Australian Government
Clean Energy Regulator

EMISSIONS REDUCTION FUND

# Participating in the Emissions Reduction Fund

## A guide to the sequestering carbon in soils in grazing systems method

# IMPORTANT INFORMATION ABOUT THIS GUIDE

The Clean Energy Regulator is updating the information in this guide to align it with the Emissions Reduction Fund.

While the information in this guide about the soil carbon in grazing systems method is current, and may be used to help you read and understand the method and its explanatory statement, general information about how to participate in the Emissions Reduction Fund requires updating.

# The Emissions Reduction Fund

The Emissions Reduction Fund is a voluntary scheme that aims to reduce Australia's greenhouse gas emissions by providing incentives for a range of organisations and individuals to adopt new practices and technologies to reduce their emissions.

Emissions Reduction Fund projects must be conducted according to an approved method. A number of activities are eligible under the scheme and individuals and organisations taking part may be able to earn Australian carbon credit units (ACCUs). One ACCU is earned for each tonne of carbon dioxide equivalent ($tCO_2$-e) stored or avoided by a project. ACCUs may be sold to generate additional income, either to the Government through a Carbon Abatement Contract or on the secondary market.

## Why participate?

As well as contributing to Australia's efforts to reduce the amount of greenhouse gas entering the atmosphere and the opportunity to earn ACCUs, running an Emissions Reduction Fund project may offer a range of other benefits for scheme participants. Examples include increases in biodiversity, better air quality, reduced energy consumption or income from electricity generation exported into the grid.

## Using this guide

This guide provides an introduction to using the Carbon Credits (Carbon Farming Initiative—Sequestering Carbon in Soils in Grazing Systems) Methodology Determination 2015 (the method), which you can access through the Clean Energy Regulator website. Methods set out the rules for conducting activities under the Emissions Reduction Fund to earn ACCUs.

The guide is complementary to the *Carbon Credits (Carbon Farming Initiative) Act 2011*[1] (the Act), the associated legislative rules, approved method and explanatory statement, but does not replace them. It has been prepared by the Clean Energy Regulator, an independent Australian statutory authority responsible for administering legislation to reduce carbon emissions and increase the use of clean energy.

[1] https://www.comlaw.gov.au/Series/C2011A00101

# Overview of a Sequestering Carbon in Soils in Grazing Systems project

A Soil Carbon in Grazing Systems project involves storing carbon on grazing land by introducing activities that either increase inputs of carbon to the soil, reduce losses of carbon from the soil or both.

The carbon stored by the project is called carbon stock, while the term 'abatement' refers to the overall reduction in greenhouse gases as a result of a project. Soil Carbon in Grazing Systems projects can use a range of actions to build soil carbon, as long as one of the actions is new. A series of measurements is used to estimate changes in soil carbon stocks over time. A soil sampling plan must be prepared and regular rounds of soil sampling and analysis need to be conducted. Collection of the samples must be done by a qualified technician and analysis must be completed in accredited laboratories. It is recommended the cost of collecting and analysing samples is considered when working out the feasibility of conducting your project.

A Sequestering Carbon in Soils in Grazing Systems project is referred to as a 'Soil Carbon in Grazing Systems project' for short.

As a sequestration activity, that is, an activity that stores carbon in vegetation or soil, a Soil Carbon in Grazing Systems project is subject to a permanence obligation. This means the project must be maintained 'permanently'. A permanence obligation maintains carbon stores for which Australian carbon credit units have been issued. The Emissions Reduction Fund will allow sequestration projects to choose a permanence period of 25 or 100 years. If a fire or other disturbance occurs in the area during the project, causing a decline in the amount of carbon stock, regrowth must be managed to allow the carbon stock to return to previously reported values. Alternatively, ACCUs equivalent to the loss of carbon caused by the disturbance can be relinquished. More information is available on the Clean Energy Regulator website[2].

To conduct a Soil Carbon in Grazing Systems project and earn ACCUs make sure you read and understand the method and other legislative requirements. To do this you will need to:

- Download the Carbon Credits (Carbon Farming Initiative) (Sequestering Carbon in Soils in Grazing Systems) Methodology Determination 2014[3] and Explanatory Statement[4].

[2] http://www.cleanenergyregulator.gov.au/Pages/default.aspx
[3] https://www.comlaw.gov.au/Details/F2014L00987
[4] https://www.comlaw.gov.au/Details/F2014L00987/Explanatory%20Statement/Text

- Download and understand how the *Carbon Credits (Carbon Farming Initiative) Act 2011* (the CFI Act)[5], the Carbon credits (Carbon Farming Initiative) Regulations 2011[6] and the Carbon Credits (Carbon Farming Initiative) Rule 2015[7] apply to a project.
- Download the Carbon Farming Initiative Soil Sampling Design Method and Guidelines[8].
- Download the Carbon Farming Initiative Soil Sampling and Analysis Method and Guidelines[9].
- Download the Carbon Farming Initiative Mapping Guidelines[10].
- Download the Carbon Farming Initiative Soil Carbon in Grazing Systems Calculator (the Calculator - optional).
- Assess the feasibility of your project including the cost of running it and the potential return it may generate. This includes considering likely rates of soil carbon change, costs to implement, sample and audit the project and any risks.
- Ensure you have the legal right and carbon sequestration right to conduct your project as well as the as well as the consent of anyone with a legal interest in the land (eligible interest holders).
- Apply to register as a scheme participant, to open an account in the Australian National Registry of Emissions Units (ANREU) and to conduct a Soil Carbon in Grazing Systems project.
- Set up your project according to the instructions in Parts 2 and 3 of the method. Set up record keeping and monitoring systems for your project as required by Part 7 of the method.
- Estimate the average annual abatement of your project, obtain an audit schedule for your project from the Clean Energy Regulator and engage a Category 2 Greenhouse and Energy Auditor early on in your project. Submit audits of your project according to your audit schedule.
- Determine the amount of carbon your project stores using the calculations in Parts 5 and 6 of the method. Convert the amount of carbon captured into carbon dioxide equivalents ($CO_2$-e).
- Submit your project report and application for ACCUs to the Clean Energy Regulator for assessment.

[5] https://www.comlaw.gov.au/Series/C2011A00101
[6] https://www.comlaw.gov.au/Series/F2011L02583
[7] https://www.comlaw.gov.au/Details/F2015L00156
[8] http://www.environment.gov.au/climate-change/emissions-reduction-fund/methods/sequestering-carbon-in-soils
[9] http://www.environment.gov.au/climate-change/emissions-reduction-fund/methods/sequestering-carbon-in-soils
[10] http://www.environment.gov.au/climate-change/emissions-reduction-fund/cfi/publications/cfi-mapping-guidelines-2015

# What does a Soil Carbon in Grazing Systems project look like?

A Soil Carbon in Grazing Systems project must meet specific requirements to be eligible. It must be located in Australia, excluding Australia's external territories. The land on which a project occurs must have been under permanent pasture or continuously cropped (land that has had no pasture rotations) for at least five years before applying to conduct the project or before conducting a baseline sampling round, whichever occurs first (see Division 2.4 of the method). The five year period helps to ensure that soil carbon stocks are not fluctuating because of recent changes in land use. Land that has been continuously cropped must convert to permanent pasture as part of the project, and project areas must remain as permanent pasture until the end of the final crediting period (see Subdivision 3.1.3 of the method). A Soil Carbon in Grazing Systems project has a crediting period of 25 years.

The land can be managed using a range of activities to build soil carbon including, but not limited to, converting cropland to permanent pasture, rejuvenating pastures, or changing grazing patterns. Activities implemented as part of the project must include at least one new management activity and some activities, such as permanent de-stocking, are not eligible (see Division 3.2 of the method). Within these parameters, the activities selected for a project are chosen by the person responsible for the project.

Changes in emissions from other sources resulting from the project, namely emissions from livestock, tillage, synthetic fertiliser and lime application, must be included in calculations to determine net abatement, which determines the number of ACCUs that may be issued for the project.

As a sequestration activity, that is, an activity that stores carbon on the land, a Soil Carbon in Grazing Systems project is subject to permanence requirements. This means the soil carbon stored must be maintained until the end of the permanence period, which is 100 years for Carbon Farming Initiative projects and 25 or 100 years for Emissions Reduction Fund projects on commencement of the Fund. This ensures that any emissions reduction benefit is not reversed.

Details of what is required for a Soil Carbon in Grazing Systems project to be considered eligible, including the type of evidence that may be used to show the Clean Energy Regulator that a project area meets these requirements, are set out in Part 2 of the method.

## New management actions

Soil Carbon in Grazing Systems projects can use a range of actions to build soil carbon, as long as at least one of the project management actions is new (see Division 3.2 of the method). New management actions are those that are different to the way an area has been managed previously (historic management actions) and may include, but are not limited to:

- converting from continuous cropping to pasture

- undertaking pasture cropping
- managing pasture by implementing or changing pasture irrigation, applying organic or synthetic fertiliser to pastures, or rejuvenating pastures, including by seeding
- managing grazing by changing stocking rates or altering the timing, duration, and intensity of grazing.

Choosing a suitable management action or actions to build soil carbon is a decision the person responsible for running a project must make. There is no guarantee that any one of the management actions listed here will build soil carbon on any particular property and it is recommended proposed project management actions are researched and expert advice sought on what will best suit a particular project area.

The Clean Energy Regulator will need evidence showing that at least one of the project management actions is new and that the project management actions as a whole will have a reasonable chance of increasing carbon inputs into the soil, reducing soil carbon losses, or both (see Part 2 of the method and explanatory statement).

Some management actions are not eligible. These are:

- permanent de-stocking
- applying biochar or amendments containing coal to the soil
- bare fallow
- applying organic fertiliser that contains crop residue, hay or straw unless they were part of a waste-stream from intensive animal production, food processing or manufacturing processes
- clearing woody vegetation unless done to manage re-growth of invasive woody weeds.

Permanent de-stocking of grazing systems is not eligible as it is not a form of grazing. Applying biochar or amendments containing coal to the soil is not provided for in the method because these substances could potentially have negative consequences such as soil toxicity. As knowledge improves, and where risks can be managed, some of these amendments may become eligible actions in the future.

**Soil carbon in grazing systems:**

Soil carbon stocks are generally either stable or declining across Australia's agricultural lands, including grazing lands. Research suggests that it is possible to build soil carbon by managing grazing systems more effectively. A review of soil carbon sequestration potential (Sanderman et al. (2010) *Soil Carbon Sequestration Potential: A review for Australian agriculture,* CSIRO) concluded that there is potential to build soil carbon in grazing systems by improving pasture production and managing grazing pressure to increase inputs of plant biomass into the soil.

Identifying management activities that build soil carbon reliably across a range of environments is challenging. The potential to build soil carbon will depend on factors such as soil type, climate and management history. All these factors will vary greatly from property to property, and a management activity that builds soil carbon on one property will not necessarily build soil carbon on another. To address this challenge, persons responsible for soil carbon projects on grazing lands need to choose management activities that are right for their property and should seek expert advice where possible. The impact of these activities on soil carbon stocks is determined by direct measurement.

The other management actions listed above are not eligible because they could potentially lead to an increase in emissions elsewhere or an increase in emissions that cannot be quantified. For example, if you are using organic fertiliser that contains crop residue, hay or straw, you may need to provide evidence that these materials came from an eligible waste-stream. This requirement is to reduce the risk that Soil Carbon in Grazing Systems projects will result in materials such as crop stubble or straw being removed from the field where they would otherwise have been incorporated into soil carbon stocks. See Division 3.2 of the method for more information on restricted activities.

**Building soil carbon in grazing systems: What does the science say?**

Soil carbon, or soil organic carbon, is carbon stored within soil organic matter, which is made up of plant and animal materials in various stages of decay. Carbon stored in a given area is called carbon stock. Soil carbon stocks are a function of the balance between carbon inputs and losses. Inputs are affected by factors that control plant growth and the deposition and conversion of plant biomass into soil organic matter. Losses are affected by factors that control the rate of soil organic matter decomposition.

## Setting up and running a Soil Carbon in Grazing Systems project

How a Soil Carbon in Grazing Systems project is set up and run is critical for calculating how much carbon is stored as a result of a project, which in turn determines the amount of abatement that has occurred and how many ACCUs may be issued for a project. Parts 3 and 4 of the method and explanatory statement describe in detail how to set up a project, and Parts 5 and 6 describe how to calculate the amount of carbon it has stored.

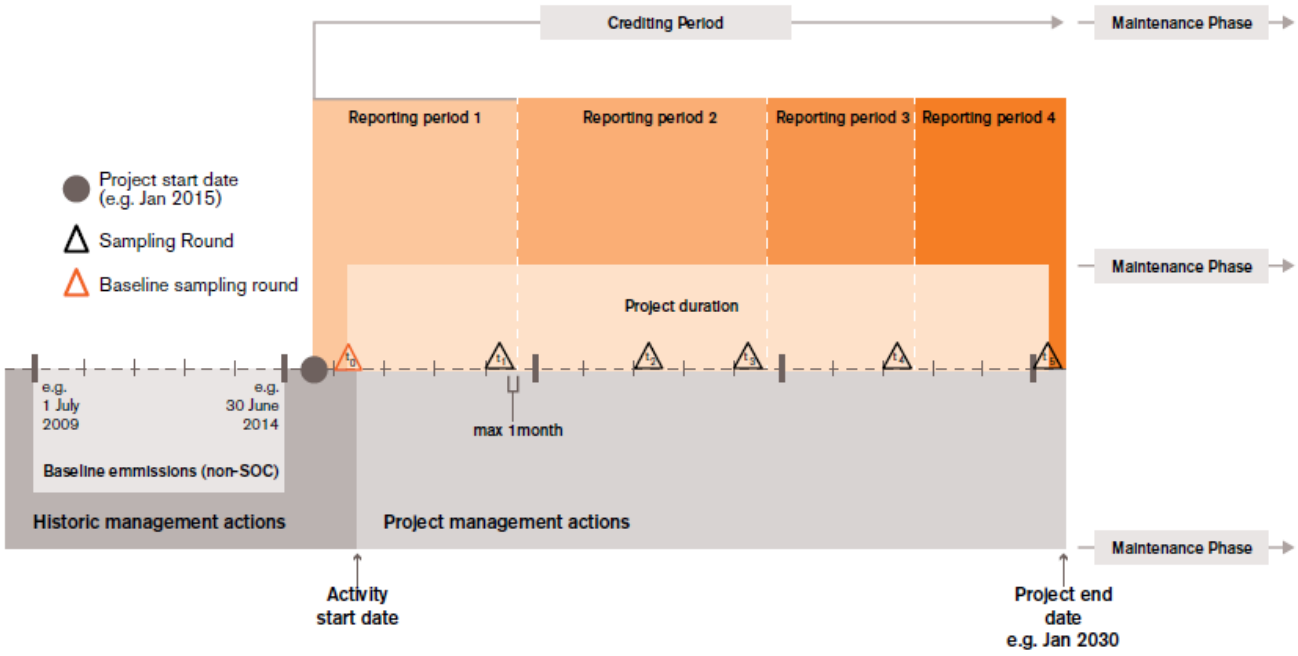


**Figure 1: An overview of key dates and time periods for a Sequestering Carbon in Soils in Grazing Systems project.** *The number of sampling rounds and reporting periods are indicative, and may vary from project to project subject to the requirements of Division 4.2 of the method. Please note, SOC means soil organic carbon.*

Remember to download a copy of the explanatory statement[11] to read along with the Soil Carbon in Grazing Systems method. Explanatory statements provide further detail about each part of the method and are important documents for interpreting and understanding a method.

## Establish the project area

Identify the area in which your project will occur using the CFI Mapping Guidelines and divide it into one or more carbon estimation areas (CEAs), and if applicable, exclusion areas (see Subdivision 3.1.2 in the method). CEAs are the areas of your project where changes in soil carbon stock will be measured. Exclusion areas are those parts of your project area where you will not take actions to build soil carbon and may include a road, a building or another area not used for primary production.

Your project can include one CEA or you can divide your project area into multiple CEAs. If one part of the project area is very different to another, it may be better to establish more than one CEA because it is easier to detect changes in soil carbon stock over time in more homogeneous CEAs. The boundaries of a CEA must be defined in accordance with the CFI Mapping Guidelines and the CFI soil sampling design method (which is included in the CFI Soil Sampling Design Method and Guidelines). Once the boundaries of a CEA have been established they cannot change. Further explanation on the role of CEAs and guidance to help you decide on the right number of CEAs for your project can be found in the CFI Soil Sampling Design Method and Guidelines.

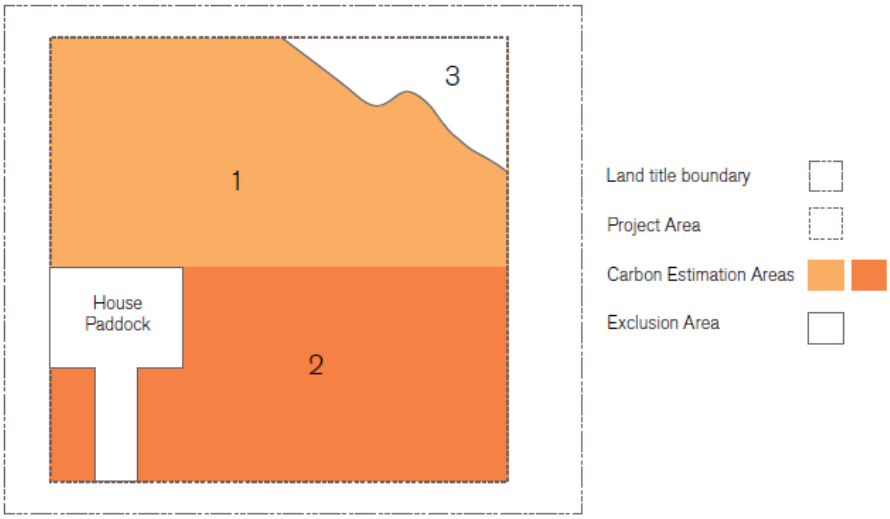


**Figure 2: Example of a project area, carbon estimation areas (1 and 2) and exclusion areas (3 and 'house paddock') for a Soil Carbon in Grazing Systems project.**

[11] https://www.comlaw.gov.au/Details/F2014L00987/Explanatory%20Statement/Text

## Prepare a sampling plan

Prepare a sampling plan in accordance with the instructions in the CFI soil sampling design method. The sampling design method can be implemented on all eligible project areas, and knowledge of the spatial variability of soil carbon on a property is not needed to use this method.

The soil sampling design requires CEAs be divided into equal area strata with randomly allocated sampling locations in each. For example, a square CEA may be divided up into nine square strata using a 3 X 3 regular grid, with four sampling locations randomly allocated in each stratum. Not all project areas will have evenly shaped CEAs and the CFI Soil Sampling Design Method and Guidelines set out further information on how to divide up CEAs into strata. A soil sample from one sampling location in each stratum in the CEA is combined to form a composite (see Conduct baseline soil sampling). A minimum of three strata and three composites (three sampling locations in each stratum) must be included in each CEA (see Division 4.2 of the method), however taking more samples, particularly by increasing the number of strata, will greatly improve the ability to detect changes in soil carbon stock over time.

Take care when preparing a sampling plan to ensure it is optimal for detecting changes in soil carbon stock over time while considering the financial resources available for soil sampling. The CFI Soil Sampling Design Method and Guidelines set out some of the key factors that should be considered when developing a sampling plan. They also step through the principles that will help you decide how intensively to sample. It is recommended that you read the guidelines carefully and seek independent advice when preparing a sampling plan.

**Can I undertake a soil carbon project anywhere in Australia?**

The CFI soil sampling design method can be implemented on all eligible project areas within Australia however, it is not likely to be cost effective to adequately sample very large properties in low rainfall areas where rates of soil carbon sequestration are likely to be low. For these reasons, soil carbon projects are not likely to be viable in areas of the Australian rangelands.

## Conduct baseline soil sampling

The project baseline represents what would be assumed to happen if your project did not occur. For a Soil Carbon in Grazing Systems project, a baseline sampling round provides an initial estimate of the soil carbon stock in each CEA. A baseline sampling round must be done after the project start date and before project management actions start on a CEA. It is recommended that the time between the project start date and the baseline sampling round is minimised to allow plenty of time for follow-up sampling rounds in the first reporting period. A baseline sampling round may be

conducted before submitting a project application to assist with assessing a project's feasibility. In these circumstances, the project start date can be back- dated to a date after the method was made.

A baseline sampling round must be conducted at an appropriate time of year, which is generally when soil moisture conditions are right for collecting soil samples (see Division 4.2 of the method and explanatory statement). Choosing the time of year is important and must be done carefully because subsequent sampling rounds must be conducted at approximately the same time of year. There is a 60-day window to conduct each CEA baseline sampling round, and a six-month window to conduct all CEA baseline sampling rounds in a project area.

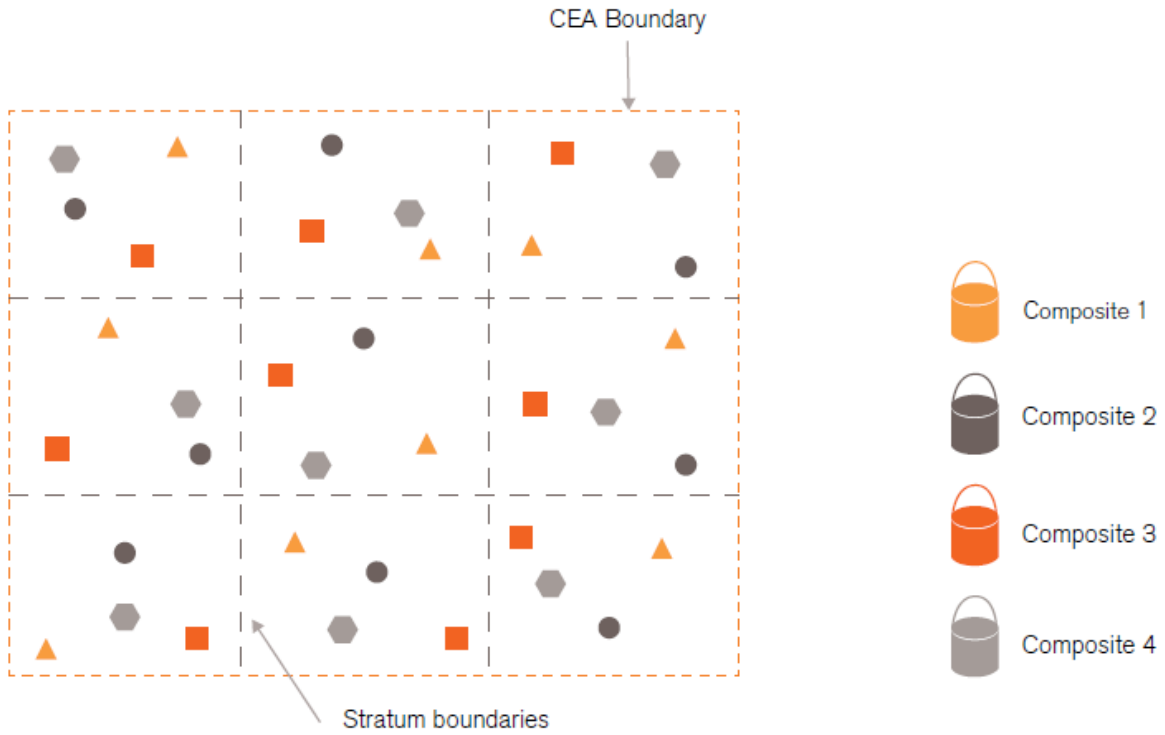


**Figure 3: A grid-based CEA with nine strata and sampling locations for four composites (represented by light orange triangles, dark grey circles, dark orange squares and grey hexagons).**

*Samples from the locations marked with a triangle are combined to form one composite (light orange bucket), samples from the locations marked with a circle are combined to form another composite (dark grey bucket) samples from the locations marked with a square are combined to form the third composite (dark orange bucket) and samples from the locations marked with a hexagon are combined to form a fourth composite (grey bucket).*

Soil samples must be collected to a minimum depth of 30cm, but may be collected deeper. All reasonable efforts must be made to sample to the same nominated sampling depth at all sampling locations in the CEA. If the nominated sampling depth is greater than 30cm, the upper layer (0-30cm) and deeper layer (30+cm) must be prepared and analysed separately (see Division 4.2 of the method and explanatory statement).

Collecting and preparing samples in the field must be conducted by a qualified technician (see Division 4.2 of the method). The technician needs to locate the sampling locations identified in a sampling plan in accordance with the CFI soil sampling design method. The technician must also conduct sample collection and preparation in accordance with the CFI soil sampling and analysis method, which is included in the CFI Soil Sampling and Analysis Method and Guidelines. A soil sample from one sampling location in each stratum of a CEA must be combined to form a composite. A sub- sample is taken from each composite and sent to an accredited laboratory for organic carbon and water content analysis in accordance with the CFI soil sampling and analysis method.

Additional guidance on how to conduct sample collection, preparation and analysis, and more information on the skills and qualifications required by technicians, is available in the CFI Soil Sampling and Analysis Method and Guidelines.

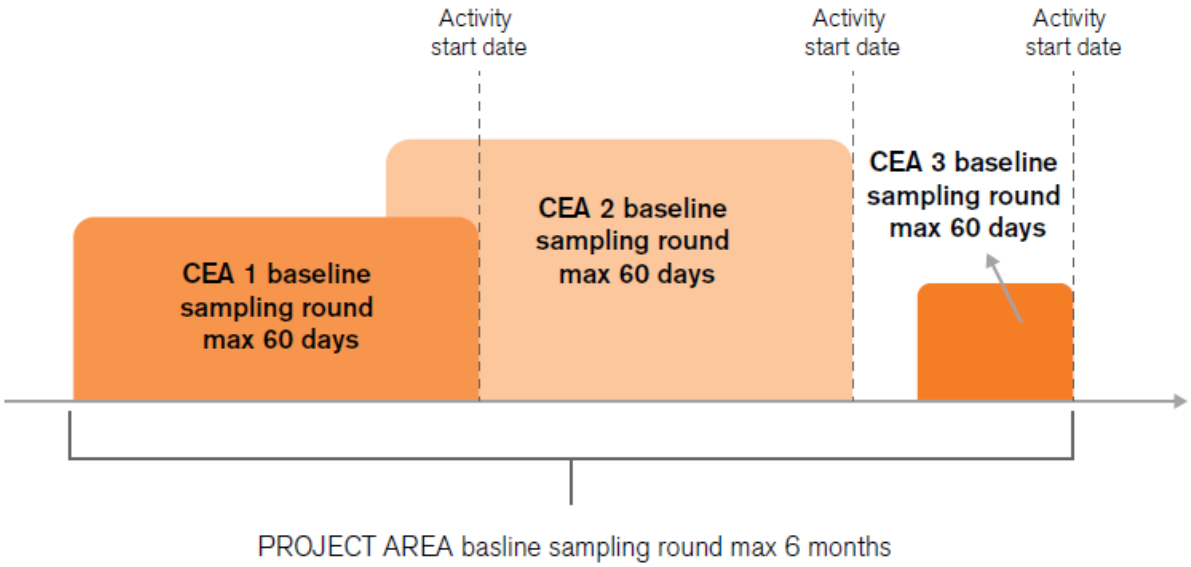


**Figure 4: Maximum time allowed for CEA baseline sampling rounds and the project area baseline sampling round for a project with three CEAs.**

*Project management actions cannot start on a CEA until the day after the last day of the baseline sampling round (the activity start date).*

## Start project management actions

Project management actions are all the actions conducted on a CEA after the 'activity start date' for that CEA and before the end of the final crediting period (see Figure 1 and Division 3.2 of the method). The activity start date is the day after the last day of the baseline sampling round, or the day after the Clean Energy Regulator declares the project to be eligible, whichever is later. The project management actions must include one or more new management actions that are implemented on a CEA within two years of the baseline sampling round and before the next sampling round.

From the activity start date until the end of the final crediting period, the only actions that may be conducted on the project area are those identified as project management actions. The Clean Energy Regulator must be notified of any changes to the project management actions before the end of the final crediting period. Project management actions can be described broadly to avoid needing to update the Clean Energy Regulator of minor changes, and should include all management actions likely to be conducted between the activity start date and the end of the final crediting period. For example, a project management action may be described as high intensity, short-rotation grazing without specifying the precise stocking density and duration of rotations.

**What about losses of soil carbon?**

When assessing project feasibility, you should be aware of, and account for, potential soil carbon loss from the project area when natural disturbances occur (for example erosion events) or when unanticipated actions are required (for example weed tillage events). Make sure you understand the need to maintain soil carbon stocks over the permanence period, with attendant financial and management consequences. It is recommended that you implement erosion protection measures to reduce the risk of soil carbon loss. Different measures will be appropriate for different properties. Contact your local land management authority for advice on assessing erosion risk, and identifying the right risk management strategies, for your property.

## Conduct follow-up soil sampling rounds

Once project management actions have started, conduct follow-up soil sampling rounds to estimate changes in soil carbon stocks over time. For these follow-up sampling rounds, the same CEAs and strata must be sampled and the CEA and strata boundaries must not change. New sampling locations can be randomly allocated within each strata, or offset by a small distance from the original sampling locations, in accordance with the CFI soil sampling design method.

Follow-up sampling rounds must be conducted at the same time of year (plus or minus 30 days) as the baseline sampling round for each CEA. This reduces the influence of seasonal variability in soil carbon stocks on measured soil carbon change over time. Where circumstances make it difficult to sample within this window, you may seek the Clean Energy Regulator's agreement to vary the sampling time (see Division 4.2 of the method). For example, if weather prohibits access to the site or there is insufficient soil moisture to enable sampling to be carried out effectively.

The time between consecutive sampling rounds (sampling interval) must be no less than one year and no more than five years. A fixed sampling interval is not prescribed, but the sampling interval must not vary by more than two years for the project duration. This ensures that sampling rounds are relatively evenly spaced over the crediting period, while providing flexibility to change the frequency of sampling rounds according to the circumstances of your project. It is recommended

that you conduct at least five sampling rounds over a 25-year crediting period. More advice on the frequency of sampling rounds is provided in the CFI Soil Sampling Design Method and Guidelines.

## Calculate soil carbon stock exchange

After two sampling rounds, soil carbon stock change is calculated as the difference between the mean soil carbon stocks from the baseline sampling round to the first project sampling round in each CEA. A temporary 50 per cent discount is applied to the total change in soil carbon in the project area (the sum of the soil carbon change in all CEAs) (see Subdivision 6.1.3 of the method and explanatory statement). This reduces the risk of over-crediting early in the project, by limiting the chance that ACCUs are issued for change that is mostly related to seasonal conditions rather than management. It also reduces the risk that projects have to maintain unrealistically high soil carbon stocks. The 50 per cent discount is only temporary; after three or more sampling rounds there is no discount applied and the discounted soil carbon change can be regained if soil carbon stock has been maintained.

After three or more sampling rounds, changes in soil carbon stock are calculated based on fitting a trend line (the slope of a linear regression) through the measured soil carbon stock at each sampling round (see Subdivision 6.1.5 of the method and explanatory statement). A trend line more accurately estimates the average change in soil carbon over time due to the project management actions, as it smoothes the fluctuations in soil carbon stocks that can occur because of natural variation such as wet and dry periods.

The change in soil carbon in a reporting period is determined by calculating the change in soil carbon between the baseline sampling round and the most recent sampling round, and subtracting any soil carbon increase already reported (See Subdivision 6.1.6 of the method). This is to ensure ACCUs are issued for individual reporting periods only and not cumulatively.

The Calculator can help calculate soil carbon stock change in accordance with the requirements of the method. It includes a simple data entry interface for you to enter the results of your soil sampling and analysis, and calculates the values for soil carbon stock change needed for your offsets report.

## Calculate emissions from the project

Every project needs to take into account emissions that arise from running it (see Division 6 in the method). This is to ensure these emissions are included in calculations that determine [*if relevant: changes in carbon stock and]* net $CO_2$-e abatement for a reporting period and crediting period.

**What's $tCO_2$-e?**

$CO_2$-e is a measure of the warming effect of different greenhouse gases that allows them to be compared to the equivalent amount of carbon dioxide. It refers to the amount of carbon dioxide that would give the same warming effect as each greenhouse gas that is emitted or stored by an activity.

Project management actions to build soil carbon on grazing land could affect emissions from sources including livestock, tillage, synthetic fertiliser and lime application. The method provides some allowance for emissions to increase or decrease before they must be accounted for. Only material changes, which are changes of a certain magnitude relative to the baseline, must be included in the net abatement calculation. You must determine whether there has been a material change in emissions from any of these sources between the baseline emissions period and the reporting period (see Division 6.2 of the method and explanatory statement). The baseline emissions period is the five financial years preceding the financial year of the project start date.

The method establishes a series of standardised approaches to estimating baseline emissions. This provides the flexibility for many different types of projects to participate, including projects with limited historical data. However, these approaches only estimate baseline emissions and may not precisely reflect the situation for each specific project.

You will need to calculate baseline emissions from each source according to the appropriate method set out in the method. In some cases this will involve using historic data, but if this data is unavailable, baseline emissions can be calculated using one of the alternative approaches. For example, as a default, baseline emissions from livestock must be calculated using historic property livestock numbers. However, if you have recently acquired the property and can demonstrate that this information is not available, you may be able to calculate baseline emissions from livestock based on an assessment of the property's long-term carrying capacity carried out by the relevant state or territory government agency.

Emissions from an individual source may increase or decrease as a result of a project. For example, an increase in stocking rates during the project will increase emissions from livestock. You must calculate the total change in emissions from all sources (see Subdivision 6.2.6 of the method which means that a decrease in emissions from one source (for example, synthetic fertiliser) could offset an increase in emissions from another source (for example, livestock).

If the total emissions from all sources increase between the baseline emissions period and the reporting period, the increase is deducted from the change in soil carbon stock to calculate net abatement for the reporting period. If total emissions decrease, this is not recognised in the calculation of net abatement because ACCUs are not issued for abatement other than change in soil carbon stock. However, a decrease can be carried into the calculation of net abatement in the next reporting period to offset potential future emissions increases.

The Calculator can help you calculate emissions from livestock, tillage, synthetic fertiliser and lime application in accordance with the requirements of the method.

**How could emissions from other sources affect net abatement?**

Consider the impact of proposed project management actions on emissions from livestock, tillage, synthetic fertiliser and lime application before submitting a project application. An increase in emissions from these sources could have a large impact on net abatement and the number of ACCUs that may be issued. For example, new management actions to build soil carbon, such as increasing nutrients and establishing a new pasture, may significantly increase the property's carrying capacity. If the project proponent chose to increase livestock numbers, the increase in methane emissions from livestock could offset soil carbon gains.

## Calculating the net amount of abatement and number of ACCUs

This is the final step in the calculations is to estimate net greenhouse gas abatement (carbon stored minus emissions) from your project during the reporting period and provide a figure for the number of ACCUs you may be eligible to receive. The final calculations provide the net abatement number (see Division 6.3 in the methodology determination) with one ACCU earned for each tonne of $CO_2$-e.

The net abatement number for each reporting period is the change in soil carbon stocks for the reporting period less any increase in emissions from all sources (livestock, synthetic fertiliser, lime and tillage). If the net abatement number is positive, you may be eligible to receive ACCUs. If the net abatement number is negative, for example because there was a small increase in soil carbon stocks and a large increase in other emissions, you would not be eligible to receive ACCUs. This negative net abatement number would be carried over into later reporting periods to ensure that all increases in emissions are accounted for over the crediting period.

## Monitoring and record keeping

The Clean Energy Regulator recommends you draw up a plan for the monitoring, data collecting and record keeping required for a project report as specified in Part 4 and 7 of the method. The means of collecting and recording data will need to be in place from the start of the project. Should a project report and associated audit show that data collecting and record keeping has not been in place for the entire reporting period, ACCUs may not be issued for some or all of that reporting period.

When developing your plan, make sure you have the right controls and processes around your data. Are you collecting your data efficiently? Will you be able to maintain your data in the event of an emergency such as a fire?

## Project and audit reports

You need to report on your project to the Clean Energy Regulator and may report as frequently as every six months where allowed for in the legislative rules made under the *Carbon Farming Initiative Act (2011).* Audits are required where indicated in your project's audit schedule, which the Clean Energy provides following registration of a project.

For sequestration projects, the first report must be made between six months to five years from the date the project was registered and then up to every five years thereafter.

Division 7.4 of the method lists the information that must be included in your project reports. Applications for ACCUs can be made at the same time as you submit your project and audit reports using the Certificate of entitlement including offsets report form. Full reporting, record keeping and monitoring requirements are set out in regulations and rules made under the Act. You should familiarise yourself with these requirements.

The Clean Energy Regulator will not issue Australian carbon credit units automatically on receipt of a project report.

Emissions Reduction Fund projects are able to generate credits throughout their crediting period. Crediting periods for each type of project are set out in Part 5 of the *CFI Act*. The crediting period for a Soil Carbon in Grazing Systems project is 25 years.

## The role of audit

Audits assess whether a project complies with the project registration, the relevant method and legislative requirements. Audit reports must be prepared by a registered Category 2 Greenhouse and Energy Auditor; a list of auditors is available on the Clean Energy Regulator website under National Greenhouse and Energy Reporting[12].

The Clean Energy Regulator recommends you engage your auditor early when developing your project to ensure the project is auditable and to assist the auditor to plan activities throughout the reporting and post-reporting periods. The costs of any audit are your responsibility or the responsibility of your organisation. You must make available to the auditor all necessary documents and information, including data records, receipts and other supporting documentation, and calculation spread sheets.

## Making changes to a project

You must notify the Clean Energy Regulator of any changes to your or your project's circumstances or operations that may affect project ownership, the project's eligibility or the amount of abatement reported and the number of ACCUs claimed. You must also notify the Clean Energy Regulator of any changes to project management actions before the end of the final crediting period. After the end of the final crediting period you are no longer required to implement project

[12] http://www.cleanenergyregulator.gov.au/NGER/For-auditors/Register-of-auditors

management actions, but you are required to notify the Clean Energy Regulator if an erosion event or risk of reversal event, such as converting from permanent pasture to cropping, occurs on your project area (see Division 7.2 of the method). While you are no longer required to implement project management actions, you are required to maintain soil carbon stocks until the end of the permanence period. This means that you should continue to implement management actions that will maintain soil carbon stocks until your permanence obligations are met.

# Resources

- For more information on participating in the ERF - www.cleanenergyregulator.gov.au
- For more information regarding method development – www.environment.gov.au
- www.comlaw.gov.au is the site where you can find all legislative instruments including the:
  - *Carbon credits (Carbon Farming Initiative) Act 2011* (current version)[13]
  - Carbon credits (Carbon Farming Initiative) Regulations 2011[14]
  - Carbon Credits (Carbon Farming Initiative) Rule 2015[15]
  - Carbon Credits (Carbon Farming Initiative— Sequestering Carbon in Soils in Grazing Systems) Methodology Determination 2015[16]
  - Explanatory statement[17]
- Enquiries on participating in the ERF - 1300 553 542; enquiries@cleanenergyregulator.gov.au

**IMPORTANT INFORMATION ABOUT THIS GUIDE**

The Clean Energy Regulator is updating the information in this guide to align it with the Emissions Reduction Fund.

While the information in this guide about the Soil carbon in grazing systems method is current, and may be used to help you read and understand the method and its explanatory statement, general information about how to participate requires updating.

[13] https://www.comlaw.gov.au/Series/C2011A00101
[14] https://www.comlaw.gov.au/Series/F2011L02583
[15] https://www.comlaw.gov.au/Details/F2015L00156
[16] https://www.comlaw.gov.au/Details/F2014L00987
[17] https://www.comlaw.gov.au/Details/F2014L00987/Explanatory%20Statement/Text