

GHG Benefits in Managed Crop and Grassland Systems

Credit Class



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This document has been prepared for informational and procedural purposes only. Its contents are not intended to constitute legal advice. Ecometric Ltd maintains the right to amend or depart from any procedure or practice referred to in this guideline as deemed necessary.

This document is intended to be used in combination with:

- [Regen Registry Program Guide](#)
- GHG Benefits in Managed Crop and Grassland Systems Methodology

Definitions

1. Approved Activities - the set of land management or conservation activities that are eligible activities for a given Credit Class.
2. Monitor - an individual or organization that is contracted to measure the benefits / indicators defined in a given Credit Class based on the requirements in the Approved Methodology.
3. Verifier - an individual or organization that is contracted to execute the verification requirements stipulated in a given Credit Class.
4. Project Proponent - the project developer or land steward that is applying to register a project on the registry.
5. Project Developer - the individual or organization that is in charge of managing the project and is the main point of contact with Regen Registry. The Project Developer can be the land steward or a third party.
6. Land Steward - the individual or organization that is performing the work on the ground. This can be a farmer, rancher, conservationist, forester, fisherman, etc.
7. Landowner - the individual or organization that holds title to the land where the project is occurring. This can be the Land Steward or a third party that rents the land to the Land Steward.
8. Project Registration Date - the official date when a project commences.

9. Project Plan - the template that each project proponent fills out in order to register a project on the registry.
10. Co-Benefit - the Intergovernmental Panel on Climate Change (IPCC) defines co-benefits of climate change mitigation as the positive benefits related to the reduction of greenhouse gasses. We define it more broadly as a benefit that is achieved along with the main indicator tracked and promoted in a given credit - which need not be reduction of GHG necessarily. For example a biodiversity credit might mainly promote the protection of a certain species and at the same time offer co-benefits, such as protection of water resources.
11. Verification - a systematic, independent, and documented assessment by a qualified and impartial third party of the benefits' assertions for a specific reporting period.
12. Crediting Term - is the finite length of time for which a Project Plan is valid, and during which a project can generate credits.
13. Project Activity - the applied management or conservation practice that a project proponent is undertaking in order to improve the benefits tracked in a given Credit Class.
14. Project Initial Monitoring Date - the date when the baseline measurement was performed.
15. Program Guide - the main document specifying the rules and procedures of Regen Registry.
16. Established Registries - other credible registries in the carbon market that Regen Registry recognizes and accepts for certain purposes such as onboarding verifiers. These registries are:
 1. VCS (Verra)¹
 2. Gold Standard²
 3. American Carbon Registry³
 4. Climate Action Reserve⁴
 5. CDM⁵

Acronyms

- GHG - Greenhouse Gasses
- IPCC - Intergovernmental Panel on Climate Change (IPCC) is an intergovernmental body of the United Nations that is dedicated to providing the world with objective, scientific information relevant to understanding the scientific basis of the risk of human-induced climate change
- AFOLU - Agriculture, Forestry and Other Land Use; a category of carbon credit projects that related to agriculture, forestry and other land uses (e.g. conservation)
- RND - Regen Network Development, Inc., the entity developing and operating Regen Registry
- SDG - the UN Sustainable Development Goals
- VCS - Verified Carbon Standard is the GHG Crediting program operated by Verra
- CDM - Clean Development Mechanism is a United Nations run carbon offsetting scheme
- CO₂e - Carbon Dioxide Equivalent

¹ [Home - Verra](#)

² [GSF Registry \(goldstandard.org\)](#)

³ [Homepage — American Carbon Registry](#)

⁴ [Climate Action Reserve - Climate Action Reserve : Climate Action Reserve](#)

⁵ [CDM: CDM-Home \(unfccc.int\)](#)

1. INTRODUCTION

Project Drawdown⁶ defines Regenerative Annual Cropping as any annual cropping system (excluding rice production) that includes at least four of the following six regenerative practices: compost application, cover crops, crop rotation, green manures, no-till or reduced tillage, and/or organic production. These practices sequester carbon in soils and reduce emissions at modest rates but have wide adoption potential and thus impressive mitigation potential. Project Drawdown claims that “regenerative agriculture enhances and sustains the health of the soil by restoring its carbon content, which in turn improves productivity—just the opposite of conventional agriculture,” and estimates that regenerative annual cropping could reduce or sequester 14.5–22 gigatons of CO₂ by 2050 ([Project Drawdown, 2020](#)).

Project Drawdown defines managed grazing as a set of practices that sequester carbon in grassland soils by adjusting stocking rates, timing, and intensity of grazing. Livestock grazing covers over 3.3 billion hectares, or 25 percent of the world’s land area, making it humanity’s largest land use (Asner *et al.*, 2004). Unfortunately, poor grazing practices have contributed to land degradation and loss of soil organic carbon. However, there are managed grazing practices that can reverse this negative trend, enhance net carbon sequestration, and improve soil and vegetation quality. These are practices such as controlled intensity and timing of grazing, enclosure of grassland to encourage resting, and/or other kinds of planned and adaptive grazing.

Under managed grazing, emissions of the greenhouse gasses methane and nitrous oxide continue, but are more than offset by soil organic carbon sequestration (at least until soil carbon saturation is achieved). The estimated global benefit from managed grazing is between 16.4 and 26 Gt CO₂e sequestered in the period between 2020-2050.

The intent of this Credit Class is to provide incentive and a structure to significantly increase the amount of hectares/acres under regenerative annual cropping and managed grazing worldwide by providing land stewards with the necessary incentives to make this important work possible.

This Credit Class follows the requirements in the Program Guide⁷. Each section below includes specific adaptations for this Credit Class.

2. CREDIT CLASS OVERVIEW

This credit class focuses on soil carbon sequestration and storage in regenerative cropping and managed grassland ecosystems. Co-benefits (or secondary ecological benefits) are not currently considered in this credit class but a formal co-benefit measurement system is under development to be retrospectively added when complete, to allow for a credit that accounts for more than just carbon.

⁶[Project Drawdown](#)

⁷[Program Rules and Requirements - Regen Library](#)

In the case of this credit, the primary benefit that is monitored, quantified and used to determine the quantity of credits issued is Carbon Sequestration and storage. The additional benefits, or co-benefits, may be measured on a project by project basis as part of a formal protocol development process.

1. Primary Indicator

The primary indicator defined in this credit class is soil organic carbon. The units of this credit are: one crediting unit equals 1 metric ton of CO₂e sequestered.

The primary benefit of atmospheric regulation through carbon sequestration is driven by carbon removals through the use of regenerative cropping or grazing sequestering carbon into the soil. To ensure a net positive effect, aside from CO₂ removals from the atmosphere, it is also important to take into account significant GHG emissions directly resulting from the *project activity*. These should be accounted for each year to accurately calculate creditable carbon change.

2. Ecosystem Service Classification

This Credit Class applies to the ecosystem services of atmospheric regulation as defined in the RND Taxonomy⁸.

3. PROJECT ELIGIBILITY

1. Ecosystem Type Classification

This Credit Class applies to croplands, grasslands, pastureland, and shrubland as defined in the RND Taxonomy.

2. Conditions for Applicability

To protect biodiverse natural habitats, any Project Area where a change of ecosystem type from Forest/Woodlands: Temperate or Tropical, or Wetlands, to Grassland, Pastureland, Cropland or Agroforestry as defined in the RND Taxonomy, within the 5 years prior to project start date, will be excluded from this credit class. Proof of land use for a 5-year period preceding project registration will be provided in the Project Plan and evidenced by farm-management records.

3. Project Activity

The project activity approved by this credit class is regenerative crop management and managed grazing. Regenerative crop management combines the processes of reduced tillage and regenerative crop practices (see RND Taxonomy under Best Management Practice tab for a list of specific reduced tillage and crop practices in detail). Managed grazing is the process of controlling where and when livestock graze an area of land. There are many practices that fall under the managed grazing approach (see RND Taxonomy under the Managed Grazing tab for a list of specific and approved managed grazing practices in detail).

4. Land Ownership Type

This credit class accepts projects which can properly demonstrate land ownership or landowner approval with adequate documentation.

5. Land tenure

Land tenure is a legal term representing rights and interests in project lands.

⁸ [Regen Network Taxonomy - Google Sheets](#)

1. Project Proponent shall own, have control over, or document control over GHG sources/sinks from which removals originate.
2. Project Proponent shall provide documentation and/or attestation of land tenure.
3. In the case of leased/rented land, the landowner shall agree to all contractual obligations taken by the Project Proponent, and the Project proponent shall provide documentation and/or attestation of title agreement to credits.
4. Regen Registry may require a legal review by an expert in local law.

6. Regulatory Compliance

Projects must maintain material regulatory compliance that is adherent to all laws, regulations, and other legally binding mandates related to Project Activities.

1. Project Proponent is required to provide a regulatory compliance attestation for each verification. This attestation must disclose all violations or other instances of non-compliance with laws, regulations, or other legally binding mandates directly related to project activities.
2. Regen Registry retains discretion to decide on a case by case basis whether a violation requires canceling the project or putting it on hold until the issue is addressed.

7. Adoption Date

Projects run under this credit class will accept an adoption date that goes back up to 10 years prior to Project Registration Date. In order to claim an Adoption Date before the Project Registration Date, the Project Proponent must have maintained clear historical records to that effect, as specified in the Approved Methodology.

8. Crediting Term

The crediting term is the length of time for which the Project Plan is valid, which for this credit class is 10 years with an option to renew. Each renewal period will be 10 years and there is no limit to the number of renewals. The Permanence obligation is additional to the Crediting term.

9. Frequency of Credit issuance

The frequency of credit issuance will be determined by the minimum time interval where SOC gains are measurable, with a maximum frequency of annual.

4. PROJECT RULES AND REGULATIONS

1. Approved Methodology

The approved methodologies for this Credit Class are:

Methodology for Soil Organic Carbon Estimation in Regenerative Cropping and Managed Grassland Ecosystems⁹. The Credit Class Admin will update this list as new methodologies are added.

2. Aggregate Projects

The aggregation of multiple Project Areas into a single Aggregate Project is permitted in this credit class. The benefit of an Aggregated Project will be Project Management administration and cost efficiencies and the pooling of larger volumes of credits to meet corporate buyer requirements.

⁹ [Soil Organic Carbon Estimation in Regenerative Cropping & Managed Grassland Ecosystems - Regen Library](#)

Project Areas will be grouped primarily by geographic bioregion as classified in the Koppen Climate Classification but also accounting for similar soil conditions and management practices, which will be specifically pre-defined and checked for each Project Area and recorded in each Aggregate Project Plan. Component farms within aggregated projects will remain individually identifiable to allow verifiers to select farms with the strongest influence over an Aggregated Project's outcomes for site visits and, to ensure differences in sequestration rates and quantities are identifiable and can be individually explained.

To register an Aggregate Project, the Project Proponent must as part of the Project Plan submit a report proving that the bioregion, management system, soil type and crop types applicability conditions have been met, evidenced by farm management data covering the 5 years prior to project registration.

All Project Areas included within an Aggregate Project will be individually subjected to standard monitoring requirements with no extrapolation between Project Areas permitted.

Each individual Project Area will generate an individual Project Report and only the resulting credits will be aggregated to meet large-volume purchaser requirements.

3. Project Plan

The Project Plan will define and evidence Project Area(s) Project Activity, Project Eligibility and Project Rules and Regulations. The Project Proponent shall fill out the Project Plan Template and submit for review by the Regen Registry.

5. GHG REMOVAL AND EMISSION REDUCTION REQUIREMENTS

The credit class follows the GHG accounting requirements defined in the Program Guide.

1. Additionality

Proof of additionality is required for this credit class.

The Approved Methodology specifies how the baseline and the additional carbon emission and/or removal is calculated. Baselines can be static, dynamic or both and additionality can be project or performance based.

Common additionality tests which form part of the framework of other voluntary carbon market codes have been considered in the context of this project, as follows:

1. Legally required practices are not accepted.
2. MRV demonstrates carbon storage above business as usual.
3. There is a reasonable expectation for carbon dioxide drawdown from project activity.
4. Credits are only issued for carbon removed from the atmosphere and quantified through this approved methodology after the initiation of baseline soil testing.

2. Leakage

For this credit class leakage is defined as >10% reduction in baseline yield. Baseline yield (5-year average) is to be reported at project registration.

Any occurrences of leakage are to be included in the annual project report along with probable agronomic or climatic cause. The project verifier is to compare project area

yields with average crop yields achieved by equivalent farming systems in the project area geographic region to determine if leakage has been caused by project activity or climatic events.

Project Proponents that expect above de minimis leakage, shall account for this in the Project Plan.

Primary land use is to be maintained and not changed during the project period.

3. Permanence Period

This credit class requires a 10-year permanence period assured by the Buffer Pool.

4. Buffer Pool

This credit class requires a 20% buffer pool contribution from each credit issuance to protect against reversal. The cumulative buffer pool is split equally between the Crediting Term Buffer Pool and the Permanence Reversal Buffer Pool. The Crediting Term Buffer Pool is allocated on the 10th anniversary of the Project Adoption Date, while the Permanence Reversal Buffer Pool is allocated 10 years after the Crediting Term ends. Buffer pool credit allocation is determined by monitoring rounds to quantify Project Area SOC Stock, with credits only returned to the Project Proponent if the net SOC Stock matches or exceeds the net SOC stock recorded by the final credit vintage monitoring report.

6. VERIFICATION

This section provides a general overview of the requirements for ex post verification of GHG and Co-Benefits assertions by an independent third-party verifier approved by Regen Registry.

As defined in this section, verification will be conducted by an independent verifier chosen by the Project Proponent and approved by Regen Registry.

Regen Registry seeks a balance between adequate assurances, the overhead, and costs associated with verification. Therefore, each Credit Class can stipulate the requirements that are best suited to the ecosystem, best management practice and/or locale(s) it pertains to. Regen Registry retains the right to adapt the requirements and provide verification templates/interfaces as needed.

1. Definitions

1. Validation is the systematic, independent, and documented process for the evaluation of the reasonableness of the assumptions, limitations, and methods that support a statement about future (ex-ante) GHG and Co-Benefits outcomes.
2. Verification is the systematic, independent, and documented assessment by a qualified, impartial third-party of the GHG and Co-Benefits assertion for a specific reporting period.
3. Regen Registry does not require an ex-ante GHG estimate in the Project Plan and therefore validation is not necessary. Instead, the verifier validates the project eligibility according to the rules defined in the Program Guide, Credit Class and the Approved Methodology. Regen Registry has simplified the eligibility requirements and considers verification an applicable standard. However, each Credit Class can customize the requirements as needed and add validation.

2. Verifier Requirements

The Project Proponent can choose a verifier from either of the following options:

1. Verification bodies accredited under ISO 14065 and in good standing with their relevant ISO member body.
2. Verifiers approved by Established Registries.
3. Verifiers that satisfy these minimum requirements:
 - 3.1. Have sufficient proof of identity.
 - 3.2. Obtain Errors & Omissions Insurance for at least \$1 million.
 - 3.3. Has demonstrated technical expertise in agriculture and grazing.
 - 3.4. Be in a position of fiduciary duty.
4. Verifiers that are accredited under ISO 14065 (per article 10.2.1.1) and/or approved by Established Registries are automatically approved to be verifiers on Regen Registry. Other verifiers must submit an application for consideration. A list of approved verifiers will be made available on the Regen Registry website.
5. In order to increase the assurance level in projects, Project Proponents shall engage at least two lead verifiers over the lifetime of their project, where the final project verification is done by a different verifier than the one used in prior verification events.
6. Verifiers must sign a statement confirming their lack of conflict of interest with the Project Proponent. Regen Registry and the Project Proponent must be satisfied that any potential for conflict of interest can be mitigated. To limit the potential for conflict of interest, these restrictions are put in place:
 - 6.1. Verifiers will not conduct a verification for any project in which:
 - 6.1.1. Any member of the verification team has a financial interest in the project or the Project Proponent.
 - 6.1.2. The Verifier has played a role in developing the project.
 - 6.2. The verifier will disclose all relationships, such as familial or fiduciary, within the past three years between the Verifier on the one hand, and the project and Project Proponent on the other.

3. Payment for Verification

1. Project Proponent is responsible for engaging and paying for verifications.

4. Evidence Gathering

1. Verifier shall take necessary and appropriate steps to assure the project inputs are authentic, using a random sampling approach whenever appropriate. Verifiers will adhere to the Regen Registry data privacy policy to ensure Project Proponent maintains privacy of their data.
2. Verifiers are required to provide assurance as to the reasonableness and accuracy of the data the Project Proponent has provided to Regen Registry and the Monitor, but they are not asked to attest to the validity or accuracy of the outputs of the Monitor.
3. The Approved Methodology contains specific guidance on the scope of evidence gathering necessary to provide reasonable assurance with respect to the data the Project Proponent provides the Monitor.
4. The verification includes but is not limited to the following categories:
 - 4.1. Project Plan - the verifier shall verify the information provided in the Project Plan.
 - 4.2. Project Ownership and Rights
 - 4.2.1. Verifier shall verify that the Project Proponent has legal rights to the land defined in the project boundaries. If the Project

- Proponent is an organization, the verifier shall also verify the documents provided to Regen Registry have been signed by the organization's representatives without a reasonable doubt.
- 4.2.2. The verifier shall choose the appropriate level of Land Owner rights verification from the list below, where the default shall be the least strictest approach. Documentation verification levels, from strictest to least:
 - 4.2.2.1. Evidence of land title or deed of ownership – official documentation of Federal / State government.
 - 4.2.2.2. ¹⁰Rate payments, such as utility services provided by local jurisdictions to the property and Project Proponent.
 - 4.2.2.3. Copies of email exchanges, letters, agreements or similar documentation (or their extracts).
 - 4.2.3. In the case the land is leased, the verifier shall also verify the lease agreement between Project Proponent (or the entity/individual represented) and Land Owner.
 - 4.2.4. If the Project Proponent is representing the Land Owner, the verifier shall verify the Deed of Representation between the Project Proponent and the Land Owner.
 - 4.3. Data inputs provided by Project Proponent to the Monitor – as stipulated by the Approved Methodology.
 - 4.4. The Monitor followed the procedures stipulated in the Approved Methodology.
 - 4.5. Compliance
 - 4.5.1. Compliance with Credit Class and Approved Methodology requirements:
 - 4.5.1.1. Project eligibility - see section above for full details. Including, but not limited to:
 - 4.5.1.2. Ownership type - matches the type mentioned in Project Plan.
 - 4.5.1.3. Project Activity falls within the defined accepted list of activities.
 - 4.5.1.4. Project Area matches land tenure descriptions.
 - 4.5.1.5. Adoption Date falls after the earliest accepted date and evidence is provided to attest to that.
 - 4.5.2. No double issuance - see Avoiding Double Counting section Regen Registry Program Guide V1.0, Para 6.5.3.
 - 4.5.3. Compliance with existing laws and regulations.
 - 4.6. Leakage - verifying estimated leakage by Project Proponent is a reasonable estimate (for example, uses regional default emission factors or is in line with similar projects).

¹⁰ [Program Rules and Requirements - Regen Library](#)

Table 1.0

Verification Type	Applicable Evidence Category
Project Registration	Project ownership and rights
	Compliance
	Monitoring and Co-Benefit data
Credit Issuance	Monitoring and Co-Benefit data
	Compliance
Final Project Verification	Monitoring and Co-benefit data
	Compliance

5. Verification Report

1. Verifiers shall generate a report summarizing their findings, including a verification rating from one of the following options:
 - 1.1. Acceptance - if all the corresponding requirements in the Evidence Gathering section (10.4) have been satisfactorily met.
 - 1.2. Acceptance with Contingencies -
 - 1.2.1. If there were any deviations from the Approved Methodology.
 - 1.2.2. If data provided by the Project Proponent (e.g. in the Project Plan) which is inconsequential to GHG estimation, could not be satisfactorily verified.
 - 1.3. Rejection -
 - 1.3.1. If project ownership could not be satisfactorily verified.
 - 1.3.2. If the Monitor did not follow key Methodology guidelines (excluding minor deviations).
 - 1.3.3. If data provided by the Project Proponent for GHG estimation is suspected to be fraudulent.
 - 1.3.4. Lack of compliance with Project Eligibility, Double Counting requirements, or existing laws/regulations.
2. In terms of data to sample, verifiers shall follow the guidance provided in Table 1.0 per verification type.

6. Verification Acceptance

1. Regen Registry will review each verification report and proceed based on its rating:
 - 1.1. Acceptance - Regen Registry will issue credits (if applicable) to the Project Proponents per the monitoring outcome and Program Guide / Credit Class stipulations.
 - 1.2. Acceptance with Contingencies -
 - 1.2.1. the Project Proponent shall make the necessary corrections and clarifications per the contingencies identified in the report. If needed, the Verifier will resubmit their report after reviewing the information provided by the Project Proponent.

- 1.2.2. Regen Registry will issue credits (if applicable) following the Acceptance procedure above.
- 1.2.3. If the resubmitted verification report still retains the Acceptance with Contingencies, Regen Registry will highlight this in the corresponding MRV section.
- 1.3. Rejection -
 - 1.3.1. The project is put on hold until the issues identified are addressed (see Project on Hold section).
 - 1.3.2. The carbon stock level will revert to the last level that was recorded and verified with the verification report with Acceptance or Acceptance with Contingencies rating. If the project has already been issued credits, then the Buffer Pool will be used to reconcile any gaps (see Buffer Pool section).
- 2. Regen Registry will post all verification reports to Regen Registry.

7. Verification Schedule

- 1. The verification schedule will be optimized to limit the amount of verifications needed and maximize the assurance level in credit issuance:
 - 1.1. Project Registration - to be completed within six months after Project Registration Date.
 - 1.2. Credit Issuance
 - 1.2.1. Threshold verification - any issuance of GHG removal credit representing more than 25K tons of CO₂e/yr shall require a verification report prior to issuance.
 - 1.2.2. Ongoing verification - these are intended to provide assurances over the maximum number of credits issued during the Crediting Term while at the same time limiting the overall audit expenses. To that end, Project Proponents shall select at which issuance event to perform this type of verification such that each one covers at least two monitoring periods. The verification shall be completed within three months of the last monitoring round chosen.
 - 1.3. Crediting Term Buffer Pool Verification – to be completed 10 years after the Project Adoption Date, verifying the Crediting Term Monitoring Report.
 - 1.4. Permanence Reversal Buffer Pool Verification - to be completed 10 years after the end of the Crediting Term, verifying the Permanence Reversal Monitoring Report.

8. Unscheduled Verification

- 1. The following circumstances will warrant a potential additional verification:
 - 1.1. A previous verification report with a Rejection or Acceptance with Contingencies ranking.
 - 1.2. Significant variance (>25%) from benchmark carbon sequestration rates for Project Activity.
 - 1.3. Compliance verifications - when Regen Registry has reasonable grounds to suspect the Project Proponent has contravened, is contravening, or is proposing to contravene with the rules and regulations.

9. Verification Oversight

- 1. Regen Registry reserves the right to conduct oversight activities of verification



performance participating verifiers. Oversight activities are conducted to ensure an adequate level of quality control and are intended to supplement accreditation body oversight and audit processes.

Metadata Breakdown

Project Eligibility

Ecosystem Type: *Croplands, Grasslands, pastureland, shrubland*

NBS: *regenerative annual cropping, managed grazing*

Primary Indicator: *soil organic carbon* ton of CO₂e

Credit Unit: *1 metric ton CO₂e*

Land Ownership Type: *public, private, tribal*

Adoption Date:

Crediting Term:

Project Rules and Regulations:

Approved Methodologies: Methodology for Soil Organic Carbon Estimation in Regenerative Cropping and Managed Grassland Ecosystems

Aggregate Projects: Permitted

Project Plan: Required

GHG Accounting:

Additionality: Accounted for

Leakage: Accounted for

Permanence: Accounted for

Verification

Verification: Required

