

15 September 2023

State Development and Regional Industries Committee: Questions on Notice.

Q1. How the Queensland Government can support farmers pre-disaster as opposed to afterwards.

- 1. Expanding the provision of high-quality extension services with long-term funding.**

The recent approach of supporting drought preparedness and planning through new Drought Reform arrangements, and the *Drought and Climate Adaptation Program (DCAP)*, has been a positive and welcome strategy. It is important to sustain the gains and progress made through successful Government, NRM and industry programs with continuity of funding and security of tenure for extension staff.
- 2. Supporting holistic farm planning with trusted local advisors to support the development and implementation of plans.**

Ensuring the continuation of programs such as the *Farm Business Resilience Planning Program* and supporting delivery through DAF, NRM groups and industry bodies and recognising organisations, such as Healthy Land & Water who have been supporting landholders with property management planning for many years will lead to enhanced drought and disaster resilience, as well as sustainable production and NRM outcomes.
- 3. Targeted research with appropriate oversight and collaboration between research organisations, NRM and industry bodies, extension providers and producers.**

On-going support collaborative research and extension infrastructure such as the *Drought and Climate Adaptation Program* and *Future Drought Fund Drought Resilience, Innovation and Adoption Hubs* will help to facilitate the implementation of long-term field trials and legacy monitoring programs which are largely absent from our Research Development and Extension programs.
- 4. Resources and programs that support adaptation.**

Provision of resources and programs that will support farm businesses to adapt to climate change through new technology and research, capital investment or environmental credentials.

Q2. Recovery funding criteria that exclude some farmers on the basis of their off-farm income.

- 1. Ensuring there is adequate financial support for agricultural producers with off-farm income, particularly young farmers looking to expand businesses and those farmers recovering from natural disasters.**


Implementing change to mitigate or adapt to climate impacts and build/expand agricultural businesses is extremely expensive, particularly in regions like SEQ with inflated land values and where significant climate events/natural disasters can severely set back landholders well intentioned plans.

Whilst existing Grants and Loans available through QRIDA to support farmers and agricultural enterprises to grow, recover and adapt their businesses are extremely effective and valued, there is an opportunity to consider reviewing and broadening additional support for those farmers with off-farm income. We have been made aware of the new *Rural Landholder Recovery Grants Scheme* which was offered for people with < \$250 K off-farm income and gross primary production income > \$ 20K, however we believe these new recovery support initiatives could have been promoted more widely to the target audience – another reason for the need for continued support for existing trusted extension and adoption officers working within NRM, industry and Government agencies.

2. Improved protection of good quality agricultural land.

Inflated land values, not reflecting primary production values and the loss of and fragmentation of good quality agricultural land due to urban expansion and peri-urban sprawl, particularly in SEQ but also seen around major regional centres, are significant barriers for young farmers and existing landholders wanting to expand and build their small and medium sized agricultural businesses.

There is a critical need for improved planning and regulatory frameworks to protect all Good Quality Agricultural Land from loss or conversion to other uses – in order to maintain food security with the increasing demand (both domestic and international) for sustainably produced food and fibre, and increasing expectations for lower emissions, which makes the protection of agricultural land in SEQ, with higher rainfall, and less distance to markets, absolutely vital.



Economic contribution, unique benefits and skills assessment of NRM Groups

Natural Resource Management Regions Queensland

October 2021

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Ernst & Young ("EY") was engaged on the instructions of Natural Resources Management Regions Queensland ("Client" or "NRM RQ") to prepare a report on the economic contribution, unique benefits and skills assessment of NRM regional bodies in Queensland ("Project"), in accordance with the engagement agreement dated 30 June 2021 including the General Terms and Conditions ("the Engagement Agreement").

The results of EY's work, including the assumptions and qualifications made in preparing the report, are set out in EY's report dated 15 October 2021 ("Report"). You should read the Report in its entirety including the disclaimers and attachments. A reference to the Report includes any part of the Report. No further work has been undertaken by the Consultant since the date of the Report to update it.

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EY acknowledges Aboriginal and Torres Strait Islander people as the first peoples of Australia and Traditional Custodians of this land its waters.

We pay our respects to Elders, knowledge holders and leaders both past and present.

We respectfully acknowledge Traditional Owners living within Queensland. We respect Traditional Owners' relationship, connection and association to "country" and that it is an integral part of their identity and cultural expression.



**Building a better
working world**

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15 October 2021

Mr Chris Norman
Chief Executive Officer
NRM Regions Queensland
Unit 11, 120 Russell Street
Toowoomba Qld 4350

Economic contribution, unique benefits and skills assessment of NRM Groups

Dear Chris

This report has been prepared for Natural Resource Management Regions Queensland ('NRMQR') to provide an evidence-based report of the economic contribution, unique benefits and skills assessment of NRM regional bodies in Queensland and the contribution of NRIP funding.

We would like to thank you, your team, and the NRM regional bodies for the assistance provided to us during this engagement. Their support and feedback was instrumental in enabling us to meet your expectations for this work.

We look forward to discussing this report or any other aspects arising from our work with you. We also look forward to the opportunity for future collaboration as NRMQR continues on its journey.

If you have any queries in the meantime, please feel free to contact me on +61 7 3011 3111 or Robert Kyne on +61 3 8664 9767.

A handwritten signature in black ink that reads "Elizabeth Rose".

Elizabeth Rose
Partner

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Executive
Summary

Executive Summary

Natural Resource Management (NRM) bodies in Queensland have played a key role in supporting the agricultural, construction, manufacturing, conservation, educations, research, tourism sectors and regional communities over the last 20 years. The not-for-profit community based NRM organisations make significant direct and indirect economic, environmental and social contribution through their programs and activities. This contribution supports regional economies and livelihoods through employment, wages, procurement and encouraging growth in other sectors. The direct and indirect economic contributions was approximately \$183m with over \$90m value add, supporting over 268 FTE employment with a further 367 indirect employment created.

NRM regional bodies have recognised the scale of the challenge and the opportunities. With the support of the Queensland Government, NRM regional bodies are establishing market-based innovations such as:

- ▶ Eco-markets Australia - the first voluntary environmental market in Australia to create opportunities for farmers, graziers and land managers to be paid for the work they do in improving our environment.
- ▶ Reef Credits is an innovative, market-based solution offering a new way to improve the quality of water entering the Great Barrier Reef.
- ▶ Cassowary Credits - independently verified and tradeable credit to attract new investment and boost the funds available to landholders for habitat restoration
- ▶ State-wide Indicators Framework that enables the NRM sector to demonstrate the investment and outcomes delivered
- ▶ Natural Capital initiatives

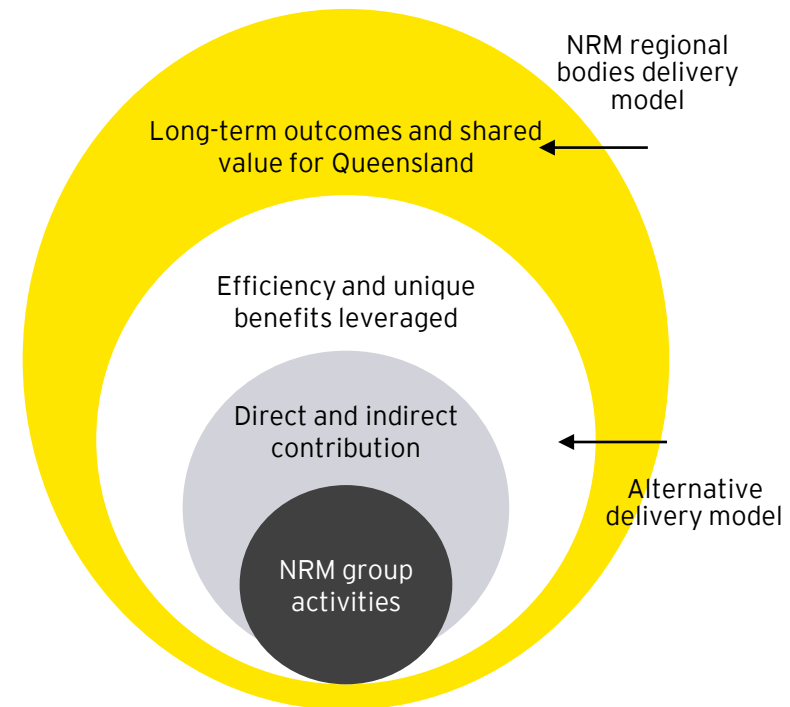


Executive Summary





Creating long-term outcomes and shared value for Queensland

NRM regional bodies create shared value for Queensland in the unique benefits and efficiencies leveraged through the specific NRM delivery model.

Generate shared value for Queensland	<ul style="list-style-type: none"> ▶ Socio-economic impact ▶ Social impact ▶ Environmental impact
Leverage efficiency and provide unique benefits	<ul style="list-style-type: none"> ▶ Lower support to delivery FTE ratio enabling a focus on outcomes: 91.4% delivery (NRM groups) vs 80% delivery (Benchmark) ▶ \$1:\$4.2 of state funding leveraged (including in-kind contribution) ▶ More efficient pay structures able to pay market rates
Direct and indirect contribution	<ul style="list-style-type: none"> ▶ Over \$180 million direct and indirect economic output and over \$90 million value-add ▶ Over 600 direct and indirect jobs created through investment in NRM groups
NRM group activities	<ul style="list-style-type: none"> ▶ Integrated land management ▶ People and communities ▶ Science and Knowledge ▶ Cost Benefit ratios exceeding 1 for almost all activities identified



Highlight of NRM regional bodies' economic contribution

Direct contribution			Indirect contribution		
 <p>Economic contribution</p>	NRIP Direct output* \$10.9 million	NRIP Direct value-add \$5.5 million	 <p>Economic contribution</p>	NRIP Indirect output \$16.9 million	NRIP Indirect value-add \$8.3 million
	NRM Direct output \$71.9 million	NRM Direct value-add \$36.2 million		NRM Indirect output \$111.7 million	NRM Indirect value-add \$55.8 million
 <p>Employment contributions</p>	NRIP contribution to jobs 39 jobs	NRIP contribution to jobs 39 jobs	 <p>Employment contributions</p>	NRIP contribution to jobs 53 jobs	NRIP contribution to jobs 53 jobs
	NRM contribution to jobs 268	NRM contribution to jobs 268		NRM contribution to jobs 367 jobs	NRM contribution to jobs 367 jobs

Highlight of NRM regional bodies' unique benefits

Long-term outcomes and shared value for Queensland



Resilience and sustainability of local economy

Increased value in natural capital



Inclusive and diverse employment

First Nations engagement



Resilient and cohesive neighbourhoods

Improved physical and mental health



Environmental behaviour change

Ongoing improvement and capacity building



Ecological resilience

Species richness



Improved water access and quality

Efficiencies and unique benefits of regional NRM bodies

Unique benefits and efficiencies are leveraged through the NRM regional bodies' activities including integrated land management, people and community engagement, and science and knowledge. These benefits are the result of both NRIP and NRM other funded projects. In particular, NRM regional bodies:

- ▶ Are trusted by government and community through over 20 years of proven delivery from technical and delivery expertise and strong and effective governance, financial management systems and processes
- ▶ Provide innovative solutions to complex problems using the collective intelligence of our staff, partners, landholders, traditional owners, scientists and other technical specialists
- ▶ Have demonstrated ability to leverage and attract investment from other government and private sector investment sources
- ▶ Measure and report on the outcomes and impact created
- ▶ Maintain unparalleled knowledge of the long-term priorities and challenges facing each of the regions as custodians of the NRM plan for the regions, which transcends short-term political cycles
- ▶ Provide value for money compared to government and private sector
- ▶ Undertake activities that generate economic benefits for broader society. Benefit Cost Ratios (BCR) found for these activities in almost all cases exceed 1 indicating for every \$1 invested in these activities greater than \$1 is returned in benefits for society

Introduction

Introduction

NRM Regional Bodies Queensland

Natural Resource Management Regions Queensland (NRM Regions Queensland) is a peak body that represents the interests and services the needs of 12 regional Not-for-Profit NRM bodies in Queensland. NRM Regions Queensland was formed in 2002 to strengthen the state-wide delivery of regional NRM outcomes in partnership with industry, community and government, and to act as a representative body for NRM in Queensland by providing a single, strong voice for its members. The collective is funded by these members - the 12 regional natural resource management bodies in Queensland.

Regional NRM bodies are a key partner in delivering environmental and sustainable agriculture outcomes with the Queensland Government to support jobs, grow regions, invest in skills and protect the environment.



Regional NRM Bodies

- ▶ Burnett Mary Regional Group
- ▶ Cape York NRM
- ▶ Desert Channels Group
- ▶ Fitzroy Basin Association
- ▶ Healthy Land and Water
- ▶ Gulf Savannah NRM
- ▶ NQ Dry Tropics
- ▶ Reef Catchments
- ▶ Southern Gulf NRM
- ▶ SQ Landscapes
- ▶ Terrain NRM
- ▶ Torres Strait Regional Authority

Introduction

Purpose of this report

The Queensland Government currently invests in natural resource management across the state through the Natural Resources Investment Program (NRIP). As part of the NRIP, the Queensland Government is investing more than \$61 million between 2018 and 2022 to support the sustainable management of Queensland's natural land and water resources.

NRIP funding acknowledges the important role that the NRM bodies and the community play in repairing and improving Queensland's unique assets for future generations. With the continued support of the Queensland Government, NRM organisations can continue to innovate to attract increased investment from the Australian Government and private sectors to support the management, regeneration, and resilience of our natural assets while simultaneously increasing economic investment and high-value job creation in Queensland.

NRMRQ is working with the 12 regional NRM bodies to target their application to the next iteration of NRIP funding. The purpose of this report is to outline:

- ▶ Economic contribution of NRM group activities
- ▶ Unique benefits and efficiency that is provided through NRM groups
- ▶ Non-monetary benefits and efficiency that is provided through NRM activities
- ▶ Capability assessment and skills taxonomy of NRM regional bodies support in regional Queensland and how it diversifies the economy, including leveraging employment growth and COVID-19 recovery

Supporting Natural Resources Investment Program objectives

NRM groups' focus is on adoption of best practice to ensure activities and associated outcomes are aligned with NRIP objectives and principles including:

NRIP 2018-2022 Principles

Integration	Integrating natural resource management planning and delivery across regions
Collaboration	Providing a framework that promotes effective collaboration
Efficiency	Targeting funding for maximum return on investment and encourage projects to leverage other sources of funding
Outcome-based	Investing in evaluating and reporting on landscape and community program impacts
Adaptive management	Building upon past success, and experimental approaches will be considered, along with opportunities for learning and informing the iterative processes that support future investment decisions.
Regional coordination/delivery	Organising project delivery at the regional scale to ensure effective NRM outcomes state-wide. Regional delivery organisations are well-placed to align and integrate efforts
Public benefit	Funding will be provided where activities are considered to provide a significant public outcome, which would not occur without government intervention

Introduction

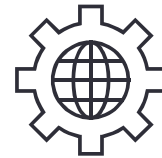
EY's approach to measuring NRM groups' contribution and unique benefits



Literature Review and impact narrative

A regional body mapping exercise was conducted which entailed a review of project activities for each of the NRM groups. This was effective in establishing context around the common activities performed within projects, the social and environmental outcomes achieved and the main stakeholders involved.

Based on the information available from the literature review, impact pathways were created, which made connections between NRM regional bodies activities and associated economic, social and environmental contributions. A series of indicators were identified, aligned with contribution categories and informed by insights from the benchmarking research. These indicators quantify the value of outcomes achieved by each of the NRM groups.



Data Request

A data request which collated all selected indicators was sent to NRM groups, requesting information where publicly available information was absent. Following this, data discussion meetings were scheduled with each NRM group to explain additional context around the data request and provide clarifications where necessary. EY liaised with NRM groups to obtain data in a consistent format.



Economic Contribution Analysis And Linked Skills Assessment

Using available input and data from the 12 regional NRM bodies, an assessment has been conducted to analyse the socio-economic impact of the NRM sector and contribution of NRIP funding. The economic contribution of NRM group activities and the unique benefits and efficiencies created have been calculated. In addition, non-monetary benefits of these activities, including leveraged funding and environmental and social benefits have been identified.

A capability assessment and skills taxonomy that NRM activities support will be conducted, focusing on how it diversifies the economy and leverages employment growth. Finally, opportunities to further grow the impact of NRM, specific to growing jobs and diversifying economies will be identified.

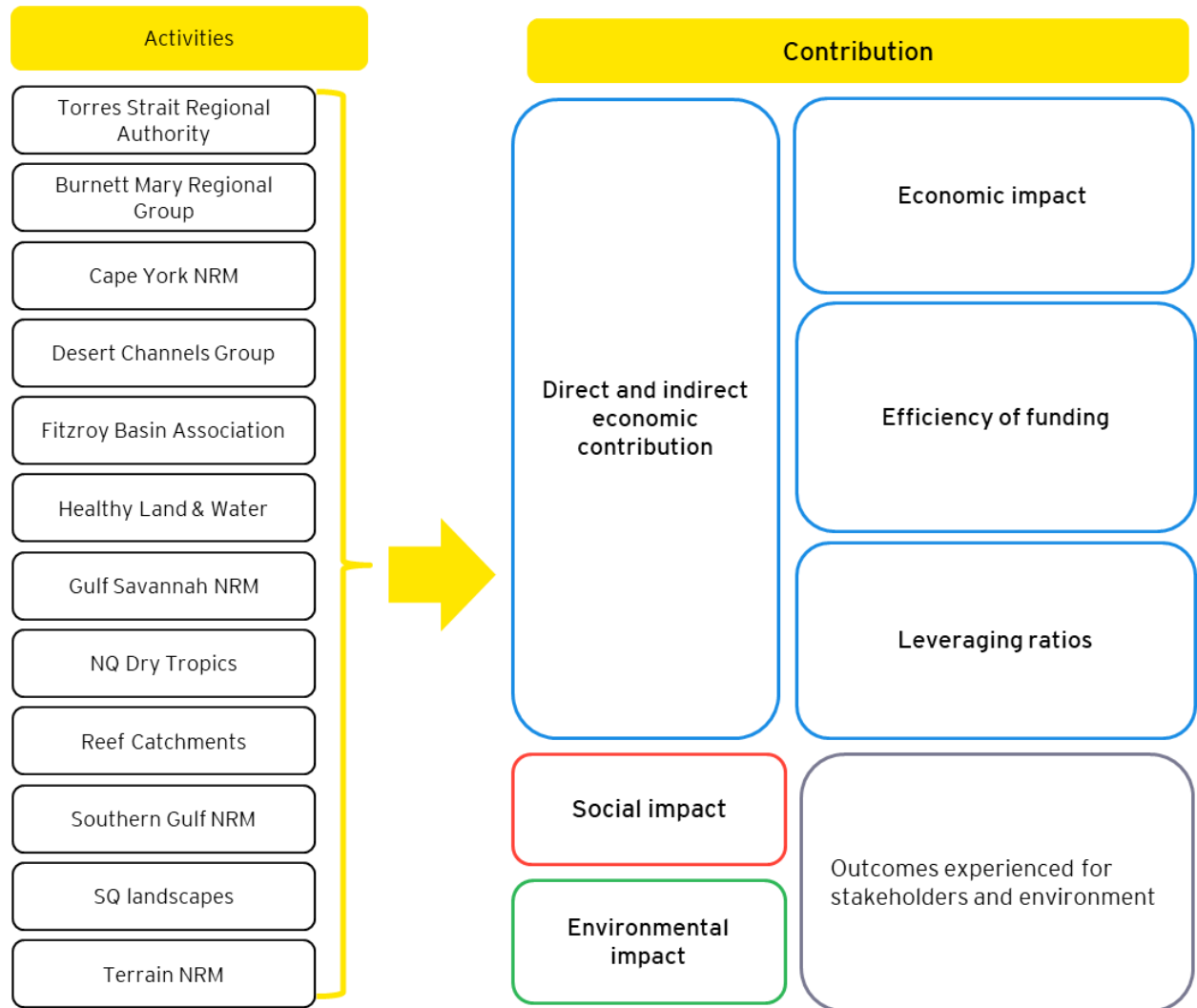
Introduction

Approach to measuring NRM groups' contribution and unique benefits

NRM groups directly and indirectly contribute to the Queensland economy and communities through their program activities. These include regional economic activities such as education, research, ecotourism, integrated land management and job opportunities.

NRM groups also contribute through local community engagement and capacity building such as networking, partnerships and skills development.

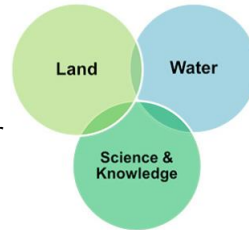
Direct and indirect economic contribution is made up of economic impact which includes gross value added, output income and multiplier effects from input-output modelling at the state or national level. Economic contribution also demonstrates the efficiencies extracted through the delivery model and funding leveraged.



Introduction

NRM regional bodies activities and programs

NRM regional bodies in Queensland deliver programs that support healthy and productive environments, viable communities and sustainable industries. NRM bodies do this by coordinating state-wide programs, providing mentoring and leadership, advocacy for improved investment in natural resource management, and identifying areas for training and improvement. Additional value and unique benefits are leveraged beyond those that would be achieved through a centralised program.



Integrated land management

NRM groups are focused on an integrated land management approach across the regions' diverse landscapes.

NRM groups leverage tools and data in a joint effort to maximise outcomes across all of the regions. This enables NRM bodies to plan, prioritise and better manage interventions to maximise environmental outcomes.



People & communities

One of the most significant benefits of the NRM delivery model is the ability to engage and support local communities. NRM groups develop trust with their communities, enhancing outcomes.

The dynamic social relationships and cohesion developed through NRM groups form an intrinsic part of the social fabric, in many cases filling gaps in the community beyond the agricultural and environmental domain.



Science & knowledge

NRM groups are engaged in a collective effort and draw on established knowledge and networks of capability.

A unique outcome of the NRM model is the increased awareness and knowledge of the landscape and the relationship of people to that landscape. NRM groups provide coordinated opportunities at a range of scales for experimentation, learning, increased awareness, observation and skill development.



A hand holding a glowing lightbulb in a field at sunset. The background is a vast field of tall grasses under a warm, golden sky with a setting sun. The lightbulb is held in the foreground, and its glow is reflected in the grass and the sky. A yellow rectangular box is overlaid on the left side of the image, containing the text.

Economic
contribution of
NRM regional
bodies

Economic contribution

How NRM regional bodies create economic activity and deliver efficient use of services



Economic contribution analysis is used to understand how economic activity cycles through a region’s existing economy. NRM regional bodies contribution is defined by total inputs into economic activity cycle in the region and the secondary activity that it generates. The analysis is retrospective and data is considered over the past three years.

The economic model used to estimate this contribution represents the economy and mimics its structure through coefficients between industries, households and other linkages. This can be further broken down into spending on intermediate inputs, labour, taxes and returns to capital. Multipliers for economic activity are also derived from the model to estimate the flow on effects from the initial injection of economic activity.

EY’s analysis has been undertaken to understand economic contribution and uncover the impact and importance of NRM regional bodies to Queensland economies.

NRIP funded and funding from other sources

NRM regional bodies make direct and indirect economic contribution through their annual activities and projects.

These activities are funded by both the Natural Resources Investment Program as well as additional government funding, commercial funding and other sources of funding. The unique benefits and contribution of the funding are distinguished and analysed in this report. Importantly, efficiencies delivered through the NRM delivery model apply to both NRIP funded activities as well as broader activities.

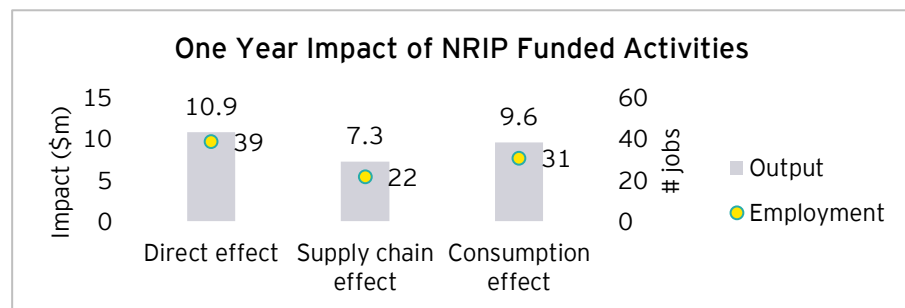
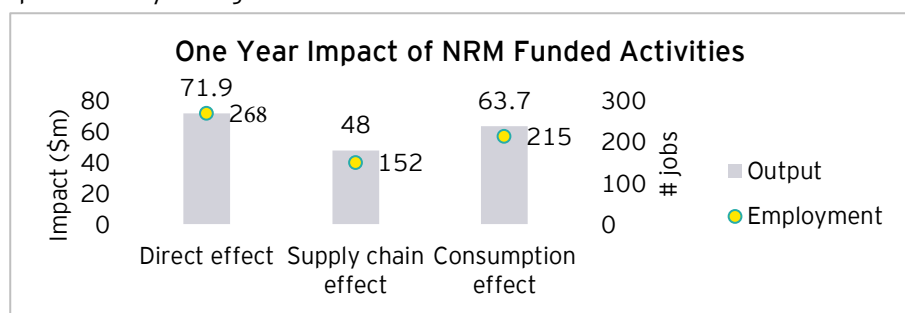
	Contribution	Indicator
Direct and indirect economic contribution	Economic impact	<ul style="list-style-type: none"> Gross value added Employment Wages
	Efficiency of funding	<ul style="list-style-type: none"> \$ wage spend/FTE Support vs delivery ratio \$ per seniority level
	Leveraging ratios	<ul style="list-style-type: none"> Source of funding (\$/%) Leverage funding \$ Number of volunteer hours leveraged

Economic contribution

Economic impact

Land management projects delivered by NRM groups unlock opportunities throughout Queensland. These projects provide employment opportunities and economic stimulus which can have major impacts on the wellbeing and resilience of all communities.

NRM regional projects and initiatives (including those funded by NRIP) contribute significantly to economic activity both directly through their own operations as well as indirectly through both supply chain and consumption effects. These indirect effects are borne through direct economic activity as well as value created to the economy upstream in the agricultural sectors, the manufacturing sector and construction sectors. Value is also created downstream in the retail, tourism, hospitality and transport industries. Efficiencies in funding imply that for a constant amount of funding, the benefits are relative to delivery efficiencies. As such, they positively impact the creation of jobs and economic activity as well as the achievement of outcomes, particularly in regional areas.



	Total	Direct (\$m)	Indirect*		
			Supply chain	Consumption	Total
Contribution (\$m)		\$71.9	\$48.0	\$63.7	\$183.7
Employment		268 Jobs	152 Jobs	215 Jobs	635 Jobs
Value added (\$m)		\$36.2	\$22.8	\$33.0	\$91.9

	NRIP	Direct (\$m)	Indirect*		
			Supply chain	Consumption	Total
Contribution (\$m)		\$10.9	\$7.3	\$9.6	\$27.8
Employment		39 Jobs	22 Jobs	31 Jobs	92 Jobs
Value added (\$m)		\$5.5	\$3.4	\$4.9	\$13.9

*Note – Indirect impact includes the impact of local industries buying goods and services from other local industries as well as consumption spending via wages

Economic contribution

Regional economic impact

Economic impact can be calculated at a regional level to understand the potential impact on employment creation in vulnerable regional communities. Regional economic employment is particularly important for post COVID-19 recovery with the Queensland Government making this a top priority, specifically calling out the creation of employment in Queensland's region "Growing our regions is the key to building Queensland's economic recovery from the COVID-19 pandemic". NRM's are in a unique position where the activities carried out and the jobs generated are centralised in the regions that they operate. As a result, injections of funding into NRM bodies go directly to these regions, stimulating jobs, incomes and providing valuable economic activity. The tables below show the range of regional economic impact of the NRM groups. Individual NRM results can be found in the Appendix.

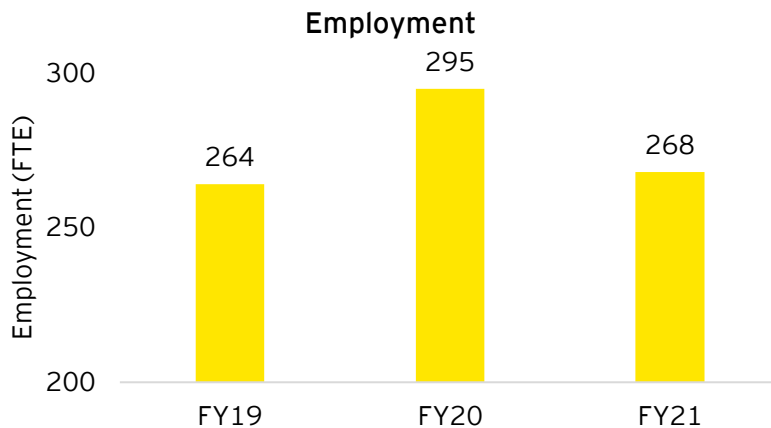
Total	Direct (\$m)	Indirect			NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total		Output	Supply chain	Consumption	Total
Contribution (\$m)	\$1.8 - 15.3	\$0.4 - 7.7	\$0.5 - 8.9	\$2.7 - 32.1	Contribution (\$m)	\$0.5 - 1.5	\$0.2 - 0.8	\$0.2 - 0.9	\$0.9 - 3.2
Employment	7 - 62	1 - 27	2 - 34	10 - 123	Employment	2 - 6	1 - 3	1 - 3	4 - 12
Value-added (\$m)	\$0.9 - 7.5	\$0.2 - 3.7	\$0.3 - 5.0	\$1.4 - 16.2	Value-added (\$m)	\$0.2 - 0.8	\$0.1 - 0.4	\$0.1 - 0.5	\$0.5 - 1.6

Economic contribution

Inclusive and diverse employment

Natural resource management projects provide opportunities to build resilience through more innovative and sustainable methods, while providing inclusive employment and capacity building for a wider range of regional communities. Inclusion is about supporting access to economic, environmental and social participation for all people.

NRM projects are also located in Indigenous communities and empower the inclusion of First Nations Peoples on country. In FY21, NRM groups provided 268* full-time equivalent jobs to Queenslanders.



**Note –Extrapolated dataset*

Case study: Diversifying Terrain's board through the Emerging Board Leader Program

Terrain NRM developed an Emerging Board Leader Program, as a year-long knowledge exchange and mentoring program. The program aims to expose a future board leader to the board process and help extend their knowledge and skills.

Participants are able to establish networks and gain experience. They are able to see what it's like working with a high performing not-for-profit organisation. It also enables Terrain to diversify their board.



A man in a plaid shirt is walking away from the camera through a vast field of green crops, likely soybeans. The field stretches to the horizon under a bright, slightly hazy sky. The man is in the lower center of the frame, with his arms slightly out to the sides. The overall scene is peaceful and agricultural.

Unique benefits of
NRM regional
bodies

Unique benefits

Efficiency of FTE distribution

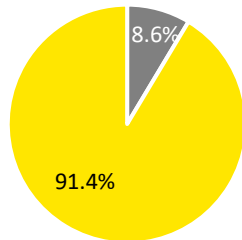
The average support vs delivery* ratio of NRM groups' full time equivalent (FTE) employees provides an indication of relative efficiency of NRM service delivery.

On average, NRM groups have 91.4% of their FTEs directly contributing to the delivery of projects as compared with the broader Queensland Public Sector Workforce benchmark, where 91.1% of FTEs are devoted to delivery. This potentially understates the difference, given that this benchmark includes services such as police, education and health who have a large delivery workforce relative to their corporate function.

Evidence indicates that NRM groups have a lower support to delivery ratio than the Queensland Public Service, implying that their overheads are lean and their delivery networks and connections are efficient.

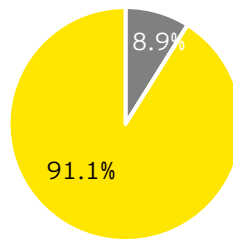
Support vs Delivery Ratio (Analysis)

■ Corporate ■ Delivery & Delivery Support



Support vs Delivery (Benchmark)

■ Corporate ■ Delivery & Delivery Support



Source: Queensland Public Sector Workforce Profile 2021

Delivery, Delivery Support and Corporate Definitions

Definitions for delivery and delivery support are consistent with the Queensland Public Sector Biannual workforce profile.

Delivery and delivery support roles are focused on the provision of services, programs and outcomes directly to the community, or provide essential support enabling the development and delivery of frontline services programs and outcomes. This can be in-office or in-field.

Corporate roles provide organisation-wide support so that the organisation can deliver objectives and outcomes. It's worth noting that often corporate-type roles are still defined as delivery under the definitions but in these instances the support they provide to the service directly links to providing an outcome to the community.

*Note – Support and delivery is not synonymous to admin costs and in this case refers to the mix of FTE only.

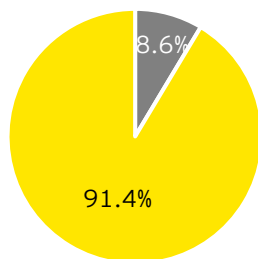
Unique benefits

Efficiency of FTE distribution (cont.)

FTE distribution is a useful indication of how funding is efficiently used. Greater proportions of delivery staff mean funding is focused directly on generating activity and outcomes on the ground. This is not a measure of administration costs (as someone focused on delivery would likely still need to undertake some level of admin), but rather an indication of the proportion of the workforce devoted to delivery of projects.

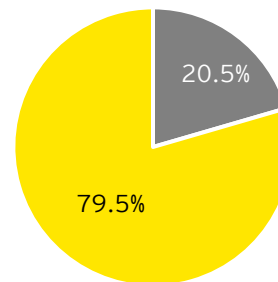
Benchmarks of both small and medium sized government organisations have been used as relevant comparators to NRMs, though small organisations would likely be the most relevant comparison. As shown, this difference in delivery versus support is more prominent, with 8.6% of NRM regional bodies' FTEs devoted to corporate services, in comparison to a comparison of approximately 20.5% and 18.5% respectively. This indicates that a greater proportion of funding is used directly in generating outcomes and activities that benefit the environmental and social systems throughout Queensland.

Support vs Delivery FTE (NRM Groups)



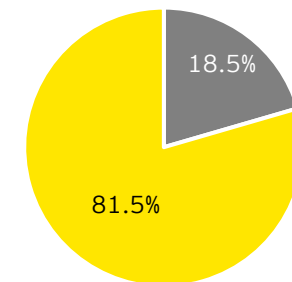
■ Corporate ■ Delivery

Support vs Delivery FTE (Small Organisations)



■ Corporate ■ Delivery

Support vs Delivery FTE (Medium Organisations)



■ Corporate ■ Delivery

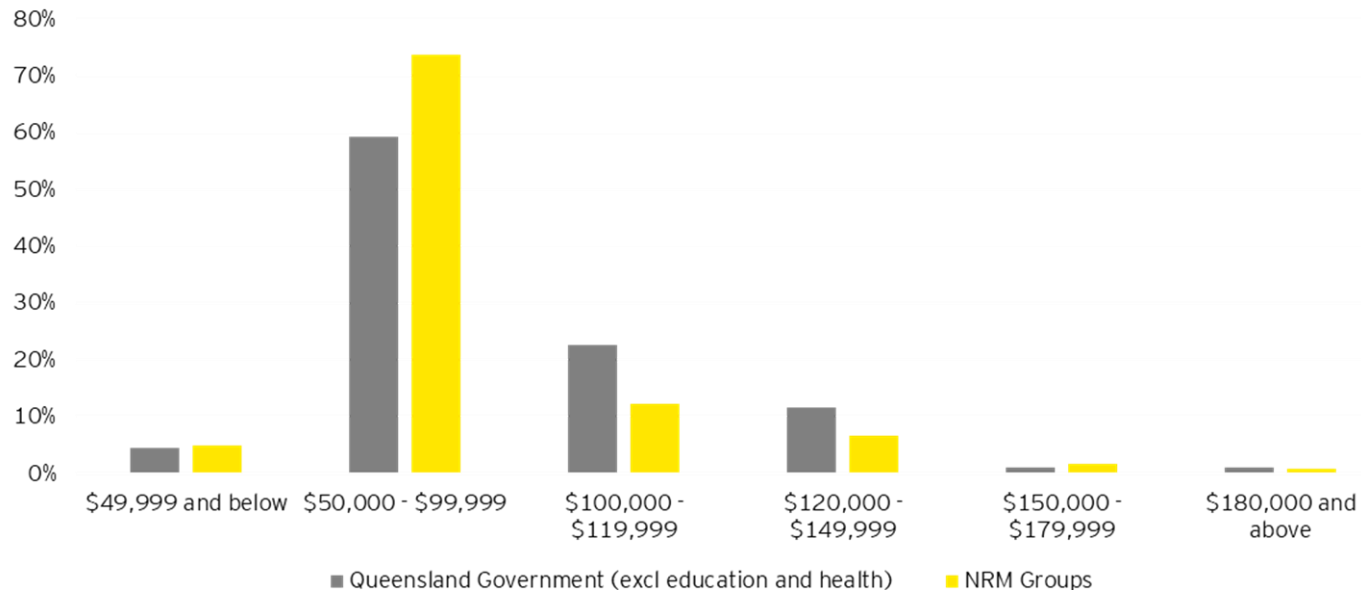
Source: Benchmarking of Commonwealth and State Government corporate services, benchmarks relate to medium and small sized organisations within Government

Unique benefits

Efficiency of wage spend

There are further efficiencies borne through the NRM regional bodies' wage spend. The current average wage spend per FTE for the NRM regional bodies is approximately \$82,500* as opposed to the Queensland Government average of \$110,000. This implies that NRM groups have lower unit costs and better economic efficiency than the benchmark. While NRM regional bodies' salaries are reflective of market rates as part of the Enterprise Agreement and typical for on-the ground delivery staff, overall there is a greater proportion of employees within lower salary bands.

The distribution of salaries suggest NRM regional bodies can be nimble in their salaries offered and are not limited by existing enterprise agreements and award structures. In the absence of the NRM regional bodies, the Queensland Government would be likely required to deliver these services. Therefore it is more efficient for NRMs rather than government to deliver these services for a given budget.

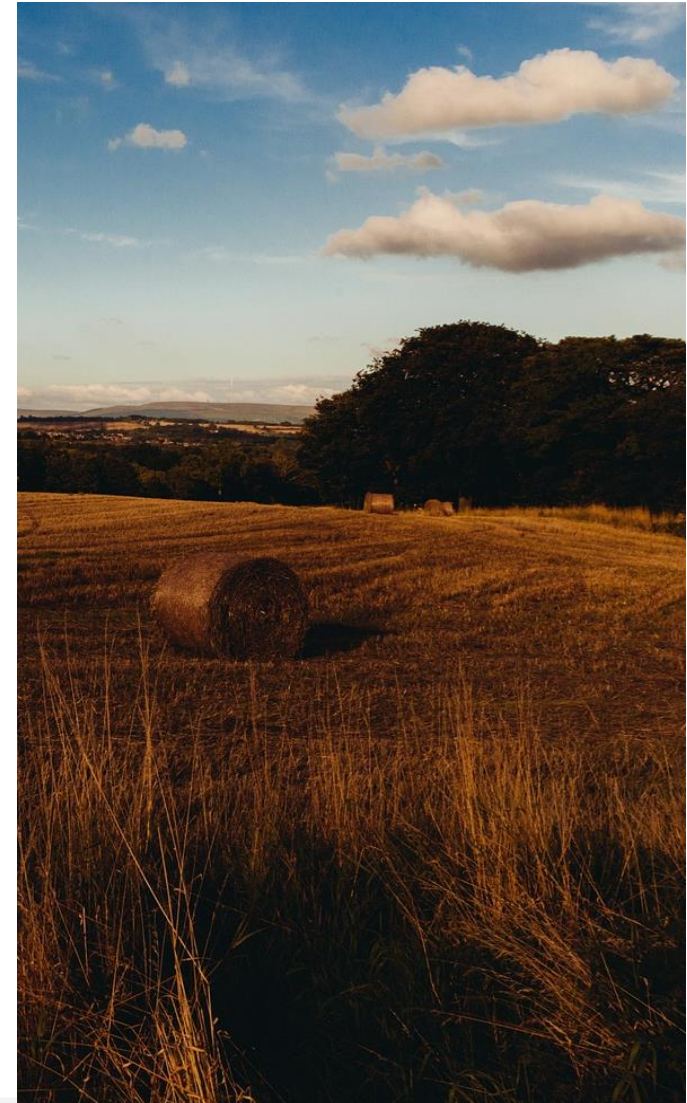


Unique benefits

Efficiency observations

It is evident that NRMs currently operate under a lean model that allows for a significant proportion of resources to be devoted to delivery of services and outcomes rather than management of the organisation. Furthermore, NRM regional bodies can avoid the inherent inefficiencies of larger organisations. Summary observations can be made regarding the efficiencies of NRM regional bodies:

- ▶ When comparing FTE distributions to a benchmark, NRM groups demonstrated a more efficient model, with 91% of FTE resources devoted to delivery of services which was in comparison to the 80% benchmark
 - ▶ This difference in ratio indicates that a substantial portion of resources can be devoted to delivering programs and generating outcomes
- ▶ Wage spend is concentrated in the lower ranges for NRMs. This implies that a greater number of staff can be “on the ground” delivering services than would otherwise be able to be provided for the same amount of money
- ▶ The reasons for efficiencies are not obvious but it is apparent that they are seen across the NRM bodies that provided data. This is likely to be borne out of necessity or through organisational culture allowing a more all-in style where everyone contributes, resulting in less need for regimented corporate functions
- ▶ From an external perspective, it may be that efficiency is driven by the current funding arrangements. Where a gap in the market exists and due to the unique skills that NRM regional bodies offer, there is no need for a tender process. As a result, this effort can be devoted to other functions. As competition grows, there may be a need for more business development functions to be developed within NRM groups. Were such a model to become more mainstream that necessitated tendering and greater fundraising, it may reduce the efficiencies observed.

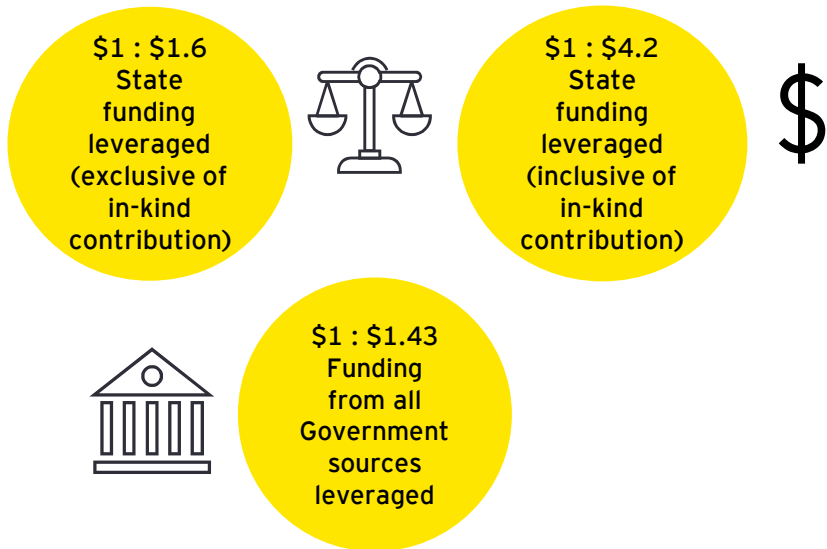


Unique benefits

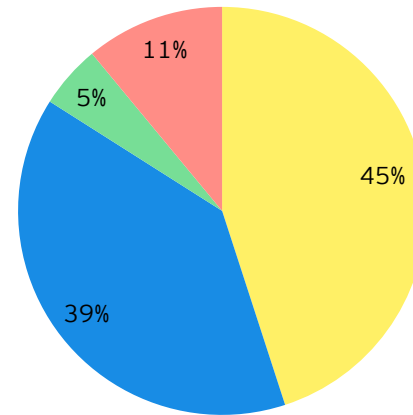
Leveraging ratios

Leveraged funding is financial contribution to NRM regional bodies from other sources that government would not have received. NRM groups deliver unique benefits because government can leverage not only the experience and expertise of the NRM groups but also other funding sources, maximising impact. For every dollar of state funding received by NRM Groups, an additional \$1.6 of funding is attracted, when in-kind contribution is included, this number increases to \$4.2*.

Relative to government, NRM Groups have the ability to leverage additional funds and in-kind contributions, including through commercial funding as well as other miscellaneous sources. Ultimately this means that \$1 of state funding invested leverages \$4.2 of other “investment”, either through in-kind contributions or commercial and other funding arrangements. This enhances the impact of state government funding, supporting enhanced achievement of outcomes such as environmental benefits, as well as economic outcomes such as job creation. It should be noted that this information is not collected regularly and further collection of this data may solidify or even prove to demonstrate increased leverage. The sources of funding for NRMs are broken down below by Commonwealth funding, state funding, commercial funding and other sources.



Funding Breakdown by Source



Commonwealth State Commercial Other

- ▶ Globally, 90% of total funding between 2009 and 2015 for land conservation was from government
Source: Trust for Nature (2018)
- ▶ Not for profit sector as a whole derives approximately 33.2% of its funding from the Government
Source: Productivity Commission (2010)
- ▶ Charities typically obtain 43% of funding from Government but have greater access to philanthropic funds
Source: ACNC

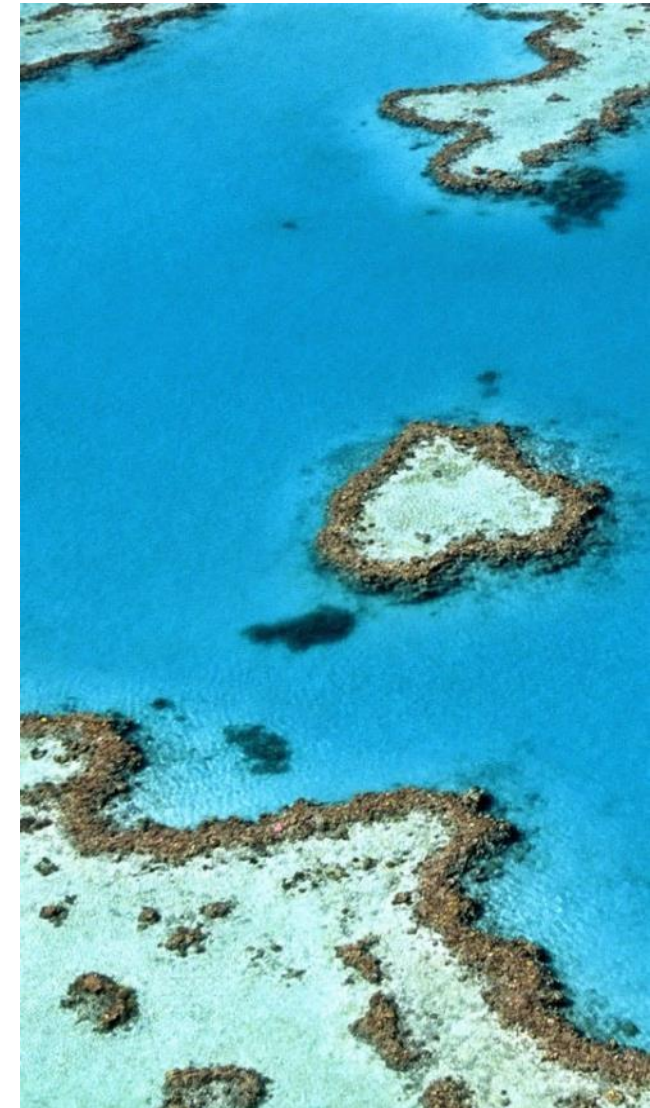
**Note – Derived from NRMs who provided sampled projects including both greater and lesser land manager contributions*

Unique benefits

Funding observations

Funding data for both external funding and in-kind and volunteering hours is incomplete. It was observed that this data was not collected uniformly across the cohort. Despite this, EY has utilised techniques that have anchored ratios where data was provided and then extrapolated this across the entire dataset. This is believed to be adequate to make high level estimates.

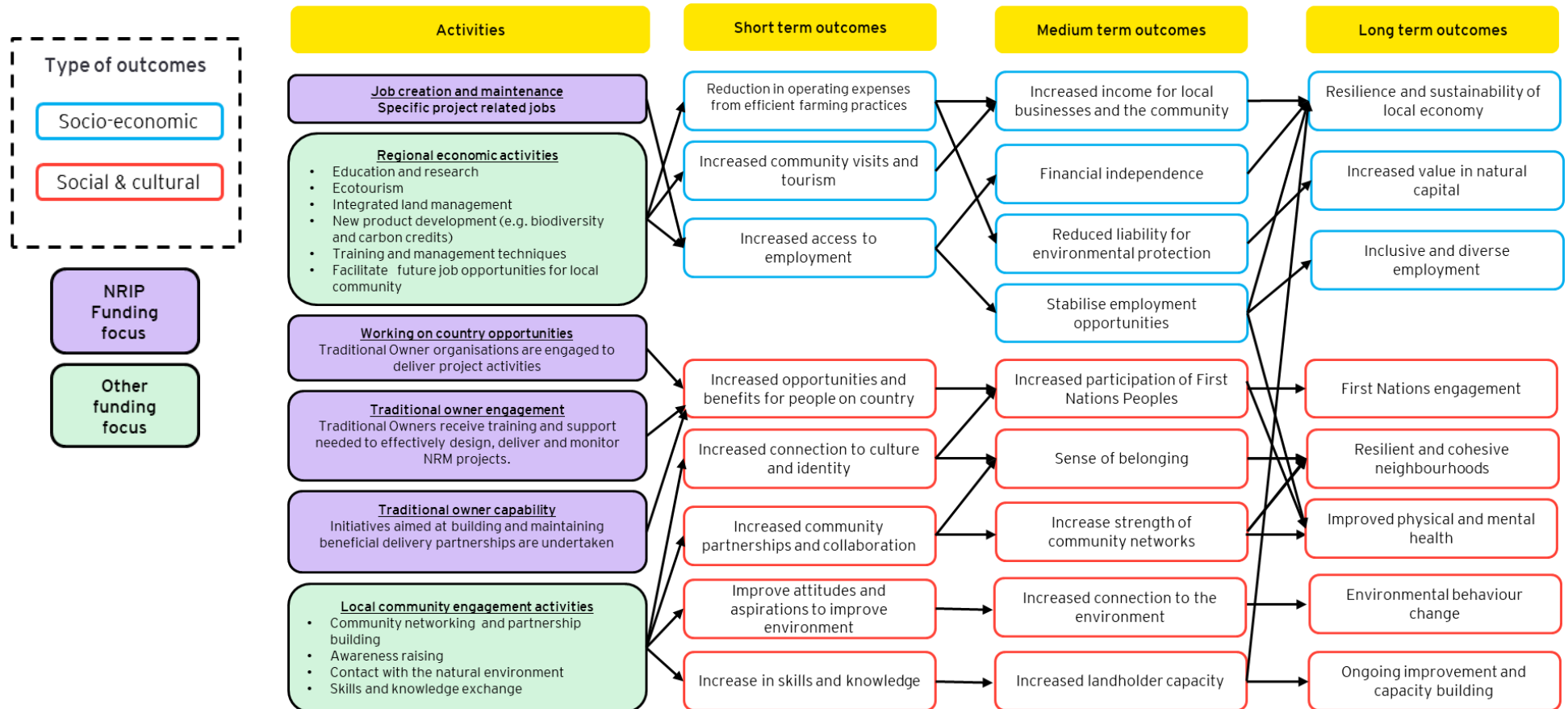
- ▶ Overall funding appears to be leveraged well. State funding in particular achieves a ratio of \$1.6* (with only funding considered) to \$4.2* (when in-kind contributions and volunteering is included) for every \$1 of state funding invested. This is viewed as an extremely favourably cost benefit ratio. In essence, this funding indicates that \$1 of state funding tends to leverage a further \$2.7 - \$3.5 of value into the Queensland economy. Importantly, this funding is regionally focused meaning that many of the jobs created are focused in the region where they are most needed during COVID-19
- ▶ Currently the split of funding is slanted toward government which is not unusual given the public nature of the benefits that NRMs convey through environmental and social improvements
- ▶ Although the split of funding could be considered high in relation to other NFPs which derive 33-43% of their funding from government, NRM regional bodies' funding split is more diverse than the global benchmark of (90%) for conservation funding. This points to a more self sufficient funding model that is less reliant on government funding
- ▶ Similarly, in-kind contribution and volunteering is equal to approximately 22% of total output and sits between comparable benchmarks of 19 and 30% within Australia and New Zealand
- ▶ NRM regional bodies explore alternative forms of funding through accessing green bonds and developing outcome based funding models to enhance the share of private sector funding that can be offered. This will need to be considered on a case by case basis for commercially viable projects
- ▶ All funding will be predicated on the ability to develop a consistent approach to environmental accounting so that standards can be adopted and developed and credible metrics reported against for cost effectiveness data. The use of standard datasets and definitions will improve reporting in the sector and provide new avenues to funding.



Unique benefits

Long-term outcomes and shared value of NRM regional bodies

NRM groups generate socio-economic, social and cultural outcomes for the community in the long term through their programs. These include regional economic and local community engagement activities.



Unique benefits

NRM regional bodies supporting cohesive and resilient communities

The work undertaken by NRM regional bodies not only provides healthy physical environments but also contributes to healthier individuals and communities. They enable community members to have meaningful contact with their physical environments and increased social connectedness and participate in community activities. Networks, trust and norms that facilitate co-operation and cohesion in communities are a key determinant of community health.

NRM groups promote cohesive communities through collaborating with other organisations (e.g. other community-oriented local businesses and national businesses with a local presence as well as local councils) to tackle community wide problems collectively. Community cohesion and resilience developed through NRM group activities form an intrinsic part of community networks and response to external pressures such as natural disasters.

The total economic cost of natural disasters is growing and is expected to reach \$39 billion per year by 2050.

NRM group activities play a significant role in community resilience through promoting complex networks that allow communities to support each other when faced with adversity. This includes ongoing engagement and collaboration with government agencies, stakeholders, and communities to prioritise recovery activities, planning, and mitigation initiatives to build landscape and community resilience.

For example, NRM interventions could promote resilience to drought through increasing groundcover, increasing water use efficiency, reducing loss of pasture during dry times and increasing planning for risks associated with drought.



Case study: Gulf Savannah Ongoing Community Support

In partnership with Tagalaka Aboriginal Corporation, Gulf Savannah are undertaking a community-based aquaponics garden project in Croydon. The objective of this project is to help the Croydon community build disaster recovery and resilience by addressing food security issues.

When the highways to Croydon are cut off by floodwaters, so too are the food supply chains into Croydon. By producing fruit, vegetables, herbs and fish, an aquaponics garden offers a fantastic alternative food supply to that which is normally transported into town from wholesale food suppliers. A food security consultant has also been engaged to help the community develop a food security strategy.

The Croydon garden project is ongoing and has been funded for many years demonstrating the ongoing support for resilient local communities. It further reinforces the Croydon community's disaster preparedness and recovery.



Unique benefits

Ongoing improvement and capacity building

Capacity building is critical for achieving environmental and social outcomes in the long-term. A differentiating benefit of the NRM regional bodies' delivery model is the ongoing continual improvement process through the independent sharing of ideas, beliefs and skills. This is enabled through the network of the twelve regional bodies and their communities.

NRM regional bodies build the capacity of the community by:

- ▶ providing information to the community
- ▶ stakeholder consultation; requesting input or feedback from the community
- ▶ decision-making, delegating decisions and planning
- ▶ participation in activities facilitated by regional NRM organisations
- ▶ undertaking or coordinating on-ground works
- ▶ capacity building, training and agricultural extension

NRM regional bodies enable capacity building through the local delivery model as the level of community involvement is increased and therefore the community are more empowered to participate in community decision making.

NRM groups support the economic sustainability of regional communities through the contribution of professional skills to the community. It is estimated, NRM activities can generate an economic return in the order of 2-5 times the original investment through the development of knowledge and skills (*Multiple Benefits of Landcare and Natural Resource Management, Final Report, 2013*). Many NRM initiatives work closely with landholders and community to support them in better managing the land and ecosystems which ultimately supports the productivity and profitability of the region.

The skills and capacity of NRM regional bodies if further details are included in our skills assessment below.

Case study: Gulf Savannah NRM 'Bush Business'

Each month, local women who have been affected by the recent drought meet at the Gulf Savannah NRM office to encourage and give the skills and confidence to put themselves and their business ideas out there.

Participants include women with unique skills and talents that have seen a need to find an extra income to supplement their family businesses through tough times. Some of these skills and experience include beef production, horticulturalists, hay producers, livestock carrying and contract mustering. The workshops are designed to bring out the best in each one and hopefully turn their idea into an income generating business.

With funding from the Mareeba Shire Council, each participant attended 6 workshops over 6 months and had to complete workbooks, homework and exercises. Many of the participants attended the Arts In The Park event held in Mareeba



Unique benefits

First Nations engagement

NRM group activities provide significant First Nations inclusion and participation benefits. The benefits for First Nations inclusion and participation in NRM activities are wide ranging and include income and employment, health and wellbeing, social, cultural and environmental benefits.

In particular, NRM groups:

- ▶ Provide an economic base for indigenous employment
- ▶ Support Indigenous people, including youth and Elders to get back on country
- ▶ Provide related mental health benefits, particularly in terms of mitigating social disconnection and the risk of suicide
- ▶ Enable individual and community healing, cultural reinvigoration and ability to practice cultural activities and care for sites and landscapes of cultural importance
- ▶ Provide training and skill development, including skills in business management, reduced substance abuse, more functional families, improved early childhood development, increased social harmony and increased community pride

NRIP Priority Principles: Traditional Owner capability building, engagement and on-country opportunities

The design of NRIP acknowledges the deep cultural, social, environmental, spiritual and economic connections of First Nations peoples to their lands and their waters. NRIP funding recipients are encouraged to build respectful, inclusive and equitable partnerships with First Nations peoples on the lands where work is undertaken. Important is the extent to which the First Nations peoples themselves feel they have benefitted from the NRIP in a range of ways, including the opportunity to share their knowledge, and opportunities to learn. This requires involvement in planning (cultural acknowledgement), project decision-making (empowerment benefits) and on-ground works delivery (economic benefits). This NRIP outcome ensures that approaches to on-ground work by delivery organisations encompass the holistic meaning and values First Nations peoples bring to caring for country, transforming project delivery through exposure to traditional knowledge.

Case study: Cape York Indigenous fire workshop

Cape York NRM is a proud supporter of the Indigenous Fire Workshop. Fire is continually identified as the biggest issue for land managers on Cape York. Wildfires strip the land of vegetation, create erosion, release carbon into the atmosphere and reduce food sources and shelter for cattle and wildlife. The fire workshops are held annually on Cape York, with participants from across Australia.

Fire management is crucial for maintaining and improving the condition of vegetation communities upon which these species rely—this is why improving fire management is a key component of all regional land partnership programs.

These workshops are helping to support the building of an Indigenous Fire Network across Cape York, Gulf Savannah and Terrain natural resource management regions. It also enables the ancient traditions of land management by fire which have been handed down to generations of Aboriginal people.



Unique benefits

Improved attitudes and aspirations towards the environment

The local delivery aspect of the NRM regional bodies enables community empowerment in protecting and enhancing their own natural assets and habitat.

Participation in natural resource management enables direct experiences in the physical environment which encourages the community to examine and adapt their attitudes and behaviours for the benefit of the natural world.

There is empirical evidence suggesting a positive link between direct experiences in nature and people's environmental attitudes and behaviours towards the environment. Similarly, a study on environmental attitudes and behaviours (Janmaimool and Khajohnmanee) found that environmental knowledge can impact attitudes and behaviour toward land management. The strongest association was found between awareness (of problem and/or action strategies) and perceived consequences of individual's actions. This finding is unsurprising, as people who are conscious of an environmental problem (e.g. diffuse water pollution from agriculture) and best management practices are more likely to be concerned with the consequences of engaging in practices that could cause or induce such environmental problems.

A unique feature of the NRM regional body delivery model is the sharing of ideas and skills, leading to the improvement of attitudes and aspirations towards the environment and society over time. This importantly also provides linkages to ongoing improvement, particularly to further NRM-based education and research. This creates a positive feedback-loop, further improving environmental and social capital over time.

Case study: Fitzroy Basin Association Team Turtle

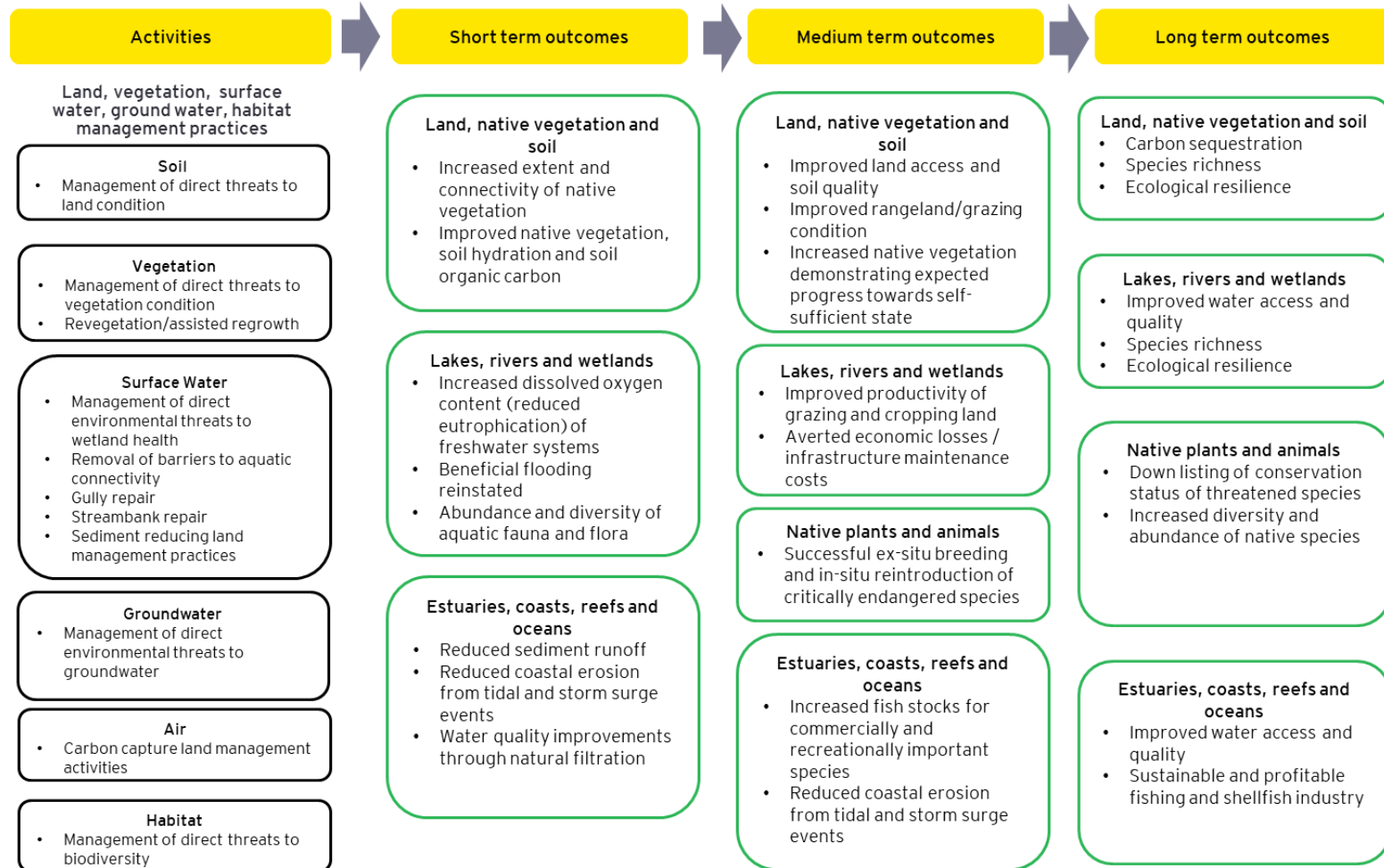
The Team Turtle CQ project is a collection of volunteers along the Capricorn and Curtis Coast who participate in citizen science by recording data on nesting marine turtles and hatchlings. Walking along local beaches volunteers record nesting turtle tracks, successful nests or nest attempts, presence of threats including evidence of predators (foxes, goannas etc.), 4WD tracks or light impacts.

Community volunteers are trained through a series of workshops to positively identify marine turtle tracks on beaches throughout the nesting and hatching season.



Unique benefits

Environmental impacts of NRM regional bodies



Unique benefits

Increase in natural capital

Ecosystem services provide economic value to society through examples of filtration, provisioning services (e.g. timber) or through regulating, servicing and cultural services. Each of these aspects is difficult to value to society and is often unquantified in economic decision making. As a result, these resources are often exploited as their true cost is unknown. A 2019 OECD report Biodiversity: Finance and the Economic and Business Case for Action found that the world lost an estimated USD 10 - 31 trillion per year from 1997 to 2011 owing to land cover change and land degradation.

These economic benefits provided by ecosystem services are protected and sustained by NRM activities. These activities are beneficial to society, and it is evident that they deliver huge economic values. While they are difficult to quantify on a micro basis, a mounting body of evidence points toward the benefit that it delivers society.

Innovative natural resource management

NRM's have recognized the scale of the challenge and the opportunities. With the support of the Queensland Government, NRM regional bodies are establishing market-based innovations such as:

- ▶ Eco-markets Australia is the first voluntary environmental market in Australia to create opportunities for farmers, graziers and land managers to be paid for the work they do in improving our environment
- ▶ Reef Credits is an innovative, market-based solution offering a new way to improve the quality of water entering the Great Barrier Reef.
- ▶ Cassowary Credits - independently verified and tradeable credit to attract new investment and boost the funds available to landholders for habitat restoration
- ▶ State-wide Indicators Framework that enables the NRM sector to demonstrate the investment and outcomes delivered

These examples of eco-markets are all evidence of new and innovative ways to attach market values to services which were previously seen as something without economic value.

Case study: Healthy Land and Water Report Card

Healthy Land and Water (HLW) has been looking at how they can do things differently and more innovatively. The HLW Report Card is a system on which other Australian and global monitoring and reporting systems have subsequently been modelled. The success of the Report Card is the result of a huge amount of collaboration. It has contributed greatly to justifying billions of dollars of investment over the last two decades by government, industry, and community, all focused on improving the health and integrity of our region's waterways. Through the evolution and next iteration of the Report Card, HLW hope to deliver an increased understanding of environments and the required on-ground action, planning, support, and investment. Past investments in catchment health are continuing to reap dividends. Some parts of Moreton Bay are reporting better conditions than at any other time in the last 20 years, and there has also been some noticeable regeneration of vulnerable habitats, including seagrass, mangroves, and vegetation in areas.



Unique benefits

Southern Queensland Landscapes NRM Case Study

Southern Queensland Landscapes NRM has strong extensive networks which enable them to quickly and efficiently engage people and progress action.

In response to the 2019 bushfires, the Australian Government funded a disaster response initiative to restore degraded land impacted by fire. The main impact to be addressed was the influx of weeds (blackberry and lantana).

Southern Queensland Landscapes was able to quickly mobilise a project team to undertake weed management, working closely with 17 regional land managers who had been impacted. The project team determined who needed support and distributed funding where it was needed most.

The speed at which assistance was delivered can be attributed to Southern Queensland Landscape's trust within communities and connections within the region.



Lantana bush regrowth following the bushfires



Weed spraying



Lantana bushes post-spraying

Unique benefits

Economic benefit of NRM activities

A variety of valuable natural capital exists in Australia, comprising vast land features, ecosystems, flora and fauna. However, the gradually declining biodiversity and the health of natural assets are occurring at an accelerating pace. This threatens ecosystem services and the benefits they bring to the various industries and society.

To assist with understanding and demonstrating the anticipated benefits delivered through each activity, EY has developed a number of logic models which represent a hypothesis of how value is created through NRMs' activities. These logic models are designed to provide an understanding of how NRM activities deliver beneficial outcomes. The Benefit Cost Ratios* (BCRs) have been inserted between the activities that they related to and before the outcomes that are expected to be achieved. This draws a logical chain borne from the activity and outcomes produced by NRMs.

To quantify the expected economic benefits that have come about through NRIP and broader NRM land management activities, EY has undertaken comprehensive research to identify appropriate benefit cost ratios (BCR) or NPV values for these NRM activities within literature. A BCR is a ratio that presents the relationship between the relative costs and benefits of a proposed intervention. BCRs are commonly used in assessing policy options and in capital budgeting to analyse the overall value of undertaking a particular intervention. The BCRs and NPVs used in this analysis express a financial or quantitative outcome attached an activity. A BCR greater than 1.0 represents an intervention that is expected to deliver a positive return on investment, similarly an NPV above 0 indicates the same. Multiple studies were considered but EY has focused on Australian studies where possible due their greater contextual match. Despite this, it is worth noting that the activities undertaken in the study may differ in context to the activities of specific NRMs.

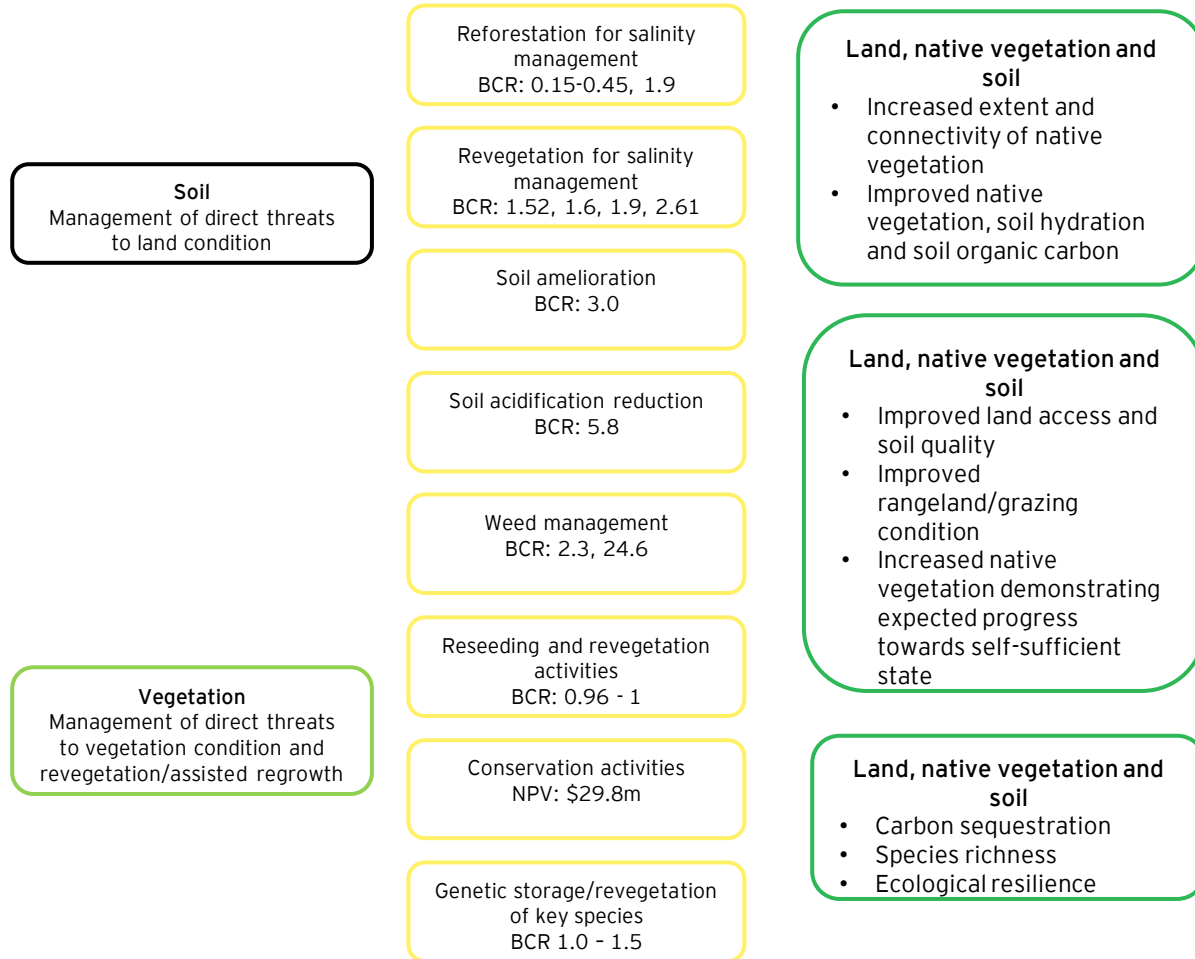
This analysis provides a comprehensive and robust grounding for understanding how benefits and costs are accrued. There is no uniform approach for calculating BCRs and throughout our research, multiple methods were observed. Variations included:

- ▶ Timeframe under which benefits are assessed
- ▶ Completeness of expected outcomes upon which a benefit is calculated
- ▶ Spatial elements within the study
- ▶ Discount rates used throughout the NPV calculation
- ▶ Ranging levels of detail in costings

The aim of these studies is to provide a comprehensive evidence base to demonstrate the benefits of NRM activities as they relate to both economic, environmental and social benefits to society. Through these studies we can develop a picture of the benefits that NRM groups deliver via the investments provided to them.

**Note – A benefit cost ratio is a calculation that identifies the ratio of benefit provided to society from any given cost*

Economic Benefit of NRM Activities

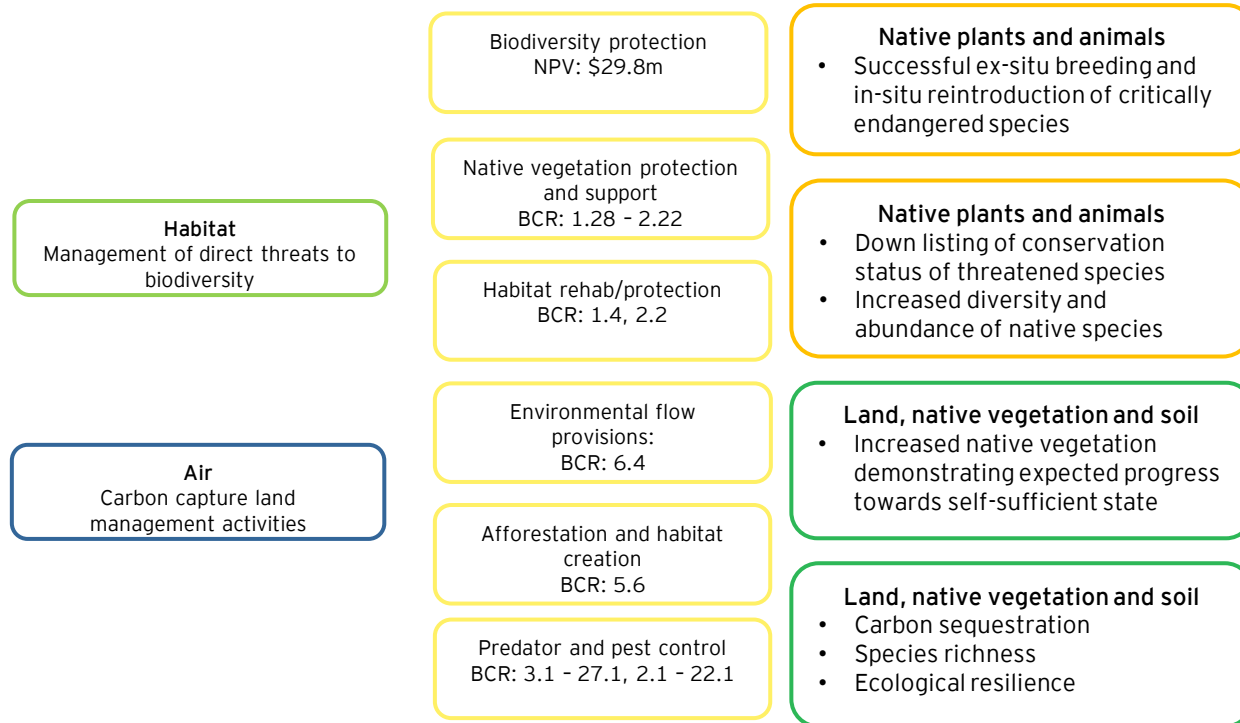


NRM regional activities have a significant focus on the restoration and protection of land. This takes many forms, ranging from management of soil, protection against threats (e.g. weed management) or restoration of saline damaged land, reintroduction of species (both fauna and flora) and developing species conservation habitats. The core outcomes of these activities are presented in our logic model at the start of this chapter as well as in the logic model on this page. For example, the specific NRM activities and the outcomes they provide have been linked to specific cost benefit ratios of studies that mirror the activities that NRM groups undertake. This provides some quantitative rigour to the logic models by illustrating what the potential benefit of every dollar invested, is.

BCRs identified related to the management of soil, land condition and vegetation range from 0.15 - 0.45 up to 5.8 or 24.6 in one specific instance. The benefits that were measured and quantified in these studies varied study to study but included productivity benefits, ecosystem services such as provisioning and regulating services, reduction in maintenance of public infrastructure (i.e. avoided cost), changes in land use, consumer surplus improvements and improved recovery from drought periods, among others.

The range of positive benefits identified is indicative of the extent that NRM activities related to vegetation and soil improve society, enhance productivity and provide cost effective returns on investment into the sector. It is evident on a business case perspective

Economic Benefit of NRM activities



NRM activities related to the management of flora and fauna habitat and air improvement can include:

- ▶ Afforestation and habitat creation
- ▶ Carbon capture project support
- ▶ Habitat rehabilitation and protection (e.g. the provision of self sustaining habitats)
- ▶ Native vegetation and support
- ▶ Predator and pest control

Each of these activities provide a range of benefits to society and support positive outcomes within the environments that ultimately support communities on a local to community scale. Benefits can accrue privately or publicly, but studies have indicated that cost benefit ratios found for these activities can range from 1.28 to 6.4. The range of studies collected indicate a positive for society where money is invested in these activities.

The benefits quantified in studies identified include impacts such as reduction in salinisation, sequestration benefits (e.g. cleaner air, social costs of carbon), wildfire management, intrinsic and extrinsic biodiversity benefits (equivalent to fines related to destruction), human health and safety and avoided costs.

It is evident that NRM activities related to the protection of biodiversity and carbon capture and management activities generate significant benefit to society with up to 6.4 times benefit relative to the level of investment based on the studies found.

Economic Benefit of NRM activities

Surface Water

- ▶ Management of direct environmental threats to wetland health
- ▶ Removal of barriers to aquatic connectivity
- ▶ Gully repair
- ▶ Streambank repair
- ▶ Sediment reducing land management practices

Groundwater

- ▶ Management of direct environmental threats to groundwater

Removal of barrier/connectivity (e.g. physical/hydraulic/chemical/behavioural)
BCR: 3.6

Riparian restoration activities
BCR: 0 - 6.5

Maintain, develop or improve wetland habitats
BCR: 1.9 - 3.07

Prevent acidification and salinisation of waterways:
BCR: 2.61

Conservation management practices for sediment reduction
Net benefit: \$94.5 ha-1 y-1

Improve natural coastal habitats
BCR: 2.62, 1.62

Lakes, rivers and wetlands

- Increased dissolved oxygen content (reduced eutrophication) of freshwater systems
- Beneficial flooding reinstated
- Abundance and diversity of aquatic fauna and flora

Lakes, rivers and wetlands

- Improved productivity of grazing and cropping land
- Averted economic losses / infrastructure maintenance costs

Lakes, rivers and wetlands

- Improved water access and quality
- Species richness
- Ecological resilience

Estuaries, coasts, reefs and oceans

- Increased fish stocks for commercially and recreationally important species
- Reduced coastal erosion from tidal and storm surge events

Estuaries, coasts, reefs and oceans

- Reduced sediment runoff
- Reduced coastal erosion from tidal and storm surge events
- Water quality improvements through natural filtration

Estuaries, coasts, reefs and oceans

- Improved water access and quality
- Sustainable and profitable fishing and shellfish industry

NRM activities are critical to protecting Queensland water environments from externalities caused through human influence. Activities that NRM groups undertake to do this include:

- ▶ Removal of barriers impeding aquatic connectivity
- ▶ Soil conservation and land management activities reducing run-off
- ▶ Aquatic habitat restoration and protection

Water is often an exploited resource and protection of it will and does ultimately benefit society. The cost benefit studies reviewed illustrate this with most studies showing a positive ratio, ranging from 1 to 0 - 6.5.

The benefits quantified within these studies range from provisioning services such as recreational and tourism benefits, reductions in disease, carbon sequestration, environmental non-use values, improvements in water quality and water supply, reductions of impact of acid sulphate in soils, averted economic losses (e.g. infrastructure maintenance cost reduction due to reductions in floods)

Outcomes related to these activities will also notably benefit those in catchments around the waterways. Such outcomes include the benefits stated above but also include ecological resilience and a variety of non-use benefits. The combination of positive cost benefit and beneficial outcomes achieved is indicative of the value that NRM groups bring to the region.

Appendix



Regional Economic Impact

NRM #1

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.24	\$0.05	\$0.08	\$0.37
Employment	1	0	0	1
Value-added (\$m)	\$0.13	\$0.02	\$0.05	\$0.20

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$2.06	\$0.45	\$0.62	\$3.14
Employment	8	2	2	12
Value-added (\$m)	\$1.00	\$0.22	\$0.37	\$1.60

NRM #2

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$1.05	\$0.55	\$0.62	\$2.22
Employment	4	2	2	8
Value-added (\$m)	\$0.51	\$0.26	\$0.34	\$1.12

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$9.23	\$4.87	\$5.41	\$19.51
Employment	36	17	21	74
Value-added (\$m)	\$4.51	\$2.32	\$2.99	\$9.82

Regional Economic Impact

NRM #3

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.89	\$0.20	\$0.27	\$1.36
Employment	3	1	1	5
Value-added (\$m)	\$0.44	\$0.10	\$0.16	\$0.69

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$4.24	\$0.93	\$1.28	\$6.45
Employment	17	3	5	25
Value-added (\$m)	\$2.06	\$0.46	\$0.77	\$3.29

NRM #4

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.88	\$0.19	\$0.27	\$1.33
Employment	3	1	1	5
Value-added (\$m)	\$0.43	\$0.10	\$0.16	\$0.68

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$3.33	\$0.73	\$1.01	\$5.08
Employment	13	3	4	20
Value-added (\$m)	\$1.63	\$0.36	\$0.60	\$2.59

Regional Economic Impact

NRM #5

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.58	\$0.13	\$0.18	\$0.88
Employment	2	0	1	3
Value-added (\$m)	\$0.28	\$0.06	\$0.11	\$0.45

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$1.77	\$0.39	\$0.54	\$2.70
Employment	7	1	2	10
Value-added (\$m)	\$0.86	\$0.19	\$0.32	\$1.38

NRM #6

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.54	\$0.12	\$0.16	\$0.81
Employment	2	0	1	3
Value-added (\$m)	\$0.26	\$0.06	\$0.10	\$0.42

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$2.74	\$0.61	\$0.81	\$4.15
Employment	11	2	3	16
Value-added (\$m)	\$1.31	\$0.30	\$0.48	\$2.09

Regional Economic Impact

NRM #7

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.90	\$0.42	\$0.40	\$1.72
Employment	4	1	2	7
Value-added (\$m)	\$0.44	\$0.20	\$0.22	\$0.86

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$5.87	\$2.75	\$2.62	\$11.23
Employment	23	9	10	42
Value-added (\$m)	\$2.87	\$1.31	\$1.46	\$5.63

NRM #8

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.50	\$0.30	\$0.33	\$1.12
Employment	2	1	1	4
Value-added (\$m)	\$0.25	\$0.14	\$0.18	\$0.56

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$9.38	\$5.56	\$6.07	\$21.01
Employment	36	19	23	78
Value-added (\$m)	\$4.60	\$2.65	\$3.29	\$10.54

Regional Economic Impact

NRM #9

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$1.54	\$0.79	\$0.90	\$3.22
Employment	6	3	3	12
Value-added (\$m)	\$0.75	\$0.38	\$0.50	\$1.62

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$15.33	\$7.86	\$8.92	\$32.11
Employment	62	27	34	123
Value-added (\$m)	\$7.46	\$3.74	\$4.97	\$16.18

NRM #10

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$1.15	\$0.59	\$0.67	\$2.40
Employment	5	2	3	10
Value-added (\$m)	\$0.56	\$0.28	\$0.37	\$1.21

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$8.29	\$4.25	\$4.82	\$17.37
Employment	34	15	18	67
Value-added (\$m)	\$4.03	\$2.02	\$2.69	\$8.75

Regional Economic Impact

NRM #11

NRIP	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$0.50	\$0.20	\$0.23	\$0.92
Employment	2	1	1	4
Value-added (\$m)	\$0.24	\$0.09	\$0.13	\$0.46

Total	Direct (\$m)	Indirect		
	Output	Supply chain	Consumption	Total
Contribution (\$m)	\$9.31	\$3.64	\$4.26	\$17.20
Employment	37	13	16	66
Value-added (\$m)	\$4.54	\$1.72	\$2.41	\$8.66

Input-Output methodology

The method used in this report to estimate the economic impact from initial investment is Input-Output (IO) analysis. The basic premise is that each sector of the economy uses inputs from other sectors, along with labour, to produce their output. As an example, the agriculture sector requires inputs from agriculture itself (e.g. fertiliser), transport, construction, manufacturing, energy, wholesale trade, professional services, and accommodation and food services, all to varying extents to produce its output, e.g. grains or other broadacre crops. These inputs (resulting in outputs) are presented as transaction matrices in an IO model. They are often specified in dollar values. At a regional level, IO transaction matrices detail all the buying and selling interactions between industry sectors in a region, the value of sales to the household and government sectors, the value of imports, exports, payments of wages and salaries, payment of taxes and the value of industry sectors' gross operating surpluses. The IO transaction matrices used in this report is for Queensland and sub regions within Queensland

The matrices are put together into a model where economists are able to study the impact of input 'shocks' to a sector of the economy to trace through the ultimate impact to other sectors and the wider economy.

A useful feature of IO analysis is the ability to calculate indirect effects. In the case of employment, an indirect impact captures other jobs that are required to produce the output. An example of this is, to produce canola, transport and logistics are required to move supplies to and from the fields. Hence, the model allows for the calculation of scenarios such as: for every 1 agriculture job in a region, how many other jobs are created in the transport and logistics sector that are ultimately for the purpose of producing canola.

It is common for the indirect effects to be classified into two categories. First, supply-chain flow on effects are generated by servicing (or supply chain) industries. Second, consumption flow on effects derive from income increasing as the result of the direct economic activity, and that income is used in spending in the local regional economy.

In examining indirect effects, the concepts of Type I and Type II multipliers are useful metrics to consider. A Type I multiplier captures the initial direct impact and supply-chain effects. It is calculated as $(\text{Direct} + \text{Supply-Chain})/\text{Direct}$. The multiplier is a unit free number. As an example, a Type I multiplier of 1.6 means that for every direct \$1 increase in output you would expect to see an extra \$0.60 of activity generated within the region due to the induced supply-chain activities.

A Type II multiplier captures the initial direct impact, and both supply-chain and consumption effects. It is calculated as $(\text{Direct} + \text{Supply-Chain} + \text{Consumption})/\text{Direct}$ or, simply and equivalently, $\text{Total}/\text{Direct}$. This multiplier is also a unit free number. By way of another example the interpretation is as follows. A Type II multiplier of 2.3 means that for every direct \$1 increase in output you would expect to see an extra \$1.30 of activity generated within the region due to the supply-chain effects plus the consumption effects.

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Skills assessment of Regional NRM Bodies

Natural Resource Management
Regions Queensland

November 2021



EY acknowledges Aboriginal and Torres Strait Islander people as the first peoples of Australia and Traditional Custodians of this land its waters.

We pay our respects to Elders, knowledge holders and leaders both past and present.

We respectfully acknowledge Traditional Owners living within Queensland. We respect Traditional Owners' relationship, connection and association to "country" and that it is an integral part of their identity and cultural expression.



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**Building a better
working world**

30 November 2021

Mr Chris Norman
Chief Executive Officer
NRM Regions Queensland
Unit 11, 120 Russell Street
Toowoomba Qld 4350

Skills assessment of regional NRM bodies

Dear Chris

This report has been prepared for NRM Regions Queensland ('NRMQR') to provide a skills assessment report of regional NRM bodies in Queensland.

We would like to thank you, your team, and the regional NRM bodies for the assistance provided to us during this engagement. Their support and feedback was instrumental in enabling us to meet your expectations for this work.

We look forward to discussing this report or any other aspects arising from our work with you. We also look forward to the opportunity for future collaboration as NRMQR continues on its journey.

If you have any queries in the meantime, please feel free to contact me on +61 7 3011 3111 or Robert Kyne on +61 3 8664 9767.

A handwritten signature in black ink that reads "Elizabeth Rose".

Elizabeth Rose
Partner

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 - Key findings
 - Background and objectives of this report
 - EY's approach to skills assessment

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 - Growing capability

- 04 Appendix**
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Executive
Summary

Executive summary

Key Findings

Collectively, NRM bodies have a diverse range of skills and knowledge to enable the coordination and delivery of projects which generate social, environmental and outcomes. There is a high degree of internally held skills within NRM bodies which includes environmental science, business management and community engagement. It's the combination of skills along with good governance that set regional NRM bodies apart.

A unique feature of the NRM delivery model is the adequate depth of skills to operate effectively. In this way, regional NRM bodies have a wealth of knowledge and skills held internally, at a range level of skill which enables them to solve problems and leverage partners and contractors where required. Not only is this more cost effective and supports with capacity or expertise need, but it also foster local knowledge and builds the capacity of the community.



Summary of NRM skills assessment

Depth and breadth of skills	A wide range of technical and non-technical skills exist to maximise social, environmental and economic outcomes
Transferrable skills	Skill maintained enable proficiencies to fill gaps and solve problems
Effective use	An adequate depth of skills is maintained to remain cost effective and to build capacity amongst the community
Collective skills	It is not the individual but the collective skills which enable co-ordination and delivery of complicated integrated programs
Ongoing skills development	NRM regional bodies look to enhance skills and identify emerging skills which are developed internally and outsourced externally to remain innovative

There are opportunities to grow capability in a strategic way to further support jobs, regions and maximise social and environmental outcomes as part of the next NRIP round of funding. These opportunities include:

- ▶ Ecotourism and visitor management activities
- ▶ Expanding First Nations partnerships
- ▶ Pest management for conservation
- ▶ Carbon and environmental (or natural) markets
- ▶ Information Technology and management

Executive summary

Outcomes of NRM bodies' internally held and outsourced skills

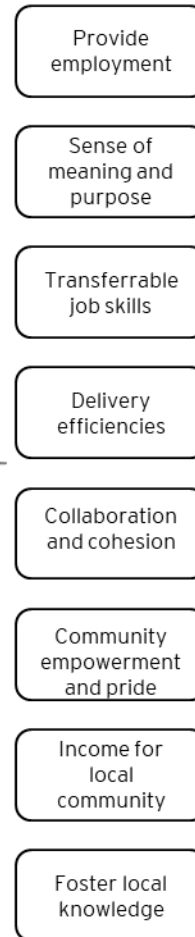
Regional NRM bodies support the growth and diversification of local economies through skills and capability that are maintained within regional NRM bodies and outsourced to local businesses and delivery partners.

Overall, regional NRM bodies are highly skilled in the areas surveyed. Through NRM employment, in-demand and high quality transferable skills are fostered. This provides significant returns to labour and supports the resilience and sustainability of local economies enabling regions to prosper.

Many of the skills surveyed are also outsourced to local delivery partners and contractors. While these skills are not maintained internally, it supports with efficiencies where some skills are in less demand. Regional NRM bodies recognise and embrace the skills and knowledge of partners and contractors. This promotes collaboration, community empowerment and income for local businesses.



Outcomes



Long-term outcomes



Executive summary

Background and objectives of this report

In line with the Natural Resource Investment Program (NRIP) principles, regional NRM bodies maintain unparalleled knowledge and skills of the long-term priorities and challenges of natural resource management in regional Queensland and provide innovative solutions through evidence adaption and community driven collaboration. This is aligned with *Queensland's Economic Recovery Plan (2020)* which aims to:

- ▶ **Support jobs:** Support increased jobs in more industries to diversify the Queensland economy and build on existing strengths in agriculture, resources and tourism
- ▶ **Grow regions:** Help Queensland's regions grow by attracting people, talent and investment, and driving sustainable economic prosperity
- ▶ **Invest in skills:** Ensure Queenslanders have the skills they need to find meaningful jobs and set up pathways for the future
- ▶ **Protect the environment:** Protect and enhance our natural environment and heritage for future generations and achieve a 50% renewable energy target by 2030

To target future NRIP funding applications, there is a need to understand the demand for NRM capability and skills, existing strengths of the regional NRM bodies and how regional NRM bodies' capability and skills can be improved to deliver better NRM outcomes and build capacity in regional communities.

This report seeks to identify regional NRM bodies' support in regional Queensland and how it diversifies the economy through:

- ▶ **Providing** an assessment of the capability and skills held within the regional NRM bodies
- ▶ **Identifying** opportunities to grow these capabilities to deliver the next round of NRIP funding
- ▶ **Assessing** how these capabilities and future employment opportunities contribute to Queensland regional economies and their COVID-19 recovery
- ▶ **Describing** current partnership and outsourcing arrangements and opportunities to grow partnerships and regional skill capacities.

Approach to skills assessment



Conduct literature review & develop skills taxonomy



Data request and engagement with regional NRM bodies



Conduct analysis and identify skill gaps and opportunities

EY's approach identified skills present amongst regional NRM bodies and the gaps and opportunities to maximise impact of NRIP funding program. This involved:

- ▶ **Conducting a literature review to develop a taxonomy** of skills required within the NRM industry and forecast demand for skills, including regional NRM bodies' reports, NRM regional body stakeholder consultation and industry research from the Australian Industry and Skills Committee
- ▶ **Data request and engagement with regional NRM bodies** - Obtained data from regional NRM bodies in relation to the taxonomy of skills to identify:
 - ▶ The demand for the skill
 - ▶ The presence of the skills
 - ▶ The outsourcing of skills
- ▶ **Analysis and identifying skill gaps and opportunities** - identified skill gaps and obtained insights on how NRM skills can further grow their impact

The data reviewed formal educational requirements and soft skill capability within regional NRM bodies such as communication, teamwork, problem solving, critical thinking, innovation, governance and professional ethics, enterprise skills and digital literacy. We also gathered data on higher educational attainment achieved, including PhD, Masters, Bachelor and Diploma attainment across relevant NRM skills.

To understand partnership arrangements, EY collected not only data on capability and skills within each regional NRM body, but also skills developed through regional NRM body partnerships with the community (through delivery partners or local business sub-contracting).

A hand holding a glowing lightbulb in a field of tall grass at sunset. The lightbulb is held in the center of the frame, with the sun setting behind it, creating a bright glow. The background is a field of tall grass, and the sky is a mix of blue and orange. A yellow box is overlaid on the left side of the image, containing the text "Skills assessment findings".

Skills assessment findings

Skills taxonomy development

EY undertook a literature review to develop a taxonomy of skills including the types of skills required within the NRM industry and forecast demand for skills. This included review of NRM bodies annual reports, NRM regional body stakeholder consultation and industry research from the Australian Industry and Skills Committee. The skill areas included in the taxonomy of skills are listed to the right and detailed in the appendix.

NRM regional body reports and stakeholder consultation

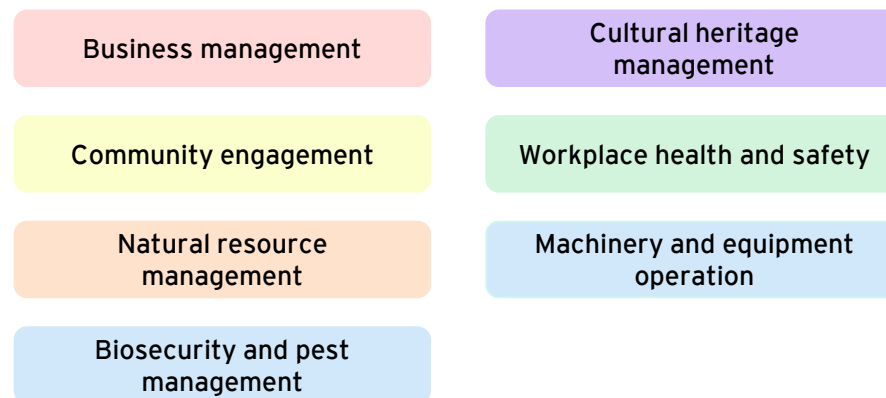
EY's research found that the skills required which most align to NRIP delivery priorities of diversifying the economy, driving economic prosperity, creating meaningful jobs and enhancing the natural environment and heritage for future generations, include the following:

- ▶ Governance
- ▶ Memberships / fundraising / philanthropy
- ▶ Sponsorships
- ▶ Economics
- ▶ Capacity building
- ▶ Knowledge transfer
- ▶ Commerciality
- ▶ Business development / market analysis
- ▶ Property management planning and Training
- ▶ GIS and technical modelling
- ▶ Fire management planning and training
- ▶ Carbon farming and biodiversity offset project delivery
- ▶ Co-design and collaboration

NRM bodies also identified the need to further strengthen NRM in Queensland including:

- ▶ Leveraging data, modelling and processes to improve approaches to environmental reporting
- ▶ Building knowledge of new and innovative natural capital markets such as carbon, reef and biodiversity credits and sustainable finance
- ▶ Promoting peer to peer learning to further build institutional capability, stability and further leverage Queensland government funding

Taxonomy of skill areas

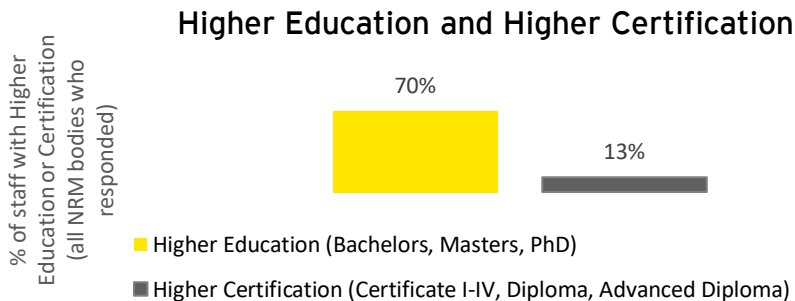


Skills present within regional NRM bodies

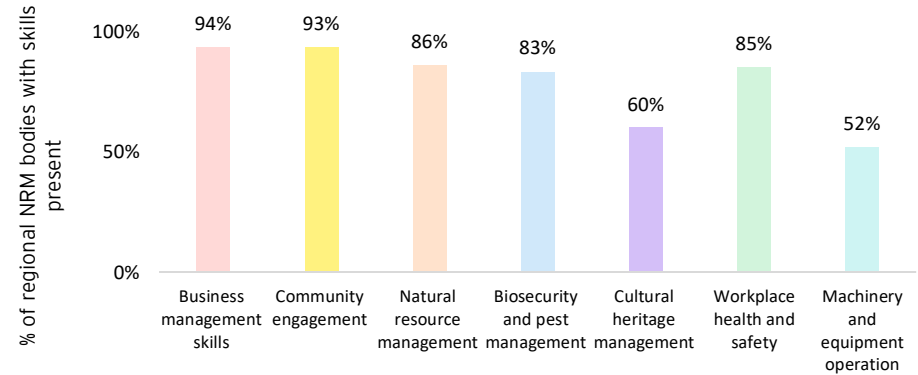
Our assessment determined that regional NRM bodies have a high degree of internal capability amongst many of the skill areas. Building capacity, knowledge transfer and practice change in land management is a priority for regional NRM bodies although additional expertise is brought in as needed (for example soil health workshops, and grazing etc.).

Over 90% of regional NRM bodies had skills relating to business management and community engagement. Unsurprisingly, there is a high presence of natural resource management skills amongst the regional bodies. 100% of regional NRM bodies had skills in developing and implementing NRM plans, water and biodiversity monitoring and natural area restoration skills. For many of the skills surveyed, regional NRM bodies indicated 100% presence of these skills within the organisation but still a moderate to substantial demand for these skills indicating opportunities for growth.

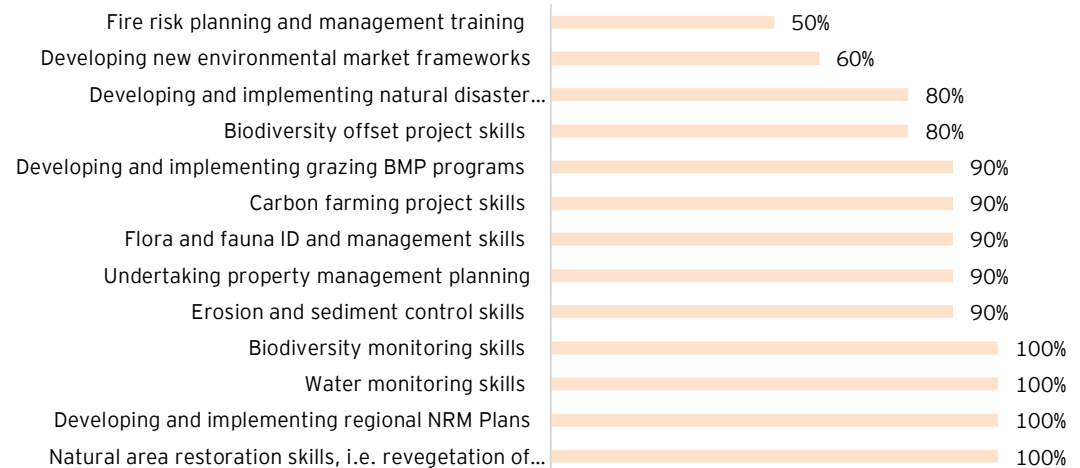
Regional NRM bodies were also surveyed on their staff's higher education and certification. Of those that responded, 83% of regional NRM bodies' staff have either higher education (such as Bachelors, Masters or PhD) or higher certification (such as Certificate I-IV, Diploma or Advanced Diploma).



Skills present within regional NRM bodies



Natural Resource Management skills



Skills present within regional NRM bodies

Community engagement skills

Community engagement and collaboration is a fundamental feature of the NRM delivery model so it is unsurprising that 100% of regional NRM bodies had community engagement skills relating to facilitating effective community networks, partnerships and building capacity. Community engagement plays an important role in natural resource management, particularly in increasing social capital in regional and remote communities.

The broader economic benefits accrued from investment in NRM extend beyond physical and environmental infrastructure to wide ranging economic outcomes benefitting the wider community such as enhanced natural capital, human capital and local identity (Landcare 2013).

Regional NRM bodies work proudly with local groups, particularly with Traditional Owners, and effective engagement is incorporated into current and future strategies. Demand and capability of community engagement skills are strong which suggests that this is an ongoing area of focus for regional NRM bodies. 20-30% of community engagement work is outsourced to local contractors and delivery partners such as industry bodies, community regional NRM bodies, research organisations and commercial organisations for:

- ▶ Knowledge transfer and practice change
- ▶ Professional development
- ▶ Facilitation of community engagement

It was noted that currently partners work with delivering school education and awareness programs. This is a focus and there is increasing interest in this area.

Engaging Traditional Owners Project

NQ Dry Tropics introduced a new way of engaging with Traditional Owners in the Burdekin Dry Tropics, based on Community Network Areas (CNA), which are hubs of Traditional Owner groups. This CNA approach encourages and strengthens subregional collaboration and mutual support between Traditional Owner groups and local councils, state and federal government representatives, industry, and community groups.

The CNAs allow for more focused, targeted engagement with Traditional Owner groups to find out about their key regional issues and hear their views about how to tackle them.



Skills present within regional NRM bodies

Business management skills

In addition to being highly technical and maintaining a wealth of knowledge and experience in multiple sciences, regional NRM bodies have strong business management capability. This includes the capability for good business practice and governance to enable the delivery of on-the-ground NRM projects. For regional NRM bodies, business management extends beyond project management and involves the design and delivery of a complex set of integrated programs.

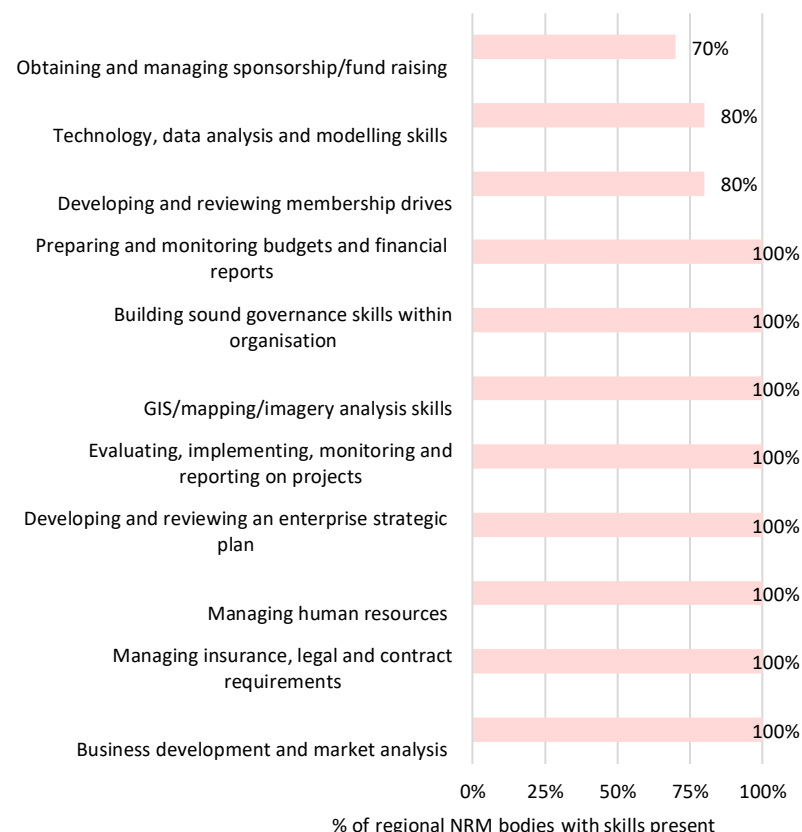
Many of the business management skills are largely present within the NRM bodies, although some noted that occasionally skills where specialist expertise is required, local contractors or consultants are engaged to bring new ideas and stretch current thinking and bring a level of independence. Some NRM bodies noted that the legal advice is contracted to a professional if advice is required beyond staff level.

100% of regional NRM bodies that responded have business management skills relating to:

- ▶ Building sound governance skills within organisation
- ▶ Developing and reviewing an enterprise strategic plan
- ▶ Preparing and monitoring budgets and financial reports
- ▶ Business development and market analysis
- ▶ Managing insurance, legal and contract requirements
- ▶ Managing human resources
- ▶ Evaluating, implementing, monitoring and reporting on projects
- ▶ GIS/mapping/imagery analysis skills

It was noted that a unique feature and benefit of regional NRM bodies business management skills is the ability to solve complex problems. This includes the navigating a complex system and procuring the right skills and services both internally as well as outsourcing. As a result, business management acts as an enabler for the many other skills such as those required to understand, direct and inform NRM based activities which contribute to positive NRM outcomes.

Business management skills



Skills outsourced to delivery partners

Our assessment determined that the following skill areas were outsourced to delivery partners.

Of particular note is the ability for regional NRM bodies to leverage community network relationships to deliver skills where they may not have these skills internally. For example, regional NRM bodies will often partner with third-party First Nations/Traditional Owner organisations, Landcare or Local Councils, in effect diversifying the economy and leveraging employment growth.

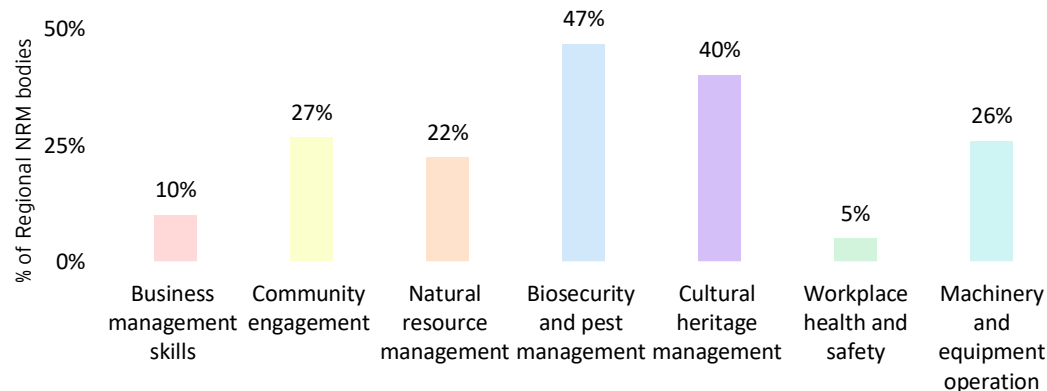
Comments from the regional NRM bodies revealed that skills were outsourced because of a combination of lack of capability and capacity in some circumstances (i.e. where insufficient staffing resources exist within the NRM regional body).

It was noted that the general approach for regional NRM bodies is to assess and utilise existing capacity within the community first before building their own internal capacity to minimize the likelihood of the downside of competition where possible.

Establishing and building partnerships is a fundamental feature of the NRM delivery model. Not only is outsourcing cost effective, fills gaps and avoids duplication of skills, it provides many benefits including:

- ▶ Building community capacity
- ▶ A shared understanding and a common purpose
- ▶ Community cohesion and collaboration
- ▶ Higher levels of trust
- ▶ Growth of skills across delivery partners

Skills outsourced to delivery partners



Skill area	Skills with the highest outsourcing to delivery partners (examples below)
Biosecurity & pest management	Storing, preparing and applying chemicals
Machinery & equipment	Operating and maintaining chainsaws
Natural resource management	Fire risk planning and management training
Cultural heritage management	Implementing Traditional Owner cultural burning practices
	Developing and implementing a cultural resource management plan

Skills outsourced to local business

Our assessment determined that the following skill areas were outsourced to local contractors.

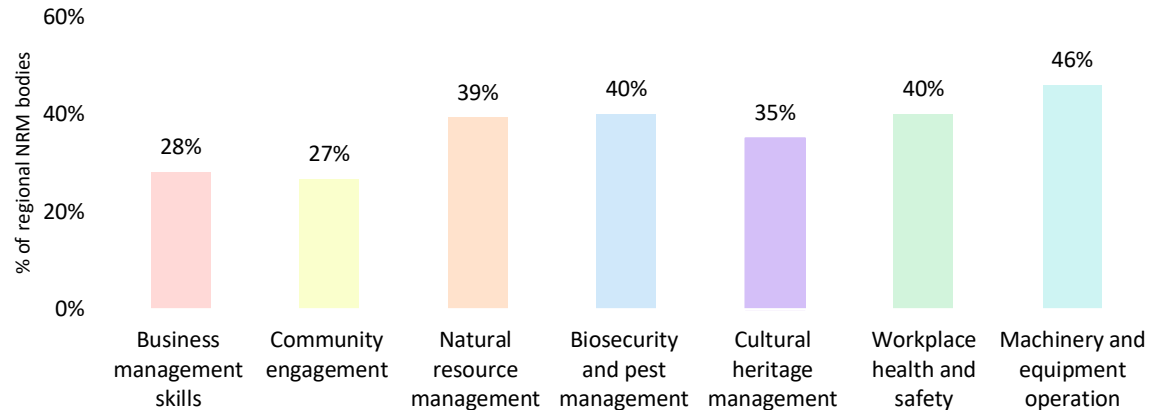
Based on our analysis, 30% - 47% of regional NRM bodies outsource the following skill areas to local contractors:

- ▶ Biosecurity and pest management
- ▶ Community engagement
- ▶ Natural resource management, namely:
 - ▶ Natural area restoration
 - ▶ Flora and fauna ID
 - ▶ Fire risk planning and management training
 - ▶ Erosion and sediment control
- ▶ Cultural heritage management
- ▶ Machinery and equipment operation

Of those skills, the most contracted skills included:

- ▶ Operating tractors, graders and/or front-end loaders
- ▶ Operating and maintaining chainsaws
- ▶ Storing, preparing and applying chemicals
- ▶ Fire risk planning and management training
- ▶ Erosion and sediment control skills

Skills outsourced to local business



Economic contribution through local business skill outsourcing

The economic contribution report found that NRM projects contribute significantly to economic activity in the regions, as well as through supply chain and consumption effects. The outsourcing of skills to local business and contractors has flow-on effects for regional economies. Money spent on local contractors has direct and indirect economic impacts including supporting employment. These indirect employment figures can be found in the economic contribution report but it should be noted that they include both consumption and supply chain impacts which are greater than the impact from outsourcing.

Comments from the regional NRM bodies revealed that skills were outsourced in some instances because of both a combination of both lack of capability and capacity in (i.e. where insufficient staffing resources exist within the NRM regional body). It was also noted that NRM bodies recognise and utilise the expertise of local community businesses.

Outsourcing to local business not only fills a gap in capacity but supports local economies with local business obtaining revenue and local employment generated.

A man in a plaid shirt is walking away from the camera through a vast field of green crops, likely soybeans, under a bright sky. The field stretches to the horizon, and the man is in the center of the frame, looking towards the distance. A yellow trapezoidal shape is overlaid on the left side of the image, containing the text.

Skill gaps and opportunities

Skills gaps and opportunities

Emerging skills

Regional NRM bodies currently hold a high degree of capability and skills. This provides them with the appropriate skills and experience to undertake their role in this highly specialised sector and deliver the environmental, social and economic benefits. The established skills provide a compelling value proposition and explanation of how NRMs are able to fulfill their role.

Despite this, there are opportunities to grow skills in a strategic way to further support jobs, regions and maximise social and environmental outcomes as part of the next NRIP round of funding.

Emerging skills across the skills taxonomy included:

- ▶ Developing new environmental market frameworks
- ▶ Fire risk planning and management training
- ▶ Implementing Traditional Owner cultural burning practices
- ▶ Developing and implementing a Reconciliation Action Plan
- ▶ Developing and implementing a cultural resource management plan
- ▶ Operating tractors, graders and/or front-end loaders
- ▶ Operating and maintaining chainsaws.



Regional NRM bodies were asked to identify other emerging skills for their organisation. It was noted that currently external expertise was engaged to meet the needs of the organisation where in-house skills were not yet fully developed. These skills included:

- ▶ Information Technology
- ▶ Advice and property management planning to landholders on natural capital revenue generating opportunities e.g. carbon, soil, biodiversity, reef, credits etc.
- ▶ Regenerative Economic Development
- ▶ Regional and local scale scenario planning considering climate change, demographic shifts and sustainability
- ▶ Marketing and event management.

Skills gaps and opportunities

Emerging skills

Demand for skills represents emerging skills expected in the future. Some skills may already be present and outsourced, although the demand is expected to grow in the future.

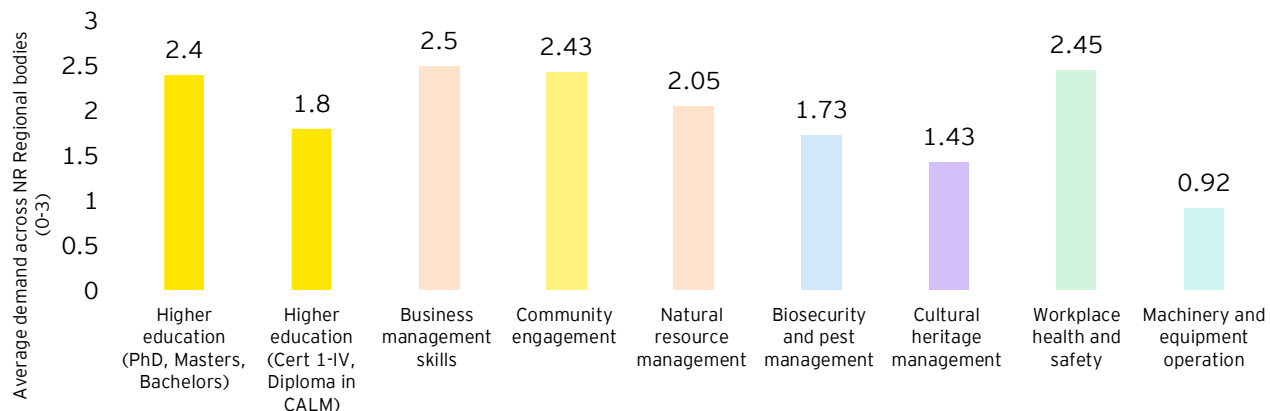
Demand for skills was highest for workplace health and safety, business management, community engagement and higher education (PhD, Masters and Bachelors) particularly sought after. This points to the skilled job creation that NRM bodies generate in the regions.

Of these topics, the most in demand skills were:

- ▶ Building governance skills within an organisation
- ▶ Preparing and monitoring budgets and financial reports
- ▶ Evaluating, implementing, monitoring and reporting on projects
- ▶ GIS/mapping/imagery analysis skills
- ▶ Facilitating effective community networks and partnerships
- ▶ Building capacity, knowledge transfer and practice change in land managers and project recipients

Based on this, it is reasonable that these skills that are in high demand will need to be grown so that they can satisfy future work demand, including NRIP projects.

Demand for skills



Demand rating	Demand rating description
None (0)	No regional body demand for skill
Emerging (1)	Emerging regional body demand, with greater demand expected in the future
Moderate (2)	Moderate regional body demand
Substantial (3)	Substantial regional body demand, expected to grow even further in the future

Skills gaps and opportunities

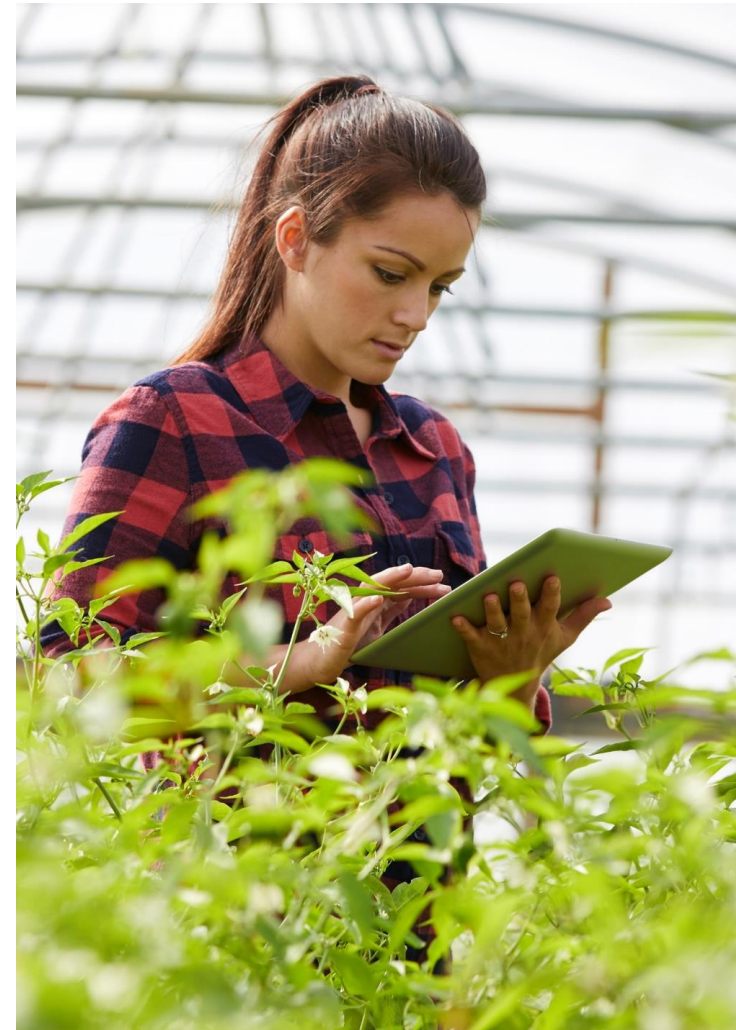
Skill development in regional Queensland and the COVID-19 recovery

The labour market has experienced major disruption due to Covid-19 and while signs of recovery are emerging, uncertainty remains around when demand will pick up and what jobs will be most in-demand. Matching workers to jobs in the evolving environment will require the ability to quickly identify skills needs and retrain people for jobs that are in demand. More than ever, the focus on skilling and re-skilling displaced workers will be essential to the recovery of the jobs market and the economy (National Skills Commission 2021).

In an effort to deal with the effects of climate change and improve sustainability, there is an increasing need for sustainability and natural resource management skills. Several state and territory governments have introduced additional measures within their Covid-19 economic recovery plans that include the requirement to build sustainability and natural resource management skills (AISC). Such examples include the national COVID-recovery employment package led by the Pew Charitable Trust for “Delivering economic stimulus through the conservation and land management sector” as well as The Tropical North Queensland Green & Blue Economic Stimulus Package.

Regional Queensland faces a complex set of challenges with regards to the provision of training, skills and pathways to employment. Higher levels of unemployment, lower levels of education attainment and distances between towns and cities can present significant hurdles for employers in the regions. NRM provides a growing income stream in the regions, leading to greater attraction of skilled workers that in turn stimulate wider supply chains across delivery partners and local businesses within the community.

Upskilling or retraining in conservation and land management roles ensures the creation of practical and transferrable skills such as teamwork, communication, leadership and job readiness. Not only do NRMs provide employment and enable people to engage in meaningful work, it also allows the accumulation of new knowledge. Participants are likely to gain important technical skills such as surveying, fencing and occupational health and safety training. There is also an opportunity to build practical and highly transferable skills in areas such as teamwork, communication, leadership and program management. In addition, engagement in the program is likely to build self-esteem, community capacity and job-readiness. This may increase one’s future employment options.



Growing capability

The conservation and land sector is broadly growing at a moderate pace. Ecotourism and agritourism are providing new and growing income streams, leading to greater requirements for skilled workers to support these opportunities. There are increasing demands on the sector to undertake tourist and visitor management activities. The total value of the significant tourist activity associated with the Great Barrier Reef in 2015-16 was estimated to contribute around \$5.7 billion to the Australian economy (Great Barrier Reef Foundation). This indirect contribution captures the value added associated with the purchase of intermediate inputs, like fuel or food and beverage by tourism operators.

In addition, there is an increasing opportunity to expand skills of First Nations groups caring for culture, as a catalyst for significant economic growth, national climate and First Nations wellbeing. First Nations land management partnerships are key to skills growth in the regions given that First Nations peoples are responsible for land management across 58% of Northern Australia.

A recent review by the Australian Skills Industry Committee of skills developed in the land management industry sector identified that the conservation and land sector is growing at a moderate pace and greater skills are required in relation to:

- ▶ Essential knowledge pertaining to plants, animals and ecology
- ▶ Pest management in a conservation and land management context
- ▶ Ecotourism skills.

In addition, tailoring projects to community and landholder needs, focusing on NRM education to support future generation skills and investing in innovation will also support regional NRM bodies to further build capacity and skills within the regions to build the NRM sector, manage natural resources and adapt to a changing climate

Opportunities to grow capability

Ecotourism
and visitor
management
activities

Expand First
Nations
partnerships

Pest
management
for
conservation

Carbon and
environmental
(or natural)
markets

Information
Technology
and
management

Growing capability

Information Technology and Management

Information technology and management offers a wealth of opportunity for regional NRM bodies that can enhance outcomes, efficiencies and decision making by providing timely and up to date information at a higher quality than would otherwise be available. Rapid improvements in technologies such as GPS, remote sensing, automated drones, satellite imagery, GIS and associated modelling capabilities continues to improve what can be done. As these technologies continue to improve, the opportunities for them to be used will increase and improve the ability for regional NRM bodies to undertake adaptive management.

The use of technologies can significantly reduce the burden on regional NRM bodies by allowing on ground measurement to occur. Technologies such as remote sensing offers the ability to monitor and manage across temporal, spectral and spatial layers. It reduces the need for on-site visits, cutting down on the time needed to travel and visit various points of interest to collect data. This provides efficiencies for officer resources to undertake other important responsibilities including regional capacity building, data analysis and project planning. Automation of this data collection through technology can also lead to more uniform data, improving comparability and usage across multiple datasets.

Improvements in information management technologies and data usage has lead to consolidated datasets, reducing the time needed to collate and synthesise information into useable formats. Datasets that talk to each other can improve modelling outputs and their accuracy, providing greater possibilities for analysis. This in turn promotes improved decision making as the governing body and decision makers have more accurate information with which to base their decisions. This is particularly important for an adaptive management approach in which practices change based on the data at hand. This agile response can only be successfully implemented with the agility that information management technologies provide.

GIS mapping and imagery analysis skills

It is recognised that GIS functionality and Information Management activities are becoming increasingly central to NRM project planning, monitoring and reporting. The focus has been on helping build a consistent approach to data attribution, collection, GIS utilisation and tools as the core NRM GIS environment: the spatial database supporting storage and retrieval of data defining the landscapes we manage. The work enables the regional NRM bodies to plan, record and track NRIP project deliverables and measure the impact these projects are having on-the-ground (outcomes), principally through the State-Wide Indicators Framework. Spatial information about landscape condition can be analysed to effectively prioritise and manage interventions for the best results and those results can be demonstrated spatially at a regional and state-wide scale.

Improvements to information technologies and the associated cost reductions also offers opportunities to collect more rigorous, accurate and informative outcome data in a cost effective way. Cost effective collection of outcome data is one of the largest barriers to effective outcomes measurement and management. At present most collection of information is limited to output data due to the costs of collecting the relevant outcome data. With remote sensing and other automated technologies, the ability to collect outcome data will improve rapidly. Improved outcomes data will provide the ability to monitor, evaluate and learn from project changes, thus improving future program iterations resulting in further improved outcomes for NRM. This can also lead to improved funding due to the tangible evidence of change being made.

Growing capability

Expanding First Nations Partnerships

Strong partnerships generally deliver a greater return on investment, as well as a more coordinated, integrated, and often, strategic natural resources outcomes. Mutually beneficial partnerships, especially across many collaborating entities, are likely to be sustained beyond the project leaving a legacy of on-going collaboration.

As explored through this report, regional NRM bodies outsource skills when there is lower demand internally and the skills can be leveraged through local delivery partners and businesses. While these skills are fostered outside of the organisation, there are flow-on benefits for the local community including direct and indirect economic contribution, environmental and social outcomes.

Regional NRM bodies partner with First Nations peoples and communities to deliver projects which provides the opportunity for First Nations peoples to fully participate in land management and draw on their significant and unique knowledge and skills. First Nations people have cared for and managed this continent for millennia and continue to care for their Country today. The natural resource management sector has strong First Nations participation and has significant potential to further expand involvement and build the capacity of emerging First Nations natural resource managers.



First Nations partnership in Cape York

First Nations peoples, Land and Sea Rangers, and Queensland Parks and Wildlife staff spent a week on southern Cape York learning the fundamentals of managing and understanding erosion.

The workshop was designed to elicit local feedback to ensure future erosion management courses in Cape York are on point.

The education program will support First Nations peoples to gain experience and accreditation in areas such as identifying and understanding soils, planning and designing a gully rehabilitation strategy, implementing a gully rehabilitation strategy; and designing and implementing a water quality monitoring program to measure the effectiveness of a gully rehabilitation strategy.

Learning strategies that take people onto country to see first-hand how the landscape responds to how it used is a critical element of Cape York NRM's approach.

Growing capability

Natural capital and carbon markets

As ambitious goals for reducing greenhouse gas emissions are set, Australia's carbon market continues to grow and mature. The Taskforce on Scaling Voluntary Carbon Markets (TSVCM) estimates that demand for carbon credits could increase by a factor of 15 or more by 2030 and a factor of 100 by 2050. Overall, the market for carbon credits could be worth upward of \$50 billion on 2030.

Regional NRM bodies are playing a leading role in shaping and forming the debate and policy around carbon markets. The work of the Carbon Market Institute brings together Government, finance & industry, regional NRM bodies and carbon service providers to provide a market place. This convergence will continue to grow into the future as more ambitious net zero targets continue to be implemented and awareness grows and hence the demand for NRM services will also grow.

Carbon markets offer the potential to channel private funding to NRM, which at present is largely comprised of public funding. In particular, voluntary carbon credits direct private financing to climate-action projects that may not otherwise get off the ground. This requires regional NRM bodies to be prepared to grow with the market through further upskilling and capacity building. This could include knowledge and skills in such areas in relation to carbon farming:

- ▶ Emissions Reduction Fund methods and opportunity costs of conventional agricultural practice
- ▶ Diversifying land
- ▶ Compliance and risk
- ▶ Upfront costs and commerciality

Natural capital markets will provide regional NRM bodies with another avenue to access private funding and also as another source of demand for their expertise in this. With the advent and growth of the Taskforce for Nature Related Disclosures, associated recommendations, and the increase in understanding and perception around how biodiversity contributes to economic prosperity, this area is likely to grow quickly. This presents an opportunity for regional NRM bodies to capitalise on to diversify their funding further. These ecosystem services' markets will require specialised skills that regional NRM bodies will need to capitalise on this opportunity.



Appendix

Skills taxonomy

Skill area	Skill details
Higher education	<ul style="list-style-type: none"> ▶ Bachelor, Masters or PhD degree in Science, Engineering or equivalent or in corporate support functions / or a similar field (e.g. accounting/finance, business, procurement, marketing, communications, HR, IT) ▶ Certificate I-IV, Diploma or Advanced Diploma in Conservation and Land Management or equivalent
Business management	<ul style="list-style-type: none"> ▶ Building sound governance skills within organisation ▶ Developing and reviewing an enterprise strategic plan ▶ Preparing and monitoring budgets and financial reports ▶ Business development and market analysis ▶ Managing insurance, legal and contract requirements ▶ Managing human resources ▶ Obtaining and managing sponsorship/fund raising ▶ Developing and reviewing membership drives ▶ Evaluating, implementing, monitoring and reporting on projects ▶ GIS/mapping/imagery analysis skills ▶ Technology, data analysis and modelling skills
Community engagement	<ul style="list-style-type: none"> ▶ Facilitating effective community networks and partnerships ▶ Developing and delivering school/awareness programs ▶ Building capacity, knowledge transfer and practice change in land managers and project recipients

Skills taxonomy

Skill area	Skill details
Natural resource management	<ul style="list-style-type: none"> ▶ Developing and implementing regional NRM Plans ▶ Undertaking property management planning ▶ Developing and implementing grazing BMP programs ▶ Natural area restoration skills, i.e. revegetation of catchments and/or riparian zones/coastal dunes ▶ Flora and fauna ID and management skills ▶ Water monitoring skills ▶ Biodiversity monitoring skills ▶ Erosion and sediment control skills ▶ Carbon farming project skills ▶ Biodiversity offset project skills ▶ Developing new environmental market frameworks ▶ Fire risk planning and management training ▶ Developing and implementing natural disaster recovery plans
Biosecurity and pest management	<ul style="list-style-type: none"> ▶ Developing and implementing biosecurity procedures ▶ Developing and implementing weeds and pest management plans ▶ Storing, preparing and applying chemicals
Cultural heritage management	<ul style="list-style-type: none"> ▶ Partnering and collaborating with Traditional Owners ▶ Implementing Traditional Owner cultural burning practices ▶ Developing and implementing a Reconciliation Action Plan ▶ Developing and implementing a cultural resource management plan
Workplace health and safety	<ul style="list-style-type: none"> ▶ Developing and implementing WHS procedures, including for remote operations ▶ First aid training and certification
Machinery and equipment operation	<ul style="list-style-type: none"> ▶ Operating tractors, graders and/or front-end loaders ▶ Operating remotely piloted systems (drones) ▶ Operating and maintaining chainsaws ▶ Boat licence (and operations) ▶ Other {insert}

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