected to be of high intensity, with large variations from year to year." [Source:](#) (p. 3)

The projections below, drawn from material developed to support the preparation of the 2015-20 Burnett Mary Regional NRM and Climate Adaptation Plan and part of Australia's contribution to the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report, remain unchanged. ([Source:](#) Dowdy, A. et al. 2015, East Coast Cluster Report, Climate Change in Australia Projections for Australia's Natural Resource Management Regions: Cluster Reports, eds. Ekström, M. et al., CSIRO and Bureau of Meteorology, Australia.)

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Figure 1



1.3 Contemporary public policy settings

The Queensland Government and the Australian Government are the primary sources of policies in pursuit of State and national public interests. The State's Natural Resources Investment Program (NRIP) and Water Quality Improvement Plan for the Burnett Mary Region (WQIP), and the Commonwealth's Regional Land Partnerships Program (RLP) are key drivers of regional effort and investment.

[Regional Land Partnerships Five-year Outcomes in the Regional Land Partnerships Program Logic](#)

Outcome 1: By 2023, there is restoration of, and reduction in threats to, the ecological character of Ramsar Sites, through the implementation of priority actions. (Priority actions in Ramsar management plans, management arrangements or other relevant plans and strategies.)

Outcome 2: By 2023, the trajectory of species targeted

under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved. (Priority actions in the [Threatened Species Strategy](#) key action areas and EPBC Act species conservation advices and recovery plans.)

Outcome 3: By 2023, invasive species management has reduced threats to the natural heritage Outstanding Universal Value of World Heritage properties through the implementation of priority actions. (Priority actions in World Heritage management plans, management arrangements or other relevant plans and strategies.)

Outcome 4: By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities. (Priority actions of EPBC Act listed [Threatened Ecological Community](#) conservation advices and recovery plans.)

Outcome 5: By 2023, there will be increased awareness

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and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation. (Industry sustainability plans and scientific reports that identify priorities and management solutions for improving soil, native vegetation and biodiversity conditions on-farm.)

Outcome 6: By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production. (Relevant industry strategies and independent research and advice from experts, such as the National Landcare Advisory Committee on resilience in agriculture.)

[Natural Resources Investment Program 2018-2022](#)

Queensland's Natural Resources Investment Program 2018-2022 works under a natural resource management asset framework with the following priorities (anticipated to carry forward into future Queensland Regional NRM investment programs):

Land: Building stable and resilient landscapes

- Improve the health and stability of soil
- Improve the condition and extent of native woody and non-woody vegetation

Water: Achieving sustainable use and management of water

- Improve the quality and flow of surface water overland and in-stream (including Reef water quality)
- Improve the quality and level of groundwater

People and communities: Facilitating effective regional management and stewardship

- Improve NRM capacity (knowledge and skills)
- Improve NRM aspirations and attitudes (awareness and engagement)

Science and knowledge: Knowing the state of natural resource management assets and effectiveness of interventions

- Improve asset monitoring and analysis
- Improve project/program evaluation and outcome reporting

In addition, there is a specific Reef Water Quality component—targeted funding aligned to the Draft Reef 2050 Water Quality Improvement Plan 2017-2022.

The Natural Resources Investment Program 2018-2022 is based on the following principles:

- **Integration** – integrates natural resource management planning and delivery across regions, issues, industry sectors and government agencies, to provide community and environmental benefits.
- **Collaboration** – provides a framework that promotes effective collaboration between landholders, communities, traditional owners, delivery partners, stakeholders, and agencies, to harness the knowledge and energy of people committed to building resilient natural landscapes.
- **Efficiency** – targets funding for maximum return on investment and encourage projects to leverage other sources of funding to capitalise on opportunities and strengthen community buy-in.
- **Outcome-based** – invests in evaluating and reporting on landscape and community program impacts. Innovative approaches to evaluation that use the latest tools and build the capacity of participants are encouraged.
- **Adaptive management** – builds upon past success, and experimental approaches will be considered, along with opportunities for learning and informing the iterative processes that support future investment decisions. Evaluation will occur throughout the delivery of the program and will support continuous improvement of the program.
- **Regional coordination/delivery** – organises project delivery at the regional scale to ensure effective NRM outcomes state-wide. Regional delivery organisations are well-placed to align and integrate efforts in partnership between government, the NRM community, local Indigenous people and industry.
- **Public benefit** – funding will be provided where activities are considered to provide a significant public outcome, which would not occur without government intervention.

[Water Quality Improvement Plan \(WQIP\) for the Burnett Mary Region](#)

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The Region's WQIP is of enduring, critical importance as a policy reference for NRM in the Region. The WQIP targets reduction of nutrients, sediment and herbicides in waters flowing from the Reef catchments into the Reef lagoon. The aims of the WQIP are:

- Protect the Reef and Great Sandy Strait and the values they support through improving the water quality from terrestrial sources. (WQIP1)
- By 2034 meet the Reef Plan Targets at a whole of region scale to reduce the anthropogenic loads entering the marine region. Reef Plan Targets = 20% TSS, 20% PN, 20% PP, 50% DIN and 60% PSII herbicides. (WQIP2)

[Wetlands in the GBR Catchment Management Strategy](#)

The Burnett Mary Region is committed to the whole-of-system catchment management framework for managing all of the Region's natural capital, including the Region's wetlands. The Walking the Landscape process has been applied in the Region and is recognised as a key tool in regional NRM, especially in understanding landscape function and where and how management actions can be most effective in achieving NRM outcomes.

The Wetlands in the GBR Catchment Management Strategy has five themes, each with a stated goal. These are:

Theme 1: Improving wetlands information for decision making and action

Goal: Information is available for evidence-based decision making and action

Theme 2: Wetland planning arrangements

Goal: Funding, non-statutory and statutory planning arrangements in place to protect, manage and enhance wetlands

Theme 3: On-ground activities to protect, manage and rehabilitate wetlands

Goal: Implementation of on-ground activities that improve the health of wetlands and enhance their contribution to Reef resilience through statutory and non-statutory mechanisms

Theme 4: Education, communication and capacity building

Goal: Improved stakeholder awareness of the value of wetlands and the management tools available

Theme 5: Monitoring, evaluation, reporting and improvement

Goal: An adaptive management approach incorporating effective monitoring, evaluation, reporting and improvement is implemented to improve wetland management

[Agriculture Stewardship package 2018-2023](#)

BMRG is the Queensland Regional NRM organisation participating in delivery of the Carbon + Biodiversity Pilot Program, which is one of the components of the Australian Government's Agriculture Stewardship package. The aim of the package is to support uptake of improved land management practices in agriculture in ways that build profitability and resilience.

The components of the package are:

- Pilot programs, including the Carbon + Biodiversity Pilot - March 2021, and the Enhanced Remnant Vegetation Pilot (in development);
- Certification and Trading schemes for farm biodiversity – mid 2021;
- Australian Agriculture Sustainability Framework – led by National Farmers Federation; and
- Agriculture Biodiversity Policy – late 2021

Burnett River Catchment Flood Strategy 2018 and Mary Regional Resilience Strategy 2020

<https://www.qra.qld.gov.au/sites/default/files/2018-10/burnett-river-catchment-flood-strategy-overview.pdf>

and

https://www.qra.qld.gov.au/sites/default/files/2020-03/0533_Mary%20Regional%20Resilience%20Strategy_January2020_LR.pdf

In 2018 the Queensland Reconstruction Authority (QRA) released the Burnett Catchment Flood Resilience Strategy which includes Strategic Pathways for society, economy, environment and settlements. The QRA released the Mary Regional Resilience Strategy in 2020.

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1.4 Contemporary BMRG corporate policy settings

The Burnet Mary Regional Group for Natural Resource Management (BMRG), as a community-based organisation, actively canvasses the views and interests of NRM and community stakeholders across the Region to ensure alignment and currency of the organisation's strategic intent with the aspirations of the Region's stakeholders. BMRG's strategic intent embraces both a responsive attitude to stakeholder direction and a commitment to corporate leadership in natural resource management.

[BMRG Strategic Plan 2020-25](#)

BMRG's Strategic Plan integrates corporate capability with clear direction for its 'lines of business' reflected in the Regional NRM and Climate Resilience Plan. The Strategic Plan's strategic outcome areas for the five years 2020-25 are:

1. Engage in collaborative natural resource management that delivers regionally important outcomes underpinned by traditional and local knowledge and leading science.
2. Empower Traditional Owners and First Nations Peoples to maintain their connection to country and protect their cultural heritage.
3. Protect and build the resilience of our land and water resources to support healthy ecosystems, and productive and sustainable landscapes.
4. Build strong partnerships that promotes collaboration and shared outcomes.
5. Build a nationally respected organisation that demonstrates leadership and innovation in natural resource management.

[Burnett Mary Regional NRM Community Prioritisation Workshop 2020-12 – Summary Report](#)

BMRG is continuously scanning the Region's NRM stakeholders' views and concerns about existing and emerging NRM challenges and opportunities. BMRG conducts NRM Community Prioritisation Workshops to directly engage the Region's NRM organisation. The prioritised Action Themes that emerged from the 2020 Workshop were:

- Working smarter together

- Telling the NRM story

- Recognising and supporting diverse leadership

- Focusing on resource condition and security.

The 2021 Workshops occurred on 15/16 June 2021 at Pomona and Gin Gin respectively and the outcomes of these will be lifted, when available, into the updated Plan.PART 2 - NRM Intent 2030 & beyond

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

2.1 Strategic intent for NRM in The Burnett Mary – Purpose, Objectives and Outcomes

2.2.1 Compelling proposition (Vision & mission)

Natural resource management is as much a social endeavour as it is an environmental one. And it is an endeavour with very real economic consequences. Engagement in NRM across the broad sweep of stakeholders' interests and world views therefore needs to be built on a shared aspiration for the future.

Our place, our purpose...

The landscape and people of the Burnett-Mary Region are defined by resilience and self-reliance. The Region's First Nations, timber-getters, farmers and graziers, industry, business and community reflect a history of endurance and enterprise. The legacy we leave coming generations in the warming world of the 21st Century is the challenge of our time. We strive to strengthen our foundations, meet the needs of today, and protect the future of our children and theirs.

2.1.2 Program logic

The program logic of the Burnett Mary Regional NRM and Climate Resilience Plan 2030 has the above statement as its highest order objective.

Three Themes provide the next level of objectives, supported by the objectives of nine Strategic Directions across 20 Outcomes. The Outcomes (with indicators, measures and baselines), and the actions to achieve them, set out the strategic core of the NRM Plan on which the monitoring, evaluation, reporting and improvement (MERI) framework is founded.

2.1.3 Themes

The three themes of the updated NRM Plan are:

- Strengthening the foundations;
- Meeting our commitments – effective, reliable delivery; and

- Driving resilience & self-reliance – endurance, transition & transformation

These three themes shape the narrative that conveys confidence in the combined effort of the Region's stakeholders in achieving success in managing risks to the Region's natural resources and making the most of beneficial opportunities.

Strengthening the foundations: To gather and absorb the best of both old and new knowledge, perspectives and practices on which to base conversations, negotiations and decisions that deliver intelligent, fair and inclusive outcomes for all concerned.

Meeting our commitments – effective, reliable delivery: To manage risks, develop opportunities and do the things that have been agreed upon, and complete actions intentionally, collaboratively and well.

Driving resilience & self-reliance – endurance, transition & transformation: To seek and develop better ways – social, financial and technical – to manage risks, build capabilities and resilience, and deliver NRM services.

2.1.4 Strategic Directions

The Strategic Directions flow on from the existing NRM Plan, refreshed, augmented and refined. The objectives of the Strategic Directions convey the scope of contemporary NRM business in the Burnett Mary and respond to the outlook for NRM in the Region. They look beyond the 2030 planning horizon that guides the Outcomes that the Strategic Directions contain.

Aboriginal Cultural Heritage: To have land and sea country values and cultural knowledge, perspectives and practices that focus the aspirations and agency of Aboriginal people in the Burnett Mary Region widely acknowledged and respected.

Climate Risk & Greenhouse Gases: To have the Region making its contribution to:

- mitigation measures that reduce atmospheric carbon and other greenhouse gas releases
- transition to a low carbon economy
- adaptation to the observed and projected effects of a warming climate.

Coastal and Marine: To have coastal, estuarine and marine resources and their processes:

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- **healthy and resilient**
- **appreciated for their value and vulnerability to changes in climate and human activity**
- **underpinning our community's industries and lifestyles.**

Catchment Community: To have the people of the Burnett/Mary Region enjoying the benefits of well managed natural resources and looking confidently to a secure and thriving future in the Region.

Freshwater: To have the freshwater ecosystems of the Region healthy and their protection and management underpinned by an increased public appreciation of their value and vulnerability to changes in landscape features, climate and human activity.

Land and Soils: To have land condition and soil health within the Region being maintained or improved as agricultural and horticultural enterprises trend towards consolidation and expansion, and as they innovate and adopt leading practice.

Landscape Function: To have the Region's landscapes recognised and managed as natural infrastructure fundamental to the continuing wellbeing of all local communities, enterprises and nature and have the emerging trends towards more damaging floods and bushfires being factored into community and industry decision-making.

Plants and Animals: To have healthy ecological systems and processes and associated vegetation communities, habitat values and natural species diversity maintained across the Region.

2.1.5 Outcomes and Actions

The matters (topics) for which Outcomes have been developed respond to a range of drivers. Not all Strategic Directions have an Outcome specified in each of the three narrative Themes. Outcomes have been developed where policy drivers have been mapped onto the intersections of the Themes and Strategic Directions in the Matters (topics) for Outcomes Table 2 below. As circumstances change in coming years, Outcomes may be added, deleted or adjusted and a protocol for doing so is described in Section 4.3. This aspect of the Burnett Mary Regional NRM and Climate Resilience Plan 2030 elevates the Plan to a dynamic level that allows it to be a 'living' Plan, responding to challenges and opportunities

as they emerge and recede in the regional natural resource management environment.

The Plan firstly responds to the matters identified under the Strategic Directions flowing from the 2015 planning process and the Plan review process, set out in the Plan's Program Logic in Table 1 below. Added to those are the relevant matters, expressed as statements of intent, set out as:

- Goals in the BMRG Strategic Plan 2020-25;
- 5-year Outcomes in the Regional Land Partnership (RLP) Program Logic - Australian Government;
- Priorities in the Natural Resource Investment Program (NRIP) – Queensland Government;
- Action Themes in the 2020 Community Prioritisation Workshop Report;
- Aims in the Water Quality Improvement Plan for the Burnett Mary (WQIP);
- Themes and Goals in the Wetlands in the Great Barrier Reef Management Strategy;
- Components of the Agriculture Stewardship package – Australian Government; and
- Strategies in the Burnett River Catchment Flood Strategy 2018 and Mary Regional Resilience Strategy 2020.

The Actions under each Outcome are drawn from the matters identified from the policy drivers above, BMRG initiatives in progress, and new initiatives critical to practical achievement of the Outcomes in this Plan. The various statements of intent in the policy drivers have been drawn across as Priority Actions in the updated Plan to provide direct 'lines of sight' from published government policy instruments to intended regional implementation, thereby extending the reach of government policy commitments to regional delivery where funding is available through regional NRM investment programs.

The BMRG initiatives in progress reflect the currency of implementation of work funded primarily through investments by the Australian and Queensland Governments (including Commonwealth funding invested through the Great Barrier Reef Foundation) These investments leverage, where practicable, in-kind effort and investment from project partners through

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BMRG’s project consortium operating arrangements.

The new initiatives critical to practical achievement of the Outcomes characterise the contemporary approach of the 2030 NRM Plan. Actions to strengthen the risk management focus of NRM in the Burnett Mary Region are supported by regional assessments of the condition of the Region’s natural capital using existing and emerging tools including the State-wide Indicators tools being developed to support the NRIP investments, and property-level Land Condition Assessments and BioCondition Assessments where available.

The Region’s commitment to developing a set of regional natural capital accounts, building on the Accounting for Nature (AfN) environmental assets

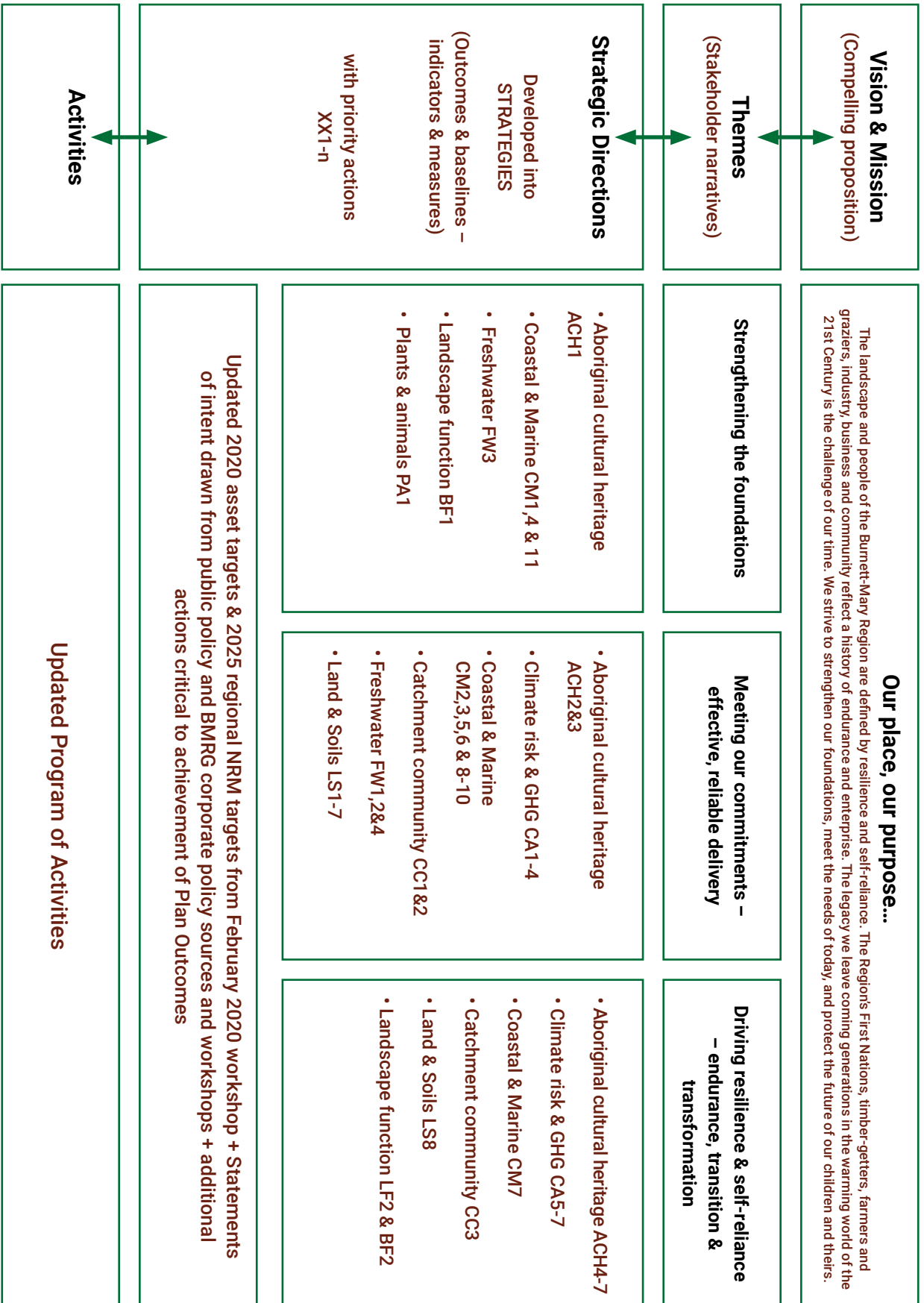
accounts approach has the development of an annual regional natural assets report card as a companion initiative.

The Outcomes for the 2030 planning horizon are mapped by Theme and Strategic Direction below. This Table reveals the narratives that underlie the 2030 NRM Plan, for example, the way engagement with Aboriginal Cultural Heritage develops across complementary Outcomes strengthening the foundations, delivery, and building resilience. Similarly, it is clear to see the focus of the Plan on NRM delivery across multiple Strategic Directions.



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Table 1 - Draft BMRG Regional NRM & Climate Resilience Plan 2030 Program Logic



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Table 2 - Matters (topics) for Outcomes

(^Strategic Directions from Program Logic)
 (* BMRG Strategic Plan 2020-25 Goals)
 (AG RLP 5-year Outcomes)

(QG NRIP priorities: L=Land, W=Water, P=People & communities, S=Science & knowledge)
 (# CPW Action themes)
 (~WQIP aims)

Strategic Directions				THEMES (Stakeholder narratives)			
ACH - Aboriginal Cultural Heritage	ACH1 [^] , SP2* [^]	ACH2&3 [^] , SP2* [^]	ACH4-7 [^] ; CPW3.5(2)#	Strengthening the foundations	Meeting our commitments – effective, reliable delivery	Driving resilience & self-reliance – endurance,	
CA - Climate Risk & Greenhouse Gases (GHG)		CA1-4 [^]	CA5-7 [^] , SP3* [^] , RLP6AG				
CM - Coastal & Marine	CM1,4&11 [^]	CM2,3,5,6&8-10 [^] ; RLP1&3 [^] ; WQIP2&3 [^] ; WET1,2&3W	CM7 [^]				
CC - Catchment Community		CC1&2 [^] , SP1&4* [^] , NRIP(P)QG; WET4 w; CPW3.1,3,3&3,5(several)#	CC3 [^] , SP3&5* [^] , CPW3.3(2)#				
FW - Freshwater	FW3 [^] ; NRIP(S)QG	FW1,2&4 [^] ; NRIP(W) QGCPW3.6(1)#					
LS - Land & Soils		LS1-7 [^] ; NRIP(L)QG; WQIP1~	LS8 [^] ; RLP5 AG; CPW3.6(2)#				
LF - Landscape Function	BF1 [^] , QRA	LF1 [^] , PA3 [^] , QRA	LF2 [^] , BF2 [^] , SP3* [^] , QRA				
PA - Plants & Animals	PA1 [^]	PA2 [^] , RLP2&4 [^] s	PA4&5 [^] , AS-C+BAS				

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

2.1.6 Delivery and investment logic – enduring collaborations and consortia

Under the existing NRM Plan two key collaborations – consortia – have been established, supporting and attributable to the Australian Government’s investments and directly addressing delivery of RLP 5-year Outcomes.

The Reef Trust 7-funded (3.8m) Discovery Coast Consortium addresses ecosystem health and GBR water quality improvement between Bundaberg and Gladstone. This collaboration is delivering on RLP 5-Year Outcomes 2, 3 and 4.

Mary River Consortium funded by GBRF (\$9m) addressing GBR water quality improvement is delivering on RLP 5-Year Outcomes 1 & 5.

A third consortium, announced in December 2020, is being established to deliver water quality, erosion, weeds and Indigenous engagement outcomes in the Monto locality of the Burnett sub-region. This work is funded by Reef Trust 7 (\$6.1m). This collaboration will deliver on RLP 5-Year Outcome 5.

The Region has the benefit of active, on-ground Catchment care / Landcare groups, among which the Noosa and District Landcare and Burung Landcare groups stand out for their size and capability, and their willingness and capacity to subcontract expertise out to others.

2.1.7 Strategic choice

The Outcomes in the updated NRM Plan address the contemporary Outlook for NRM in the Burnett Mary Region and are focused on the topics (Matters for Outcomes) identified through review of the previous NRM Plan; the Goals in the BMRG Strategic Plan 2020-25 (SP); the priorities established in the Australian Government Regional Land Partnerships Program (RLP) and the Queensland Government Natural Resource Investment Program (NRIP) and Water Quality Improvement Plan (WQIP); and the Priority Action Themes generated by the Community Prioritisation Workshop 2020-21 (CPW) held in August 2020.

The Matters for Outcomes are mapped (once only, best fit) onto a matrix with Themes on the top axis and the Strategic Directions on the side axis. This may

imply a need for an Outcome to be specified at each intersection, which could be soundly justified. However, the matrix exposes where Matters for Outcomes are currently identified by stakeholders and investors in addressing the contemporary NRM Outlook for the Burnett Mary Region, and hence where effort and investment might best be directed for the current planning horizon.

Should interest, opportunity and investment emerge for initiatives in vacant matrix intersections, the matrix readily supports framing of those initiatives for their contributions to both the Themes and the Strategic Directions of the Plan.

Similarly, the matrix makes apparent those areas of risk or opportunity not currently addressed, that could address a critical ‘gap’ in NRM effort and investment.

Internal BMRG discussions readily identify a range of matters that need to be comprehended in the updated NRM Plan in response to government initiatives and stakeholder interests and concerns.

Reef water quality (with a particular focus on controlling sediment loss, especially in the Mary River system) is an enduring area of NRM engagement with both government and corporate investors. Reef water quality is a focus for the Australian Government’s Regional Land Partnerships program, Reef Trust 7, and the Great Barrier Reef Foundation investment strategy. Similarly, the Queensland Government invests in action on this issue through the Natural Resource Investment Program, and the Land Restoration Fund. Corporate investors GreenCollar and Greening Australia are also directly engaged with the Region on this issue.

Blue carbon is an emerging opportunity in the Burnett Mary. Regional Land Partnerships and Reef Trust have two projects in place and a further 12 projects are prospective for development and investment.

Payments to landholders for biodiversity co-benefits/offsets is an emerging opportunity in the Region, especially through the Queensland Government Land Restoration Fund and the Australian Government Agriculture Stewardship package.

Looking forward, there are some stand-out priorities for NRM in the Burnett Mary Region. Of these, enhancing and expanding best management practices for agriculture, engaging First Nations’ perspectives

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(most currently in relation to bushfire), and building community resilience and self-reliance in relation to hotter weather and more intense rainfall, are potentially transformational areas of NRM endeavour.

Major bushfires at Woodgate and on K'gari (Fraser Island) have raised widespread concern about fire management and asset protection, with the understanding and appreciation of cultural burning practices becoming increasingly recognised in the Region, as they are elsewhere around Australia. Examples of practical applications include programs to protect Bulburin nut (*Macadamia jensenii*) – a 'heritage macadamia species' – on Bulburin NP where Gidarjil is working with QPWS and other stakeholders using cultural burning to get cool burns. At a policy level, Threatened Species Recovery Plans (EPBC Act 1999 – C'wealth) are being updated to address increasing bushfire threat.

In relation to Reef water quality, water quality monitoring in the Greater Baffle Creek catchment for risk assessment (poorly defined risk at the moment), is a priority as is constraining streambank erosion in three priority reaches of the Mary River

Supporting Best Management Practice programs for grazing, horticulture, sugarcane and grains, and encouraging development of Farm Management Plans is the focus of working with industry leaders to drive leading practice for enhanced regional performance and reputation.

Managing invasive species is an on-going challenge. The Region is establishing collaborative, enduring arrangements for risk-based invasive species action to deliver consistent, enduring, holistic effort in this area.

Protection of at-risk biodiversity, species and ecosystems, is an enduring challenge. There is a regional focus on establishing artificial habitat for migratory seabirds/shorebirds for roosting and feeding, and protection of marine and freshwater turtles.

In the Burnett Mary Region, disaster management has a climate hazard focus. BMRG is working within the State-wide/district/local prevention, preparation, response and recovery arrangements to build disaster resilience, and with industry and the research community to manage risk to agriculture and NRM assets generally. The prospective ClimateCare opt-in initiative is a key focus of community resilience-building.



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2.2 Prioritisation Methodology - Criteria and Process

The prioritisation methodology for the 2030 BMRG NRM & Climate Resilience Plan has been developed to support simplified multi-criteria analysis – criteria, weightings (if needed), scores and priority rankings at the action/activity level of the planning process.

The prioritization methodology supports the strategies and the actions within them by attaching a priority ranking to each of the actions within the strategies. The prioritisation process is an iterative process that can occur once the actions proposed to achieve the outcomes of each strategy have been gathered through desktop development and stakeholder consultation.

The proposed criteria reflect four considerations that are explicitly salient to decision-making about how best to invest resources (time, money and human effort and expertise) in regional NRM in the contemporary Burnett-Mary Regional setting. The four criteria are complex considerations expressed simply, so they can be scored and compared across diverse areas of proposed intent.

Well recognised economic techniques including cost/benefit analysis and return on investment have not been included owing to the degree of uncertainty in quantifying the actual cost of intervention and the economic value of the attributable benefits. The notion of affordability is proposed to comprehend the real cost of action, its value for money and the opportunity cost of inaction as a qualitative judgement rather than a quantitative metric for comparison between actions for dissimilar outputs.

If necessary, economic tools can be used to choose between alternative actions that seek to deliver a similar result (output).

Multi criteria analysis for prioritisation is a tool to aid in decision-making, not of itself a decision maker. The results of prioritisation need to be acceptable to the stakeholders as being both intellectually and intuitively reasonable. Hence, recalibration of and scoring and weighting (if applied) need to be iterative to obtain the most soundly justified reasoning and results.

In the prioritisation process, the prioritisation criteria are scored from 1 to 5 with 1 representing minimal extent of satisfaction of this criterion and 5 representing a high level of satisfaction of this criterion. The scoring can be done by anyone. However, the scorers need

to be well-informed about the process, and as far as practicable, impartial about particular results. Forming a priority scoring working group as part of stakeholder engagement may be a beneficial and productive approach.

For the initial round of scoring the four criteria are equally weighted at zero. As the currency of planning is maintained, in consultation with stakeholders, the prioritization criteria may need to be differentially weighted. However, initially, all criteria may be reasoned to have comparatively equivalent weight.

The four criteria used for the prioritization methodology, together with the calibration of scoring, are:

Stakeholder support (S). To what extent does the proposed action align with the existing or prospective interests and intentions of relevant stakeholders. Is it something that has a history of support and/or is likely to be perceived by stakeholders as a worthy matter to implement?

SCORE:

- ◇ S=1 means limited stakeholder interest or commitment or opposition by certain stakeholders
- ◇ S=3 means generally supported by most stakeholders
- ◇ S=5 means strongly supported by key stakeholders

Note: A score of 4 reflects a strong contribution to the relevant Outcome, and a score of 5 reflects established Australian or Queensland Government investment, that the Action is already in implementation, or that the Action is a core initiative of BMRG.

Strategic importance (I). To what extent does the proposed action contribute to an outcome in the Program Logic of the revised Plan. Is it a critical component and does it rely upon, support or add critical redundancy to other components of the strategy to which it belongs or to companion strategies in the Plan?

SCORE:

- ◇ I=1 means marginally useful to achievement of one or more Outcomes
- ◇ I=3 means materially beneficial to achievement of one or more Outcomes
- ◇ I=5 means critical to achievement of one or more Outcomes

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Note: A score of 4 reflects a strong intention on the part on stakeholders, and a score of 5 indicates that the Action is essential to achieving the relevant Outcome.

Affordability (A). To what extent could the proposed action be delivered at an acceptable real cost, deliver value for money, and/or avoid a significant opportunity cost of inaction?

SCORE:

◊ A=1 means questionable value for money or unlikely to attract adequate funding

◊ A=3 means acceptable value for money if funding is available funding

◊ A=5 means good value for money and likely to attract adequate funding

Note: A score of 4 indicates that the Action is prospectively good value for money, but is dependent upon funding being available, and a score of 5 indicates that the Action is already funded or is essential to achieving the relevant Outcome and is therefore likely to be funded.

Risk responsiveness (R). To what extent does the proposed action explicitly respond to the need to manage an identified risk to one or more NRM assets, systems or services. How well does it offer a local management response to a locally induced or globally induced risk?

SCORE:

◊ R=1 means questionable impact on reducing a significant risk

◊ R=3 means directly or indirectly contributes to reducing a significant risk

◊ R=5 means directly reduces a significant risk

Note: A score of 3 indicates that the Action addresses a background risk. A score of 4 indicates the Action addresses a specific, recognised risk, and a score of 5 indicates that the Action is critical to risk management.

All actions included in the Plan are Priority Actions because they have been identified for inclusion from sources across a range of contemporary policy, investment and community prioritisation processes. Actions with aggregate scores of 10-16 tend to reflect operational priority actions or intentions. Actions with aggregate scores of 17-20 tend to reflect strategic priority actions or intentions. The strategic Priority Actions are shown bold in Section 2.3 below.



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2.3 Structure and content

2.3.1 Theme F: Strengthening the foundations

Strategy F(ACH): Strengthening the foundations - Aboriginal Cultural Heritage:

Background

BMRG is actively engaged with the Region's Indigenous stakeholders.

The relationship between Gidarjil Development Corporation and BMRG is now well established both at a project level and corporately. BMRG had been working closely with Gidarjil to develop Gidarjil's corporate governance capabilities and capacity and extend these initiatives more broadly across the Region's Indigenous organisations. BMRG is directly engaged with both the Butchulla and Kabi Kabi Traditional Owners of K'gari (Fraser Island) and the Great Sandy Region.

BMRG has an enduring commitment to establishing and nurturing respectful and appropriate working relationships with the Region's Aboriginal stakeholders. Part of this commitment is the intention that BMRG's board and staff have a reasonable working understanding of the NRM perspectives, knowledge and cultural practices of the Region's First Nations. It is recognised that the existence of a person's reasonable working understanding is only meaningful if it is acknowledged in on-going interactions with the First Nations people who hold that knowledge, those perspectives and are active in those NRM cultural practices.

For non-Indigenous Board members and staff, several recent publications are available (or will be in the near future), that share contemporary Aboriginal insights on matters within the scope of regional natural resource management. Of these, Victor Steffensen's *Fire Country*, and *Country* by Bill Gammage & Bruce Pascoe (to be published in 2021), provide an excellent grounding. Sessions delivered by Aboriginal colleagues and shared time in the field are important opportunities for both uptake of Aboriginal NRM perspectives by non-Indigenous NRM staff and Board members, and recognition by First Nation's knowledge holders of the extent and veracity of that uptake by their non-Indigenous colleagues.

2030 Outcome: (indicators and measures)

By or before 2030, to have all BMRG Board Members and staff (measure) holding a reasonable working understanding of Aboriginal perspectives on NRM (indicator).

Baseline:

The Aboriginal members of project consortia are recognised as the source of and reference point for Aboriginal perspectives on natural resource management. In late 2021, the Aboriginal members of BMRG's project consortia will be surveyed to establish the baseline of how many non-Aboriginal BMRG Board Members and staff, are recognised as having a reasonable working understanding of Aboriginal perspectives on NRM.

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Priority actions: (info/ position/ implementation/ social change)

Action	Info/Position/ Implementation/ Extension	Action # & Priority
ACH1. The knowledge base of Aboriginal cultural heritage is documented and informs land and sea cultural management plans	Information	F(ACH)#1 S=4 I=4 A=4 R=3 SCORE=15
Update and maintain the Region’s Cultural Heritage Database	Information	F(ACH)#2 S=4 I=4 A=4 R=3 SCORE=15
Work with First Nations partners to access program funding for Aboriginal NRM programs and projects	Implementation	F(ACH)#3 S=4 I=4 A=5 R=3 SCORE=16
Work with First Nations partners to develop and deliver an Aboriginal NRM perspectives program for Board & staff members	Implementation	F(ACH)#4 S=5 I=5 A=5 R=3 SCORE=18
Build relationships to support Traditional Owner engagement in regional programs and projects	Attitude & behaviour change	F(ACH)#5 S=5 I=4 A=5 R=3 SCORE=17

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Strategy F(CM): Strengthening the foundations - Coastal and Marine:

Background

The coastal and marine landscapes of the Burnett Mary are among the Region’s most vulnerable landforms and ecological communities. Coastal development for industry and residential purposes, pollutant loads in coastal catchments, particularly sediment loads in the Mary River system, increased heating of marine turtle nesting beaches, and rising sea levels are compounding to threaten the Region’s coastal zone.

Identifying and documenting the extent and condition of Region’s coastal and marine assets is foundational to developing a risk management framework to inform and support critical NRM actions to secure the natural capital of these assets.

2030 Outcome: (indicators and measures)

By or before 2030, to have the extent and condition of 80% of the Region’s coastal and marine ecosystems mapped and risk rated within a regional coastal and marine risk management framework.

Baseline:

As at 1 July 2021 a regional coastal and marine risk management framework is yet to be developed. However, there is substantial information available about the extent and condition of the Region’s coastal and marine ecosystems.

Priority actions: (info/position/implementation/social change)

Action	Info/Position/ Implementation/ Extension	Action # & Priority
CM1. Critical ecological connections (interactions) and processes are identified	Information	F(CM)#1 S=4 I=4 A=4 R=4 SCORE=16
CM4. The extent and condition of all coastal, estuarine and marine benthic habitats will be known and a baseline created and risk assessed – drawing on the Accounting for Nature and Regional Report Card initiatives and established and emerging condition assessment tools	Information	F(CM)#2 S=4 I=5 A=4 R=4 SCORE=17
CM11. The water quality risk status of the Greater Baffle Creek catchment will be determined	Information	F(CM)#3 S=4 I=4 A=4 R=4 SCORE=16
A regional coastal and marine risk management framework – drawing on existing risk management frameworks – will be developed	Position (Policy & Planning)	F(CM)#4 S=4 I=5 A=5 R=5 SCORE=19

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Strategy F(FW): Strengthening the foundations - Freshwater:

Background

The rivers, streams, freshwater wetlands and groundwaters of the Burnett Mary are critical NRM assets for agriculture, biodiversity and urban water supply. A great deal of work has been done over many years to safeguard these assets and recover historic deterioration from land clearing and the increasing demands upon the Region's water resources. For the past two decades, particular effort has been invested in reducing the fugitive agricultural chemicals (nutrients and pesticides) and sediment entering the Region's waterways, to reduce stress on the Great Barrier Reef.

Although understanding the risk to water quality in the Region's freshwaters is well advanced, identifying and documenting the extent and condition of Region's freshwater biodiversity assets is foundational to developing a risk management framework to inform and support critical NRM actions to secure the natural capital of these assets.

A regional freshwater risk management framework must smoothly articulate with the existing P2R water quality risk framework and with the contemporary water quality policy and regulatory settings (including the GBR Water Quality Guidelines and scheduled environmental values and water quality objectives - Environmental Protection (Water and Wetland Biodiversity) Policy 2019.

2030 Outcome: (indicators and measures)

By or before 2030, to have the extent and condition of 80% of the Region's freshwater ecosystems (groundwater-dependent and surface ecosystems) mapped and risk rated within a regional freshwater risk management framework.

Baseline:

As at 1 July 2021 a regional freshwater risk management framework is yet to be developed. However, there is substantial information available about the extent and condition of the Region's freshwater ecosystems.

Priority actions: (info/position/implementation/social change)



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Action	Info/Position/ Implementation/ Extension	Action # & Priority
NRIP(S). Science and knowledge: Knowing the state of natural resource management assets and effectiveness of interventions: - Improve asset monitoring and analysis; Improve project/ program evaluation and outcome reporting	Information	F(FW)#1 S=5 I=4 A=4 R=3 SCORE=16
The extent and condition of all freshwater habitats will be known and a baseline created and risk assessed – drawing on the Accounting for Nature, Regional Report Card and NRIP State-wide Indicators initiatives and other established and emerging condition assessment tools	Information	F(CM)#2 S=4 I=5 A=4 R=4 SCORE=17
The Burnett Mary condition assessment and restoration plan will be finalised	Position (Policy & Planning)	F(FW)#3 S=4 I=4 A=4 R=4 SCORE=16
A regional freshwater risk management framework – drawing on established and emerging risk management frameworks – will be developed	Position (Policy & Planning)	F(FW)#4 S=4 I=5 A=5 R=5 SCORE=19
FW3. The ecological importance and sensitivities of the Region’s freshwater assets is better understood, more widely appreciated and more thoroughly considered in planning	Attitude & behaviour change	F(FW)#5 S=4 I=4 A=4 R=3 SCORE=15

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Strategy F(LF): Strengthening the foundations – Landscape function:

Background

Bushfire is a natural part of the Australian landscape, and many species and Regional Ecosystems are fire-dependent or fire-adapted. However, one of the observed and projected effects of climate change is harsher bushfire weather and few natural systems are tolerant of 'catastrophic' burning, a new level of severity added to the Australian bushfire classification system in 2009.

Severe bushfires in the Mary Burnett in recent years, particularly the 2019-20 Woodgate bushfire and the K'gari (Fraser Island) bushfire in 2020-21, have heightened concern among all stakeholders.

Similarly, flooding is an important landscape dynamic that redistributes sediments and supports ecological processes. Severe flood events of the past decade, particularly in the upper Burnett catchment and impacting Bundaberg have also heightened concern among all stakeholders.

2030 Outcome: (indicators and measures)

By or before 2030, to have a documented flood and bushfire risk assessment (indicator) for the natural resources in two substantial regional catchments (measure).

Baseline:

As at 1 July 2021, the tools for achievement of this Outcome have yet to be developed. Priority Actions for this purpose are specified below.

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Priority actions: (info/position/implementation/social change)

Action	Info/Position/Implementation/Extension	Action # & Priority
BF1. Update Threatened Species Recovery Plans (EPBC Act – C’wealth) to respond to increasing bushfire risk	Position (Policy & Planning)	F(BF)#1 S=4 I=4 A=4 R=5 SCORE=17
Build upon existing tools and approaches to develop a bushfire risk assessment approach/framework for local application, in collaboration with the Qld Fire Service and allied stakeholders	Position (Policy & Planning)	F(BF)#2 S=4 I=5 A=5 R=5 SCORE=19
Build upon existing tools, hazard mapping and approaches to implement the Strategic Pathways in the Burnett Catchment Flood Resilience Strategy (2018) and the Mary Regional Resilience Strategy 2020 by developing a flood risk assessment/management approach/framework for local application, in collaboration with the Qld Reconstruction Authority and allied stakeholders	Position (Policy & Planning)	F(BF)#3 S=4 I=5 A=5 R=5 SCORE=19
Develop two, catchment level, pilot flood and bushfire risk assessments	Position (Policy & Planning)	F(BF)#4 S=4 I=5 A=5 R=5 SCORE=19

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Strategy F(PA): Strengthening the foundations – Plants and Animals:

Background

Consistent with the risk management approach that underpins the companion outcomes in this NRM Plan relating to reducing risk to freshwater and coastal and marine species and ecosystems, a risk management approach provides a coherent framework for securing the wellbeing of at-risk terrestrial biodiversity.

The Region’s Regional Ecosystems have been mapped by the Queensland Herbarium. <https://www.qld.gov.au/environment/plants-animals/plants/herbarium/mapping-ecosystems>. The anticipated effects of projected changes in regional temperature and rainfall regimes as a result of climate change has also been modelled. However, a regional assessment and rating for management purposes is yet to be attempted and would provide significant support for decisions about investments in species and ecosystem management.

2030 Outcome: (indicators and measures)

By or before 2030, to have the extent and condition of 80% of the Region’s terrestrial biodiversity mapped and risk rated within a regional biodiversity risk management framework. NEW: develop a regional terrestrial biodiversity risk management framework.

Baseline:

As at 1 July 2021 a regional terrestrial biodiversity risk management framework is yet to be developed. However, there is substantial information available about the risk and vulnerability of the Region’s terrestrial species and ecosystems.

Priority actions: (info/position/implementation/social change)

Action	Info/Position/Implementation/Extension	Action # & Priority
Prepare a regional biodiversity extent and condition assessment based on revised SLATS assessment supplemented by the BioCAT State-wide Indicators tool, augmented where available, by assessments based on the BioCondition Assessment methodology (Qld Herbarium)	Information	D(LS)#1 S=4 I=5 A=4 R=3 SCORE=16
A regional biodiversity risk management framework will be developed	Position (Policy & Planning)	D(PA)#2 S=4 I=5 A=5 R=5 SCORE=19

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2.3.2 Theme D: Meeting our commitments – effective, reliable delivery

Strategy D(ACH): Meeting our commitments – effective, reliable delivery - **Aboriginal Cultural Heritage:**

Background

BMRG is actively engaged with the Region's Indigenous stakeholders. The Bunya Mountains Murri Ranger program is well established with a strong focus on integrating Aboriginal cultural practices with science for effective NRM outcomes. Traditional burning practices are a particular example of the currency of contemporary NRM in the Region reflecting old knowledge in a new way forward.

The Region's Indigenous organisations actively participate in the NRM Community Prioritisation Workshops mentioned above. An example of action flowing from these workshop discussions is the project being delivered through Alluvium Consulting to map the governance capabilities and capacities of participating Indigenous organisations – Butchulla and Port Curtis Coral Coast organisations. This project is exploring alignment between the aspirations of the organisations, to draw out opportunities to strengthen capability and capacity, especially by mutual support and sharing across organisations. Traditional Owners from one organisation helping build traditional knowledge and experience in the other organisation is a practical expression of the benefits of this initiative.

BMRG is focused on Traditional Owners and First Nations Peoples having the capacity and support to lead the implementation of culturally significant NRM programs. However, the Region's aspiration for Aboriginal Cultural engagement embraces the opportunity for First Nations' stakeholders to offer their perspective on all projects and initiatives, where such opportunity is wanted by those stakeholders.

2030 Outcome: (indicators and measures)

By or before 2030, to have Aboriginal cultural knowledge and perspectives reflected in the planning and implementation (indicator) of all projects commenced after 30 June 2022 (measure).

Baseline:

The Aboriginal members of project consortia are recognised as the source of and reference point for Aboriginal perspectives on natural resource management. In late 2021, the Aboriginal members of BMRG's project consortia will be surveyed to establish the baseline of how many current projects are recognised by the Aboriginal members of BMRG project consortia as reflecting Aboriginal perspectives on NRM or are able to be materially enhanced by reflecting Aboriginal cultural knowledge and perspectives.



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Priority actions: (info/position/implementation/social change)

Action	Info/Position/Implementation/Extension	Action # & Priority
Work with First Nations partners to develop a set of guiding principles for reflecting Aboriginal NRM perspectives in regional NRM project proposals	Information	D(ACH)#1 S=5 I=5 A=5 R=4 SCORE=19
Work with First Nations partners to prepare Traditional Owners' Fire Management Plans	Position (Policy & Planning)	D(ACH)#2 S=4 I=4 A=4 R=5 SCORE=17
Work with First Nations partners to develop and implement cultural burning programs in collaboration with land managers	Implementation	D(ACH)#3 S=4 I=4 A=4 R=5 SCORE=17
ACH2. Traditional Owners undertake on-ground assessment, protection and management of areas of cultural significance	Implementation	D(ACH)#4 S=4 I=4 A=4 R=4 SCORE=16
SP2. Traditional Owners and First Nations Peoples have the capacity and support to lead the implementation of culturally significant NRM programs	Implementation	D(ACH)#5 S=4 I=4 A=4 R=3 SCORE=15
SP2. Build the financial independence of Traditional Owners for delivering NRM outcomes	Implementation	D(ACH)#6 S=4 I=4 A=4 R=3 SCORE=15

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Support Land & Sea Ranger water quality projects – sampling & analysis	Implementation	D(ACH)#7 S=4 I=4 A=5 R=3 SCORE=16
Support Land and Sea Ranger UAV (Unmanned Aerial Vehicle – drones) training to Commonwealth Air Safety Authority – CASA - Certification	Implementation	D(ACH)#8 S=4 I=4 A=4 R=3 SCORE=15
CPW3.3(2) Fold Indigenous storytelling into all NRM communications	Attitude & behaviour change	D(ACH)#9 S=4 I=4 A=5 R=3 SCORE=16
Develop case studies to demonstrate the benefits of cultural approaches – knowledge and perspectives	Attitude & behaviour change	D(ACH)#10 S=4 I=4 A=4 R=3 SCORE=15
ACH3. Regional Councils, State Government agencies and other major land and sea -management agencies recognise and respect cultural heritage values in their urban planning and NRM related processes and have established working relationships with Traditional Owners	Attitude & behaviour change	D(ACH)#11 S=4 I=4 A=4 R=4 SCORE=16
SP2. The role of Traditional Owners and First Nations Peoples in Land and Sea management is respected, promoted and celebrated regionally and nationally	Attitude & behaviour change	D(ACH)#12 S=4 I=4 A=4 R=3 SCORE=15

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Strategy D(CA): Meeting our commitments – effective, reliable delivery - **Climate Risk & Greenhouse Gases:**

Background

The observed and projected effects of climate change are well understood and drive both risk assessment and adaptation. Accepting such an understanding should not be at all reassuring. The increasingly likely consequences of regional shifts in moisture and temperature patterns, increasingly severe weather events, (especially heat, heavy rain and powerful winds), sea level rise and ocean acidification are quite certain to be extremely disruptive at every level of society and the natural world.

At this point in history, the single most important action is to reduce greenhouse gas emissions, especially carbon dioxide. While combatting climate change is a global challenge, curbing our own greenhouse gas emissions is a local action.

2030 Outcome: (indicators and measures)

By or before 2030, to have BMRG’s carbon footprint (indicator), lower than its level on 1 July 2021 (measure).

Baseline:

BMRG’s carbon footprint as at 1 July 2021 in CO2e is yet to be calculated. A Priority Action for this purpose are specified below.

Priority actions: (info/position/implementation/social change)

Action	Info/Position/ Implementation/ Extension	Action # & Priority
<p>RLP Outcome 6: By 2023, there is an increase in the capacity of agriculture systems to adapt to significant changes in climate and market demands for information on provenance and sustainable production. (Relevant industry strategies and independent research and advice from experts, such as the National Landcare Advisory Committee on resilience in agriculture.)</p>	<p>Position (Policy & Planning)</p>	<p>D(CA)#1 S=5 I=4 A=4 R=3 SCORE=16</p>
<p>Calculate BMRG’s carbon footprint and identify actions for carbon footprint reduction.</p>	<p>Implementation</p>	<p>D(CA)#2 S=5 I=5 A=5 R=3 SCORE=18</p>

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CA3. Participation in schemes that encourage bio-sequestration, using the carbon storage capacity of vegetation and soils, will exceed the 2020 baseline	Implementation	D(CA)#3 S=4 I=4 A=4 R=3 SCORE=15
CA4. Regional initiatives to reduce greenhouse gas emissions and atmospheric carbon releases will exceed 2020 levels	Implementation	D(CA)#4 S=4 I=4 A=4 R=3 SCORE=15
Work with the emergency management authorities and their allied stakeholders to assist in disaster management and climate related resilience-building	Implementation	D(CA)#5 S=4 I=4 A=4 R=4 SCORE=16
CA5. Development of climate risk management for primary production systems will be advocated and actively supported.	Attitude & behaviour change	D(CA)#6 S=4 I=4 A=4 R=4 SCORE=16
Work with partners to build community awareness and self-reliance in managing climate risk and impacts	Attitude & behaviour change	D(CA)#7 S=4 I=4 A=4 R=4 SCORE=16
CA2. Education and extension initiatives that improve the community's understanding of climate change causes, effects and mitigation measures will be delivered	Attitude & behaviour change	D(CA)#8 S=4 I=4 A=4 R=3 SCORE=15

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Strategy D(CM): Meeting our commitments – effective, reliable delivery - **Coastal and Marine:**

Background

The Burnett Mary Region has an extensive scope of coastal and marine assets that attract priority attention in the Queensland, Australian and international contexts. The K'gari (Fraser Island) World Heritage Area, the southern extremity of the Great Barrier Reef World Heritage Area and the Great Sandy Strait Ramsar Wetland of International Importance are coastal assets within the Region that are of global significance.

The long-term Reef Plan arrangements between the Australian and Queensland Governments provide on-going guidance and impetus for natural resource management actions to protect the Great Barrier Reef. Within these arrangements, the Water Quality Improvement Plan for the Burnett Mary Region is a key policy driver that links to the Paddock to Reef Water Quality Monitoring and Modelling Program (P2R) and the annual Reef Water Quality Report Card.

The 2017 Scientific Consensus Statement on Land Use Impacts on Great Barrier Reef Water Quality and Ecosystem Condition identified the Mary catchment as being of high relative priority for sediment and particulate nutrients and of moderate priority for dissolved inorganic nitrogen. This report also recognised the Mary catchment as a locality offering opportunity for relatively cost-effective reduction of these losses from the catchment.

The Region has important beaches for six of the world's seven marine turtle species and many species of threatened shorebirds.

Consistent with the risk management approach that underpins Reef water quality actions, and the companion outcomes in this NRM Plan relating to reducing risk to freshwater and terrestrial species and ecosystems, a risk management approach provides a coherent framework for securing the wellbeing of at-risk coastal and marine biodiversity assets.

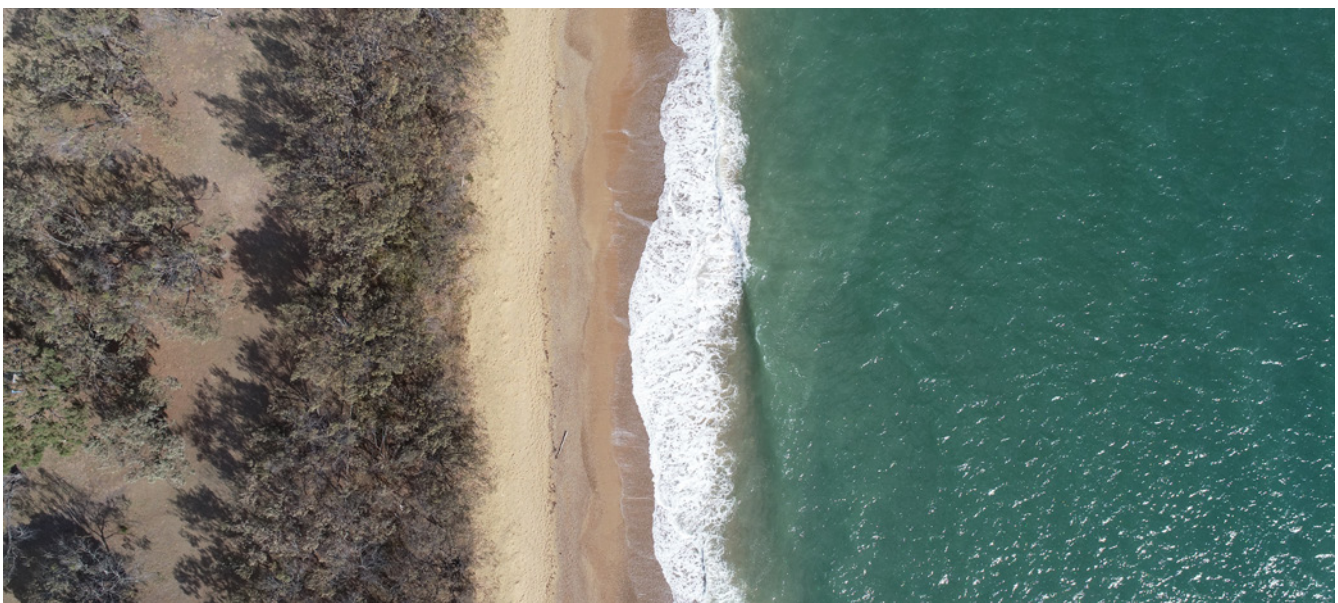
2030 Outcome: (indicators and measures)

By or before 2030, to have the risk to five coastal or marine species or ecosystems (indicator) reduced by one level (measure) in the Region's coastal and marine risk management framework.

Baseline:

As at 1 July 2021 a regional coastal and marine risk management framework is yet to be developed. However, there is substantial information available about the risk and vulnerability of the Region's coastal and marine species and ecosystems.

Priority actions: (info/position/implementation/social change)



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Action	Info/Position/Implementation/Extension	Action # & Priority
Wet1.6 Information on wetlands is publicly accessible to inform decision making and action Refer to WetlandInfo tools where appropriate in the plan	Information	D(CM)#1 S=4 I=4 A=4 R=3 SCORE=15
Wet1.7 Wetlands used by shorebirds and other waterbirds are managed with best available data and information	Information	D(CM)#2 S=4 I=4 A=4 R=3 SCORE=15
Wet1.11 the extent and type of intertidal and subtidal habitats are known	Information	D(CM)#3 S=4 I=4 A=4 R=3 SCORE=15
Wet1.13 Tools are available to mitigate the impacts of climate change on wetlands	Information	D(CM)#4 S=4 I=4 A=4 R=4 SCORE=16
Wet1.1 Information on the location, type and extent of wetlands (including groundwater requirements) is available i.e. make use of the most current wetlands mapping	Information	D(CM)#5 S=4 I=4 A=4 R=3 SCORE=15
Reef water quality - Greater Baffle Creek catchment – water quality monitoring for risk assessment (poorly	Information	D(CM)#6 S=4 I=4

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<p>CM2. Surface water and groundwater flows are measured and maintain ecological connections that underpin coastal values</p>	<p>Information / Position (Policy & Planning)</p>	<p>D(CM)#7 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CM3. Geomorphological processes (including riverine and shoreline) maintain or restore sediment transport that sustains beaches and coastal dunes</p>	<p>Position (Policy & Planning)</p>	<p>D(CM)#8 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CM5. The function and value of all coastal, estuarine and marine benthic habitats are improved or maintained</p>	<p>Position (Policy & Planning)</p>	<p>D(CM)#9 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CM6. There is no net loss of the extent of natural wetlands</p>	<p>Position (Policy & Planning)</p>	<p>D(CM)#10 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CM8. There is no adverse change in biological diversity in coastal, estuarine and marine species</p>	<p>Position (Policy & Planning)</p>	<p>D(CM)#11 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>WQIP 2. By 2034 meet the Reef Plan Targets at a whole of region scale to reduce the anthropogenic loads entering the marine region</p>	<p>Position (Policy & Planning)</p>	<p>D(CM)#12 S=4 I=4 A=4 R=4 SCORE=16</p>

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WQIP 3. Reef Plan Targets = 20% TSS, 20% PN, 20% PP, 50% DIN and 60% PSII herbicides	Position (Policy & Planning)	D(CM)#13 S=4 I=4 A=4 R=4 SCORE=16
Wet1.3 Wetlands and other coastal ecosystems are managed from a whole-of-catchment perspective	Position (Policy & Planning)	D(CM)#14 S=4 I=4 A=4 R=3 SCORE=15
Wet1.4 Wetlands are managed to best practice standards Promote wetland management tools and guidelines	Position (Policy & Planning)	D(CM)#15 S=4 I=4 A=4 R=3 SCORE=15
Wet2.3 Wetlands and whole-of-catchment management are incorporated into strategic planning and funding initiatives	Position (Policy & Planning)	D(CM)#16 S=4 I=4 A=4 R=3 SCORE=15
Wet3.9 Wetlands in protected areas and / or Ramsar sites maintain their ecological character	Position (Policy & Planning)	D(CM)#17 S=5 I=4 A=4 R=3 SCORE=16
CM10. Actions identified in the Burnett Mary Water Quality Improvement Plan are implemented to achieve water quality targets to maintain coastal, estuarine and marine ecosystem health	Implementation	D(CM)#18 S=4 I=4 A=4 R=4 SCORE=16

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<p>Deliver the RLP Enhancing the Ecological Character of Ramsar Wetlands - Strait expectations – Restoring the Great Sandy Ramsar wetland project</p>	<p>Implementation</p>	<p>D(CM)#19 S=5 I=5 A=5 R=4 SCORE=19</p>
<p>Deliver the RLP Conserving the Outstanding Universal Values of World Heritage Areas - Turtles and saltmarsh outstanding universal value of K’gari (Fraser Is) WHA project</p>	<p>Implementation</p>	<p>D(CM)#20 S=5 I=5 A=4 R=4 SCORE=18</p>
<p>Deliver the Burnett River shoreline erosion project</p>	<p>Implementation</p>	<p>D(CM)#21 S=5 I=4 A=5 R=4 SCORE=18</p>
<p>Deliver the Marine debris clean-up project</p>	<p>Implementation</p>	<p>D(CM)#22 S=5 I=4 A=5 R=4 SCORE=18</p>
<p>Deliver the Rodds Peninsula Causeway removal project</p>	<p>Implementation</p>	<p>D(CM)#23 S=5 I=5 A=5 R=4 SCORE=19</p>
<p>Deliver the fox control program</p>	<p>Implementation</p>	<p>D(CM)#24 S=5 I=5 A=5 R=4 SCORE=19</p>

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Deliver the Nest to ocean turtle protection program	Implementation	D(CM)#25 S=5 I=4 A=5 R=4 SCORE=18
Deliver the 2020 Port of Bundaberg shorebird monitoring program	Implementation	D(CM)#26 S=5 I=4 A=5 R=4 SCORE=18
Deliver the Turtle monitoring program	Implementation	D(CM)#27 S=5 I=4 A=5 R=4 SCORE=18
Deliver the Artificial habitat for migratory seabirds/shorebirds – roosting and feeding project	Implementation	D(CM)#28 S=5 I=5 A=5 R=4 SCORE=19
Wet1.10 Barriers to fish passage are managed to improve ecosystem health	Implementation	D(CM)#29 S=4 I=4 A=4 R=3 SCORE=15
Wet3.2 Wetland values are enhanced through targeted, coordinated and effective rehabilitation / restoration initiatives	Implementation	D(CM)#30 S=4 I=4 A=4 R=3 SCORE=15

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Wet3.4 Wetlands are connected for improved environmental outcomes and address barriers to fish passage	Implementation	D(CM)#31 S=4 I=4 A=4 R=3 SCORE=15
Wet 3.6 Wetland values and services are enhanced through management of threats	Implementation	D(CM)#32 S=4 I=4 A=4 R=4 SCORE=16
Deliver the NRIP – Streambank and wetland recovery for Reef water quality project	Implementation	D(CM)#33 S=5 I=4 A=5 R=3 SCORE=17
Deliver the NRIP – Regional support for Paddock to Reef Program function	Implementation	D(CM)#34 S=5 I=4 A=5 R=3 SCORE=17
Deliver the NRIP – Regional coordination and evaluation function	Implementation	D(CM)#35 S=5 I=4 A=5 R=3 SCORE=17
Deliver the GBRF Mary River Recovery program	Implementation	D(CM)#36 S=5 I=5 A=5 R=4 SCORE=19

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<p>Deliver the Riverbank shoreline rehabilitation in Burnett River project</p>	<p>Implementation</p>	<p>D(CM)#37 S=5 I=4 A=5 R=4 SCORE=18</p>
<p>Deliver the Kolan River Restoration program</p>	<p>Implementation</p>	<p>D(CM)#38 S=5 I=4 A=5 R=4 SCORE=18</p>
<p>Deliver the Susan River Wetland project</p>	<p>Implementation</p>	<p>D(CM)#39 S=5 I=5 A=5 R=4 SCORE=19</p>
<p>Deliver the GBRF Community Action Plan</p>	<p>Implementation</p>	<p>D(CM)#40 S=5 I=4 A=5 R=3 SCORE=17</p>

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy D(CC): Meeting our commitments – effective, reliable delivery - **Catchment Community:**

Background

A key strength of Queensland’s regional NRM arrangements is engagement across multiple stakeholders for the delivery of NRM programs and projects. In the Burnett Mary the establishment of formal project consortia has enabled robust project governance, coordination of effort and practical cooperation on project delivery.

The Region’s consortia arrangements provide the multi-organisational infrastructure for discussion and well-informed decision-making by the consortium partners on shared NRM interests, and for consultation on emerging challenges and opportunities.

Beyond the consortia arrangements, BMRG is committed to hosting opportunities to canvass contemporary NRM priorities and report on

achievements by BMRG and its partner and allied organisations across the catchment community, government, research institutions and industry.

2030 Outcome: (indicators and measures)

By or before 2030, to have five (measure) formal consortia arrangements (indicator) established among NRM organisations, industry, consultants, government (AG/QG), councils and other participants to enable strategic alignment and resource-sharing for combined effort.

Baseline:

Currently there are two established (Fraser/Discovery Coast and Mary River), and one in development (Upper Burnett/Monto).

Priority actions: (info/position/implementation/social change)

Action	Info/Position/Implementation/Extension	Action # & Priority
SP1. Local knowledge and expertise underpin regional NRM planning and implementation - Annual regional science and knowledge exchange forum	Information	D(CC)#1 S=4 I=4 A=5 R=3 SCORE=16
CPW3.1(1) Create a simple, easy to use directory/library of projects and available datasets, catalogued by key descriptors such as theme (e.g. natural resource, agriculture, marine), accessibility (e.g. private, public), type (e.g. monitoring, research, project data etc), location/owner, date range and so on.	Information	D(CC)#2 S=4 I=4 A=4 R=3 SCORE=15
CPW3.1(2) Create a shared calendar of events across regional NRM partners.	Information	D(CC)#3 S=4 I=4 A=4 R=3 SCORE=15

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<p>CPW3.5(3) Create a directory of skills and expertise across NRM organisations. Identify opportunities to share knowledge across organisations to facilitate the delivery of NRM outcomes for the Region.</p>	<p>Information</p>	<p>D(CC)#4 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CPW3-1(3) Create a repository of locally relevant policy, strategic and operational plans for all local NRM delivery agents.</p>	<p>Position (Policy & Planning)</p>	<p>D(CC)#5 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CPW3.5(1) Organise an annual/biannual youth forum with representatives from local NRM organisations with an emphasis on inclusivity and diversity.</p>	<p>Implementation</p>	<p>D(CC)#6 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CPW3.3(3) Hold a capacity building, communication workshop with local NRM delivery agents to assist them with developing their 'elevator pitch'</p>	<p>Implementation</p>	<p>D(CC)#7 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>SP3. Maintain active advisory roles for local and Regional disaster and emergency planning, drought planning and coastal hazard planning</p>	<p>Implementation</p>	<p>D(CC)#8 S=4 I=4 A=4 R=5 SCORE=19</p>
<p>SP5. To celebrate and support the development of regional NRM champions</p>	<p>Implementation</p>	<p>D(CC)#9 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>CC2. Subcontracting arrangements will be established to enable access to expertise by Catchment care / Landcare groups</p>	<p>Implementation</p>	<p>D(CC)#10 S=4 I=4 A=5 R=3 SCORE=16</p>

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<p>SP4. Support local community groups in the efforts to promote and actively deliver land stewardship and catchment restoration activities</p>	<p>Implementation</p>	<p>D(CC)#11 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>SP1. BMRG members and the community are engaged in identifying and implementing regional and local priorities - Facilitate annual community prioritisation and planning workshops across the Region</p>	<p>Attitude & behaviour change</p>	<p>D(CC)#13 S=5 I=4 A=5 R=4 SCORE=18</p>
<p>NRIP(P). People and communities: Facilitating effective regional management and stewardship: - Improve NRM capacity (knowledge and skills); - Improve NRM aspirations and attitudes (awareness and engagement)</p>	<p>Attitude & behaviour change</p>	<p>D(CC)#14 S=5 I=4 A=4 R=3 SCORE=16</p>
<p>Wet4.1 Wetland visitors, residents and industry appreciate wetlands and actions they can take to conserve wetlands</p>	<p>Attitude & behaviour change</p>	<p>D(CC)#15 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>Wet4.5 Collaborative partnerships promote wetlands best practice management</p>	<p>Attitude & behaviour change</p>	<p>D(CC)#16 S=4 I=4 A=4 R=3 SCORE=15</p>

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy D(FW): Meeting our commitments – effective, reliable delivery - **Freshwater:**

Background

The surface freshwaters and the groundwaters of the Region are extraordinarily valuable natural assets that support agriculture, settlements, natural ecosystems and recreation. Beyond their ‘use’ value, the waters of the Region have aesthetic and spiritual values that command respect and stewardship.

The Burnett Mary is home to several endemic species that rely upon the and contribute to the health of the Region’s freshwater habitats. The Australian Lungfish, the Mary River Cod and the Freshwater Mullet are high profile examples among other fish species, freshwater turtles including the Mary River Turtle and White-throated Snapping Turtle, frogs including the Giant-barred Frog, invertebrates and plants.

Consistent with the risk management approach that underpins Reef water quality actions, and the companion outcomes in this NRM Plan relating to

reducing risk to coastal and marine and terrestrial species and ecosystems, a risk management approach provides a coherent framework for securing the wellbeing of at-risk freshwater biodiversity assets.

2030 Outcome: (indicators and measures)

By or before 2030, to have the risk to five freshwater (groundwater-dependent or surface freshwater) species or ecosystems (indicator) reduced by one level (measure) in the Region’s freshwater risk management framework.

Baseline:

As at 1 July 2021 a regional freshwater risk management framework is yet to be developed. However, there is substantial information available about the risk and vulnerability of the Region’s freshwater species and ecosystems.

Priority actions: (info/position/implementation/social change)

Action	Info/Position/ Implementation/ Extension	Action # & Priority
<p>FW1. The ecological function of water dependent ecosystems is improved from the 2015 baseline</p>	<p>Position (Policy & Planning)</p>	<p>D(FW)#1 S=4 I=5 A=4 R=4 SCORE=17</p>
<p>FW2. The ecological connectivity within and between freshwater habitats (both aquatic and terrestrial) and the marine interface is improved from the 2015 baseline</p>	<p>Position (Policy & Planning)</p>	<p>D(FW)#2 S=4 I=4 A=4 R=4 SCORE=16</p>
<p>FW4. The quality of riverine, coastal, estuarine and marine waters will improve in order to, at least, meet accepted water quality objectives</p>	<p>Position (Policy & Planning)</p>	<p>D(FW)#3 S=4 I=4 A=4 R=3 SCORE=15</p>

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NRIP(W). Water: Achieving sustainable use and management of water - Improve the quality and flow of surface water overland and in-stream (including Reef water quality)	Position (Policy & Planning)	D(FW)#4 S=5 I=4 A=4 R=3 SCORE=16
NRIP(W). Water: Achieving sustainable use and management of water - Improve the quality and level of groundwater	Position (Policy & Planning)	D(FW)#5 S=5 I=4 A=4 R=3 SCORE=16
CPW3.6(1) Create a working group to discuss and find solutions to water security issues for the Burnett Mary Region, including the current issues related to the Paradise Dam.	Implementation	D(FW)#6 S=4 I=4 A=4 R=4 SCORE=16
Delivery of the NRIP RWQ Burnett grazing project	Implementation	D(FW)#7 S=5 I=4 A=5 R=4 SCORE=18
Delivery of the NRIP RWQ Mary River MRCCC project	Implementation	D(FW)#8 S=5 I=5 A=5 R=4 SCORE=19
Support Gidargil water quality monitoring and analysis projects – (freshwater)	Implementation	D(FW)#9 S=5 I=4 A=5 R=3 SCORE=17

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy D(LS): Meeting our commitments – effective, reliable delivery - **Land and Soils:**

Background

The lands of the Burnett Mary have diverse capability for land-use - for agriculture, infrastructure and as reserved natural places. Extensive historical forest clearing for timber and farming have greatly altered the landscapes of the Region. Today, intensification of agriculture with substantial areas of high value soils transitioning from sugarcane to tree cropping – especially macadamias and avocados – is again transforming the landscape and local economies.

Mining for metals is a continuing impact on the Region’s lands while contribution to the Region’s history of economic prosperity from natural resources, industry and primary production.

2030 Outcome: (indicators and measures)

By or before 2030, to have land condition (indicator) of 100% of the Region’s agricultural lands in the same or better condition (measure) than the 2020 baseline.

Baseline:

The 2020 baseline land condition assessment of the Region’s agricultural lands is yet to be determined. A Priority Actions for this purpose and for periodic reassessment is specified below.

Priority actions: (info/position/implementation/social change)

Action	Info/Position/ Implementation/ Extension	Action # & Priority
Prepare regional land condition assessments based on established and emerging condition assessment tools	Information	D(LS)#1 S=4 I=5 A=4 R=3 SCORE=16
LS1. Salinity extent and severity is maintained at the 2015 baseline	Position (Policy & Planning)	D(LS)#2 S=4 I=4 A=4 R=4 SCORE=16
LS2. Soil acidification is maintained at the 2012 baseline for agricultural land	Position (Policy & Planning)	D(LS)#3 S=4 I=4 A=4 R=3 SCORE=15

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<p>FW2. The ecological connectivity within and between freshwater habitats (both aquatic and terrestrial) and the marine interface is improved from the 2015 baseline</p>	<p>Position (Policy & Planning)</p>	<p>D(FW)#2 S=4 I=4 A=4 R=4 SCORE=16</p>
<p>FW4. The quality of riverine, coastal, estuarine and marine waters will improve in order to, at least, meet accepted water quality objectives</p>	<p>Position (Policy & Planning)</p>	<p>D(FW)#3 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>NRIP(W). Water: Achieving sustainable use and management of water - Improve the quality and flow of surface water overland and in-stream (including Reef water quality)</p>	<p>Position (Policy & Planning)</p>	<p>D(FW)#4 S=5 I=4 A=4 R=3 SCORE=16</p>
<p>NRIP(W). Water: Achieving sustainable use and management of water - Improve the quality and level of groundwater</p>	<p>Position (Policy & Planning)</p>	<p>D(FW)#5 S=5 I=4 A=4 R=3 SCORE=16</p>
<p>CPW3.6(1) Create a working group to discuss and find solutions to water security issues for the Burnett Mary Region, including the current issues related to the Paradise Dam.</p>	<p>Implementation</p>	<p>D(FW)#6 S=4 I=4 A=4 R=4 SCORE=16</p>
<p>Delivery of the NRIP RWQ Burnett grazing project</p>	<p>Implementation</p>	<p>D(FW)#7 S=5 I=4 A=5 R=4 SCORE=18</p>
<p>Delivery of the NRIP RWQ Mary River MRCCC project</p>	<p>Implementation</p>	<p>D(FW)#8 S=5 I=5 A=5 R=4 SCORE=19</p>

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LS3. Soil Organic Matter is maintained at the 2012 baseline for agricultural land	Position (Policy & Planning)	D(LS)#4 S=4 I=4 A=4 R=3 SCORE=15
LS4. Sheet erosion risk, stream bank erosion risk and gully erosion extent and severity do not exceed 2015 baseline levels, with streambank erosion reduced in three priority reaches of the Mary River	Position (Policy & Planning)	D(LS)#5 S=5 I=4 A=5 R=5 SCORE=19
LS5. The extent of acidification caused by the disturbance of Acid Sulfate Soil does not exceed the 2015 baseline	Position (Policy & Planning)	D(LS)#6 S=4 I=4 A=4 R=4 SCORE=16
LS6. The extent of suitable Cropping Land (i.e. cropping, horticulture and plantation forestry) is maintained at the 2015 baseline	Position (Policy & Planning)	D(LS)#7 S=4 I=4 A=4 R=3 SCORE=15
LS7. Ground cover of grazing lands is maintained at the 2015 baseline	Position (Policy & Planning)	D(LS)#8 S=4 I=5 A=4 R=3 SCORE=16
NRIP(L). Land: Building stable and resilient landscapes - Improve the condition and extent of native woody and non-woody vegetation	Position (Policy & Planning)	D(LS)#9 S=5 I=5 A=4 R=3 SCORE=16
RLP Outcome 5: By 2023, there will be increased awareness and adoption of land management practices that improve and protect the condition of soil, biodiversity and vegetation. (Industry sustainability plans and scientific reports that identify priorities and management solutions for improving soil, native vegetation and biodiversity conditions on-farm.)	Position (Policy & Planning)	D(LS)#10 S=5 I=5 A=5 R=3 SCORE=18

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<p>Support preparation of Farm Management Plans</p>	<p>Implementation</p>	<p>D(LS)#19 S=5 I=5 A=5 R=3 SCORE=18</p>
<p>Deliver the Soil conservation and mentoring program</p>	<p>Attitude & behaviour change</p>	<p>D(LS)#20 S=5 I=5 A=5 R=3 SCORE=18</p>
<p>Deliver the DAF Regional Extension Coordination function</p>	<p>Attitude & behaviour change</p>	<p>D(LS)#21 S=5 I=4 A=5 R=3 SCORE=17</p>
<p>Deliver the Enhanced extension and education – Peer to peer - project</p>	<p>Attitude & behaviour change</p>	<p>D(LS)#22 S=5 I=4 A=5 R=3 SCORE=17</p>

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy D(LF): Meeting our commitments – effective, reliable delivery - **Landscape Function:**

Background

Landscape function sits at the heart of healthy ecosystems and the wellbeing of the communities and enterprises that rely upon the sustainable productivity of the Region’s natural capital – its geology, soil, air, water and all living things. Landscape function is the way a landscape works as a system. And like any system – components within a boundary – landscapes have ‘stocks’ of natural resources and ‘flows’ of inputs and outputs, and each landscape responds to the forces acting upon it.

Landscape functional outputs have been characterised as ecosystem services* - provisioning (eg. food, fuel, fibre and water), regulating (eg. climate regulation, water purification and pollination), supporting (eg. soil formation and nutrient cycling), and cultural (eg. aesthetics, inspiration and education).

To maintain and enhance landscape function it is important to avoid depleting the stocks and flows of natural capital and mitigate threatening processes

including human overuse or inappropriate use and natural impacts like erosion, catastrophic bushfire and invasive species.

[*2005 UN Millennium Assessment – Ecosystems and their Services](#)

2030 Outcome: (indicators and measures)

By or before 2030, to have 50% by overall \$ value (measure) of the publicly funded NRM investments (indicator) in the Region, annually reporting their contribution to quantifiable improvements in the Region’s natural capital as reported in the regional natural asset accounts and report card.

Baseline:

As at 1 July 2021, the contribution of publicly funded NRM investments in the Region is not reported in terms of quantifiable improvements in the Region’s natural capital. However, BMRG’s regional natural asset accounts and report card initiatives will create a framework for reporting.

Priority actions: (info/position/implementation/social change)

Action	Info/Position/ Implementation/ Extension	Action # & Priority
Prepare a regional wetland condition assessment based on established and emerging condition assessment tools	Information	D(LS)#1 S=4 I=5 A=4 R=3 SCORE=16
GBR Wetlands - Understand where the wetlands are, what they are, the services they provide, and how these services are valued within the catchment (including intrinsic values) and the NRM region, who are the beneficiaries of these services	Information	D(LF)#2 S=4 I=4 A=4 R=3 SCORE=15

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GBR Wetlands - Consider the role that wetlands and water play in maintaining and restoring the health of the reef and its ecosystems, and identifying ways to restore wetland function such that these services are restored and strengthened (2.9, 3.2)	Information	D(LF)#3 S=4 I=4 A=5 R=3 SCORE=16
GBR Wetlands - Consider the impacts of climate change on wetland processes and components (e.g. water, fire, temperature, coastal processes etc.) and the ability of wetlands to deliver ecosystem services, factor these into the plan (3.6)	Information	D(LF)#4 S=4 I=4 A=4 R=4 SCORE=16
GBR Wetlands - Refer to the tools and resources on WetlandInfo, including wetlands mapping, management tools and guidelines, assessment methods etc. as resources to inform strategic planning, for prioritization and operational and land management guidelines	Information	D(LF)#5 S=4 I=4 A=5 R=3 SCORE=16
GBR Wetlands - The role of wetlands in the provision of ecosystem services across the catchment (and receiving waters) is incorporated into plans (including the recognition of the services and values wetlands provide)	Position (Policy & Planning)	D(LF)#6 S=4 I=4 A=4 R=3 SCORE=15
LF1. Landscape function is enhanced through activities that address threatening processes	Implementation	D(LF)#7 S=4 I=4 A=4 R=3 SCORE=15
Quantify in \$ terms, contributions to natural capital improvement as part of all project proposals	Implementation	D(LF)#8 S=4 I=5 A=5 R=3 SCORE=17
GBR Wetlands - Opportunities to embed how wetlands contribute to the economic, social and cultural wellbeing of people within an area	Attitude & behaviour change	D(LF)#9 S=4 I=4 A=4 R=3 SCORE=15

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy D(PA): Meeting our commitments – effective, reliable delivery - **Plants and Animals:**

Background

The list of threatened species listed under the EPBC Act occurring in the Burnett-May Region is available here: <https://www.environment.gov.au/heritage/publications/anhat/biodiveristy-summary/burnett-mary-qld>

The numbers of threatened species (Environment Protection and Biodiversity Conservation Act 1999) which belong to the families covered by the Australian Government Biodiversity Summary for the Region are: 1 species declared as critically endangered; 27 species declared as endangered; 72 species declared as vulnerable; and 1 species declared as conservation dependent.

<https://www.environment.gov.au/heritage/publications/anhat/biodiveristy-summary/burnett-mary-qld>
(Accessed 9/12/2020)

Threatened species that are currently funding priorities for RLP projects initiated under the current NRM Plan are *Numenius madagascariensis* (Eastern Curlew, Far Eastern Curlew); *Caretta caretta* (Loggerhead Turtle); *Chelonia mydas* (Green Turtle); and *Natator depressa* (Flatback Turtle).

In addition, BMRG has contributed to the delivery of projects to better understand and protect the Region's threatened freshwater turtle species and the Queensland lungfish.

BMRG recognises the Region's threatened ecological communities on its website with threatened coastal

saltmarsh ecological communities being addressed as funding priorities by two RLP projects initiated under the existing NRM Plan. Currently there are five threatened ecological communities protected within the Burnett Mary Region.

Ecological communities under threat include coastal rainforest, semi-evergreen vine thicket, brigalow, coastal saltmarsh and lowland riparian rainforest. Key threatening processes to biodiversity in the Region are a result of ongoing reduction in the extent and condition of native habitat. Clearing for agriculture and the continuing demand for land for urban growth and resource infrastructure continue to place pressure on an already fragmented natural environment.

2030 Outcome: (indicators and measures)

By or before 2030, to have the risk to five terrestrial (non-coastal, marine or groundwater-dependent or surface freshwater) species or ecosystems (indicator) reduced by one level (measure) in the Region's terrestrial biodiversity risk management framework.

Baseline:

As at 1 July 2021 a regional terrestrial biodiversity risk management framework is yet to be developed. However, there is substantial information available about the risk and vulnerability of the Region's terrestrial species and ecosystems.

Priority actions: (info/position/implementation/social change)



PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Action	Info/Position/Implementation/Extension	Action # & Priority
CM9. Plants and animals of ecological, economic, conservation or iconic value are identified and, where possible, actions are implemented to improve or sustain their populations	Information	D(PA)#1 S=4 I=4 A=4 R=3 SCORE=15
PA1. The extent of the Region’s vegetation communities will be maintained at the 2013 baseline	Position (Policy & Planning)	D(PA)#2 S=4 I=4 A=4 R=3 SCORE=15
PA2. The diversity of vegetation communities will be maintained at 2013 levels and opportunities for sustaining species’ populations, particularly those that are threatened, will be improved	Position (Policy & Planning)	D(PA)#3 S=4 I=4 A=4 R=4 SCORE=16
RLP Outcome 2: By 2023, the trajectory of species targeted under the Threatened Species Strategy, and other EPBC Act priority species, is stabilised or improved. (Priority actions in the Threatened Species Strategy key action areas and EPBC Act species conservation advices and recovery plans.)	Position (Policy & Planning)	D(PA)#4 S=5 I=5 A=4 R=4 SCORE=18
RLP Outcome 4: By 2023, the implementation of priority actions is leading to an improvement in the condition of EPBC Act listed Threatened Ecological Communities. (Priority actions of EPBC Act listed Threatened Ecological Community conservation advices and recovery plans.)	Position (Policy & Planning)	D(PA)#5 S=5 I=5 A=4 R=4 SCORE=18
PA3. Collaborative, enduring arrangements for risk-based invasive species action will be established for consistent, enduring, holistic effort)	Implementation	D(PA)#6 S=4 I=4 A=4 R=4 SCORE=16

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Delivery of feral pig control projects	Implementation	D(PA)#7 S=4 I=4 A=4 R=4 SCORE=16
Delivery of weed control projects	Implementation	D(PA)#8 S=4 I=4 A=4 R=4 SCORE=16
Delivery of at-risk biodiversity - species and ecosystems - projects	Implementation	D(PA)#9 S=4 I=5 A=4 R=4 SCORE=17

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

2.3.3 Theme R: Driving resilience & self-reliance – endurance, transition & transformation

Strategy R(ACH): Driving resilience & self-reliance –
endurance, transition & transformation - **Aboriginal
Cultural Heritage:**

Background

Direct engagement of Indigenous stakeholders has been established through participation of Gidarjil in the Discovery Coast project consortium and Butchulla in the Mary River recovery project consortium.

Increasing the depth of understanding will help build resilience and enhance self-reliance for the Region's Aboriginal stakeholders in delivery of the Aboriginal cultural heritage aspects managing the Region's natural resources. BMRG recognises of the value of its Board and staff members having a reasonable working understanding of Aboriginal NRM perspectives. Looking to the future, such a reasonable working understanding will be encouraged in at least the participation leaders for each member organisation within the Region's project consortia.

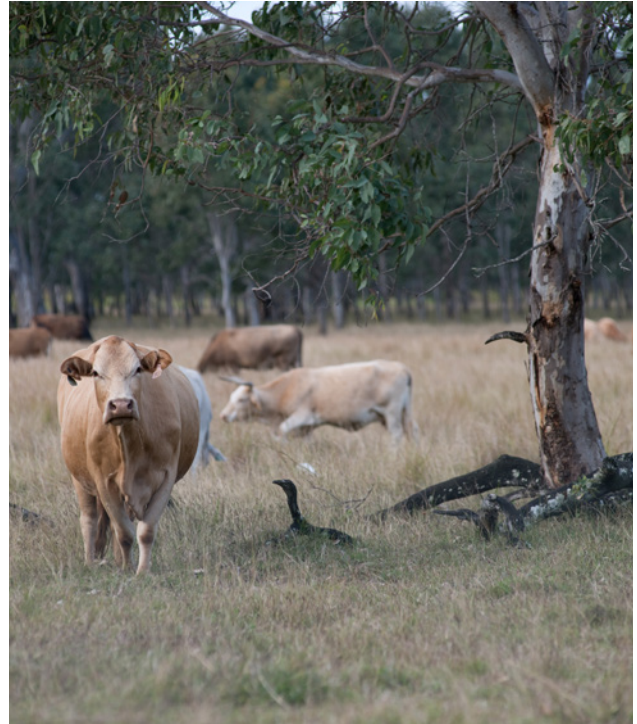
2030 Outcome: (indicators and measures)

By or before 2030, to have all Consortium members (participation leaders for each consortium member organisation) (measure) holding a reasonable working understanding of Aboriginal perspectives on NRM (indicator).

Baseline:

The Aboriginal members of project consortia are recognised as the source of and reference point for Aboriginal perspectives on natural resource management. In late 2021, the Aboriginal members of BMRG's project consortia will be surveyed to establish the baseline of how many non-Aboriginal project consortia members (participation leaders) are recognised as having a reasonable working understanding of Aboriginal perspectives on NRM.

Priority actions: (info/position/implementation/social change)



PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Action	Info/Position/ Implementation/ Extension	Action # & Priority
CPW3.5(2). Facilitate and support the creation of a future leaders mentoring program for young First Nations people and Elders from local Traditional Owner groups	Implementation	R(ACH)#1 S=4 I=4 A=4 R=3 SCORE=15
Work with First Nations partners to extend BMRG's Aboriginal NRM perspectives program (Ref. Action F(ACH)#x) to include participation leaders for BMRG's project consortium partners	Implementation	R(ACH)#2 S=4 I=5 A=5 R=3 SCORE=17
ACH4. The cultural values and caring for country aspirations of regional Aboriginal people are promoted by an increased number of the Region's educational, research, tourism and government organisations	Attitude & behaviour change	R(ACH)#3 S=4 I=4 A=4 R=3 SCORE=15
ACH5. First Nations aspirations and agency in natural resource management will be advocated and actively supported to enhanced capability, including application of cultural knowledge, perspectives and practices and emerging technology (eg. drones technology)	Attitude & behaviour change	R(ACH)#4 S=4 I=5 A=4 R=3 SCORE=16
ACH6. First Nations aspirations and agency in robust governance, jobs & career security will be advocated and actively supported	Attitude & behaviour change	R(ACH)#5 S=4 I=4 A=4 R=3 SCORE=15
ACH7. First Nations aspirations and actions to demonstrate the benefits of cultural approaches and promote cross-cultural outreach & connections will be encouraged and facilitated	Attitude & behaviour change	R(ACH)#6 S=4 I=4 A=4 R=3 SCORE=15

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy R(CA): Driving resilience & self-reliance – endurance, transition & transformation - **Climate Risk & Greenhouse Gases:**

Background

Aware or not, everyone is now responding to the effects of climate change. Hotter hot days, more hot days and longer warm periods are already occurring, and people's adaptive behaviour is implied in the increased installation and use of air conditioning, workplace adjustments to working outside in hot weather, and development of programs to assist vulnerable people during heatwaves. Similarly, Australia's widespread uptake of solar power reflects recognition at all levels of society that renewable energy is both socially virtuous and economically beneficial.

The Queensland Government has actively promoted climate change risk management through the Queensland Climate Adaptation Strategy and the programs, adaptation plans, tools and projects flowing from it. The Climate Resilient Councils Program being delivered by the Local Government Association of Queensland is well established, underpinned by robust coastal hazards assessment. Recently released are simple climate adaptation tools for households and businesses.

Best Management Practice schemes for agricultural industries are increasingly including a climate risk module, mainstreaming the management of climate risk into business-as-usual for some of Queensland's most climate exposed industries.

2030 Outcome: (indicators and measures)

By or before 2030, to have ten community stakeholders (organisations or individuals) (measure) actively engaged in a climate resilience program (indicator).

Baseline:

As at 1 July 2021, all of the Region's Local Governments are actively engaged in the Climate Resilient Councils program managed by LGAQ, and the Region's horticulture enterprises are in the introductory stages of engagement with a climate change module within the Hort360 GBR Best Management Practice (BMP) scheme for their industry.

Priority actions: (info/position/implementation/social change)



PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Action	Info/Position/ Implementation/ Extension	Action # & Priority
<p>SP3. Climate vulnerable areas and ecosystems are identified, and risk mitigation strategies incorporated into NRM or other relevant planning processes</p>	<p>Information / Position (Policy & Planning)</p>	<p>R(CA)#1 S=4 I=4 A=4 R=5 SCORE=17</p>
<p>Advocate and support the uptake of Hort360 GBR (Incl. climate module)</p>	<p>Implementation</p>	<p>R(CA)#2 S=5 I=5 A=5 R=4 SCORE=19</p>
<p>CA6. Community awareness and self-reliance – heat, intense rainfall – will be advocated and actively supported by developing a Community ClimateCare (opt-in) program</p>	<p>Attitude & behaviour change</p>	<p>R(CA)#3 S=4 I=5 A=4 R=5 SCORE=18</p>
<p>CA7. Climate risk assessments and responses will be advocated and actively supported for water security, invasive species, workforce wellbeing & productivity</p>	<p>Attitude & behaviour change</p>	<p>R(CA)#4 S=4 I=4 A=4 R=5 SCORE=17</p>

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy R(CM): Driving resilience & self-reliance – endurance, transition & transformation - **Coastal and Marine:**

Background

Looking to the future, the wellbeing of coastal and marine ecological communities can offer collateral benefits from carbon sequestration initiatives. Blue carbon has emerged to complement on-land carbon sequestration in trees and soils.

The Region’s extensive coastal wetlands offer substantial opportunity for protecting Ramsar assets and threatened ecological communities through programs

that secure and promote carbon capture and storage in the Region’s living marine and coastal landscapes.

2030 Outcome: (indicators and measures)

By or before 2030, to have doubled (measure) the CO2e value of blue carbon projects (indicator) in the Region.

Baseline:

As at 1 July 2021, two blue carbon projects are in place with a prospective twelve projects in development.

Priority actions: (info/position/implementation/social change)

Action	Info/Position/Implementation/Extension	Action # & Priority
Assess (first pass assessment) the Region’s blue carbon potential	Information	R(CM)#1 S=4 I=4 A=4 R=3 SCORE=15
CM7. There is an improvement in the ecological processes and environmental values of natural wetlands	Position (Policy & Planning)	R(CM)#2 S=4 I=4 A=4 R=3 SCORE=15
Wet2.9 Maintain and enhance connections to improve reef ecosystem health and resilience	Position (Policy & Planning)	R(CM)#3 S=4 I=4 A=4 R=3 SCORE=15

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

<p>Work with partners to develop and implement blue carbon projects</p>	<p>Implementation</p>	<p>R(CM)#4 S=4 I=5 A=4 R=3 SCORE=16</p>
<p>PA5. Establishment of artificial roosting and feeding habitat for migratory seabirds/ shorebirds will be advocated</p>	<p>Implementation</p>	<p>R(CM)#5 S=4 I=4 A=4 R=3 SCORE=15</p>
<p>Advocate the economic and environmental benefits blue carbon sequestration</p>	<p>Attitude & behaviour change</p>	<p>R(CM)#6 S=4 I=4 A=4 R=3 SCORE=15</p>

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy R(CC): Driving resilience & self-reliance – endurance, transition & transformation - **Catchment Community:**

Background

The people and businesses of the Burnett Mary have a fundamental stake in the wise management of the Region's natural resources. Developing the capacity of the Region to support the wellbeing and prosperity of its catchment community must be balanced with managing the potential harm from globally driven risks resulting from climate change and market forces and from locally driven risks such as invasive species and poor historic or contemporary decisions.

Responding to these challenges and the opportunities they may present, involves sharing awareness of how natural systems function and how they are likely to respond to the actions of people and nature. Framing conversations around natural capital, natural assets and natural infrastructure helps shift community worldviews towards purposefully managing natural resources for sustainable benefits and greater capacity to withstand shocks and recover without collapsing – building resilience.

Acknowledging natural assets as being held in trust, not just in title, helps non-Indigenous stakeholders move

closer to reconciliation with First Nations' notion of Country. The sense of responsibility for passing rural properties to future generations in better condition than when they came to us, is an abiding virtue in the rural ethos.

2030 Outcome: (indicators and measures)

By or before 2030, to have two (measure) NRM-allied sectors (indicator) – eg. energy, emergency services, public health ... - actively advocating the benefits of well managed natural resources as a core element of industry and community prosperity and resilience.

Baseline:

As at 1 July 2021, stakeholders in sectors within the Region including agriculture, water supply and tourism that are directly reliant upon natural resources, recognise and advocate the benefits of effective NRM. Local Government is an active participant in regional NRM. However, recognition of the benefits of well managed natural resources is at a distance from the core business concerns of some sectors that are potentially allied with NRM.

Priority actions: (info/position/implementation/social change)

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Action	Info/Position/ Implementation/ Extension	Action # & Priority
Develop a set of Regional Natural Capital Accounts linked to the Accounting for Nature (AfN) framework for environmental assets	Position (Policy & Planning)	R(CC)#1 S=5 I=5 A=5 R=3 SCORE=18
Develop an appropriate framework and prepare annual Regional Report Cards for the Burnett Mary's Natural Capital	Implementation	R(CC)#2 S=5 I=5 A=5 R=3 SCORE=18
CPW3.3(4). Develop an NRM focused curriculum that can be used by local schools to explain the importance of NRM and promote key NRM activities in the Region (also consider guest presentations at schools)	Implementation	R(CC)#3 S=4 I=4 A=4 R=3 SCORE=15
CPW3.3(1) BMRG to take lead on developing a state-wide brand campaign to develop an understanding of NRM outside of the industry and the general public around the benefits NRM brings to QLD and each region.	Attitude & behaviour change	R(CC)#4 S=4 I=4 A=4 R=3 SCORE=15
CC3. Community disaster resilience-building will be advocated and actively supported working within the State-wide/district/local prevention, preparation, response and recovery arrangements	Attitude & behaviour change	R(CC)#5 S=4 I=4 A=4 R=5 SCORE=17

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy R(LS): Driving resilience & self-reliance – endurance, transition & transformation - **Land and Soils:**

Background

The twenty first Century is building upon the soil conservation and land condition work of the past 50 years adding a focus on soil carbon, soil health and soil hydration to established practices around soil erosion, land cover and fertility.

Productivity, profitability and competitiveness remain imperatives in agriculture. However, the industrial agriculture perspective of soil as a growth medium to which chemical nutrients are added for crops, is being shaken by insights into managing soils as living systems from which sustainable productivity may be harvested.

Understanding the stocks and flows of organic and inorganic carbon in soils is becoming an established body of knowledge to support improved soil health and productivity. However, soil carbon management for carbon capture and storage is now also a burgeoning area of potential income generation for agriculture.

2030 Outcome: (indicators and measures)

By or before 2030, to have an enterprise-level natural asset account for land condition and soil health that includes both natural capital and productivity/profitability dimensions (indicator) for 5% of agricultural lands within the Region (measure).

Baseline:

As at 1 July 2021, an enterprise-level natural asset accounting scheme for land condition and soil health that includes both natural capital and productivity/profitability dimensions has yet to be developed. However, exploratory work with the owners of one enterprise has commenced.

Priority actions: (info/position/implementation/social change)



PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Action	Info/Position/ Implementation/ Extension	Action # & Priority
Prepare a regional soil health assessment	Information	D(LS)#1 S=4 I=5 A=4 R=3 SCORE=16
NRIP(L). Land: Building stable and resilient landscapes - Improve the health and stability of soil	Position (Policy & Planning)	D(LS)#2 S=5 I=4 A=4 R=3 SCORE=16
LS8. A 'leading practice' approach will be promoted to build upon existing Best Management Practice programs in the Region, focusing on fit-for-purpose Farm Management Plans and working with emerging industry majors to drive leading practice for enhanced regional reputation	Position (Policy & Planning)	R(LS)#3 S=4 I=4 A=4 R=3 SCORE=15
CPW3.6(2). Identify a framework or tool that can be used to assign/calculate both economic and non-economic values for natural resource condition (eg. land condition) and/or ecosystem services - AfN linked environmental assets accounting framework with profitability dimension	Position (Policy & Planning)	R(LS)#4 S=5 I=5 A=4 R=3 SCORE=17
Work with major stakeholders in industry to drive leading practice for enhanced regional NRM reputation	Implementation	R(LS)#5 S=4 I=4 A=4 R=3 SCORE=15

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy R(LF): Driving resilience & self-reliance – endurance, transition & transformation - **Landscape**

Function:

Background

The physical functions of landscapes are controlled by their form and composition. Seeing landscapes and their components – including slopes, floodplains, wetlands, coastlines and fuel loads - as natural infrastructure, helps us understand, and manage, the way energy and materials flow through the landscape.

Managing natural infrastructure is recognised in the Queensland Emergency Management Sector climate change adaptation plan. <https://www.disaster.qld.gov.au/cdmp/Documents/Adaptation-Plan/EM-SAP-FULL.pdf> pp. 7 & 67.

Floodplain management/reactivation, wetland management, coastal dune and mangrove protection, and bushfire management practices including cultural burning practices are examples of natural resource management practices that work with the landscape to reduce damage from natural disasters including floods, bushfires and storm surge.

The 2010/2011, 2013 and 2017 major floods that Bundaberg and large areas of the Burnett catchment have built upon long-established flood awareness and concern about flooding in the Mary River system.

The projected trend of increasingly harsh bushfire weather combined with the catastrophic 2019-20 bushfire seasons in the eastern States and south-western Western Australia in 2020-21 have brought fire management into stark relief. The Woodgate bushfire in 2019-20 and the K'gari (Fraser Island) bushfire in 2020-21 have given the Burnett Mary Region direct experience of the seriousness of this threat to the Region's communities and landscapes.

The K'gari bushfire, in particular, demonstrated the need to look beyond past fire management practice, both in managing the landscape to reduce risk and in managing the bushfire event. Consequently, all NRM stakeholders have a role in future bushfire management, supporting the bushfire management agencies – QFRS, QPWS and the Rural Fire organisations – and in purposefully addressing bushfire risk management in NRM-

The re-emergence of Aboriginal cultural burning practices is being recognised as providing vital insights into managing the landscape in a year-round responsibility to read Country and respond to its predictably changing, in-built function to both carry and extinguish fire.

Priority actions: (info/position/implementation/social change)

2030 Outcome: (indicators and measures)

By or before 2030, to have the concept of managing natural infrastructure to reduce disaster risk recognised (indicator) in two (measure) District Disaster/Emergency Management Plans and have documented assessment of flood and bushfire risk (including Aboriginal perspectives) (indicator) included by all BMRG project consortium partners (measure) in their NRM-related decisions.

Baseline:

As at 1 July 2021, District Disaster Management Plans and project consortia NRM decisions have yet to explicitly identify the benefits of or practices for managing natural infrastructure in the landscape to reduce the risk of natural disasters, although hazard reduction burning is such a practice that could be recognised.

Priority actions: (info/position/implementation/social change)

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Action	Info/Position/ Implementation/ Extension	Action # & Priority
Develop a template approach and content for including management of natural infrastructure to reduce hazards and harm from natural disasters, particularly flooding and bushfire	Position (Policy & Planning)	<p>R(LF)#1</p> <p>S=4 I=5 A=5 R=5 SCORE=19</p>
SP3. Promote the development of regionally appropriate fire management and burning regimes that integrates traditional burning practices	Position (Policy & Planning)	<p>R(BF)#2</p> <p>S=4 I=4 A=5 R=5 SCORE=18</p>
Support fire management agencies and First Nations stakeholders to manage bushfire in the Region	Implementation	<p>R(BF)#3</p> <p>S=4 I=4 A=4 R=5 SCORE=17</p>
Develop two pilot projects to demonstrate the management of natural infrastructure to reduce hazards and harm from natural disasters particularly flooding and bushfire	Implementation	<p>R(LF)#4</p> <p>S=4 I=5 A=4 R=5 SCORE=18</p>
LF2. Management of natural infrastructure including floodplains, wetlands and coastal dune systems will be advocated for their critical contribution to disaster management in dissipating the energy in extreme weather events and reducing the exposure of assets to harm	Attitude & behaviour change	<p>R(LF)#5</p> <p>S=4 I=4 A=4 R=5 SCORE=17</p>
BF2. Bushfire risk assessment and response planning will be advocated and actively supported in collaboration with industry and the community	Attitude & behaviour change	<p>R(BF)#6</p> <p>S=4 I=4 A=4 R=5 SCORE=17</p>

PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Strategy R(PA): Driving resilience & self-reliance – endurance, transition & transformation - **Plants and Animals:**

Background

As the climate changes, regional patterns of temperature and moisture shift. Natural ecosystems respond by shifting their range and adjusting their ecological linkages and component species towards those favoured by the emerging environmental conditions. This autonomous adaptation can occur until it is blocked by a barrier or the existing ecosystem collapses and is replaced by a different ecosystem.

Protecting connectivity and climate refugia in the landscape are critical for natural climate adaptation. Minimising barriers to the geographical movement of species and their habitat, and reducing ecosystem stressors including native vegetation clearing, introduced invasive species, over extraction of water and pollution, enable climate-stressed species and ecosystems to exploit opportunities to adapt. Restoration of land cover, improvement of ecosystem condition, control of introduced predators (eg. feral cats and wild pigs), and augmentation of areas of critical functional connectivity like migratory bird roosting sites, improve the prospect of survival for vulnerable species.

2030 Outcome: (indicators and measures)

By or before 2030, to have secured provision for the refugia and functional connectivity shifts of two at-risk Regional Ecosystems

Baseline:

As at 1 July 2021, in the Burnett Mary, no explicit initiatives have been developed to secure provision for anticipated shifts of at-risk Regional Ecosystems. However, substantial information and tools are available to underpin development of a purposeful approach for negotiation with stakeholders.

Priority actions: (info/position/implementation/social change)



PART 2 - STRATEGIC INTENT FOR NRM IN THE BURNETT MARY

Action	Info/Position/ Implementation/ Extension	Action # & Priority
<p>PA4. Cultural burning practices will be used to protect at-risk biodiversity species and ecosystems, including <i>Macadamia jensenii</i> – a heritage macadamia species – Bulburin nut</p> <p>The Carbon + Biodiversity pilot (Agricultural Stewardship package) will be delivered in the Burnett Mary Region</p>	<p>Position (Policy & Planning)</p> <p>Position (Policy & Planning) & Implementation</p>	<p>R(PA)#1</p> <p>S=4 I=4 A=4 R=4 SCORE=16</p> <p>R(PA)#2</p> <p>S=5 I=5 A=5 R=3 SCORE=18</p>
<p>Delivery of Land Restoration Fund biodiversity offsets projects</p>	<p>Implementation</p>	<p>R(PA)#3</p> <p>S=4 I=5 A=4 R=3 SCORE=16</p>
<p>Delivery of Biodiversity offsets projects for corporate, philanthropic and utility entities</p>	<p>Implementation</p>	<p>R(PA)#4</p> <p>S=4 I=4 A=4 R=3 SCORE=15</p>
<p>Delivery of biodiversity co-benefit credits projects under BRMG's participation in and support for the Accounting for Nature (AfN) accreditation scheme</p>	<p>Implementation</p>	<p>R(PA)#5</p> <p>S=5 I=5 A=4 R=3 SCORE=17</p>

PART 3 - MONITORING, EVALUATION, REPORTING AND IMPROVEMENT (MERI)

Key references:

NRM MERI FRAMEWORK 2009 : AUSTRALIAN GOVERNMENT NATURAL RESOURCE MANAGEMENT MONITORING, EVALUATION, REPORTING AND IMPROVEMENT FRAMEWORK

<http://nrmonline.nrm.gov.au/downloads/mql:2338/content>

Regional Land Partnerships Evaluation Plan

<http://www.nrm.gov.au/publications/regional-land-partnerships-evaluation-plan>

The MERI framework for the BMRG NRM and Climate Resilience Plan 2030 operates at the Outcome and Priority Action levels of the Plan. The Outcomes address the contemporary Outlook for NRM in the Burnett Mary Region and are focused on the topics (Matters for Outcomes) identified through review of the previous NRM Plan and priorities established in the Australian Government Regional Land Partnerships Program and the Queensland Government Natural Resource Investment Program, and other public policy and BMRG corporate policy documents. The MERI framework integrates the 'strategic frame' and the 'evaluation frame' conceptual elements of the Plan and together with the reporting and adjustment elements, completes the adaptive management cycle that underpins established MERI practice in natural resource management. Figure 2 sets out the MERI framework as a visual 'wiring diagram'.

The strategic frame reflects the simple conceptual logic of 'where do we want to be (outcome specified using indicators and measures of condition/trend), where are we now (baseline using the same indicators and measures), and how will we get there from here (prioritised actions)? The evaluation frame reflects the simple conceptual logic of 'did we do what we said we would (implement the prioritised actions), if not, why not, and if so, did we achieve the outcome (shift the measure of the indicators from the baseline to the outcome), and if not, what do we do differently (identify adjustments)?

The two critical processes involved are tracking implementation of the prioritised actions (and efficiency evaluation), and assessing the attainment of the outcomes (effectiveness evaluation). The 'machinery' of these two processes is established as part of the NRM

Plan's conceptual design.

The Australian Government NRM MERI Framework 2009 provides comprehensive guidance on outcome evaluation. In practice, the most critical matter is the specification of outcomes (and baselines) using a very small number of meaningful indicators that reflect the condition of the significant (target) asset and that can be practically and reliably measured.

The Plan sets out the outcomes and baselines, with indicators and measures, for each of the Plan's eight Strategic Directions. Because the Plan supports three narrative themes, two or three separate 'companion' Outcomes for each Strategic Direction have been developed under each theme. This allows Outcomes reflecting multiple Strategic Directions to directly support the narrative themes, and the companion Outcomes to support their common Strategic Direction.

Prioritised actions to attain the Outcomes are identified under each Outcome in Section 2.3.

Presented in the Table 3 below are the information type and sources for the indicators (and measures) for each Outcome.

Table 4 maps the 2030 Outcomes across the three Themes that create a foundations – delivery – resilience narrative for the Strategic Directions.

Table 6 sets out the key evaluation questions for each Outcome in the established MERI evaluation themes of effectiveness, efficiency, appropriateness, impact and legacy (Table 5 refers to guidance provided in the NRM MERI Framework 2009).

PART 3 - MONITORING, EVALUATION, REPORTING AND IMPROVEMENT (MERI)

Table 3 – Indicator information and sources

2030 Outcome	Indicator	Measure	Source
<i>Theme F: Strengthening the foundations</i>			
Aboriginal Cultural Heritage: By or before 2030, to have all BMRG Board Members and staff holding a reasonable working understanding of Aboriginal perspectives on NRM.	Reasonable working understanding held	# of Board Members (All) # of Staff (All)	Survey of views of First Nations consortium partners
Coastal and Marine: By or before 2030, to have the extent and condition of 80% of the Region’s coastal and marine ecosystems mapped and risk rated within a regional coastal and marine risk management framework.	Asset mapped and risk rated	% of area (80%)	BMRG data
Freshwater: By or before 2030, to have the extent and condition of 80% of the Region’s freshwater ecosystems (groundwater-dependent and surface ecosystems) mapped and risk rated within a regional freshwater risk management framework.	Asset mapped and risk rated	% of area (80%)	BMRG data
Landscape Function: By or before 2030, to have a documented flood and bushfire risk assessment for the natural resources in two substantial regional catchments.	Existence of documented assessments	# of catchments (2)	BMRG w QFES data
<i>Theme D: Meeting our commitments – effective, reliable <u>delivery</u></i>			
Aboriginal Cultural Heritage: By or before 2030, to have Aboriginal cultural knowledge and perspectives reflected in the planning and implementation of all projects commenced after 30 June 2022.	Explicit evidence	# of projects (all)	BMRG data

PART 3 - MONITORING, EVALUATION, REPORTING AND IMPROVEMENT (MERI)

<p>Climate Risk & Air Quality: By or before 2030, to have BMRG's carbon footprint lower than its level on 1 July 2021.</p>	Carbon footprint	Tons of CO ₂ /yr (<1 July 2021)	BMRG data
<p>Coastal and Marine: By or before 2030, to have the risk to five coastal or marine species or ecosystems reduced by one level in the Region's coastal and marine risk management framework.</p>	Risk to specified assets	# of specified assets (5); risk rating level (1)	BMRG data
<p>Catchment Community: By or before 2030, to have five (measure) formal consortia arrangements (indicator) established among NRM organisations, industry, consultants, government (AG/QG), councils and other participants to enable strategic alignment and resource-sharing for combined effort.</p>	Consortium arrangements	# of consortia	BMRG data
<p>Freshwater: By or before 2030, to have the risk to five freshwater (groundwater-dependent or surface freshwater) species or ecosystems reduced by one level in the Region's freshwater risk management framework.</p>	Risk to specified assets	# of specified assets (5); risk rating level (1)	BMRG data
<p>Land and Soils: By or before 2030, to have land condition of 100% of the Region's agricultural lands in the same or better condition than the 2020 baseline.</p>	Land condition	<p>% area (ha) in improved condition (cf 2020)</p> <p>% area (ha) in diminished condition (cf 2020)</p>	LCAT + Land condition assessment
<p>Landscape Function: By or before 2030, to have 50% by overall \$ value of the publicly funded NRM investments (indicator) in the Region, annually reporting their contribution to quantifiable improvements in the Region's natural capital as reported in the regional natural asset accounts and report card.</p>	Investments reporting on natural capital	% of \$ value (50%)	Regional Report Card

PART 3 - MONITORING, EVALUATION, REPORTING AND IMPROVEMENT (MERI)

<p>Plants and Animals: By or before 2030, to have the risk to five terrestrial (non-coastal, marine or groundwater-dependent or surface freshwater) species or ecosystems reduced by one level in the Region's terrestrial biodiversity risk management framework.</p>	<p>Risk to specified assets</p>	<p># of specified assets (5); risk rating level (1)</p>	<p>BMRG data</p>
<p><i>Theme R: Driving resilience & self-reliance – endurance, transition & transformation</i></p>			
<p>Aboriginal Cultural Heritage: By or before 2030, to have all Consortium members (participation leaders for each consortium member organisation) holding a reasonable working understanding of Aboriginal perspectives on NRM.</p>	<p>Reasonable working understanding held</p>	<p># of Consortium participation leaders (All)</p>	<p>Survey of views of First Nations consortium partners</p>
<p>Climate Risk & Air Quality: By or before 2030, to have ten community stakeholders (organisations or individuals) actively engaged in a climate resilience program.</p>	<p>Program engagement</p>	<p># of stakeholders (10)</p>	<p>BMRG data</p>
<p>Coastal and Marine: By or before 2030, to have doubled the CO₂e value of blue carbon projects in the Region.</p>	<p>Blue carbon projects</p>	<p>CO₂e value (2x 2020)</p>	<p>BMRG data</p>
<p>Catchment Community: By or before 2030, to have two (measure) NRM-allied sectors (indicator) – eg. energy, emergency services, public health ... - actively advocating the benefits of well managed natural resources as a core element of industry and community prosperity and resilience.</p>	<p>Explicit evidence</p>	<p># of advocate sectors (2)</p>	<p>BMRG and partners' data</p>
<p>Land and Soils: By or before 2030, to have an enterprise-level natural asset account for land condition and soil health that includes both natural capital and productivity/profitability dimensions (indicator) for 5% of agricultural lands within the Region (measure).</p>	<p>Existence of natural capital accounts</p>	<p>% of area (5%)</p>	<p>BMRG data</p>

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<p>Landscape Function: By or before 2030, to have the concept of managing natural infrastructure to reduce disaster risk recognised (indicator) in two (measure) District Disaster/Emergency Management Plans and have documented assessment of flood and bushfire risk (including Aboriginal perspectives) (indicator) included by all BMRG project consortium partners (measure) in their NRM-related decisions.</p>	<p>Explicit evidence</p>	<p># of EM Plans # of decisions (all where relevant)</p>	<p>Survey of District groups Survey of consortium partners</p>
<p>Plants and Animals: By or before 2030, to have secured provision for the refugia and functional connectivity shifts of two at-risk Regional Ecosystems.</p>	<p>Explicit evidence</p>	<p># of assets</p>	<p>BMRG and expert info</p>

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Table 4 - MAP: 2030 Outcomes across Themes

Foundations	Delivery	Resilience
Aboriginal Cultural Heritage:		
By or before 2030, to have all BMRG Board Members and staff (measure) holding a reasonable working understanding of Aboriginal perspectives on NRM (indicator).	By or before 2030, to have Aboriginal cultural knowledge and perspectives reflected in the planning and implementation (indicator) of all projects commenced after 30 June 2022 (measure).	By or before 2030, to have all Consortium members (participation leaders for each consortium member organisation) (measure) holding a reasonable working understanding of Aboriginal perspectives on NRM (indicator).
Climate Risk & Air Quality:		
	By or before 2030, to have BMRG's carbon footprint (indicator), lower than its level on 1 July 2021 (measure).	By or before 2030, to have ten community stakeholders (organisations or individuals) (measure) actively engaged in a climate resilience program (indicator).
Coastal and Marine:		
By or before 2030, to have the extent and condition of 80% of the Region's coastal and marine ecosystems mapped and risk rated within a regional coastal and marine risk management framework.	By or before 2030, to have the risk to five coastal or marine species or ecosystems (indicator) reduced by one level (measure) in the Region's coastal and marine risk management framework.	By or before 2030, to have doubled (measure) the CO ₂ e value of blue carbon projects (indicator) in the Region.

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Catchment Community:		
	By or before 2030, to have five (measure) formal consortia arrangements (indicator) established among NRM organisations, industry, consultants, government (AG/QG), councils and other participants to enable strategic alignment and resource-sharing for combined effort.	By or before 2030, to have two (measure) NRM-allied sectors (indicator) – eg. energy, emergency services, public health ... - actively advocating the benefits of well managed natural resources as a core element of industry and community prosperity and resilience.
Freshwater:		
By or before 2030, to have the extent and condition of 80% of the Region’s freshwater ecosystems (groundwater-dependent and surface ecosystems) mapped and risk rated within a regional freshwater risk management framework.	By or before 2030, to have the risk to five freshwater (groundwater-dependent or surface freshwater) species or ecosystems (indicator) reduced by one level (measure) in the Region’s freshwater risk management framework.	
Land and Soils:		
	By or before 2030, to have land condition (indicator) of 100% of the Region’s agricultural lands in the same or better condition (measure) than the 2020 baseline.	By or before 2030, to have an enterprise-level natural asset account for land condition and soil health that includes both natural capital and productivity/profitability dimensions (indicator) for 5% of agricultural lands within the Region (measure).

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Landscape Function:		
By or before 2030, to have a documented flood and bushfire risk assessment (indicator) for the natural resources in two substantial regional catchments (measure).	By or before 2030, to have 50% by overall \$ value (measure) of the publicly funded NRM investments (indicator) in the Region, annually reporting their contribution to quantifiable improvements in the Region’s natural capital as reported in the regional natural asset accounts and report card.	By or before 2030, to have the concept of managing natural infrastructure to reduce disaster risk recognised (indicator) in two (measure) District Disaster/Emergency Management Plans and have documented assessment of flood and bushfire risk (including Aboriginal perspectives) (indicator) included by all BMRG project consortium partners (measure) in their NRM-related decisions.
Plants and Animals:		
	By or before 2030, to have the risk to five terrestrial (non-coastal, marine or groundwater-dependent or surface freshwater) species or ecosystems (indicator) reduced by one level (measure) in the Region’s terrestrial biodiversity risk management framework.	By or before 2030, to have secured provision for the refugia and functional connectivity shifts of two at-risk Regional Ecosystems

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Table 5 – Key evaluation questions

[SOURCE: NRM MERI FRAMEWORK 2009 : AUSTRALIAN GOVERNMENT NATURAL RESOURCE MANAGEMENT MONITORING, EVALUATION, REPORTING AND IMPROVEMENT FRAMEWORK](#)

Appropriateness

- To what extent is the program aligned with the needs of the intended beneficiaries?
- To what extent is the program compliant with recognised best practice processes in the field—e.g. the type, level and context of investment and associated activities?

Impact

- In what ways and to what extent has the program or initiative contributed to changing asset condition and management practices and institutions?
- What, if any, unanticipated positive or negative changes or other outcomes have resulted?
- To what extent were the changes directly or indirectly produced by the program interventions?

Effectiveness

- To what extent have the planned activities and outputs been achieved?
- Are current activities the best way to maximise impact or are there other strategies that might be more effective?
- To what extent is the program attaining, or expected to attain, its objectives efficiently and in a way that is sustainable?

Efficiency

- To what extent has the program attained the highest value out of available resources?
- How could resources be used more productively and efficiently?
- What could be done differently to improve implementation, and thereby maximise impact, at an acceptable and sustainable cost?

Legacy

- Will the program's impacts continue over time and after the program ceases?
- How should the legacy be managed and by whom?

To inform future approaches to management and investment, for each of the above questions it will be important to ask why the change has or has not occurred."

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Table 6 - Looking back from 2030 ... (key evaluation question) ... ?

Outcomes within Themes	Key evaluation questions
Aboriginal Cultural Heritage:	
Effectiveness	To what extent do First Nations project partners agree that BMRG and its non-Indigenous staff, Board Members and project partners share a working understanding of First Nations NRM perspectives?
Efficiency	Were actions to achieve the outcomes implemented and to what extent was implementation guided by First Nations project partners?
Appropriateness	To what extent has the pursuit of these Outcomes reflected appropriate and respectful engagement of First Nations stakeholders in regional NRM in the Burnett Mary?
Impact	In what tangible ways are First Nations' knowledge, practices and perspectives evident in management of Region's natural assets (including social/cultural & economic dimensions)?
Legacy	To what extent is Aboriginal NRM now a mainstream expectation of regional NRM programs?
Climate Risk & Air Quality:	
Effectiveness	To what extent has BMRG's carbon footprint been reduced and has BMRG been able to influence stakeholders in the NRM community to engage actively in climate risk management?
Efficiency	To what extent and how quickly was the cost and responsibility of decarbonisation and climate risk management taken up by regional NRM stakeholders and what could have been done differently?
Appropriateness	To what extent has BMRG's leadership by example and facilitation of uptake by allied stakeholders enabled ready adoption of decarbonisation and climate risk management in regional NRM in the Burnett Mary?
Impact	What tangible evidence is there that permanent decarbonisation has been achieved and that the risks of climate change-related harm to the assets, systems and services of the Region's NRM stakeholders are being well managed?
Legacy	To what extent are low-carbon/no-carbon options affordably accessible and climate risk management established as mainstream expectations among the Region's NRM stakeholders?

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Coastal and Marine:	
Effectiveness	To what extent are the Region’s coastal and marine ecosystems mapped and their risks assessed? To what extent are the Region’s blue carbon sequestration opportunities known?
Efficiency	To what extent has a risk management approach enabled prioritisation of investment in coastal and marine biodiversity projects?
Appropriateness	To what extent has a risk management approach secured the future of at-risk coastal and marine ecosystems and species?
Impact	What tangible evidence is there that the risk to at-risk coastal and marine ecosystems and species has been reduced? To what extent have the Region’s blue carbon sequestration opportunities been brought to market?
Legacy	To what extent are the prospects for at-risk coastal and marine ecosystems and species now better able to be secured? To what extent are the Region’s blue carbon sequestration contributions recognised in the Queensland and Australian carbon sequestration context?
Catchment Community:	
Effectiveness	To what extent have consortia of partners around common NRM interests been established and maintained?
Efficiency	To what extent have consortia of partners around common interests reduced potential duplication, confusion or complexity in pursuing and achieving NRM outcomes in the Burnett Mary?
Appropriateness	To what extent has the establishment and nurturing of consortia of partners around common interests enabled achievement of NRM outcomes?
Impact	What tangible evidence is there that having consortia of partners has built advocacy for and championship of cooperation and collaboration around common NRM interests?
Legacy	To what extent are the benefits of well managed natural resources widely recognised as a core element of industry and community prosperity and resilience in the Burnett Mary?
Freshwater:	
Effectiveness	To what extent are the Region’s freshwater ecosystems mapped and their risks assessed?
Efficiency	To what extent has a risk management approach enabled prioritisation of investment in freshwater biodiversity projects?

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Appropriateness	To what extent has a risk management approach secured the future of at-risk freshwater ecosystems and species?
Impact	What tangible evidence is there that the risk to at-risk freshwater ecosystems and species has been reduced?
Legacy	To what extent are the prospects for at-risk freshwater ecosystems and species now better able to be secured?
Land and Soils:	
Effectiveness	To what extent has the assessed land condition and trend of the Region's agricultural lands changed? To what extent is the soil health and trend of the Region's agricultural lands known?
Efficiency	To what extent has a focus on natural capital accounting linked to profitability enabled enhanced land management decision-making in the Burnett Mary?
Appropriateness	To what extent has a focus on natural capital accounting linked to profitability been taken up by land managers in the Burnett Mary?
Impact	What tangible evidence is there that a focus on natural capital accounting linked to profitability has improvements in land condition, improvements in soil health and delivered quantifiable benefits to land managers in the Burnett Mary?
Legacy	To what extent has a focus on natural capital accounting linked to profitability become mainstream among land managers in the Burnett Mary?
Landscape Function:	
Effectiveness	To what estimated extent has reflecting the concepts of improving natural capital, managing natural infrastructure and flood and bushfire risk assessments in investment and natural disaster decision-making reduced harm from natural disasters in the Region?
Efficiency	To what estimated extent have the practical requirements to report improvements in natural capital from NRM investments and to specifically acknowledge the management of natural infrastructure in disaster management (including Aboriginal perspectives), been part of decision-making about natural resource management matters?
Appropriateness	To what extent are stewardship of natural capital, managing natural infrastructure and flood and bushfire risk assessments considered by natural resource managers, including local governments and emergency services actors, to be salient to their decision-making?

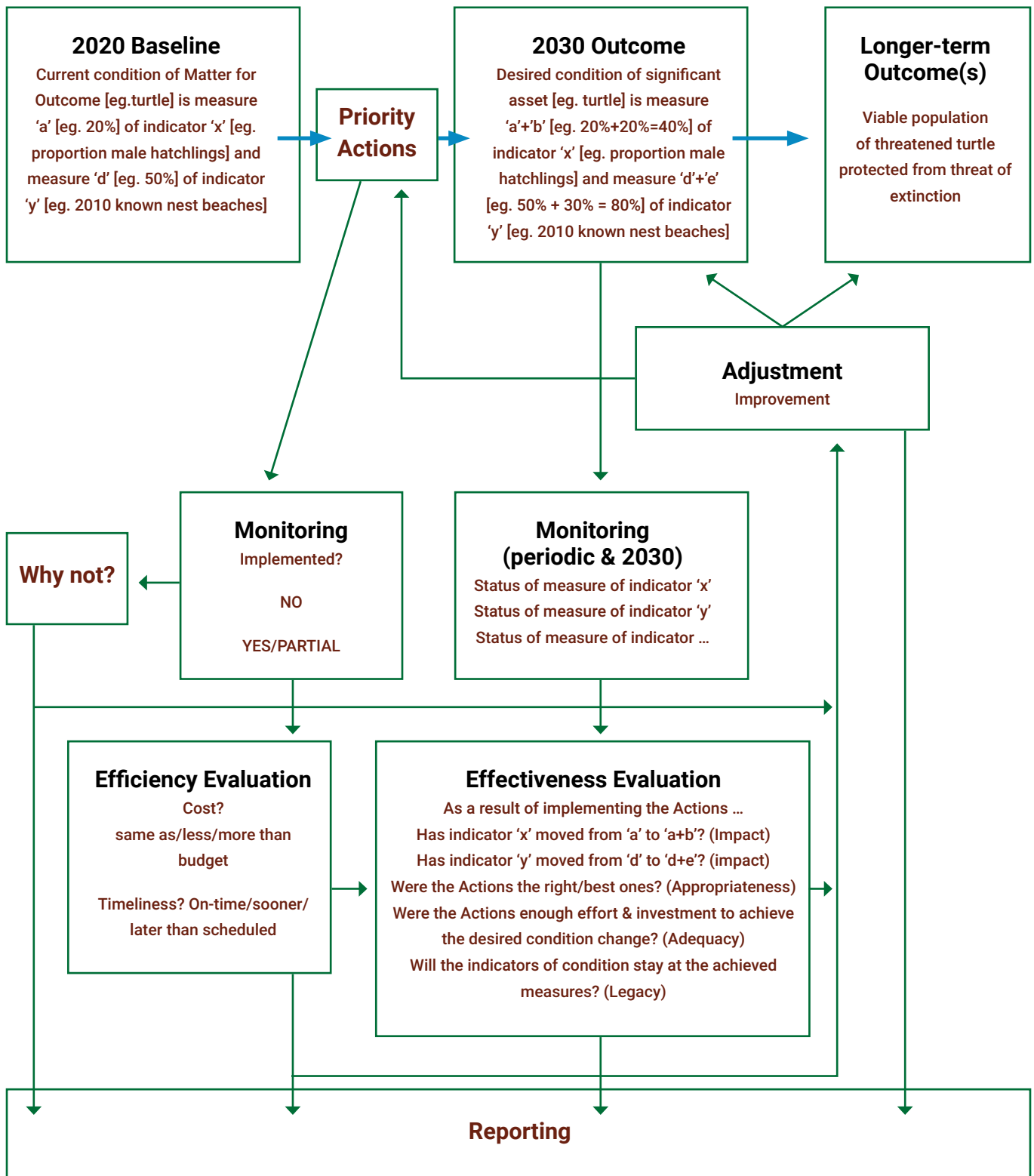
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Impact	What tangible evidence is there that stewardship of natural capital, management of natural infrastructure and preparation of flood and bushfire risk assessments have explicitly affected NRM, land use and disaster management decision-making, and in particular, reflecting consequential bushfire management changes in response to enhanced understanding of Aboriginal cultural burning practices, and the effects of climate change?
Legacy	To what extent has understanding of landscape function become a mainstream expectation of land use decision-making?
Plants and Animals:	
Effectiveness	To what extent are the Region's terrestrial ecosystems mapped, their risks assessed and their projected climate refugia and connectivity requirements estimated?
Efficiency	To what extent has a risk management approach enabled prioritisation of investment in terrestrial biodiversity projects, including protection of likely climate refugia and connectivity?
Appropriateness	To what extent has a risk management approach secured the future of at-risk terrestrial ecosystems and species?
Impact	What tangible evidence is there that the risk to at-risk terrestrial ecosystems and species has been reduced?
Legacy	To what extent are the prospects for at-risk terrestrial ecosystems and species now better able to be secured? To what extent are the prospects for all at-risk coastal, marine, freshwater and terrestrial biodiversity now better able to be secured in relation to the projected effect of climate change and the consequential effects on species and ecosystems?

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Figure 2 - BMRG NRM Plan Update MERI Framework

(Outcome – condition specified using indicators with measures of change in status of indicators)



PART 4 - NRM STAKEHOLDER ENGAGEMENT

4.1 Stakeholder engagement

Stakeholder engagement in updating the Burnett Mary Regional NRM and Climate Resilience Plan 2030 has four important dimensions. The first is the Region's ongoing engagement process through collaborative project delivery, project consortia and annual Community Prioritisation Workshops. These have generated a substantial body of contributions to the updating process for inclusion in the draft content of the updated Plan.

The second dimension is the relationships being broadly built with the Region's First Nations stakeholders. This update of the Region's NRM Plan includes Outcomes for the Aboriginal Cultural Heritage Strategic Direction that empowers First Nations consortium partners to determine the extent to which these Outcomes are being achieved.

The third dimension is the information/consultation/participation of key stakeholders in reviewing drafts and/or summary presentations of the updated NRM Plan content in online workshop sessions, direct discussions and the 2021 Community Prioritisation Workshops. This led to refinement of the Strategic Directions for Climate Risk & Greenhouse Gases and Landscape Function, better specification of concern around particular at-risk threatened species in the Mary and Burnett river systems, and refinement of the updated Plan's compelling proposition, as specific examples of significant stakeholder influence in the plan update process.

The fourth dimension of engagement is the design of the updated Plan as a dynamic on-line presence. The adjustments and protocols set out in Sections 4.2 and 4.3 below provide the machinery for maintaining the currency of the Region's NRM and Climate Resilience Plan as an on-going activity rather than by periodic review. This approach is an element of BMRG's digital transformation initiative.

4.2 Adjustments to the 2015-20 NRM Plan web presence

Website updating – desired functionality:

1. **Ability to interrogate the content by narrative theme** – what's happening about strengthening the foundations of NRM practice in the Region? Or about reliable service delivery – what 'business as usual is

underway or planned? Or about building resilience, especially to the effects of climate change?

2. **Ability to interrogate the content by each of the nine strategic directions** – for any strategic direction, what's the flow between the three narrative themes?

3. **Interactivity with registered (free registration) members of the public (Burnett Mary Region's NRM constituency)** – questions and comments, feedback on the NRM Plan, upload of appropriate content (case studies, progress reports, reflections, insights and lessons learnt).

4.3 Adjustment protocols

The Burnett Mary Regional NRM and Climate Resilience Plan is a dynamic tool that is intended to respond to challenges and opportunities as they emerge and recede in the regional natural resource management environment. The Plan is intended to be responsive to stakeholder input and feedback as an on-going capability. It is intended to respond to the results of its MERI component – annually for tracking of Actions and periodically for evaluation of achievement of Outcomes - putting into place the Improvement element of MERI, without requiring a complete rebuild. Making such responsiveness possible requires a set of protocols for adjusting the web presence of the Plan.

Anticipated adjustments increase in impact and complexity from:

- updating progress of implementation of existing Actions;
- adding, changing or deleting Actions;
- adding, changing or deleting Outcomes and Baselines;
- adding, changing or deleting Strategic Directions;
- refreshing the Compelling proposition (Vision / Mission) or Themes.

4.3.1 Updating progress of implementation of existing Actions

Updating the progress of implementing Actions and adding/updating information, case studies, showcases, profiles, factsheets and similar about activities that contribute to the implementation of Actions and consequential achievement of outcomes is a routine responsibility of BMRG Project Managers. Adjustments

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to the Plan's web presence is facilitated and moderated for BMRG corporate quality control by the Manager, Digital Transformation.

4.3.2 Adding, changing or deleting Actions

Maintaining the currency and completeness of the Actions identified in the Plan is the routine responsibility of the Executive Manage Team and its delegate(s) for assuring Plan content. Reviewing this responsibility is a quarterly standing item on EMT Agendas.

4.3.3 Adding, changing or deleting Outcomes and Baselines

Maintaining the currency and completeness of the Outcomes identified in the Plan is the responsibility of the Executive Manage Team and its delegate for assuring Plan currency (nominally the Manager, Natural Capital). Reviewing the Plan's Outcomes is a periodic item on EMT Agendas where circumstances indicate a substantive driver.

An example of a substantive driver of a change to the Plan's Outcomes may be an emerging government policy that targets one of the Theme/Strategic Direction intersections for which there is currently no Outcome in the Plan. For instance, an emerging policy around better understand floodplain management may require an additional Outcome in the Strengthening the foundations Theme for the Landscape function Strategic Direction.

4.3.4 Adding, changing or deleting Strategic Directions, and

Refreshing the Compelling proposition (Vision / Mission) or Themes

Maintaining the currency of the Plan's Strategic Directions and higher order objectives is the responsibility of the Chief Executive Officer supported by the Executive Manage Team. Reviewing the Plan's Strategic Directions and higher order objectives is a periodic item on BMRG Board Agendas concurrent with the Board's strategic planning cycle, or as otherwise determined by the Chief Executive Officer and Board.

