

THE LAND RESTORATION FUND



Priority Investment Plan



Queensland
Government

Prepared by: Department of Environment and Science

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Executive summary

The Queensland Government’s vision is to support Queenslanders to be recognised as the best land managers in the world—carbon farming is an important part of this story.

Queensland is well placed to be Australia’s major source of ‘premium’ land sector carbon credits and the Land Restoration Fund (the Fund) will invest in land sector carbon farming projects that manage Queensland’s carbon emissions, as well as delivering additional co-benefits.

Co-benefits are the positive environmental, socio-economic and First Nations outcomes delivered by carbon farming projects in addition to greenhouse gas abatement. The LRF values and pays for co-benefits, which include environmental benefits like healthier soils and waterways, restoration for threatened species habitat, and social outcomes like new jobs in regional communities.

The agriculture industry is changing—peak bodies have identified climate change and other environmental impacts as challenges, but also as presenting different market opportunities, such as working towards being carbon-neutral. By fostering new economic activities and through new environmental commodities, the Fund supports a commercially and environmentally sustainable land sector, generating new job and revenue possibilities for regional Queensland.

This Priority Investment Plan (the Plan) sets out the vision and objectives for the Fund, and specifies the key priorities for achieving them.

The priorities and indicators selected for the Fund complement other government initiatives, and build on the Queensland Government’s long-term investments in spatial data and knowledge systems.

Indicators are designed to provide guidance on aspects of the priority that can be used to evaluate project ideas.

The Fund’s ultimate objective is to invest in projects that will deliver Australian Carbon Credit Units (ACCUs) plus additional environmental, socio-economic and First Nations co-benefits. The Fund will also work to build capacity across Queensland’s land sector and the supply chain to undertake projects that generate carbon offsets with co-benefits, and also invest in research and science to enable the growth of carbon farming and new environmental markets.

The Fund will primarily invest in projects and research that help Queenslanders realise opportunities under Australia’s carbon offset framework and build markets that value and ‘price in’ environmental co-benefits.

The Land Restoration Fund will work with First Nations peoples to build on their land management knowledge and practices to deliver tangible and long lasting outcomes through carbon markets and other emerging environmental markets. The Fund will also work with the land, conservation, finance, and corporate sectors, as well as agribusiness, and the community, to support initiatives aiming to deliver sustainable landscapes, and resilient regions.

The Land Restoration Fund is part of global efforts to improve environmental governance, accountability and investment, with potential for impact beyond Queensland. Understanding and valuing of our natural capital, is critical for maintaining a healthy environment for economic longevity and viability in Queensland.



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Part 1. Context and objectives

Introduction

The Land Restoration Fund (the Fund) is a \$500 million commitment to grow Queensland's carbon farming industry by supporting innovative land management projects that deliver carbon offsets and co-benefits. Benefits from carbon farming can be far reaching through our community. A robust carbon farming industry will help to manage emissions, create more regional jobs, provide habitat for threatened species, and improve the health of our land and waterways.

The Fund will encourage land management changes for carbon farming that also support other priorities for Queenslanders. The Fund's main innovation is to consider the range of additional benefits that can be generated by carbon farming activities when negotiating the price it will pay for Australian Carbon Credit Units (ACCUs).

This Priority Investment Plan (the Plan) outlines the strategic priorities set by the Queensland Government for the Fund's operation and forms part of the Fund's governance framework. Periodic updates to these investment priorities and this plan will ensure the Fund remains flexible and responsive to the changing market and community context.

The Commonwealth Government provides the framework for land managers to register projects and generate ACCUs. The framework's foundation is the *Carbon Credits (Carbon Farming Initiative) Act 2011* (CFI Act).

The essence of carbon farming involves changing land management practices to either increase storage of carbon in landscapes or reduce greenhouse gas emissions. A comprehensive list of land management and other activities that can earn ACCUs is available on the Commonwealth Government's [Emissions Reduction Fund website](#).

Below are the land sector methods currently relevant to the Fund. Further information and details on each of these methods is available from the Commonwealth Government's [Emissions Reduction Fund website](#). For more information on the eligibility of these methods under the Fund's current Investment Round, please consult the most up-to-date version of the [Land Restoration Fund Co-benefits Standard](#).

Vegetation

- [avoided clearing of native regrowth](#)
- [human-induced regeneration of a permanent even-aged native forest](#)
- [measurement based methods for new farm forestry plantations](#)
- [native forest from managed regrowth](#)
- [plantation forestry](#)
- [reforestation and afforestation](#)
- [reforestation by Environmental or Mallee Plantings –FullCAM](#)
- [tidal restoration of blue carbon ecosystems method](#)
- [verified carbon standard project](#).

Fire

- [savanna fire management 2018 \(emissions avoidance\)](#)
- [savanna fire management 2018 \(sequestration and emissions avoidance\)](#).

Livestock

- [beef cattle herd management](#)
- [feeding nitrates to beef cattle](#)
- [reducing greenhouse gas emissions by feeding dietary additives to milking cows](#).

Soil and cropping

- [estimating soil organic carbon sequestration using measurement and models method](#)
- [estimating sequestration of carbon in soil using default values \(model-based soil carbon\)](#)
- [reducing greenhouse gas emissions from fertiliser in irrigated cotton](#).

Additionality is a key principle underpinning carbon farming and is critical to ensuring that *additional benefits* are delivered. The Queensland Government will require reasonable assurance that the outcomes being funded are unlikely to have happened without the Fund's investment.

Land Restoration Fund’s investment vision and objectives

Vision: ‘to support Queenslanders to be the best land managers in the world to benefit the environment and economy’.

Objectives

- To facilitate a pipeline of qualifying Queensland based carbon offset projects, including through private sector investment.
- Pursue environmental, economic and social co-benefits as defined by the Government.
- Invest in research and development into emerging carbon farming areas where Queensland has a comparative advantage.

To meet its objectives, the Fund will make three types of investments:

1. Investment in projects that will deliver ACCUs plus co-benefits.
2. Investment to build capacity across Queensland to undertake land restoration activities that deliver carbon offsets with co-benefits.
3. Investment in research and development that will enable the growth of land sector carbon and other environmental markets.

The Fund will primarily be investing in projects that deliver ACCUs with co-benefits. It will also make strategic investment in capacity-building and research initiatives to support growth of not only carbon farming in Queensland, but also new environmental markets for values such as reducing nitrogen and sediment, or improving biodiversity. Any investment made by the Fund must deliver on one of the investment priorities outlined in Part 2.

Ultimately, the Fund will be investing in Queensland and investing in Queenslanders. The aim is to grow the carbon farming industry and new environmental markets for co-benefits in a way that helps Queensland thrive economically, environmentally, and socially.



Alignment with other programs and strategies

The investment priorities articulated in this Plan align with and support other Queensland Government strategies and programs, including:

- [Queensland Climate Change Response](#) which includes the [Queensland Climate Adaptation Strategy](#)
- [Reef 2050 Long Term Sustainability Plan](#)
- [Reef 2050 Water Quality Improvement Plan](#)
- [2017 Scientific Consensus Statement: Land use impacts on Great Barrier Reef water quality and ecosystem condition](#)
- [Protected Area Management Plans](#)
- [Environmental Offsets Policy](#)
- [Water Quality Improvement Plans](#)
- [Queensland's approach to biodiversity](#)
- [South East Queensland Koala Conservation Strategy](#) and other [koala conservation measures in Queensland](#)
- [Queensland's Planning System](#)

Key strategic alignments outside of Queensland Government include:

- [Carbon Market Institute Carbon Farming Industry Roadmap](#)
- [Natural Resource Management \(NRM\) regional plans](#)
- [Healthy Country Plans](#)
- [ClimateWorks Australia Land Use Futures](#)
- [Great Barrier Reef Marine Park Authority Reef Outlook Report 2019](#)
- [United Nations Sustainable Development Goals](#)





Part 2. Investment Priorities

All investments made by the Fund through commercial ACCU with co-benefit projects, capacity-building activities or research will be directed toward the following priorities:

Priority

1

Land restoration to improve the health of wetlands and coastal ecosystems, including the Great Barrier Reef.



Priority

2

Land restoration for threatened species and ecosystems.



Priority

3

Land restoration for social and economic sustainability.



Indicators and information sources listed under each priority are designed to provide guidance on preparing and developing projects. Projects that produce multiple co-benefits are likely to be assessed more favourably for investment.

Benefits delivered by projects will depend to some extent on the activity being undertaken. For example, changes to grazing practices to reduce emissions from beef production or to increase soil carbon will often increase pasture biomass and cover, which can reduce run-off and erosion risk, and enhance biodiversity.





1

Priority 1: Land restoration to improve the health of wetlands and coastal ecosystems, including the Great Barrier Reef

Carbon farming and land restoration actions can improve catchment condition and support the health of Queensland’s wetlands. Land condition and vegetation cover affect how water moves or is stored in the landscape (hydrology). Improving catchment condition, especially in the most hydrologically active land types, through activities such as riparian revegetation, helps regulate the quality and quantity of water entering wetlands, which in turn indirectly reduces pressures on wetland health such as excess nutrients.

Direct restoration of coastal ecosystems and wetlands can lead to reduced sediment and nutrient flows through catchments, which is particularly important for our most famous natural ecosystem, the Great Barrier

Reef. The [2017 Scientific Consensus Statement on the Great Barrier Reef](#) makes it clear that coastal wetlands are an important part of the reef’s ecosystem.

Information sources to address this Priority include:

- [WetlandInfo](#)
- [Water Quality Improvement Plans](#)
- [Regional Ecosystems](#)
- [Declared fish habitat areas](#)
- [“Blue maps”](#)
- [2017 Scientific Consensus Statement](#)
- [2050 Reef Water Quality Improvement Plan](#)
- [NRM Regional Plans](#) for coastal catchments
- [Regrowth management guides](#)



Image credit: Tourism and Events Queensland



Indicator 1.1 – Improve riparian vegetation and catchment condition in priority areas for aquatic ecosystem health

Carbon offset projects involving land management change that result in improved land condition and aquatic ecosystem health are a priority. Specific priorities are for carbon and co-benefit projects to be located in:

- Great Barrier Reef catchments
- catchments in the Healthy Land and Water NRM region (South East Queensland)
- catchments feeding other high-value wetlands such as Ramsar sites. Ramsar sites are wetlands listed under the Convention of Wetlands of International Importance (known as the Ramsar Convention).

Examples of priority projects are ones that:

- contribute to land management targets in the Reef 2050 Water Quality Improvement Plan, including targets for riparian vegetation extent, wetland extent, catchment ground cover, and improvements to land management practices described in that plan
- restore riparian, wetland and catchment vegetation in areas where there has been extensive historical wetland loss in the landscape, or a high degree of vegetation clearing (remnant or regrowth)
- restore riparian, wetland and catchment vegetation in areas in close proximity to wetlands of national or regional significance.





Existing carbon methods, such as environmental plantings or native forests from managed regrowth, may be used alone or in combination with other on-ground activities that deliver water quality improvements or reduce pressures on wetlands.

Activities such as improving the extent and condition of riparian vegetation, including vegetation alongside swamps, lakes, rivers and streams, can:

- improve catchment condition
- provide landscape corridors
- improve wetland health by slowing water flows, and reducing sediment loss.

For example, improved grazing management can increase ground cover, and retaining vegetation cover in grazing areas can reduce runoff, improve sediment and nutrient retention, and improve water quality.

Restoration of gullies and streamlines prone to erosion can be undertaken by establishing appropriate plant cover, and by protecting sensitive areas from ongoing pressures to allow natural regeneration to occur. A number of carbon farming methods can be used in riparian areas to restore ecosystem function and create healthy systems that lead to improved biodiversity, connectivity, and water quality outcomes.

Indicator 1.2 – Improve the extent and condition of coastal ecosystems

Healthy coastal ecosystems are vital for maintaining key sectors of Queensland’s economy like tourism and fishing. These coastal ecosystems buffer Queensland’s coastal communities from the impacts of damaging weather-related events such as storm surges. They are also important areas of community wellbeing and cultural significance.

Past clearing, altered hydrology and poor water quality have degraded our coastal ecosystems, including the Great Barrier Reef.

For investments in ACCU projects, existing carbon methods involving tree plantings or facilitating regrowth can be used to restore coastal ecosystems, and directly improve the extent and condition of coastal woodlands and forest.

Investments in research and development, and capacity building also have significant potential. For example, the development of new carbon methods likely to benefit wetlands, such as introduction (or re-introduction) of tidal flows in mangrove and tidal marsh ecosystems, and nutrient management in cane and other intensive agricultural systems.





2

Priority 2: Land restoration for threatened species and ecosystems

Queensland is home to extraordinary biodiversity, including many species and ecosystems found nowhere else in the world. Some plant and animal species are at risk of extinction due to a range of threatening processes, with habitat loss a frequent factor.

Carbon farming projects that improve the amount and condition of habitat available to threatened species and ecosystems should assist in reducing the risk of continued species loss, particularly from habitat loss, climate change, and cumulative development impacts.



Information sources that can be used to identify and develop projects that align with this Priority include:

- [Biodiversity and Ecosystems Climate Adaptation Plan](#)
- [Biomaps](#)
- [Environmental maps and data](#)
- [Regrowth management guides](#)
- [Protected plant flora survey trigger mapping](#)
- [Threatened species information published by the Department of Environment and Science](#)
- [The Queensland Government's approach to biodiversity](#)
- [Biodiversity planning assessments](#)
- [Queensland's protected areas](#)
- [Regional ecosystems](#)
- [Species recovery plans](#)

Indicator 2.1 Improve the extent and condition of habitat for threatened species

A **threatened species** is any plant or animal listed under Queensland's [Nature Conservation Act 1992](#), or under the Commonwealth [Environment Protection and Biodiversity Conservation Act 1999](#) (EPBC Act) as extinct, extinct in the wild, critically endangered, endangered, or vulnerable.

Projects that improve or restore habitat for threatened species, such as by restoring native woodlands and forests through regrowth or environmental plantings, can provide greater protection for threatened plants and animals and are activities already well aligned with existing carbon methods.

Priority projects will be those that combine existing carbon methods with other on-ground management activities able to provide demonstrable benefits for threatened species, such as weed or pest control in relevant habitats. Factors such as the project location, type of ecosystem, and range of activities undertaken, will contribute to how beneficial a project will be for threatened species.

In general, there are a greater number of threatened species occurring in eastern Queensland, and this area is also more likely to have been affected by habitat loss.

Biodiversity planning assessments and maps showing essential habitat can be used as evidence of potential to benefit threatened species habitat. Biomaps can also be used to generate reports compiling modelling of potential habitat for threatened species for user-defined areas.

Indicator 2.2 Improve the extent and condition of threatened ecosystems

A **threatened ecosystem** is a Regional Ecosystem with a Biodiversity status of *endangered* or *of concern* in the Regional Ecosystem description database (REDD), or a Regional Ecosystem identified within a listing advice as part of a threatened ecological community under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

The Queensland Herbarium lists over 1,449 Regional Ecosystems in version 12.2 of its state-wide mapping. These include 237 regional ecosystems with a biodiversity status of *endangered*, and 572 with an *of concern* status. Figure 1 shows that these threatened ecosystems are concentrated in Queensland's south and east regions. Carbon farming projects that improve the condition or extent of threatened ecosystems will help retain biodiversity.

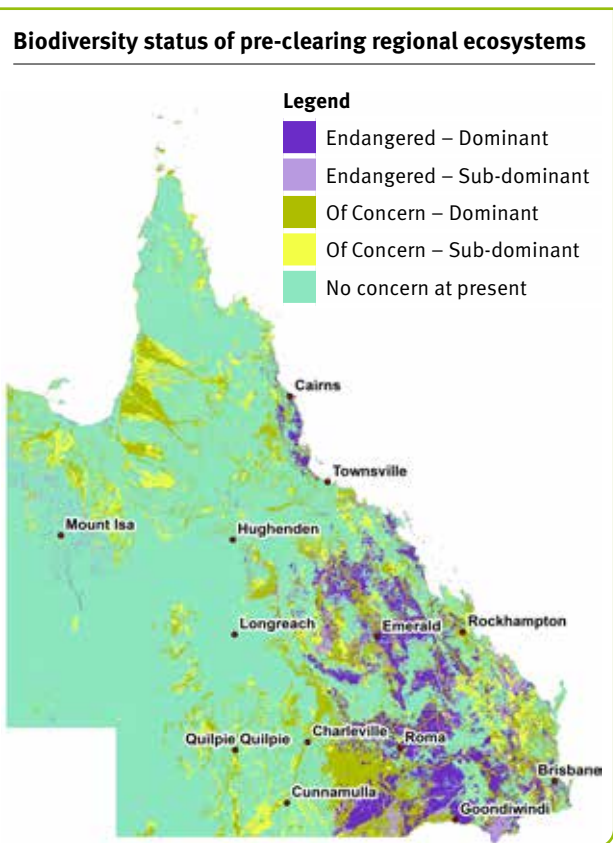


Figure 1. Biodiversity status of pre-clearing regional ecosystems, Queensland Department of Environment and Science.

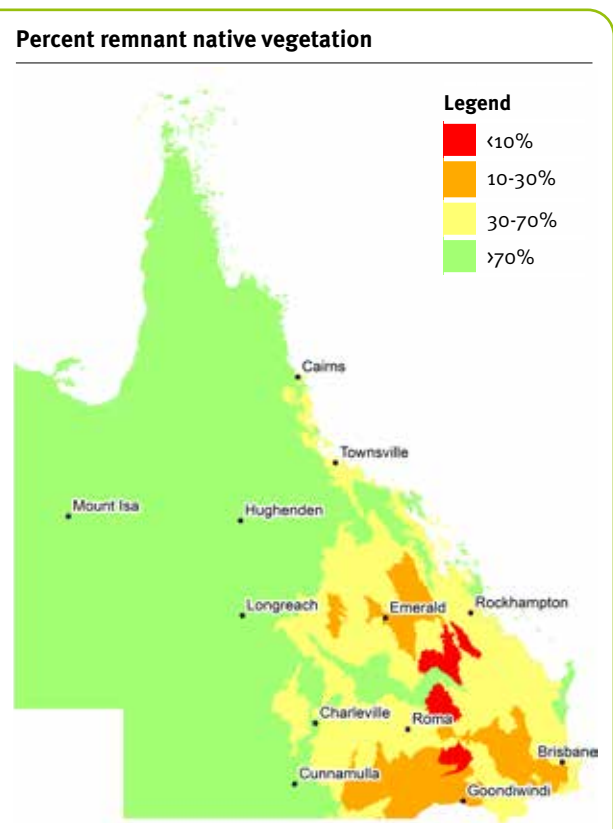


Figure 2. Extent of remnant vegetation in Queensland's biogeographic subregions in 2017, Queensland Department of Environment and Science.

Indicator 2.3 Improve connected habitats for Queensland's biodiversity

Connectivity to existing habitat is a critical indicator of the likely benefit of restoration projects for threatened species. Restoring habitat adjacent to existing native ecosystems will often be more beneficial than an isolated restoration project. Well-targeted restoration can also increase connectivity for native biota, by bridging breaks in habitat corridors, or buffering narrow connections. This benefit from restoration is particularly important in landscapes with very little remnant vegetation left (Figure 2).

Remnant Regional Ecosystem mapping and other layers available through Biomaps can be used to assess connectivity of a site to existing habitat, including remnant vegetation, Nature Refuges, Special Wildlife Reserves, and other protected areas. Similarly, maps of current and future climate refugia can be used as evidence of potential to benefit threatened species through improved connectivity and climate change resilience. (Figure 3)

Indicator 2.4 Restore habitat for the koala

The South East Queensland Koala Conservation Strategy highlights the critical need for urgent action to address the ongoing decline in koala numbers in this region.

The challenge is that much of Queensland's koala habitat overlaps with areas where significant habitat loss has occurred, and continues to occur. This is particularly acute in South East Queensland where koala populations are under threat due to habitat loss and fragmentation, increasing temperatures and bushfire risk associated with climate change, disease, and predation.

While the strategy outlines the key priority areas for restoration in South East Queensland, projects that restore koala habitats across their entire range will be considered, especially where they link with other priorities. An example of a priority project under this indicator is restoring and rehabilitating koala habitat through tree planting and effectively managing regrowth.

Priority areas for restoration can also be identified through the Department of State Development, Infrastructure, Local Government and Planning's interactive Planning Assessment System page.

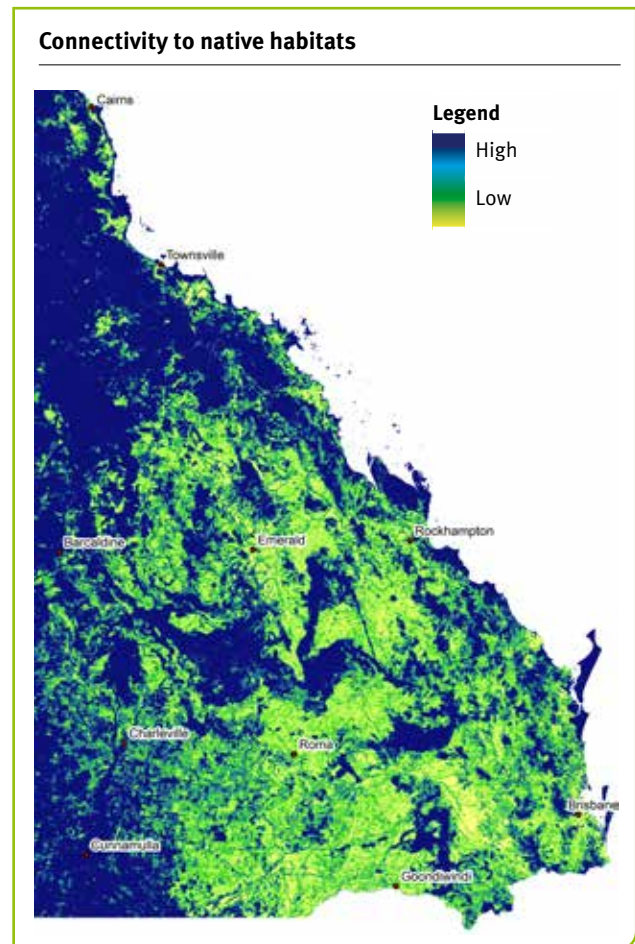
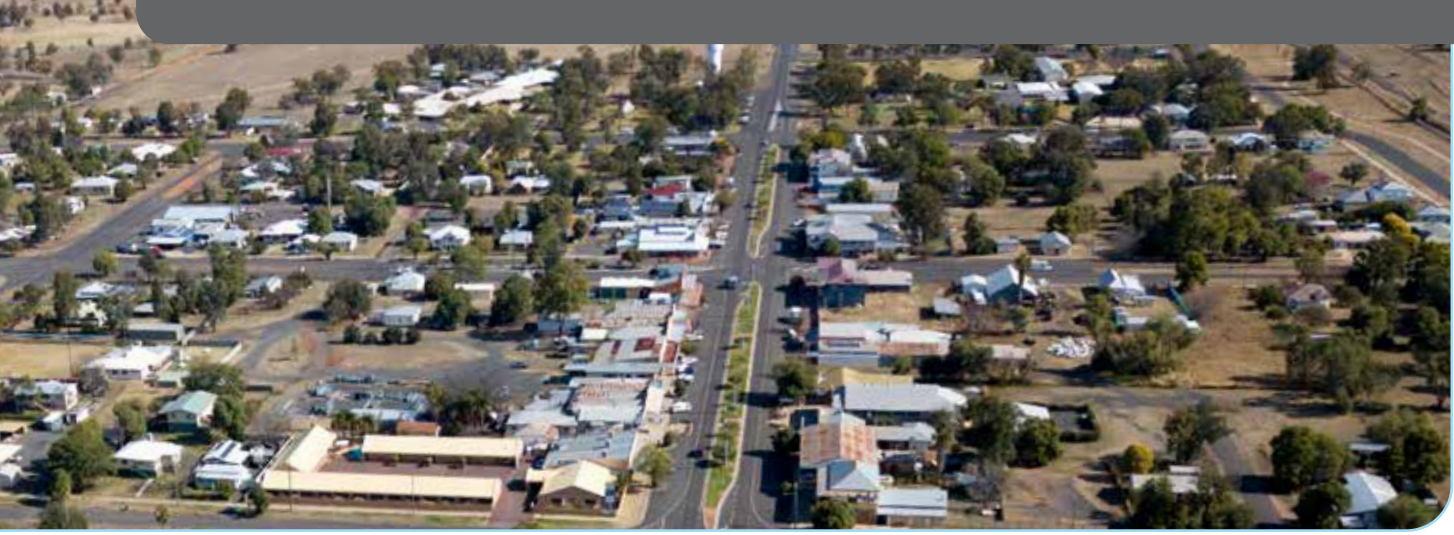


Figure 3. Connectivity to native ecosystems for eastern Queensland. Butler et al 2015.







3

Priority 3: Land restoration for social and economic sustainability

The Fund will prioritise projects that increase spatial coverage of carbon farming linked to Queensland’s regional and remote communities, with an emphasis on projects being delivered by First Nations peoples. The aim is that these projects support growth of new goods and services in regional areas as a result of the Fund’s approach of valuing the additional environmental, socio-economic and First Nations co-benefits produced by ACCU projects. This will build on the carbon farming projects already underway under the Commonwealth Government’s Emissions Reduction Fund, which are primarily benefiting Queensland’s regional and First Nations land managers.

Growing the existing carbon market and valuing the associated co-benefits will be a substantial step toward securing greater economic returns for land managers who deliver environmental benefits to Queensland.

This new source of income for land managers through carbon farming markets, as well as potentially new environmental markets, not only benefits the direct recipients but also provides benefits to the local community through indirect spending and need for other service providers.



Information sources that can be used to support investment decisions include:

- Locations of existing carbon projects across Queensland, indicating regions where spatial coverage of carbon farming could be improved (Figure 4).
- Statistical information describing local community demographics, median income, employment, and key industries as collated by the [Australian Bureau of Statistics](#).
- Evidence that projects will include long term, active management activities that deliver environmental, socio-economic and First Nations co-benefits, and go above and beyond the requirements described in existing carbon methods.
- Evidence, detailed in a business plan, that the project will improve enterprise and local scale income diversity, long term profitability, and provide local employment growth, relative to a plausible future scenario without the project.
- Clear evidence that projects are consistent with priorities identified in Healthy Country Plans, or [NRM Regional Plans](#).

Indicator 3.1 Expand the spatial coverage of carbon farming in Queensland

The Fund investments must be new activities and not those already supported by the Commonwealth’s Emissions Reduction Fund and other funding sources such as reef water quality investments and environmental offsets.

Indicator 3.2 New income streams for regional communities through long term, active management

Regional Queensland has vibrant local economies, but it also has communities undergoing long-term economic and social decline, with clear needs for further economic opportunity. Projects should drive employment opportunities and economic development for economically restricted communities and should show alignment with community objectives articulated in Healthy Country Plans, or NRM Regional Plans.

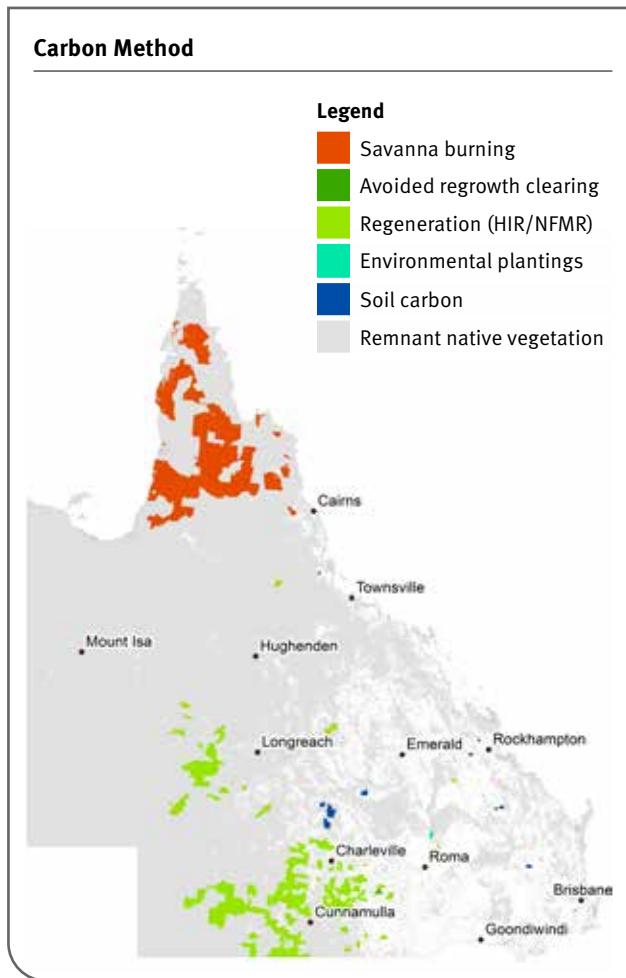


Figure 4. Land parcels with land-based carbon farming projects in Queensland based on the Emissions Reduction Fund project register (accessed 10 December 2019). Note that it does not show all projects from the register because some property descriptions in the register could not be matched to real property descriptions. Size of land parcels exaggerated (by thick boundary line) for all methods except savanna burning and regeneration.

Indicator 3.3 Deliver economic opportunities for First Nations peoples

Projects should offer demonstrable benefit to First Nations peoples, and their involvement in projects, as beneficiaries, participants or service providers.



Indicator 3.4 Engage key regional industries

The agricultural sector has identified environmental impacts as an emerging threat to their access to premium markets. For example, projects could engage with peak agricultural industries and help them toward their carbon-neutral objective therefore providing direct economic benefit and participation in carbon farming.



Part 3. Application and future scope of Plan

Role of spatial data and other frameworks

Queensland is a leader in spatial information and provision of open and accessible data. The Fund will use those strengths, including state of the art remote sensing, land cover data, and state-wide mapping of regional ecosystems, soils and wetlands to support land managers to design and deliver projects. Project evaluation and monitoring will also draw upon these foundational data collections as well as numerous other plans, prioritisations, and reports that aid the Queensland Government's policy delivery.

The priorities and examples of indicators detailed in this plan are designed to be informed by standard spatial data products and relatively simple tools to gather additional data. Such tools can be used to evaluate investments in terms of the priority benefits they deliver.

Additionally, frameworks like Accounting for Nature will be used to provide independent and transparent verification for environmental co-benefits in direct commercial investment projects. Other frameworks may be used to monitor and report on outcomes of projects such as the [Aboriginal Carbon Foundation – Core Benefit Verification Framework](#) for social and cultural outcomes.

Investment in verified, long-term outcomes

Most land sector carbon offset projects are long-term undertakings. For example, vegetation management projects have minimum crediting periods of 25 years. Likewise, capacity-building and research activities take time to come to fruition. Therefore, the Fund will evaluate investments based on anticipated outcomes over the long term, where appropriate.

Investment Plan Review and Evaluation

This Plan will be reviewed periodically to ensure the Fund remains flexible and responsive to the market and community.

More information

For more information, to check your eligibility and/or apply for the Land Restoration Fund, visit:
www.qld.gov.au/LandRestorationFund





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