

Implementation of the Burnett Mary NRM and Climate Adaptation Plan 2015

PROGRAM of ACTIVITIES

This document is a “first step” in terms of reporting implementing activities across the region that address this plan’s targets. It is supported by a spreadsheet that details targets, suggested activities and implemented (funded) programs / projects for each regional asset. Both documents can be readily updated as new information becomes available, to develop a record of target-related actions undertaken, and identify those targets that are NOT supported by investment – the gaps.

Background

In 2013 the Burnett Mary Regional Group (BMRG) was contracted by the Australian Government (AG) to review and update the region’s natural resource management plan. The update was to include a comprehensive consideration of the impacts of projected climate change on natural assets, engage regional stakeholders and identify opportunities for landscape storage of carbon. The project was contracted at the end of an AG term characterised by a focus on climate change policy and an unsuccessful attempt to develop an Emissions Trading Scheme. The regime of the replacement AG focused climate change activities on direct actions by proponents, delivered through an Emissions Reduction Fund that used an auction process to determine successful proponents. Simultaneously, the Queensland Government (QG) was withdrawing funding to a wide range of Queensland groups on the basis that it would not fund activities already funded through the AG. It was against this changing policy backdrop that this plan review process was initiated and finalised.

Stakeholder engagement in the project to develop the *Burnett Mary NRM and Climate Adaptation Plan 2015* commenced mid-2014. A Maryborough summit, highlighting the regional impacts of climate change and open to all sectors of the community, was convened and addressed by leading climate scientists and policy makers. Community scenario planning workshops across the region followed the summit, along with the first round of workshops supported by scientists and regional experts. They considered the detailed implications of region-specific climate change projections on the region’s biophysical assets.

The revised plan clearly concentrates on non-statutory activities that will deliver its asset targets. These targets arose from *expert panel* review and updating of the previous plan’s targets, in early 2015. Further, expert panel members suggested target-aligned activities that would help to achieve the plan’s targets. Where confident, they ascribed a priority to the proposed actions.

The draft plan was released for public comment between August and October, 2015. A review of current funded activities, aligned to the targets, was undertaken during this time. The results of that review have informed development of this implementation approach.

BMRG's role in plan implementation

The *Burnett Mary NRM and Climate Adaptation Plan 2015* is a whole-of-region plan; its strategic approach is designed to **enable** future investment in management of the region's natural assets. The plan's implementation is not the sole responsibility of BMRG. BMRG, through the devolved programs and projects it directly delivers, will retain a significant role in implementation. The region's key catchment management groups – the Burnett Catchment Care Association and the Mary River Catchment Coordinating Committee – as well as other community organisations, such as Coastcare and Landcare groups, and local governments – all play critical roles in implementing the *Burnett Mary NRM and Climate Adaptation Plan 2015*.

BMRG's strategic plan highlights the importance of the revised natural resource management plan to its future directions. Future on-ground BMRG activities, projects and grant applications will be required to demonstrate alignment against the plan's targets and/or identified activities. The targets and activities are incorporated into enQUIRE, the online management system used by BMRG and Queensland's other regional NRM groups to manage programs and projects. This will also assist reporting to funding providers and inform progress toward meeting the plan's targets.

'SNAPSHOT' - BURNETT MARY NRM INVESTMENT HISTORY

BMRG is primarily funded by government, with occasional project / program funds sourced from other organisations such as Flora and Fauna International. In turn, BMRG "contracts out" to landholders, catchment and/or industry groups to deliver programs and projects. Those same groups also pursue funding for their activities so that, as well as being collaborators for program delivery and lobbying, the groups also compete for available funding.

The nature of government investment in on-ground NRM has changed considerably since regional groups such as BMRG were established. There has been a transition from untied funding allocations to address documented regional priorities, to stipulated outcomes under the AG *Caring for our Country* program, to the current focus on program-specific outcomes, such as improved water quality of Reef lagoon inflows.

The imperative to deliver contracted outcomes, rather than direct activity to identified regional priorities, has resulted in a loss of "big picture" focus for BMRG and the region's other NRM stakeholders. The revised regional NRM plan and this activity reporting framework provide a pragmatic mechanism for regionally assessing how investment in NRM activities relates to the region's assets. Thereafter, it would be possible to refine this approach and develop a strategy for monitoring the effectiveness of investments. Broader engagement of the region's NRM operators is key to the success of such a venture.

Overview – current plan targets, aligned activities and gaps

As a first step in reviewing current implementation activities, a compilation of all of the plan’s 2020 targets¹ and aligned activities across the dimensions – *planning and governance, on-ground, community capacity building and science* – was prepared using information extracted from the plan’s four Asset Background Reports². Senior BMRG officers identified current and recently completed programs/projects (previous 12 months) that deliver on the targets. These activities extend beyond those directly managed by BMRG. This exercise highlighted facets of the regional natural resource agenda that are well supported by current programs and those that are NOT well supported i.e. THE GAPS. At present there is no systematic mechanism for capturing other funded activities or the voluntary, self-funded efforts of local groups, businesses and individuals instituting on-ground works and delivering initiatives that address, at local-scale, delivery against the plan’s targets.

Tables reflecting information captured using the “Targets and Programs” spreadsheet, for each plan asset, are shown in Appendices 2 – 7. Each displays the asset targets and aligned activities, as well as current programs/projects.

An overview and narrative, specific to each asset, is presented in the following sections.

Definitions

- Currently addressed:** *list of activities³ funded now, or in the last 12 months - plus supporting comment (optional)*
- No/Limited current (known) activities:** *list of activities NOT currently or recently funded - plus supporting comment (optional)*
- Priorities – ongoing:** *current activities supported by continuing funding*
- Priorities – emerging:** *high priority unfunded activities for which funding will be sought*

Aboriginal Cultural Heritage – targets, recommended activities and current initiatives

<p>Currently addressed: 1.2, 1.3, 2.3, 2.5, 2.6, 3.4, 3.5, 3.6, 4.1, 4.2, 4.4 Over recent years, the focus of BMRG’s indigenous programs has been on strengthening the capacity of Indigenous groups, raising Indigenous awareness to the community and protecting culturally significant sites.</p>
<p>No/Limited current (known) activities: 1.1, 1.4, 2.1, 2.2, 2.4, 2.7, 3.1, 3.2, 3.3, 4.3, 4.5, 4.6 Further work on strengthening partnerships and recognition of cultural significance with other organisations, particularly councils, is required.</p>
<p>Priorities – ongoing: 1.2, 2.3, 2.5, 2.6, 3.5, 3.6, 4.1, 4.4 Awareness raising and the protection of cultural sites needs to continue to maintain and enhance the cultural landscape.</p>
<p>Priorities – emerging:</p>

¹ Appendix 1 details all of the plan’s 2020 targets

² See <http://nrmpplan2015.bmrg.org.au/links-and-resources/>

³ Aligned activities identified in Asset Background Reports and captured in supporting spreadsheet to this document

1.3, 3.1

Building real and meaningful partnerships between Indigenous groups and other organisations (in particular local councils) where both parties are respected and their input valued, is a high priority activity that needs to be addressed.

Air and Climate – targets, recommended activities and current initiatives

<i>Currently addressed:</i>
<i>No/Limited current (known) activities:</i>
<i>Priorities – ongoing:</i>
<i>Priorities – emerging:</i>

**This asset is currently LEAST supported by BMRG-delivered activities. Traditionally air quality and climate-related issues have received scant recognition in regional NRM plans. However, it is anticipated that international attention on atmosphere-related matters, focused by the United Nations Paris Climate Change Conference, will result in greater regional activity levels.*

Coastal and marine – targets, recommended activities and current initiatives

<i>Currently addressed:</i>
<i>No/Limited current (known) activities:</i>
<i>Priorities – ongoing:</i>
<i>Priorities – emerging:</i>

WORK IN PROGRESS

Freshwater – targets, recommended activities and current initiatives

Currently addressed:

No/Limited current (known) activities:

Priorities – ongoing:

Priorities – emerging:

WORK IN PROGRESS

Land and Soils – targets, recommended activities and current initiatives

Currently addressed:

No/Limited current (known) activities:

Priorities – ongoing:

Priorities – emerging:

WORK IN PROGRESS

Plants and Animals – targets, recommended activities and current initiatives

Currently addressed:

1.1, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.10, 3.4, 3.5, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.15

BMRG’s biodiversity program aims to deliver activities to mitigate threatening processes and the negative effect this is having on threatened species, ecosystems and key supporting habitat.

No/Limited current (known) activities:

1.2, 1.3, 1.4, 1.11, 1.12, 2.8, 2.9, 2.11, 2.12, 2.13, 2.14, 2.15, 3.1, 3.2, 3.3, 3.6

Promote incentives and/or delivery mechanisms that provide new opportunities to achieve priority conservation outcomes within the region.

Priorities – ongoing:

1.1, 1.5, 1.6, 1.7, 1.8, 1.9, 1.10, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7, 2.9, 2.10, 2.14, 2.15, 3.4, 3.5, 3.7, 3.8, 3.9, 3.10, 3.11, 3.12, 3.13, 3.14, 3.15

Continue to support existing and new partnerships to achieve priority conservation outcomes, understand the effectiveness of prescribed actions and define future needs.

Priorities – emerging:

1.2, 1.3, 1.4, 1.6, 1.11, 1.12, 2.3, 2.4, 2.5, 2.6, 2.8, 2.9, 2.10, 2.11, 2.12, 2.13, 2.14, 2.15, 3.1, 3.2, 3.3, 3.4

Encourage the use of evidence based planning, resources assessment and prioritisation methods to clearly demonstrate regional gaps and priorities for investment.

Future ‘tracking’ of NRM plan implementation

This document and its supporting spreadsheet provide a means of capturing *current status* high-level information regarding implemented activities across the Burnett Mary region that address the NRM plan’s targets. The current version provides a “first cut”, built largely on the input of key BMRG personnel and reflecting the status of plan-aligned, on-ground works at the end of 2015.

Annually, there will be a review of delivered on-ground works against the plan targets and activities. The spreadsheet of plan targets, recommended activities and funded programs and projects is straightforward approach to capturing relevant information. In turn that data can be used to inform this document’s update, providing an overview of activities and supporting narrative, as well as a growing record of regional activity.

“Asset champion” groups with membership beyond BMRG, and focused on “key players” involved in delivering on-ground activities and research relevant to the assets, will be convened. Members might be drawn from Qld and local government, research institutions, cultural heritage bodies, catchment groups and Landcare / Coastcare groups.

Periodic meetings of such groups, to capture updated information about the status of relevant programs and projects, will also provide important regional networking opportunities for NRM professionals. The demise of the Wide Bay Burnett Environment and Natural Resources Working Group, convened to support development of the Wide Bay Burnett Environment and Natural Resource Management Plan 2012-2031, has left a regional “collaboration void”. Reinstating a similar broad group has great potential for improved co-ordination and more efficient delivery of on-ground natural resource management activities.

Future Australian and Queensland Government arrangements for the delivery of on-ground natural resource management activities are uncertain. Limited current QG funding for Burnett Mary regional NRM works, and a general winding-back of AG investment, are critical concerns at the time of finalising this NRM plan – November, 2015. The steps above constitute a pragmatic approach to retaining a “big picture” region-wide NRM focus and fostering all-important collaboration between those Burnett Mary residents and group members engaged in better management of the region’s natural wealth.

Appendix 1. Strategic directions and 2020 targets for assets – Burnett Mary NRM and Climate Adaptation Plan 2015

Aboriginal Cultural Heritage

Strategic direction: Land and sea country values that focus the guardianship of Aboriginal people in the Burnett Mary region are widely acknowledged across the entire community.

ACH1. The knowledge base of Aboriginal cultural heritage is documented and informs land and sea cultural management plans.

ACH2. Traditional Owners undertake on-ground assessment, protection and management of areas of cultural significance.

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.

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.

Air and Climate

Strategic direction: The region makes its contribution to mitigation measures that reduce atmospheric carbon releases and address state and national air quality targets.

A1. The effect of air contaminant levels on the community will be maintained at or below 2015 levels.

A2. Education and extension initiatives that improve the community’s understanding of climate change causes, effects and mitigation measures are delivered.

A3. Participation in schemes that encourage bio-sequestration, using the carbon storage capacity of vegetation and soils, will exceed the 2015 baseline.

A4. Regional initiatives to reduce greenhouse gas emissions and atmospheric carbon releases will exceed 2015 levels.

Coastal and Marine

Strategic direction: Coastal, estuarine and marine resources and their processes:

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

Physical and biological processes

CM1. Critical ecological connections (interactions) and processes are identified.

CM2. Surface water and groundwater flows are measured and maintain ecological connections that underpin coastal values.

CM3. Geomorphological processes (including riverine and shoreline) maintain or restore sediment transport that sustains beaches and coastal dunes.

Coastal, estuarine and marine habitats

CM4. The extent of all coastal, estuarine and marine benthic habitats will be known and a baseline created.

CM5. The function and value of all coastal, estuarine and marine benthic habitats are improved or maintained.

CM6. There is no net loss of the extent of natural wetlands.

CM7. There is an improvement in the ecological processes and environmental values of natural wetlands.

Coastal, estuarine and marine plants & animals

CM8. There is no adverse change in biological diversity in coastal, estuarine and marine species.

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.

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.

Freshwater

Strategic direction: Freshwater ecosystems of the region are healthy; their protection and management is underpinned by an increased public appreciation of their value and vulnerability to changes in landscape features, climate and human activity.

Function

F1. The ecological function of water dependent ecosystems is improved from the 2015 baseline.

Connectivity

F2. The ecological connectivity within and between freshwater habitats (both aquatic and terrestrial) and the marine interface is improved from the 2015 baseline.

Understanding

F3. The ecological importance and sensitivities of the region's freshwater assets is better understood, more widely appreciated and more thoroughly considered in planning.

Water quality

F4. The quality of riverine, coastal, estuarine and marine waters will improve in order to, at least, meet accepted water quality objectives.

Land and Soils

Strategic direction: Land condition and soil health within the region will be maintained or improved.

Soil salinity

LS1. Salinity extent and severity is maintained at the 2015 baseline. MODERATE

Soil acidification

LS2. Soil acidification is maintained at the 2012 baseline for agricultural land. LOW

Soil organic matter

LS3. Soil Organic Matter is maintained at the 2012 baseline for agricultural land. MODERATE

Erosion

LS4. Sheet erosion risk, stream bank erosion risk and gully erosion extent and severity do not exceed 2015 baseline levels. HIGH

Acid sulfate soils

LS5. The extent of acidification caused by the disturbance of Acid Sulfate Soil does not exceed the 2015 baseline. LOW

Cropping Land

LS6. The extent of suitable Cropping Land (i.e. cropping, horticulture and plantation forestry) is maintained at the 2015 baseline. HIGH

Grazing Land

LS7. Ground cover of grazing lands is maintained at the 2015 baseline. HIGH

Plants and Animals

Strategic direction: Healthy vegetation communities, associated landscape processes and habitat values are maintained across the region.

Extent




PA1. The extent of the region's vegetation communities will be maintained at the 2013 baseline.

Diversity

PA2. The diversity of vegetation communities will be maintained at 2013[1] levels and opportunities for sustaining species' populations, particularly those that are threatened[2], will be improved.




Landscape function

PA3. Landscape function is enhanced through activities that address threatening processes.

ABORIGINAL CULTURAL HERITAGE - Land and sea country values that focus the guardianship of Aboriginal people in the Burnett Mary region are widely acknowledged across the entire community.				
Target	Knowledge	On-ground action	Working relationships	Recognition
	ACH1. The knowledge base of Aboriginal cultural heritage is documented and informs land and sea cultural management plans.	ACH2. Traditional Owners undertake on-ground assessment, protection and management of areas of cultural significance.	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.	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.
Recommended activities		 Priority 1 (highest)	 Priority 2	 Priority 3
<u>Planning & Governance</u>	ACH1.1 Aboriginal input to local government planning schemes: Communicate key triggers for involvement in Planning Scheme reviews; Identify key representation for planning scheme input through registered Cultural Heritage bodies; Engage Local Government Association of Queensland to encourage increased engagement with Traditional Owners in planning scheme reviews and development.	ACH 2.1 Internal group workshop to prioritise specific areas: Supporting the development of management plans for areas of cultural significance. Support participation of Traditional Owner's in decision making bodies for areas of cultural significance.	ACH 3.1 Traditional Owner input to local government planning at an early stage: Develop cultural heritage planning triggers (these may relate to criteria used in predictive modelling). Explore the use of the BMRG cultural database to inform land use planning.	ACH 4.1 Cultural awareness education and cultural interpretations. School resource packages developed by TO groups built into school curriculum or activities where possible. Communications plan developed to ensure projects and activities within this regional plan are well known and understood.
	ACH1.2 Elevate the importance of local knowledge and incorporate in the development assessment process: Ensure/promote effective engagement with Traditional Owner representatives regarding development assessment. This links with ensuring compliance with the ABORIGINAL CULTURAL HERITAGE ACT 2003; Support connecting with appropriate representatives, and access to cultural knowledge.	ACH 2.2 Cultural Heritage Group / Elders decide on protection and management requirements (e.g. through elders meetings): Protocols for on-ground site protection works developed by individual TO groups or by regional TO group. This could include general agreement for fencing, revegetation or other NRM activities that support the protection of sites.	ACH 3.2 Change legislation to mandate TO / local Aboriginal input into planning on all levels by State and Local government: ACH 3.3 Use the Wide Bay Burnett Planning Advisory Group to promote the interests of Aboriginal people:	
<u>On-ground</u>		ACH 2.3 Support and facilitate investment into Aboriginal heritage rehabilitation projects throughout the region. Prioritisation for areas that have cultural heritage management plans developed.	ACH 3.4 On-ground partnership development through the implementation of cultural heritage management plans.	ACH 4.2 Interpretive and communications products distributed. BMRG Cultural Database used as a communication and educational tool.
<u>Community capacity building</u>	ACH 1.3 Increase capacity of groups to map, record and keep their significant places: Explore options for groups to map and record significant sites. Increase capacity for groups to develop and implement cultural heritage management plans.	ACH 2.4 Foster partnerships with other organisations who can assist with the protection of significant sites. This could involve training, governance support, planning assistance or on-ground works.	ACH 3.5 Local partnership delivery between Traditional Owners, Aboriginal organisations, NRM organisations/groups, Governments and Registered Training Organisations to build capacity for cultural heritage and NRM activities.	ACH 4.3 The tourism industry promotes Aboriginal values in its advertising and guiding. Ensure that appropriate local Aboriginal input informs tourism industry promotions:
		ACH 2.5 Cultural heritage training – traditional knowledge / succession planning activities: Support the development of training programs for Traditional Owners, focusing on Conservation and Land Management - Indigenous Land Management stream.	ACH 3.6 Indigenous Awareness training for non-Indigenous groups and individuals.	ACH 4.4 Incorporate local and area-specific Aboriginal tribal knowledge into the school curriculum

		ACH 2.6 Explore funding opportunities to assist groups maintain and protect significant sites		ACH 4.5 Ensure broad understanding that Aboriginal knowledge is specific to local Aboriginal people and that there are many different tribes and customs
				ACH 4.6 Source funding to support local Aboriginal people to engage with schools and other organisations.
<u>Science</u>	ACH 1.4 Develop a strategy about how to use the knowledge: Science investigating the application of TEK to contemporary NRM/land and sea management. Develop a clearer definition and understanding of what TEK is.	ACH 2.7 Explore the use of predictive modelling to prioritise areas for cultural heritage assessments		

AIR & CLIMATE - The region makes its contribution to mitigation measures that reduce atmospheric carbon releases and address state and national air quality targets.

Target	Air contaminants	Community education	Carbon storage	Greenhouse gas release
	A1. The effect of air contaminant levels on the community will be maintained at or below 2015 levels.	A2. Education and extension initiatives that improve the community’s understanding of climate change causes, effects and mitigation measures are delivered.	A3. Participation in schemes that encourage bio-sequestration, using the carbon storage capacity of vegetation and soils, will exceed the 2015 baseline.	A4. Regional initiatives to reduce greenhouse gas emissions and atmospheric carbon releases will exceed 2015 levels.
Suggested activities	 Priority 1 (highest)	 Priority 2	 Priority 3	
<u>Planning & Governance</u>	A1.1 Use available local government strategies and projects to address activities adversely impacting air quality, especially those activities below regulatory thresholds.	A2.1 Ensure that plans and strategies across the region that address matters impacted by climate change are underpinned by current, best-available climate projections and supporting information.	A3.1 Ensure relevant plans across the region encourage, rather than discourage or are neutral to, activities that increase carbon storage in soils and vegetation.	A4.1 Ensure relevant plans across the region encourage, rather than discourage or are neutral to, activities that minimise greenhouse gas releases.
<u>On-ground</u>	A1.2 Pursue and deliver incentives programs aimed at reducing air contaminant levels arising from both urban and non-urban activities.	A2.2 Support the adoption of measures to mitigate the effects of climate change.	A3.2 Deliver initiatives, and support landholders engaged in activities, that increase carbon storage in soils and vegetation.	A4.2 Support initiatives and landholders engaged in activities that reduce the release of greenhouse gases.
<u>Community capacity building</u>	A1.3 Deliver community education programs that focus on improved understanding of the adverse health implications of poor air quality.	A2.3 Deliver activities targeting improved understanding, at all community levels, of the systems that drive weather and climate, and how they are changing.	A3.3 Raise awareness of the programs available to support projects that increase carbon storage, in soils and vegetation.	A4.3 Raise awareness of the programs available to support projects that reduce the release of greenhouse gases.
<u>Science</u>	A1.4 Support initiatives to capture local air quality data, to complement regional National Pollutant Inventory data.	A2.4 Ensure best-available, current climate change science underpins relevant education materials.	A3.4 Encourage and support participation in research projects relating to biosequestration, especially those with potential to better inform region-specific activities.	A4.4 Encourage and support participation in research projects relating to locally-relevant greenhouse gas abatement strategies.

COASTAL & MARINE - Coastal, estuarine and marine resources and their processes:

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

Target	Physical coastal and ecological processes			Coastal, estuarine and marine habitats			Coastal, estuarine and marine plants & animals	Water quality	
	CM1. Critical ecological connections (interactions) and processes are identified.	CM2. Surface water and groundwater flows are measured and maintain ecological connections that underpin coastal values.	CM3. Geomorphological processes (including riverine and shoreline) maintain or restore sediment transport that sustains beaches and coastal dunes.	CM4. The extent of all coastal, estuarine and marine benthic habitats will be mapped and a baseline created.	CM5. The function and value of all coastal, estuarine and marine benthic habitats are improved or maintained.	CM6. There is no net loss of the extent of natural wetlands.	CM7. There is an improvement in the ecological processes and environmental values of natural wetlands.	CM8. There is no adverse change in biological diversity in coastal, estuarine and marine species.	CM9. 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.
Activities recommended by expert panel	Priority 1 (high)	Priority 2	Priority 3						
Planning & Governance	CM1.1 Provide best-available advice to all planning processes that potentially impact the ecological connectivity of terrestrial and marine environments.	CM2.1 Provide best-available advice to planning and policy reviews related to the management of surface and ground waters, emphasising the significance of surface and ground water flows to maintaining coastal ecological values.	CM3.1 Facilitate information sharing to ensure that planning schemes, new or revised erosion management plans and strategic plans for development in marine areas recognise the importance of maintaining coastal processes, including maintaining sediment transport regimes.	CM4.1 Provide best-available advice to planning and development processes that potentially impact on coastal, estuarine and benthic habitats (and their buffers) with provision for climate change (2050 horizon).	CM5.1 Provide the best available science and technical advice to planning and policy reviews to ensure the function and value of estuarine and marine habitats continue to be recognised and are improved or maintained through future planning and policy initiatives.	CM6.1 Provide best-available advice to planning and development processes that potentially impact on natural wetlands (and their buffers) with provision for climate change (2050 horizon).	CM8.1 Influence planning and development processes to consider development impacts on marine resources, particularly species' vulnerabilities associated with life cycle changes and migration.	CM9.1 Support moves to amend Queensland Government legislation to: <ul style="list-style-type: none"> • amend the Water Act to allow for marine water quality standards to be addressed in Water Resource Plans • integrate the Queensland Coastal Plan with Environmental Protection Policy (Water) and Water Quality Improvement Plans, in relation to coastal development • revise and reschedule WQIP Ecological Values and Water Quality Objectives e.g. pursue accreditation of the Baffle-Burnett WQIP as a Healthy Waters Management Plan under the Environmental Protection Policy (Water). 	

			<p>CM3.2 Develop guidelines for use by local government and the general community that identify threats to biodiversity, life and property in the coastal zone; reflecting current scientific, economic and legal information.</p>					<p>CM8.2 Use the Queensland Coastal Plan and other instruments to inform local and state government planners of the statutory requirements for maintaining species extent and connectivity in planning and development assessment.</p>	
			<p>CM3.3 Review the location and legal standing of existing structures in tidal waterways (e.g. boat ramps or other private and public maritime infrastructure) and coastal developments on significant coastal dunes to inform future planning / management strategies.</p>						
On-ground	<p>CM1.2 Support actions to protect, maintain or restore coastal, estuarine and marine ecological connectivity; including those with links to freshwater and terrestrial programs.</p>	<p>CM2.2 Design and deliver innovative programs that restore surface and ground water flows in areas where such flows have declined due to irrigation "take." (Links to rural water use efficiency and irrigation efficiency programs)</p>	<p>CM3.4 Approve, modify or remove unlawful structures in tidal wetlands and on significant coastal dunes.</p>	<p>CM4.2 Support actions to protect, maintain or restore key coastal, estuarine (and marine) habitat sites where feasible (given constraints such as sea level rise). For example through the installation of seagrass friendly moorings to protect habitat.</p>	<p>CM5.2 Support community and other initiatives that undertake coastal and estuarine habitat protection, rehabilitation and restoration e.g. saltmarsh fencing, mangrove planting, hydrology restoration, estuarine rehabilitation and urban stormwater quality improvement/flow reduction, dune fencing and revegetation.</p>	<p>CM6.2 Provide incentives, or other extension services, for lower impact land uses, best management practices technical support and education (particularly for agricultural practices in tidal wetlands).</p>	<p>CM7.1 Provide incentives, or other extension services, for lower impact land uses, best management practices technical support and education (particularly for agricultural practices in tidal wetlands).</p>	<p>CM8.3 Implement actions from Species Recovery Plans to improve outcomes for species of conservation significance.</p>	<p>CM9.2 Coordinate activities across agencies and the community to implement Water Quality Improvement Plans.</p>




					CM5.3 Undertake marine debris clean up initiatives.	CM6.3 Undertake riparian restoration and promote buffer implementation, particularly adjacent to forested areas.	CM7.2 Expand and implement the biopassage strategy in the region.	CM8.4 Encourage adoption of "best practice" by commercial and recreational fishers and marine tourism operators.	CM9.3 Provide education and technical support, as required, and incentives to encourage industry adoption of best management practice that improves water quality.
						CM6.4 Support tidal wetland fencing and removal of stock from sensitive tidal wetlands.		CM8.5 Promote viable land and marine based aquaculture that is appropriately located and does not impact on natural habitats or species.	CM9.4 Retain, enhance and restore vegetated filters / buffers that are capable of improving water quality.
								CM8.6 Increase compliance and enforcement of existing regulations.	
								CM8.7 Support the development and implementation of Traditional Use of Marine Resource Agreements (TUMRAs) to assist in species management delivery.	
								CM8.8 Restore habitat connectivity and riparian catchment condition to enhance species resilience and natural life cycle processes.	

Community capacity building	CM1.3 Create “it’s all connected” education tools (e.g. website, guidelines, brochures, DVDs, YouTube, videos) explaining ecological connectivity, its significance for where and how we live and regional economic implications viz. tourism, fisheries productivity, natural hazard reduction etc.	CM2.3 Create “it’s all connected” education tools (e.g. website, guidelines, brochures, DVDs, YouTube, videos) explaining ecological connectivity, its significance for where and how we live and regional economic implications viz. tourism, fisheries productivity, natural hazard reduction, ...	CM3.5 Provide training for local and state government planners on the statutory requirements (and options) for maintaining coastal ocean processes in development assessment and planning.	CM4.3 Promote key messages that reinforce the value of coastal, estuarine and marine habitats to the regional economy through fisheries productivity and tourism e.g. No habitat, no fish.	CM5.4 Support community information days through industry, coastal and other care groups to enhance awareness of the function and values of coastal, estuarine and marine habitats to the Burnett Mary region (and the potential risks to these values through Climate Change). E.g. Seafood Festivals.	CM6.5 Foster lower impact land uses and provide best management practices technical support and education to managers of land uses in tidal wetlands.		CM8.9 Support community information days through industry, coastal and other care groups to enhance awareness of coastal, estuarine and marine biodiversity and its significance to the Burnett Mary region through fisheries productivity and tourism (and potential risks to species through Climate Change).	CM9.5 Implement the education and monitoring components of the Wide Bay Burnett Healthy Waterways Strategy.
	CM1.4 Highlight the importance of connectivity through education programs such as Marvellous Mangroves and Shorebird activities.		CM3.6 Create education tools (e.g. -website, guidelines, brochures, DVDs, YouTube, videos) that explain the importance of: - coastal ocean processes and the effects/risks of altering the natural coastal environment - retaining tidal wetlands and coastal dunes and allowing natural coastal processes to occur.	CM4.4 Highlight the importance of coastal, estuarine and marine habitats through education programs such as Marvellous Mangroves and the Reef Guardian Schools program.	CM5.5 Highlight the function and values of coastal, estuarine and marine habitats through education programs such as Marvellous Mangroves and the Reef Guardian Schools program.	CM6.6 Highlight the importance of natural wetlands through education programs such as Marvellous Mangroves and the Reef Guardian Schools program.		CM8.10 Highlight the unique biodiversity values of the Burnett Mary region (and threats to these species) through targeted education programs and campaigns e.g. shorebirds, Marvellous Mangroves and the Reef Guardian Schools program.	CM9.6 Increase awareness of the unaccounted costs of poor water quality on assets e.g. reduced prawn fishery production, economic losses in the ecotourism sector as a consequence of seagrass loss due to increased sediment inflow.
					CM5.6 Promote the cultural heritage value of coastal and estuarine habitats to Aboriginal people to the wider community through joint initiatives with local Traditional Owner groups.				

Science	CM1.5 Review current knowledge to build a conceptual model of ecological connectivity in the coastal, estuarine and marine systems of the Burnett Mary (including identification and prioritisation of knowledge gaps)	CM2.4 Compile existing data sets to identify current surface flows and establish baselines to maintain ecological connectivity.	CM3.7 Coordinate and integrate the existing local science regarding coastal ocean processes (e.g. climate change, hazards, oceanography and sand movement).	CM4.5 Classify and map intertidal and subtidal estuarine and marine habitats for the region, including groundwater dependence.	CM5.7 Develop regionally specific conceptual models to increase the understanding of ecosystem processes and services of habitats.	CM6.7 Coordinate and integrate existing data sets regarding the extent of natural coastal, estuarine and marine wetlands		CM8.11 Establish a list of scheduled and significant local species (plants and animals of ecological, economic, conservation or iconic value), considering the Back on Track prioritisation process, to target research funding opportunities.	CM9.7 Undertake event monitoring and remote sensing of receiving waters and link to habitat condition monitoring.
	CM1.6 Prioritise and implement research activities to address knowledge gaps	CM2.5 Address data gaps, principally groundwater flows, to establish baseline flows required to maintain ecological connectivity.	CM3.8 Coordinate and integrate intertidal and contour data.	CM4.6 Coordinate and integrate existing local science on coastal, estuarine and marine habitats (including marine water bodies) and undertake future research.	CM5.8 Identify and prioritise habitats of high ecological significance (utilising HES methodology) to inform policy, planning and management outcomes.	CM6.8 Classify and map all natural wetland habitats in the Burnett Mary region to establish baseline extent mapping.		CM8.12 Model and map species habitats including climate change predictions.	CM9.8 Gain better understanding of groundwater processes, acid sulfate soils and pollution studies and link findings to land management activities.
			CM3.9 Undertake a sediment volume study (Beach Protection Authority) to enable better understanding of regional sediment composition over time (palaeo-sedimentology).	CM4.7 Ground truth mapping and establish baselines for all regional estuarine and marine benthic habitats, such as rhodolith and bivalve beds.	CM5.9 Coordinate and integrate existing local science on coastal, estuarine and marine habitats (including water) and undertake further research.	CM6.9 Prioritise and implement research activities to address knowledge gaps.		CM8.13 Establish a baseline of presence and extent for significant species and fisheries population.	CM9.9 Establish nutrient hazardous coastal land mapping (as per State Planning Policy (Healthy Waters)).
			CM3.10 Establish the baselines required for monitoring (e.g. significant coastal dunes, tidal wetlands, and undeveloped tidal waterways) and seek community involvement and support.	CM4.8 Identify and prioritise habitats of high ecological significance (utilising HES methodology) to inform policy, planning and management outcomes.		CM6.10 Establish the baselines required for natural wetland extent monitoring and seek community involvement and support.		CM8.14 Conduct social and economic studies of services provided by significant species and fisheries	CM9.10 Model sediments and nutrients coming from the Mary River (including the cumulative effects).

			<p>CM3.11 Seek ownership and involvement from the greater community to undertake coastal monitoring programs (This may require the development of new citizen science programs Dune Watch).</p>	<p>CM4.9 Align terrestrial and aquatic connectivity methodology and processes to the coastal, estuarine and marine environment.</p>			<p>CM8.15 Seek ownership and involvement from the greater community to undertake monitoring programs e.g. Queensland Turtle Research program, or by Coastcare and universities, and promote involvement in species incidence reporting.</p>	<p>CM9.11 Maintain (and extend) EHP's ambient water quality monitoring. Extend to target biological indicators of water quality such as seagrass meadows, corals, scribbled angelfish, mud crabs and crab holes.</p>
				<p>CM4.10 Develop regionally specific conceptual models to increase the understanding of ecosystem processes and services of habitats.</p>			<p>CM8.16 Identify keystone or indicator species for habitat condition and health.</p>	<p>CM9.12 Establish better mapping products for biological indicators including tidal wetlands, riparian and foreshore vegetation, and link to management outcomes/practices.</p>
				<p>CM4.11 Seek ownership and involvement from the greater community to undertake monitoring programs e.g. Seagrass Watch, Mangrove Watch, Reef Check.</p>			<p>CM8.17 Identify where negative interactions with species exist and develop management responses to reduce these risks.</p>	<p>CM9.13 Gain better understanding of the total water cycle management for the Wide Bay Burnett region e.g. the catchment sources of sediment, pesticides, pine discharge and path in receiving waters.</p>
				<p>CM4.12 Assess buffer implementation within or adjacent to riparian areas, tidal wetlands and significant coastal dunes.</p>				<p>CM9.14 Provide support to (and standardise) community groups' monitoring programs for total water cycle management (i.e. water quality, habitat protection, vegetation filter restoration,...) and integrate into regional planning/management.</p>

FRESHWATER - Freshwater ecosystems of the region are healthy; their protection and management is underpinned by an increased public appreciation of their value and vulnerability to changes in landscape features, climate and human activity.




Target	Function	Connectivity	Understanding	Water quality
	F1. The ecological function of water dependent ecosystems is improved from the 2015 baseline.	F2. The ecological connectivity within and between freshwater habitats (both aquatic and terrestrial) and the marine interface is improved from the 2015 baseline.	F3. The ecological importance and sensitivities of the region's freshwater assets is better understood, more widely appreciated and more thoroughly considered in planning.	F4. The quality of riverine, coastal, estuarine and marine waters will improve in order to, at least, meet accepted water quality objectives.
Activities recommended by expert panel	 Priority 1 (highest)	 Priority 2	 Priority 3	
<u>Planning & Governance</u>	F1.1 Improve recognition in other planning documents	F2.1 Enforce existing legislative requirements related to connectivity	F3.1 Broaden legislative responses to managing threats to Groundwater Dependent Ecosystems (currently addressed in WRPs under Water Act)	F4.1 Finalise Water Quality Objectives (draft values in WQIP) for inclusion in EPP Water
	F1.2 Encourage other groups to maintain implementation focus for organisations other than BMRG	F2.3 Review current legislative arrangements pertaining to riparian maintenance and establish a jurisdiction to co-ordinate administration	F3.2 Influence local government to incorporate planning scheme and development assessment measures that better protect sensitive freshwater resources	
	F1.3 Monitor alignment of activities (by all groups) with plan targets	F2.4 Influence LG activities related to connectivity, in particular - planning schemes and development assessment		
<u>On-ground</u>	F1.4 Protect existing Water Dependent Ecosystem's through threat reduction	F2.5 Implement biopassage strategy - identify priority barriers for fishways / remove identified barriers in areas with barrier assessments. Undertake barrier assessments in areas without an existing assessment that have been prioritised for action.		F4.2 Adopt practices to reduce sediment, pesticide and nutrient loads in targeted reaches (as per WQIP)
		F2.6 Measure the effectiveness of connectivity improvements		
		F2.7 Increase the extent of connected riparian vegetation		
		F2.8 Maintain revegetated areas and structures facilitating biopassage		
<u>Community capacity building</u>	F1.5 Deliver awareness activities (field days, education programs, PAG-type meetings, development of education packages/module).	F2.9 Deliver awareness activities (field days, education programs, PAG-type meetings, development of education packages/modules).	F3.3 Target activities that raise awareness of known threats in relevant communities	F4.3 Promote improved understanding of the water quality impacts of European land use change
	F1.6 Support existing active groups delivering relevant on-ground activities	F2.10 Improve the capacity of key State (DTMR) and local government officers responsible for road construction and maintenance, regarding the importance of biopassage-friendly design		F4.4 Develop and disseminate education materials that highlight the links between water quality issues and their implications for species, especially those that are 'threatened'
	F1.7 Improve regional access to and understanding of, Blue Maps			

<u>Science</u>	F1.8 Establish baseline data (identifying data gaps and criteria for function)	F2.11 Establish baseline data, particularly data gaps	F3.4 Establish baseline data on extent, quality and distribution of GDEs	F4.5 Prioritise remediation reaches of streams / catchments based on investment impact and landholder adoption
	F1.9 Identify threats and prioritise groundwater dependant ecosystems		F3.5 Improve knowledge of processes affecting GDEs	F4.6 Establish the effectiveness for water quality improvements from changed management practices, in sectors <u>other than</u> grazing and sugar production
	F1.10 Maintain and renew Blue Maps		F3.6 Assess levels of risk for GDEs to identify threats	
			F3.7 Improve mapping and ground-truthing of GDEs	

LAND & SOILS - Land condition and soil health within the region will be maintained or improved.

Target	Soil salinity	Soil acidification	Soil organic matter	Erosion	Acid sulfate soils	Cropping Land	Grazing Land
	LS1. Salinity extent and severity is maintained at the 2015 baseline. MODERATE	LS2. Soil acidification is maintained at the 2012 baseline for agricultural land. LOW	LS3. Soil Organic Matter is maintained at the 2012 baseline for agricultural land. MODERATE	LS4. Sheet erosion risk, stream bank erosion risk and gully erosion extent and severity do not exceed 2015 baseline levels. HIGH	LS5. The extent of acidification caused by the disturbance of Acid Sulfate Soil does not exceed the 2015 baseline. LOW	LS6. The extent of suitable Cropping Land (i.e. cropping, horticulture and plantation forestry) is maintained at the 2015 baseline. HIGH	LS7. Ground cover of grazing lands is maintained at the 2015 baseline. HIGH
Activities recommended by expert panel	Priority 1 (highest)	Priority 2	Priority 3				
<u>Planning & Governance</u>	LS1.1 Incorporate baseline data into (town) planning decisions to avoid inappropriate development.	LS2.1 Incorporate baseline data into development of BMP for all crop production.	LS3.1 Incorporate baseline data into development of BMP for all crop production.	LS4.1 Incorporate baseline data into development of BMP for all land use.	LS5.1 Incorporate baseline data into (town) planning decisions to avoid inappropriate development.	LS6.1 Incorporate baseline data into (town) planning decisions to avoid inappropriate development.	LS7.1 Incorporate baseline data into development of BMP for all land use.
<u>On-ground</u>	LS1.2 Improve ground cover / vegetation and crop and irrigation management.	LS2.2 Implement BMP.	LS3.2 Implement BMP.	LS4.2 Implement BMP	LS5.2 Avoid development or implement BMP.	LS6.2 Avoid inappropriate development	LS7.2 Implement BMP and appropriate fire management
-	LS1.3 Ensure infrastructure does not exacerbate salinity problems (e.g. channel / dam leakage).				LS5.3 Ensure infrastructure does not exacerbate ASS problems (e.g. channel / dam construction).		
-					LS5.4 Manage groundwater to avoid exposing potential ASS.		
<u>Community capacity building</u>	LS1.4 Ongoing education re salinity processes and management option.	LS2.3 Ongoing education re soil acidification processes and management options.	LS3.3 Ongoing education re the benefits of retaining/building SOM and management options.	LS4.3 Ongoing education re soil erosion processes and management options.	LS5.5 Ongoing education re ASS processes and management option.		LS7.3 Ongoing education re BMP and management options.
-	LS1.5 Provide / maintain extension services.	LS2.4 Provide / maintain extension services.	LS3.4 Provide / maintain extension services.	LS4.6 Provide / maintain extension services.	LS5.6 Provide / maintain extension services.		LS7.4 Provide / maintain extension services
<u>Science</u>	LS1.6 Complete baseline data – salinity extent and severity.	LS2.5 Implement Monitoring & Evaluation program.	LS3.5 Implement Monitoring & Evaluation program.	LS4.7 Accumulate existing information into relevant format.	LS5.7 Complete baseline data – ASS disturbance extent.	LS6.3 Complete baseline mapping.	LS7.5 Implement Monitoring & Evaluation program.
	LS1.7 Implement Monitoring & Evaluation program.			LS4.8 Implement Monitoring & Evaluation program.	LS5.8 Implement Monitoring & Evaluation program.	LS6.4 Implement and M&E	

PLANTS & ANIMALS - Healthy vegetation communities, associated landscape processes and habitat values are maintained across the region.

Target	Extent	Diversity	Landscape function
	PA1. The extent of the region's vegetation communities will be maintained at the 2013 baseline.	PA2. The diversity of vegetation communities will be maintained at 2013 ^[1] levels and opportunities for sustaining species populations, particularly those that are threatened ^[2] will be improved.	PA3. Landscape function is enhanced through activities that address threatening processes.
Activities recommended by expert panel	 Priority 1 (highest)	 Priority 2	 Priority 3
Planning & Governance	PA1.1 Promote the use of current and relevant spatial datasets such as species data, vegetation mapping, wetlands mapping, and condition based assessment e.g. biodiversity planning assessment.	PA2.1 Provide best-available advice to planning and policy reviews related to the management of terrestrial ecosystem and biodiversity.	PA3.1 Ensure future planning and related actions are informed by a clear understanding of ecosystem condition and threatening processes.
-	PA1.2 Support activities that increase compliance and enforcement of existing regulations, e.g. through surveys of high value regrowth areas and promotion of the value of these areas.	PA2.2 Promote and use computer based decision support tools to provide an unbiased prioritisation method for regional investment.	PA3.2 Work with other NRM groups to develop projects across regional boundaries to provide consistency and improved outcomes.
-	PA1.3 Provide best-available advice to all planning processes that potentially impact the ecological connectivity of terrestrial environments.	PA2.3 Establish a list of scheduled and significant regional species, considering the Back on Track prioritisation process, to target research funding opportunities.	PA3.3 Promote connectivity and function through local corridors and retention of vegetation (including regrowth) for maintained or improved landscape function.
-	PA1.4 Support local government to address identified threatened and/or significant environmental values in planning schemes and other strategic land use documents.		
On-ground	PA1.5 Encourage the retention of high value regrowth and support planting projects in priority areas, identified in broader assessments, e.g. biodiversity planning assessments, corridor studies.	PA2.4 Establish a baseline and associated method required for monitoring terrestrial biodiversity, e.g. significant vegetation communities, threatened species and ecosystems.	PA3.4 Undertake field based activities to determine the actual level of threat to biodiversity and use this to inform future planning and prioritisation of resource investment.
-	PA1.6 Support projects and data collection that improve Regional Ecosystem mapping at the local scale.	PA2.5 Address data gaps, particularly for threatened and/or significant species through "ground truthing" activities to improve existing data and knowledge. This includes confirmation of probable habitat mapping and actual threatening processes.	PA3.5 Compile existing data sets to establish a baselines to maintain ecological connectivity.

-		PA2.6 Promote on-ground management techniques aimed at maintaining biodiversity values, including connectivity and condition of priority Broad Vegetation Groups.	PA3.6 Deliver programs to mitigate threatening processes identified as having an impact on biodiversity values. Program to be developed irrespective of tenure or jurisdiction.
-			PA3.7 Support landholders to understand relevant legislation and to further adopt industry Best Management Practice.
<u>Community capacity building</u>	PA1.7 Support and build the capacity of community groups and relevant organisations to deliver on-ground biodiversity activities.	PA2.7 Develop and deliver awareness raising activities that target the region's threatened species and ecosystems e.g. school "sponsorship" of high value bushland patches.	PA3.8 Promote better understanding of the nature of threatening processes and this effects biodiversity or landscape function - through delivery of workshops, web portals and other mechanisms.
-	PA1.8 Increase community and land manager understanding of the biodiversity assets that occur on their properties, in the region and across jurisdictions e.g. rural fire brigades, utility providers, other land management agencies...	PA2.8 Facilitate training for groups and individuals in survey techniques and data upload to recognised databases such as WildNet (species records), Wetland Info and Koala Tracker.	PA3.9 Improve stakeholder understanding by delivering workshops and using other mechanisms such as property management planning for biodiversity outcomes.
<u>Science</u>	PA1.9 Maintain and update spatial datasets, e.g. biodiversity planning assessments, regional ecosystems and Queensland wetlands.	PA2.9 Improve spatial data reliability through groundtruthing (targeted assessment using standard methods) and other activities that confirm species/communities presence and /or viability.	PA3.10 Develop and maintain an inventory of threatening processes, specific to the Burnett Mary region.
	PA1.10 Continue to streamline data sharing arrangements for spatial information.	PA2.10 Develop management guides for specific Broad Vegetation Groups, e.g. preferred burning regimes suited to enhancing identified component species, as well as entire ecosystems.	PA3.11 Review codes of practice, BMP statements and biodiversity-related management recommendations to ensure they reflect current evidence-based findings.
	PA1.11 Support projects that identify or provide new insight into the projected vulnerability of ecosystems to threatening process under a changing climate e.g. grazing, fire, weeds.	PA2.11 Revise regional biodiversity planning assessments to ensure most recent information is captured and that recommendations are evidence-based.	PA3.12 Support the development, review and implementation of ecosystem, single and multispecies recovery plans and associated recommendations.
	PA1.12 Identify vulnerability thresholds for terrestrial asset groups with the aim of defining areas of greatest risk (within and between assets).	PA2.12 Promote and implement projects that aim to identify species-level response to fire regime and how this relates to life history response, long term persistence and/or extinction risk.	PA3.13 Promote and support projects that aim to identify ecosystem functional response to threatening processes under a changing climate.
		PA2.13 Promote and implement projects that aim to identify ecosystem level response to fire regime and how this relates to species and supporting habitat persistence.	PA3.14 Revise the 'vulnerability assessment' method used within this plan to integrate new data and improve the knowledge of the potential risk to target assets.
		PA2.14 Identify species and ecosystems that are not listed as threatened but are either significant, or at threat at the regional scale.	PA3.15 Model regional fragmentation/connectivity to identify priority areas for investment (i.e. retain and promote regeneration, biodiverse plantings, avoid deforestation) to meet PA3.

PA2.15

Establish a diversity baseline consistent with the prioritisation method used to assess the climate change vulnerability of the region's BVGs.