GHG Benefits in Managed Crop and Grassland Systems
Credit Class

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Disclaimer

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 gases. 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:

a. VCS (Verra)
a. Gold Standard
b. American Carbon Registry
c. Climate Action Reserve
d. CDM

Acronyms

- GHG - Greenhouse Gases
- 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

1. Introduction

Project Drawdown 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 CO_2 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 gases 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 Guide. Each section below includes specific adaptations for this Credit Class.

2. Credit Class Overview

This credit class focuses on soil carbon sequestration 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.

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. 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 tons of CO_2e 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. Emissions sources attributable to the *project activity* might include emissions from livestock or increased fertilizer use as defined by the methodology.

2. Ecosystem Service Classification

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

3. Project Eligibility

1. Ecosystem Type Classification

This Credit Class applies to croplands, grasslands, pastureland, and shrubland as defined in the RND Taxonomy[7].

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 under the following ownership types: public, private, tribal.

5. Adoption Date

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.

6. Crediting Term

The crediting term 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.

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 Ecosystems.

7. Aggregate Projects

Aggregate Projects are permitted in this credit class. Rules and regulations outlining the approach to approve aggregate projects should be defined in the approved methodology.

8. Project Plan

Any project run using this Credit Class must have an aligned project plan.

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:

a. Legally required practices are not accepted.
b. MRV demonstrates carbon storage above business as usual.
c. There is a reasonable expectation for carbon dioxide drawdown from project activity.
d. Credits are only issued for carbon stored 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.

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

9. Permanence Period

This credit class requires a 10-year permanence period.

10. Buffer Pool

A buffer pool contribution of 20% of each credit issuance (as quantified by the latest monitoring report) is required for this credit class.

11. Verification

Verification is required for this credit class. Verification data to be made available to verifiers for the independent measurement of the primary indicators is outlined in the approved methodology.

Metadata Breakdown

Project Eligibility

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

NBS: *regenerative annual cropping*, *managed grazing*

Primary Indicator: *soil organic carbon* ton of Co2

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


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