Reef Credits

Grazing Land Management Methodology Guide

Reef Credits is a voluntary environmental market designed to incentivise landholders to adopt additional land management practices that improve water quality in the Great Barrier Reef catchment. Poor water quality, primarily from pollutants such as sediment and nitrogen runoff, poses a significant threat to the Reef's health. Reef Credits provide a clear and accountable way to address this challenge through measurable, independently verified pollutant reductions.

Each Reef Credit project follows an approved Standard and Methodology, which sets clear guidelines on how to conduct projects, the eligible activities, and how pollutant reductions are measured and verified. This ensures that every Reef Credit generated represents a credible, tangible improvement in water quality.

The activities and actions taken, and environmental outcomes achieved to generate Reef Credits contribute to the productivity of the land and health of the soil. The improvement in water quality also contributes to the long-term preservation of the Great Barrier Reef, while encouraging sustainable land and water management practices.

This guide provides an overview of the Reef Credit Scheme with a focus on the Grazing Land Management Methodology, how it all works, and the benefits it offers to organisations, landholders, and communities striving to protect one of the world's most precious natural assets.

Reef Credits Snapshot

- A voluntary Australian environmental market focused on improving water quality in the Great Barrier Reef catchment.
- Reef Credits are generated through verified sustainable land management practices that reduce targeted pollutants.
- Each Reef Credit represents a measurable reduction in pollutants, preventing them from reaching the Great Barrier Reef.
- Reef Credits provide financial return for landholders while supporting critical environmental outcomes and improving productivity and soil health though amended land management practices.
- Administered by Eco-Markets Australia, an independent administrator, to ensure rigorous governance, transparency, and the integrity of both the program and its verified environmental benefits.
- Reef Credits can be purchased by governments, philanthropists, and private sector organisations. Organisations can use Reef Credits as part of their Nature Strategy and Nature Finance Plan, especially if their business operations have a footprint in the Reef catchment or impact water quality.

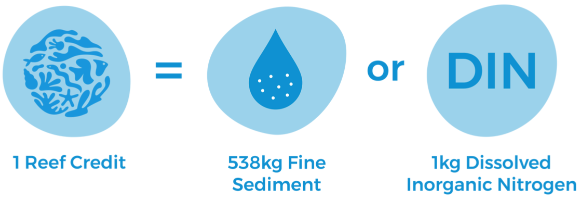
What is a Reef Credit?

A Reef Credit quantifies the volume of pollutants, such as nitrogen or fine sediment, that are prevented from entering waterways of the Great Barrier Reef catchment. These credits play a crucial role in supporting water-quality improvement initiatives.

Types of Reef Credits

There are two types of Reef Credits, depending on the water-quality improvement project and methodology used to generate credits. Each credit represents a specific amount of reduction in pollutant and can attract different prices when sold.

- **One 'fine sediment' Reef Credit** is earned for every **538 kilograms** of fine sediment prevented from entering the Reef catchment.
- **One 'DIN' Reef Credit** is earned for **every kilogram** of Dissolved Inorganic Nitrogen (DIN) prevented from entering the Reef catchment.



Verification Process

Reef Credits can only be generated when a Project Proponent undertakes an approved Reef Credit project and achieves verified water quality improvements. The verification process is overseen by Eco-Markets Australia, ensuring transparency and accountability throughout.

Generating Reef Credits

The number of Reef Credits a project can generate varies depending on the specific practices implemented. Once verified and issued, these credits can be sold to a range of purchasers, including governments, businesses, and philanthropists, committed to supporting efforts that enhance the health of the Great Barrier Reef. Each Reef Credit provides an investor with an exclusive, uncontested claim to the environmental benefit that it represents.

Reef Credit project rules and requirements are available on the website or via the QR code.

Unpacking the Reef Credits

Reef Credits is overseen by Eco-Markets Australia, a not-for-profit organisation that manages the administration of the program, providing a robust framework for environmental market activities.

The program consists of a comprehensive set of rules and requirements guiding the development and implementation of Reef Credit projects. These components include:

- **Reef Credit Guide** – This document provides an overarching explanation of the program's purpose, governance, operations, and management.
- **Reef Credit Standard** – This establishes the rules and requirements for Reef Credit projects. It outlines the processes for validating, registering, monitoring, and verifying projects, as well as for issuing, trading, and utilising Reef Credits.
- **Methodology Approval Procedure** – This procedure describes the process for submitting methodologies for approval. A Methodology specifies the water-quality improvements to be achieved and details the requirements for measuring these reductions to generate Reef Credits. While each Reef Credit project is unique, methodologies provide a consistent framework for implementation.
- **Project Crediting Procedure** – The procedure outlines the specific activities and action plans necessary to generate Reef Credits. Projects must align with the requirements of the Reef Credit Standard and applicable Methodology.
- **Reef Credit Registry** – This secure online ledger tracks Reef Credit issuance, transactions, retirement, and ownership, ensuring transparency and accountability of the market. The Registry ensures the environmental benefit that each credit represents is only claimed once.

Why do we need Reef Credits?

Reef Credits provide an innovative, market-based solution to address one of the most pressing threats to the Great Barrier Reef: poor water quality.

Second only to climate change, declining water quality, primarily by land-based runoff and wastewater discharging, is a critical factor affecting the long-term health and resilience of the Reef.

Sediment, nutrients, and contaminants entering the Reef's waters from land activities including agricultural land use create an ongoing threat to marine biodiversity, water clarity, and ecosystem health. Reef Credits help in addressing these challenges by incentivising landholders to reduce pollutants entering the waterways of the Great Barrier Reef catchment.

Addressing Water Quality

In the Reef catchment, grazing accounts for approximately 73% of the land use, making it a key driver of fine sediment runoff. This fine sediment, alongside nutrients such as dissolved inorganic nitrogen from fertilisers, poses a severe threat to marine biodiversity, water clarity, and the overall health of the Reef ecosystem.

Reef Credits generated through the Grazing Land Management Methodology help address these challenges by incentivising farmers engaged in grazing activities to implement practices that reduce sediment runoff. By adopting land management techniques that mitigate these impacts, landholders can generate Reef Credits, which can be sold to governments, philanthropists, and private sector organisations. This not only helps improve water quality but also provides farmers with a tangible way to participate in the protection of the Reef while gaining a diversified income stream.

Given that such a large proportion of the catchment is dedicated to grazing, the involvement of landholders in generating Reef Credits through this methodology is critical to the success of the Reef Credit Scheme. By reducing sediment runoff, farmers play a key role in safeguarding the long-term health of the Great Barrier Reef, creating a lasting environmental impact.

A National and Global Priority: Meeting Biodiversity and Water Quality Targets

Australia has committed to a range of global and national environmental targets aimed at protecting biodiversity and improving ecosystems.

Reef Credits contribute to the following:

- **Reef 2050 Plan:** The Reef 2050 Water Quality Improvement Plan is Australia's flagship strategy for protecting the Great Barrier Reef. By reducing pollutants through verified environmental projects, Reef Credits play a pivotal role in helping Australia meet its water quality targets and ensure the resilience of this iconic ecosystem.
- **Global Biodiversity Framework:** This framework seeks to halt biodiversity loss and restore ecosystems. By improving water quality in the Great Barrier Reef, Reef Credits directly support key biodiversity goals, including the conservation of marine ecosystems and the reduction of pollution impacts.
- **UN Sustainable Development Goals (SDGs):** Reef Credits align with several SDGs, especially SDG 14 (Life Below Water) and SDG 15 (Life on Land). These goals emphasise the importance of protecting both water and land based ecosystems while tackling pollution and restoring degraded environments.
- **Paris Agreement:** Recognising the crucial role of ecosystems like the Great Barrier Reef in climate change, the Paris Agreement underscores the importance of safeguarding these environments. Reef Credits contribute to climate change efforts by protecting the health of the Reef, supporting Australia's broader environmental and climate objectives.

What does participation in Reef Credits involve?

There are currently four approved methodologies that can be used to generate Reef Credits. This guide outlines the Grazing Land Management Methodology:

Grazing Land Management Methodology

The Reef Credit methodology for accounting fine sediment abatement through improved grazing land management, otherwise known as the Grazing Land Management Method, or GLM, is designed to account for fine sediment savings through improved grazing land management practices. By enhancing grazing land management, this method seeks to maintain a high level of groundcover prior to high-intensity rainfall events, thereby reducing the risk of hillslope fine sediment runoff and maximising benefits to local waterways and the Great Barrier Reef.

How it works:

To mitigate the impact of external factors like seasonality, the Grazing Land Management Method uses Dynamic Reference Cover Modelling, ensuring that credits are awarded solely for improvements in grazing land management practices. The calculations for credit generation are based on the Revised Universal Soil Loss Equation (RUSLE), a refined sediment delivery model used by the Australian and Queensland Governments. This approach provides a robust framework for quantifying the environmental benefits of improved land management while supporting the sustainable use of grazing lands.

Maximum Project Crediting Period:

The maximum amount of time that credits can be generated by a project is 25 years.

Independent Audit & Credit Issuance:

Outcomes are measured and Credits issued following a rainfall event.

View the Grazing Land Management Methodology documentation on the website or via the QR code.

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Methodologies

1 Reef Credit = 538kg Fine Sediment or 1kg Dissolved Inorganic Nitrogen

Methodology	Nitrogen Use Efficiency Method	Gully Method	Wastewater Method	Grazing Land Management Method	Constructed Wetlands Method (Draft Method Under Assessment)
Pollutant	DIN	Sediment	DIN	Sediment	DIN
Activities	Soil and nutrient practice change	Landscape rehabilitation and construction	Algal bioremediation at sewerage treatment plant	Fine sediment savings through improved grazing land management practices	Utilise constructed wetlands to prevent dissolved inorganic nitrogen from entering waterways
Maximum Project Period	10 years	25 years	15 years	25 years	25 years
Independent Audit & Credit Issuance	Annually	On rainfall event	Quarterly	On rainfall event	On rainfall event

Reef Credits:
Qualifying Activities for Graziers

To qualify for Reef Credits, graziers must implement a series of measurable activities aimed at reducing sediment loads entering the waterways of the Great Barrier Reef catchment.

The following steps outline the necessary actions to generate Reef Credits under this methodology:

- **Baseline Assessment:** Establish the current condition of grazing land by measuring baseline ground cover and fine sediment loss. This initial assessment serves as a reference point for evaluating the impact of subsequent management practices.

- **Implementation of Improvements:** Implement a range of activities designed to enhance ground cover and mitigate fine sediment loss. These practices may include:
  - Grazing Practice Changes: Activities that are expected to increase ground cover, such as rotational grazing and wet season spelling, which allow periods of rest for pasture recovery.
  - Infrastructure Investments: Install fencing and watering points to manage grazing patterns and protect sensitive areas.
  - Land Remediation: Engage in pasture management, native vegetation rehabilitation and weed control to foster healthy ecosystems.

- **Monitoring and Reporting:** Establish a rigorous monitoring program to measure the effectiveness of implemented improvements. This includes:
  - Tracking changes in ground cover through remote sensing technologies.
  - Documentation of management activities and their impact on ground cover.
  - Submission of monitoring reports to verify compliance with the established performance criteria.

- **Credit Generation Calculation:** Calculate the credits generated based on the reductions in fine sediment achieved through the improvements. This involves:
  - Applying the approved credit calculation methodology, which compares project fine sediment loss against a modelled business as usual scenario.
  - Ensuring all calculations adhere to the specified guidelines and reporting standards of the methodology.

- **Verification Process:** Engage an approved independent verifier to assess the monitoring and reporting outcomes. The verification process ensures the integrity and credibility of the generated credits.

- **Credit Issuance:** Once verified, the credits can be issued and registered on the Reef Credit registry, making them available for sale to corporate investors committed to improving the health of the Great Barrier Reef.

By following these steps, landholders can not only contribute to the preservation of Great Barrier Reef marine environment but also participate in a sustainable market that rewards proactive efforts to reduce fine sediment loss.

Who's who in Reef Credits?

The generation of Reef Credits involves a number of key stakeholders, with different roles, purposes and interests.

- **Project Proponents** – individuals or organisations that have overall responsibility to carry out a Reef Credit Project and to whom Reef Credits may be issued. A Project Proponent may be an individual landowner, or land manager such as a farmer or grazier. Project Proponents may also develop a project in partnership with an Environmental Project Developer.
- **Environmental Project Developers** – individuals or organisations experienced with implementing environmental projects. They work with Project Proponents to assess the feasibility and help develop a Reef Credit Project. They can also help with the implementation and delivery of the project activities and provide support throughout the life of the project. They may also assist with and manage the sale of Reef Credits.
- **Verifiers** – are independent third parties or agencies that audit and confirm Reef Credits are accurately calculated. Verifiers must be appropriately trained and accredited.
- **Buyers or Investors** – include any public or private entity that purchase Reef Credits and has an interest in contributing to water quality improvement to protect the Great Barrier Reef. See below 'Top reasons investors like Reef Credits'.
- **Eco-Markets Australia** – independent environmental market administrator that manages the governance, administration, issuance and tracking of Reef Credits in order to ensure the highest standards of environmental and financial integrity.

Top reasons investors value Reef Credits

- **Trust** – Credit buyers can have confidence that the environmental outcomes they are purchasing and claiming are real, already achieved, measured and risk free.
- **Support water quality stewardship** – investing in innovation and best practice management to deliver water quality improvements that contribute to the waterways in the catchment and the health of the Reef.
- **Market demand for sustainability** – demonstrating a commitment to the protection and conservation of the Great Barrier Reef in response to investor expectation and consumer demand.
- **Alignment with environmental, social and governance (ESG) or brand positioning strategies. Use of Reef Credits as part of an organisations Nature Strategy and Nature Finance Plan –** particularly where business operations have a footprint in the Reef catchment.
- **Simplicity** – a Reef Credit is a verified environmental outcome that contributes to real and measurable water quality improvements to protect and conserve the Great Barrier Reef.
- **Safeguard Australia's natural assets** – the iconic Great Barrier Reef, recognised in Australia and internationally for its scale, beauty and biodiversity.

Want to participate in Reef Credits?

To understand what's involved in a Reef Credit Project and if it's right for you, consider the following points:

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

2. **Seek expert advice**
Speak with your local NRM, industry group and business advisors (accountant, solicitor, agri-advisor, financial advisor, agronomist, etc) to gain an understanding of your specific situation.

3. **Evaluate risks and benefits**
Assess the risk-to-reward ratio associated with participating in a Reef Credit Project. Reef Credits offer a financial return linked to a verified environmental outcome. 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 timeframes, reporting and monitoring.

Resources

For easy access to Eco-Market Australia's online resources, please click on the **links** or scan the QR codes.

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

Grazing Land Management Methodology:
eco-markets.org.au/methodologies

More information

If you have any questions or would like more information about Reef Credits, please contact Eco-Markets Australia:

T: 0437 264 608
E: **info@eco-markets.org.au**
W: **eco-markets.org.au**

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Level 1, 261 Queen Street, Brisbane, QLD 4000

0437 264 608

info@eco-markets.org.au

@eco-markets-australia

@ecomarketsaustralia

eco-markets.org.au