Reef Credits

A Beginner's Guide

Reef Credits is a voluntary nature market that incentivises additional best practice and land management activities, and wastewater treatment, to improve water quality in the Great Barrier Reef. Reef Credit projects generate Reef Credits, a verified pollutant reduction, which are sold to investors like governments, philanthropy and the private sector.

If you are interested in participating in Reef Credits this Beginner's Guide provides an introduction to the program and how it works.

Reef Credit projects involve undertaking on-land activities that have a flow-on impact that improves water quality entering the Great Barrier Reef. Participation in a Reef Credit project is voluntary.

Reef Credit projects use an approved methodology which sets out how to undertake the project, eligible activities, measure pollutant reduction and quantify Reef Credits.

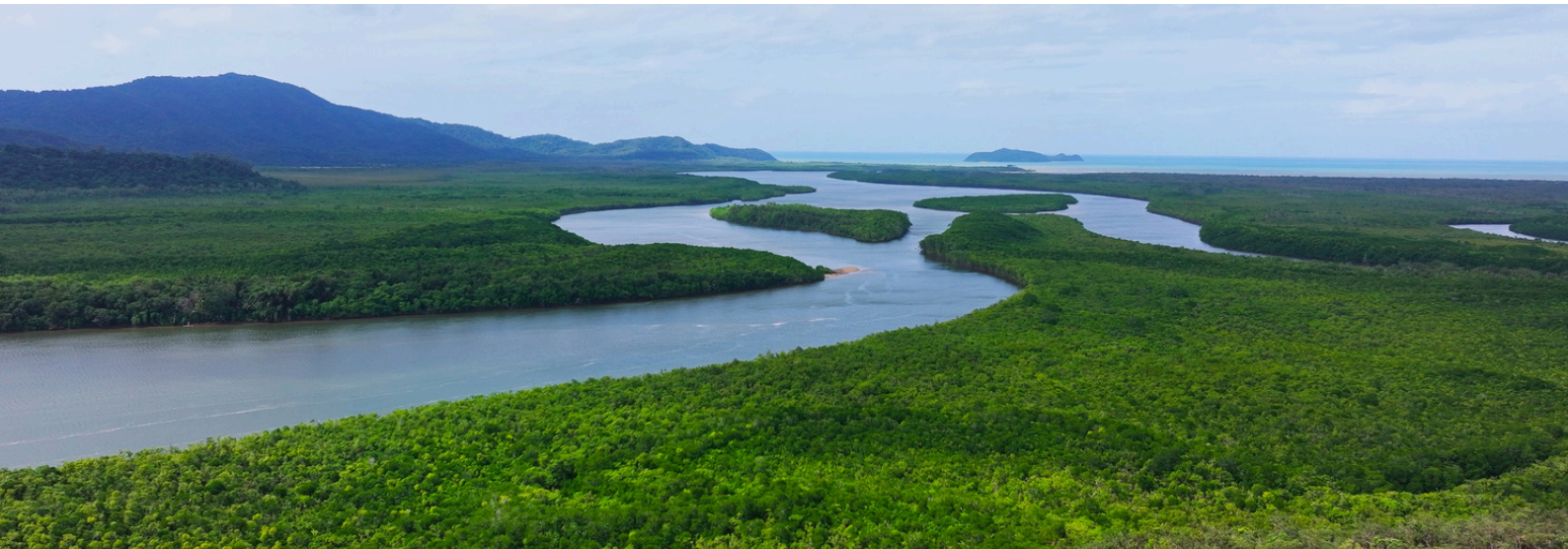
One Reef Credit equals a verified reduction of 1 kilogram of dissolved inorganic nitrogen (DIN) or 538 kilograms of fine sediment from entering the Great Barrier Reef.

Eco-Markets Australia is the administrator of Reef Credits. It is a not-for-profit. All approved Reef Credit projects can be viewed on the Eco-Markets Australia Registry.

Reef Credits Snapshot

- Voluntary water quality market
- Reef Credits generated from best practice and land management activities, and wastewater treatment, that help improve water quality
- Reef Credits are a verified reduction of DIN or fine sediment prevented from entering the Great Barrier Reef
- Reef Credits are sold to investors, and the income returned to the Reef Credit project owner
- The program is administered by Eco-Markets Australia

In this guide



How do Reef Credit projects work?

1 Partnership and project design

Work with an environmental project developer to identify and scope a Reef Credit project suitable for your property

Environmental project developers have expertise in assessing the feasibility of a project and developing a project plan. To do this they will need your assistance to provide relevant records, historical baseline data and other information.

Environmental project developers also help you implement (and provide support throughout the life) of the project.

2 Project validation and registration

Reef Credit project application is submitted to Eco-Markets Australia, the administrator of Reef Credits, to be validated and registered

The environmental project developer will work with you to complete the project application process. This is then submitted to Eco-Markets Australia for validation. This process confirms all the details of your project, your project plan and that it meets the requirements of Reef Credits. Once the validation process is complete, the project is registered on the Eco-Markets Australia Registry.

3 Project implementation, monitoring and verification

Reef Credit projects are implemented, and the outcomes monitored and verified

The Reef Credit project is implemented in accordance with the methodology, and project outcomes monitored. To provide assurance that the pollutant reductions are real and Reef Credit estimates are correct, projects are independently verified and this information is provided to Eco-Markets Australia for review.

Verification is undertaken by an independent and accredited verifier, approved by Eco-Markets Australia, and must be done each time the project seeks to have Reef Credits issued.

4 Reef Credit issuance

Eco-Markets Australia reviews the verification report. If it is satisfied that all the requirements of Reef Credits have been met, Reef Credits are issued into the Registry Account associated with the project.

Steps 3 and 4 are repeated for each monitoring period, for the crediting period of the project (10 - 25 years, depending on the methodology).

Methodologies

A methodology sets out how to undertake a project, eligible activities, measure pollutant reduction and quantify Reef Credits. Reef Credit projects must adhere to a methodology, and monitor and verify outcomes to generate Reef Credits.

1. Improved nitrogen use efficiency (DIN Method)

To reduce the loss of dissolved inorganic nitrogen (DIN) by adopting soil and nutrient management practices, with a focus on activities that support nitrogen use efficiency.

Best suited to

Sugarcane

Note: Bananas, grains and fodder may also be suitable however there is currently no modelling tool available to support their inclusion.

How it works

Reduces DIN loss through more efficient soil and nutrient management practices.

Project crediting period

Annually for 10 years.

Project activities

Project activities include (but are not limited to):

- efficient nitrogen fertiliser application
- maintenance of green trash blanket including as fallow cover on final ratoon
- machines and implements operating on the same wheel spacings under GPS guidance
- maintaining row widths at 1.8 - 2 metres
- planting sugarcane fallow land to legumes or alternative crops
- zonal tillage.

Reef Credit

One Reef Credit is earned for every kilogram of DIN prevented from entering the Reef catchment.

2. Gully rehabilitation (Gully Method)

To reduce fine sediment run-off from rural landscapes through gully rehabilitation within the Great Barrier Reef catchment.

Best suited to

Rural landscapes with demonstrated gully erosion

How it works

Landscape rehabilitation that reduces the amount of fine sediment run-off from gully erosion.

Project crediting period

At least every 5 years for 25 years.

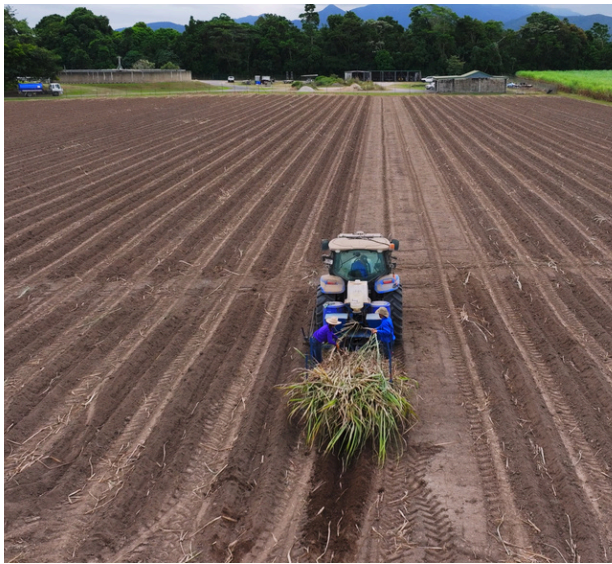
Project activities

Gully rehabilitation interventions may include:

- engineered control structures
- gully reshaping or capping
- drainage diversion structures
- soil amelioration
- revegetation
- grazing management
- any other interventions undertaken to rehabilitate gullies.

Reef Credit

One Reef Credit is earned for every 538kgs of fine sediment prevented from entering the Reef catchment.



Methodologies (continued)

3. Grazing Land Management Method

To reduce fine sediment run-off from rural landscapes through improved grazing land management that also increases farm productivity and resilience, and soil health.

Best suited to

Grazing operations

How it works

Fine sediment reductions are achieved through increasing pasture cover before high intensity rainfall periods to reduce the likelihood of run-off.

Project crediting period

At least every 5 years for 25 years

Project activity

Project activities may include:

- matching stocking to forage budgets
- rotational grazing and wet season spelling, 'period of rest'
- infrastructure investment i.e. fencing and water
- fire management
- land condition remediation i.e. pasture and nature vegetation management, weed control, feral animal control
- other interventions undertaken to increase ground cover and land condition.

Reef Credit

One Reef Credit is earned for every 538kgs of fine sediment prevented from entering the Reef catchment.

4. Wastewater Method

Removing dissolved inorganic nitrogen (DIN) in wastewater discharged from a site or facility through managed algal bioremediation.

Best suited to

Municipal wastewater treatment, aquaculture facilities and agricultural run-off

How it works

Wastewater treatment using live algae (microalgae or macroalgae) leading to a reduction in DIN across the project area.

Project crediting period

Quarterly for 15 years

Project activity

Project activities must:

- remove the quantity of DIN through a managed algal bioremediation solution
- be located within or adjacent to a site or facility discharging wastewater, that was operational during project activities
- be compliant with all federal, state and local government regulations.

Reef Credit

One Reef Credit is earned for every kilogram of DIN prevented from entering the Reef catchment.

Why Reef Credits?

Reef Credits is an innovative nature market that helps protect the Great Barrier Reef by combining the latest in environmental science, land stewardship and investment from the private sector, to deliver a real, additional and permanent improvement in water quality.

The Great Barrier Reef is one of the world's natural wonders and the largest coral reef on Earth. The Reef is under threat from climate change and poor water quality.

Poor water quality affects the Reef by reducing light, smothering corals, promoting algal growth and propagating crown of thorns starfish outbreaks. Improved water quality is achieved through best practice and land management activities, urban wastewater treatment and stormwater management.

The Queensland and Australian Governments have set water quality targets to reduce Reef dissolved inorganic nitrogen (DIN) loads by 60% and fine sediment loads by 25% by 2025.

Reef Credits is a voluntary Australian nature market that incentivises landholders to undertake additional on-land activities that improve water quality in the Reef catchment, and be remunerated for these efforts by generating Reef Credits.

Reef Credits are earned for each monitoring period for the life of a Reef Credit project, which varies from 10-25 years (as specified in the methodology).

Investors buy Reef Credits, a verified water quality outcome, and contribute to the long-term protection and sustainability of the Reef.

Case studies

Wastewater Method
RegenAqua and Burdekin Shire Council

The Ayr-Brandon Wastewater Treatment Facility is the first Reef Credit project to be approved using the Wastewater Method.

The project uses macroalgal bioremediation to remove nutrients like dissolved inorganic nitrogen (DIN) from wastewater.

The project is a partnership between RegenAqua (who developed and tested the technology with James Cook University), and Burdekin Shire Council. Construction of the facility is due to be complete in late 2024.

When fully operational the project is expected to remove between 1,400 to 2,400 kilograms of DIN per quarter.

"It is an innovative, low risk and cost-effective solution that improves water quality in the Great Barrier Reef," Sam Bastounas, CEO, Pacific Biotechnologies (representing RegenAqua) said.

DIN Method
Lawrence Di Bella

Lawrence Di Bella's family has been farming in the Ingham area for more than 100 years. For his family the Reef Credit Scheme is an opportunity to adopt practices that reduce their environmental footprint and help protect the Reef, building on the sustainability and biodiversity work they are already doing.

"We don't want to have an impact on the environment. We want to minimise that as much as possible.

"The Reef is really important to our local towns and (our) communities rely on it. We need to work together to protect our environment," Mr Di Bella said.

The Reef Credit project has involved implementing fertiliser management and other soil health practices resulting in improved farm productivity and profitability, and generating Reef Credits.
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"It's allowed us to reinvest back into our farm, so we will be able to reduce our costs, be viable and be sustainable – all in one."

Learn more about landholder experiences

Landholders participating in the Reef Credits have reported benefits like improved farm productivity and profitability, as well as earning Reef Credits. Find out more about their experiences here or scan the QR code below.

Want to get involved?

1 Talk to an environmental project developer

Get in touch with an environmental project developer about the potential for a project on your property. Understand if you meet the eligibility criteria and what's involved in a project. A list of environmental project developers currently involved in the Scheme is available on the Eco-Markets Australia website.

2 Seek expert advice

Speak with your local Natural Resource Management (NRM) organisation, industry group and agribusiness adviser(s) (accountant, solicitor, financial adviser, agronomist, etc) to get a understanding of your specific situation.

3 Evaluate the risks and benefits

Assess the risk-to-reward ratio associated with participating in a Reef Credit Project. The Scheme is not a grant program. Projects generate Reef Credits linked to a verified environmental outcome associated with eligible activities undertaken using an approved methodology. Evaluate the short, medium, and long term financial implications of undertaking a project.

4 Understand the project

Understand what you will be expected to do, including activities, timeframes, reporting and monitoring.

More information

For more information about Eco-Markets Australia and Reef Credits, please follow the **links** or scan the QR codes.

Eco-Markets Australia website: eco-markets.org.au

Reef Credits rules & requirements: eco-markets.org.au/rules-and-requirements

Landholder experiences eco-markets.org.au/landholder experiences

Questions or queries?

If you have any questions or queries about the Reef Credits, please contact Eco-Markets Australia:

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