



Australian Government
Clean Energy Regulator

EMISSIONS
REDUCTION
FUND

Participating in the Emissions Reduction Fund

A guide to the Estimating Sequestration of Carbon
in Soil Using Default Values method

Version 1, November 2015



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 (t CO₂-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. A Carbon Credits (Carbon Farming Initiative—Estimating Sequestration of Carbon in Soil Using Default Values) Methodology Determination 2015 project (called a 'soil carbon project' in this guide) may help reduce emissions by sequestering carbon in agricultural soils. This is achieved by increasing soil nutrients, balancing soil acidity and installing irrigation, all of which also improve pasture quality and productivity.

Using this guide

This guide provides an introduction to using the (Carbon Farming Initiative—Estimating Sequestration of Carbon in Soil Using Default Values) Methodology Determination 2015 (the method). 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* (the Act), the associated legislative rules, approved methods and their explanatory statements, 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.

Overview of a soil carbon project

A soil carbon project involves removing carbon from the atmosphere and storing it in soil primarily by increasing the amount of decomposing plant material and microbes in the soil. This is done by setting up specific project management activities and management actions that change agricultural soil conditions to improve crop and pasture growth.

The project helps to reduce the amount of greenhouse gas entering the atmosphere because carbon is stored (or sequestered) in the soil following the breakdown of root, stem and leaf material of pasture grasses and crops. The stored carbon is called 'carbon stock'. Some project activities add extra carbon to the soil through increased growth, and therefore a greater volume of pasture and other plant-based matter, called 'biomass', in paddocks. Other activities reduce the rate at which carbon is removed from an area, and therefore the rate at which soil carbon is decreased—for example, projects that retain stubble. The resulting net reduction in greenhouse gas emissions is termed the 'net abatement'.

The carbon stored by the project is modelled directly from the amount of greenhouse gases calculated as tonnes of carbon dioxide equivalent (t CO₂-e). The main steps are summarised below.

First, the amount of carbon stored in the project area from each project management activity over the project reporting period is modelled using the CFI Mapping Tool, as detailed in the method.

Second, net emissions are determined as follows.

- Calculate the baseline emissions, or average yearly emissions that occurred over five years in the project area before the project started, from the following sources:
 - » livestock metabolism
 - » lime and synthetic fertilisers added to soil
 - » crop residues and operations to till crop residues into soil
 - » energy (fuel and electricity) used to operate irrigation.
- Calculate the project emissions released from these sources during the project.
- Subtract the baseline emissions from the project emissions to calculate net emissions for each source.
- Add up the total net emissions from all sources over the project reporting period.

Finally, for the first reporting period, net carbon abatement is calculated by subtracting the total change in emissions from all sources over the project reporting period from the amount of sequestered carbon. For subsequent reporting periods, the net abatement from the previous reporting period also needs to be considered in the calculation of net abatement for the current reporting period.

As a sequestration activity, that is, an activity that stores carbon in vegetation or soil, a soil carbon project is subject to a 'permanence obligation'. This means the modelled soil carbon must be maintained 'permanently' (currently either 25 or 100 years). If a fire or other disturbance occurs in the area during the project, or project activities stop, causing a decline in the amount of carbon stock, the land and its soil must be managed to allow the carbon stock to return to previously reported values. Alternatively, ACCUs equivalent to the loss of carbon caused either by the disturbance, or by cessation of activity, can be relinquished.

To conduct a soil carbon project and earn ACCUs, make sure you read and understand the method and other legislative requirements. You will need to:

- Download the [Carbon Credits \(Carbon Farming Initiative—Estimating Sequestration of Carbon in Soil Using Default Values\) Methodology Determination 2015](#) and [Explanatory Statement](#).
- Download and understand how the [Carbon Credits \(Carbon Farming Initiative\) Act 2011](#) (the CFI Act), the [Carbon Credits \(Carbon Farming Initiative\) Regulations 2011](#) and the [Carbon Credits \(Carbon Farming Initiative\) Rule 2015](#) apply to a project.
- Use the CFI Mapping Tool to identify the sequestration areas according to Statistical Area Level 2 (SA2) available [here](#).
- Download the [CFI Mapping Tool Help Manual](#) or the [CFI Mapping Guidelines](#) to identify the sequestration values.
- Download the [Guidelines—Qualified Person under the Estimating Sequestration of Carbon in Soil Using Default Values Determination](#).
- Download the [Standard Parameters and Emissions Factors](#) tables.
- Ensure you have the legal and carbon sequestration rights for conducting your project.
- Apply to register as a scheme participant and to open an account in the [Australian National Registry of Emissions Units](#) (ANREU).
- Apply to register your soil carbon project as an eligible offsets 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 5 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. Submit audits of your project according to your audit schedule.
- Determine the amount of carbon your project stores using the calculations in Part 4 of the method. Convert the amount of carbon captured into carbon dioxide equivalents (CO₂-e).
- Submit your project report and application for ACCUs to the Clean Energy Regulator for assessment.

What does a soil carbon project look like?

A soil carbon project involves setting up specific project management activities on eligible land that aim to remove carbon from the atmosphere by increasing the amount of carbon added to the soil. As they grow, plants take up carbon and return it to the soil, where it is broken down to form soil carbon. A soil carbon project may also aim to decrease the amount of carbon biomass removed from the soil: for example, by keeping crop stubble in the soil.

At least one of three types of 'project management activities' must be undertaken in a project. Each of these is made up of specific 'management actions' (see Section 9 of the method).

Three soil carbon project management activities

1. Sustainable intensification: where new ways of productive land management are started with the aim to increase soil carbon content.
2. Stubble retention: where crop residue that was previously removed by baling or burning is now retained in the field.
3. Conversion to pasture: where cropped land is changed to permanent pasture.

Available management actions for sustainable intensification project management activities are managing nutrients, managing acidity (also known as pH), introducing new irrigation and renovating pasture. Two of these activities must be undertaken, and they may be carried out on either pasture or cropping land. However, pasture renovation may only be carried out on land that is already under pasture (see Sections 25–42 of the method).

Stubble retention project management activities keep biomass as crop residues in the field, where previously they were removed by baling or burning (but not by grazing). Stubble retention can only be run on land that is already cropped (Section 39).

Conversion to pasture project management activities can only be run on land that has been continuously cropped for at least five years before the project starts. The land must stay as pasture for the permanence period of the project (Sections 40–42).

The amount of carbon sequestered in the soil is calculated based on the project's direct management actions, such as irrigation or retaining stubble. However, the change in emissions from sources associated with the project must also be calculated. The emissions sources include livestock, synthetic fertiliser, application of lime, crop residues (including diesel use for tillage) and fuel and electricity used for irrigation.

Soil carbon projects are to be carried out on operating farms. As such, the projects are designed to support profitable enterprises and accommodate 'business-as-usual' activities, such as land use rotation and other activities that are not part of the project's management actions. However, soil carbon projects must provide new ways to sequester carbon, and so cannot include existing practices on the farm. The financial commitment to carrying out the projects is expected to be balanced by greater productivity from the improved soil.

Setting up and running a soil carbon project

How a soil carbon project is set up and run is critical for calculating how much carbon is stored as a result. In turn, this 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 how to calculate the volume of emissions from the amount of carbon stored, as well as the net abatement that has occurred.

Remember to download a copy of the [explanatory statement](#) to read along with the Carbon Credits (Carbon Farming Initiative— Estimating Sequestration of Carbon in Soil Using Default Values) Methodology Determination 2015. The explanatory statement provides further detail and is an important document for interpreting and understanding the method.

Setting up and running a soil carbon project can be divided into the following parts. In each part below, the relevant sections of the method and explanatory statement are referred to, which explain the project in more detail.

Establish the project area

Identify your project area using the CFI Mapping Tool and make sure this area meets the eligibility requirements in Sections 10–12. This means that eligible land will have a sequestration value that has been determined by the FullCAM model values.

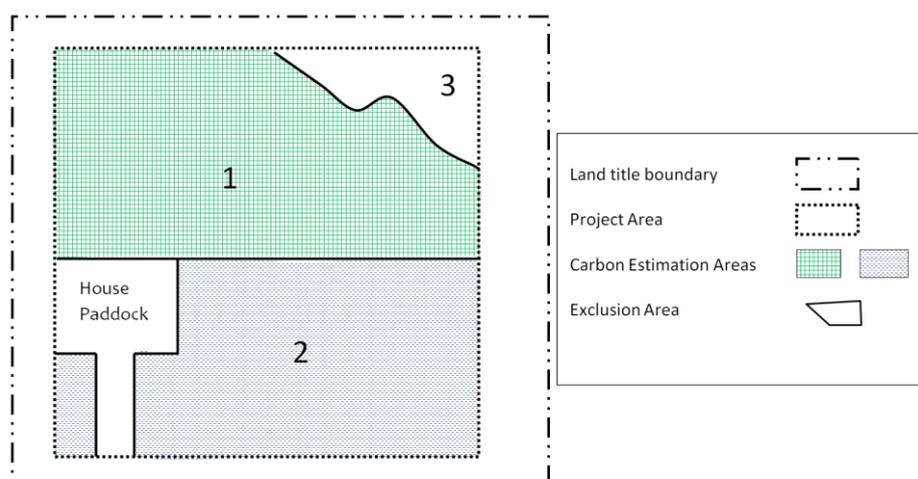
Then, divide or ‘stratify’ the project area into a combination of carbon estimation areas (CEAs) and exclusion areas (Sections 13–15). CEAs are the areas of your project in which you will carry out the project management activities, where carbon will be stored, and for which you may be issued ACCUs.

The boundary of each CEA must be defined using the CFI Mapping Guidelines. Each CEA must be entirely within a single Statistical Area Level 2 (SA2) region. You must identify the SA2 region using the CFI Mapping Tool to obtain the correct sequestration value for that CEA. Use the CFI Mapping Guidelines to ensure the map of your project area that identifies your CEAs meets the requirements of the method.

Your project area can contain one or more CEAs. However, only one type of project management activity can occur in each CEA (Section 14). A CEA may be a single area of land, or it can be split by exclusion areas (Figure 1). Exclusion areas are those parts of your project area that will not store carbon and where project activities will not be conducted. Rocky outcrops, dams, buildings, certain soil types and cleared forests and drained wetlands are examples. You can have more than one exclusion area in your project area, and you must show them on the map.

Because the offsets for a project are calculated for each CEA and then added up, and not averaged over the project area, you must stratify your project area into CEAs and exclusion areas before you apply to run a project. Section 16 outlines how you can re-stratify (re-define), add or remove CEAs as a project progresses.

Figure 1: Example of a soil carbon project area showing carbon estimation areas (1 and 2) and exclusion areas (3 and house paddock)



Why does a soil carbon project use 'default' values?

It is sometimes not practical or easy to measure the amount of carbon sequestered in every project area before your project starts. The amount of carbon sequestered in soil carbon projects is therefore calculated using default values that have already been estimated (modelled) for different types of soils and climate by the Full Carbon Accounting Model (FullCAM) over Statistical Area Level 2 (SA2) regions. SA2 regions are defined areas of land used by the Australian Bureau of Statistics.

The modelled values are provided in the [Standard Parameters and Emissions Factors Tables](#). The values apply clear, but conservative, sequestration values to a discrete range of project management activities.

Establish your project management activities

Project management activities can include sustainable intensification, stubble retention or conversion to pasture. At the same time, you may also carry out land management activities that are not part of the project.

Only one project management activity can be carried out in each CEA. Different eligibility requirements apply to each project management activity about the type and number of management actions that can be carried out. The sections of the method that refer to general management and eligibility requirements are outlined in Table 1.

Table 1: Summary of requirements and numbers of management actions for a project management activity to be established in a carbon estimation area

Project management activity Requirements for management actions	Sustainable intensification	Stubble retention	Conversion to pasture
Number of management actions in a project management activity	Two of: <ul style="list-style-type: none"> • nutrient management • soil acidity management • new irrigation • pasture renovation 	One	One
Eligibility requirements for project management activity in addition to Sections 24 and 43–44	Sections 17–21	Section 22	Section 23
General requirements for project management activity in addition to Sections 24 and 43–44	Sections 25–38	Section 39	Sections 40–42

Once you have established that your proposed soil carbon project is eligible, and you have decided which project management activity you will carry out in each CEA, you need to set up your project management activities so they meet the general requirements of the method. This means that a qualified person must prepare a strategy for each management action, to ensure the actions improve productivity as well as increase soil carbon.

General requirements for all projects (Section 24) include selecting a permanence period for your project. In addition, Section 43 outlines that you cannot clear woody vegetation to prepare a project area (with exceptions, such as clearing woody weeds). Section 44 outlines that eligible projects must implement a new project management activity to store carbon that would not have occurred under business-as-usual operations.

Qualified persons

A qualified person is required to help prepare a management strategy when conducting:

- nutrient, soil acidity or pasture renovation management actions within a sustainable intensification project management activity
- a conversion to pasture project management activity.

A qualified person has the training and experience to decide which strategies and testing methods are appropriate for your project. Testing is required if management actions include nutrient management or soil acidity management. The requirements for qualified persons are detailed in the [Guidelines—Qualified Person under the Estimating Sequestration of Carbon in Soil Using Default Values Determination](#).

A qualified laboratory must carry out the tests according to industry best practice so that you can regularly review the success of your management actions. The requirements for appropriate testing are outlined in Section 6 of the method.

Ensure your sustainable intensification project meets requirements

Sustainable intensification project management activities must include two nominated management actions in each CEA (Section 25). You can carry out more than two management actions, but you only need to nominate two to gain ACCUs. In addition, you cannot remove stubble from a CEA that is under cropping before you start a sustainable intensification project management activity (Section 26). To further help increase soil carbon, all crop residues must remain in the CEA.

For projects undertaking sustainable intensification, a qualified person will need to prepare a management strategy for each management action (except irrigation) before you start your project. Nutrient management strategies are outlined in Sections 27–30, soil acidity management strategies in Sections 31–33, and pasture renovation strategies in Sections 36–38.

Pasture renovation management actions include sowing high-productivity grass species to establish new pasture (Sections 36–38). Natural regeneration from tilled land is not likely to build soil carbon, and so it is not considered. Before the project starts, a management strategy must advise on the species to be used and other activities that can reasonably expect to re-establish pasture in the CEA. The plan needs to show, for example, how you will re-establish 70% ground cover within 12 months, conduct pasture maintenance and review schedules.

New irrigation project management activities cover an area that has not been irrigated for the entire five years of the baseline period (Section 20). The project activities must source water from new in-stream allocations or from on-farm improvements, and must not be paid for partly or in full by any level of government (Sections 34–35).

There is a risk that water from in-stream allocations can inadvertently (though not deliberately) be diverted from another irrigator. This means that new irrigation projects can decrease the productivity of another farm. Therefore, the amount of carbon stored by any new irrigation project management activity that includes water sourced from in-stream allocations is discounted by 50%.

Ensure your stubble retention project meets requirements

Stubble retention projects can be established in CEAs where more than 30% of crop residues were burned or baled, and the area was cropped in each year, over the five-year baseline (Section 22). During a stubble retention project, crop residues may only be removed from the CEA once every five years (Section 39).

Ensure your conversion to pasture project meets requirements

Conversion to pasture management actions (Sections 40–42) are similar, but not identical, to those for pasture renovation management actions carried out under a sustainable intensification project (see Sections 37–39).

Pasture renovation within sustainable intensification vs conversion to pasture project management activities

Planting vigorous grasses makes pastures more productive, while at the same time sequestering more carbon as biomass (fine roots and leaves) than when land is continuously cropped.

If you renovate pastures within a sustainable intensification project management activity (Section 36):

- The CEA must have been under pasture for at least two years before applying for the project.
- You must have one other sustainable intensification management action running in the CEA at the same time.

If you conduct a conversion to pasture project management activity (Section 40):

- The CEA must not have been under pasture, but have been either bare ground or under crops during the five-year baseline.

A written pasture renovation strategy and seeding to create permanent pasture apply to both projects.

Calculate emissions baseline

The emissions baseline represents what would happen if your project did not occur. The emissions baseline provides a point against which you measure any changes in the amount of emissions produced by a project in a reporting period. You use this change in emissions to calculate net abatement. For soil carbon projects, the emissions baseline is the amount of emissions expected or calculated from the alternative scenario before the project starts. The baseline is calculated over the ‘baseline emissions period’, which is usually the five years before the project starts.

Sources and sinks of carbon described by the greenhouse gas assessment boundary are given in Section 46. However, only baseline emissions from livestock on pasture, synthetic fertiliser and crop residues need to be calculated for a soil carbon project, as shown in Table 2. Baseline lime and irrigation energy use are considered to be zero for soil carbon projects.

Table 2: Summary of livestock, synthetic fertiliser and crop residue baseline calculations that must be calculated for different project management activities and management actions

Project management activity Baseline emissions calculation	Sustainable intensification	Stubble retention	Conversion to pasture
Livestock	Livestock baseline A or B as applicable (Section 55)	Not calculated	Livestock baseline A or B as applicable (Section 55)
Synthetic fertiliser	Synthetic fertiliser baseline A or B as applicable (Section 59)	Synthetic fertiliser baseline A or B as applicable (Section 59)	Synthetic fertiliser baseline A or B as applicable (Section 59)
Crop residue	Pasture renovation actions—use residue baseline A (Sections 62, 63) Project CEAs under crops—use residue baseline B (Sections 62, 64)	Residue baseline A (Sections 62, 63)	Residue baseline C (Sections 62, 65)

Figure 2: Calculating livestock baseline for each carbon estimation area

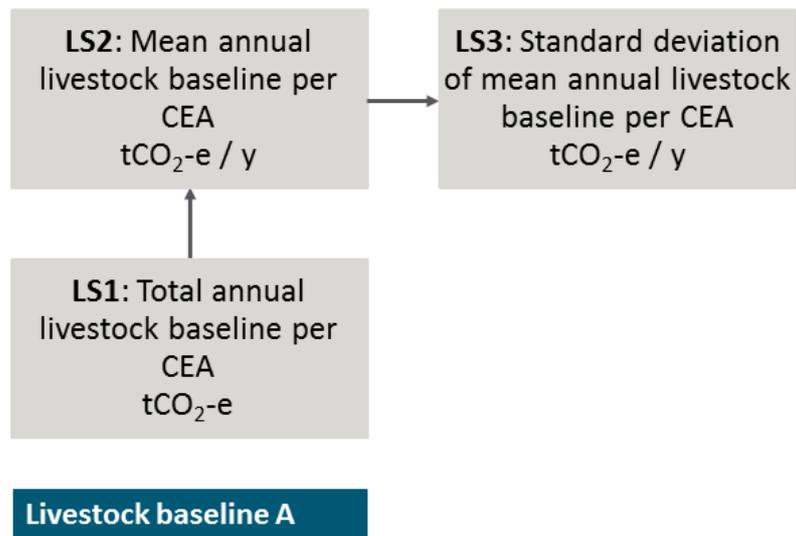


Figure 3: Calculating livestock baseline for each carbon estimation area

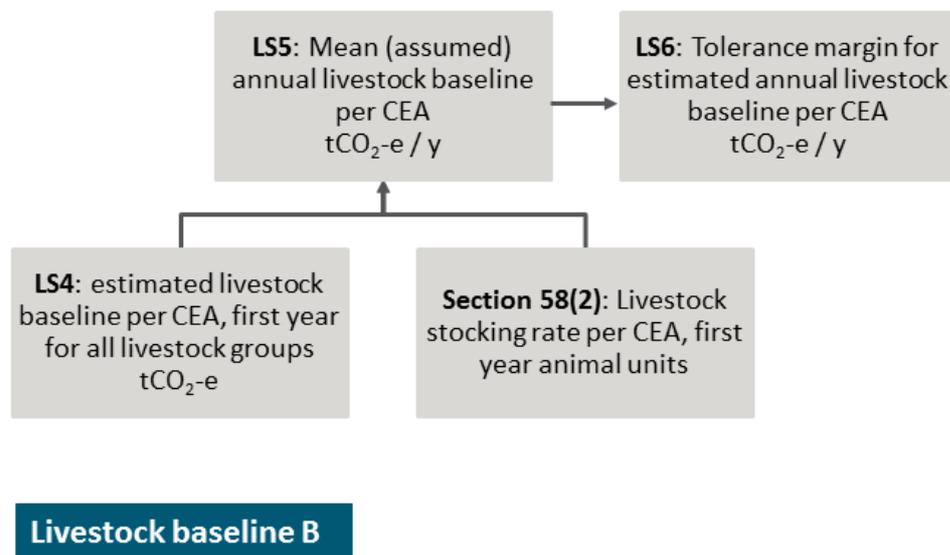


Figure 4: Calculating synthetic fertiliser baseline for each carbon estimation area

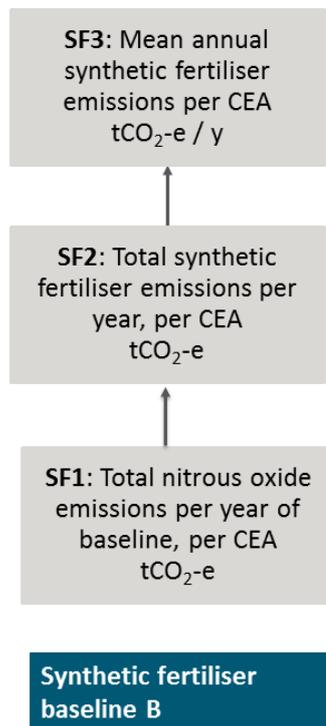
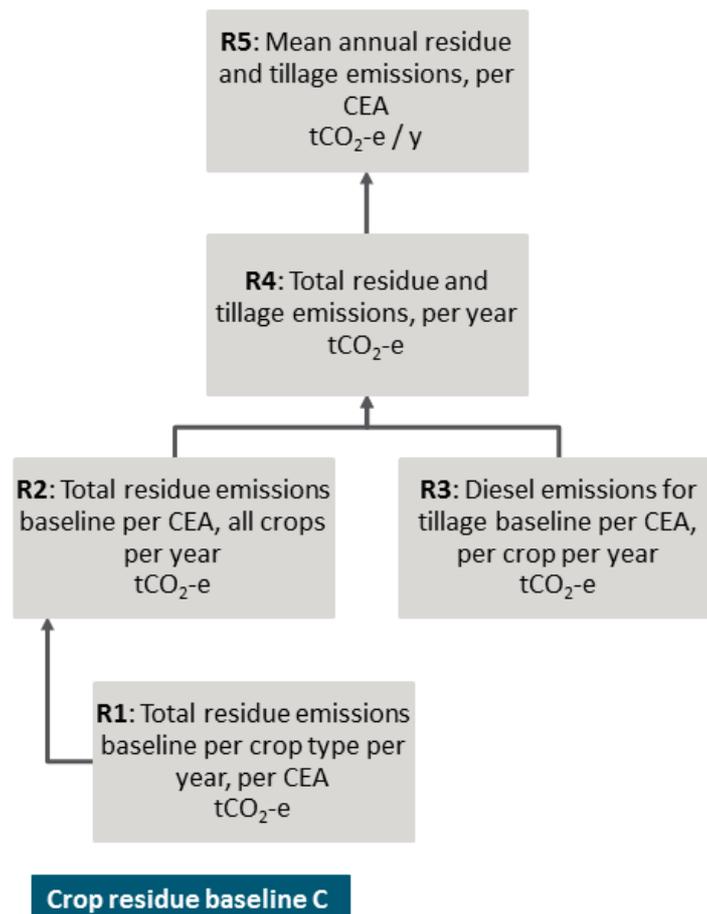


Figure 5: Calculating crop residue baseline for each carbon estimation area



See Figures 2-5: Equation trees for calculating baseline emissions for a project

To calculate the baseline CO₂-e emissions from a modelled soil carbon project, you need to follow a sequence of equations. An individual equation tree for each emission source, in Figures 2 – 5, steps through the calculations. Equation numbers are at the top left of each box.

For livestock, if you have 1–5 years of historical stocking data for the land that now forms the CEA, use the livestock baseline A equations (see Sections 55–56). If you do not have this historical stocking data, use livestock baseline B equations (Sections 57–58), along with standard carrying capacity data given in the [Standard Parameters and Emissions Factors Tables](#).

For livestock emissions only, you need to calculate either a standard deviation or a 10% tolerance margin, depending on whether you use livestock baseline A or B. This value is needed when you calculate your livestock emissions later in the project (using Figure 6). If emissions differ from the baseline by a standard deviation or 10% tolerance (as relevant), they must be included when calculating your net abatement.

Synthetic fertiliser baseline A has a default zero value, and is not shown on Figures 2-5. However, if you have historical fertilisation data for the land that now forms the CEA for at least three of the five baseline years, use the synthetic fertiliser baseline B equations (Sections 59–60).

Lime baseline emissions are assumed to be zero (Section 61) and are not shown on the equation trees.

Crop residue baseline A applies for projects under pasture renovation or where all crop residue is assumed to have been removed (Table 2), so the baseline is assumed to be zero. For project areas under crops (Table 2), baseline B assumes that a 20% increase in the amount of biomass will be accumulated during the project reporting period. Crop residue baselines A and B are fixed values and are not shown on Figure 2. For a project that converts crops to pasture, baseline emissions are calculated by residue baseline C (Section 65).

The irrigation baseline is assumed to be zero, as outlined in Section 66, and is not shown.

Data needed to complete the sequence of equations are drawn from a number of sources. Some data come from the [National Greenhouse and Energy Reporting Regulations](#), some are already available for you in the methodology determination, and others are drawn from the [National Inventory Report 2013](#) and from data you will produce as a result of running your project.

Calculating emissions from the project

Every project needs to take into account emissions that arise from running it (see Part 4, Division 4 in the method). This is to ensure these emissions are included in calculations that determine net CO₂-e abatement for a reporting period and crediting period.

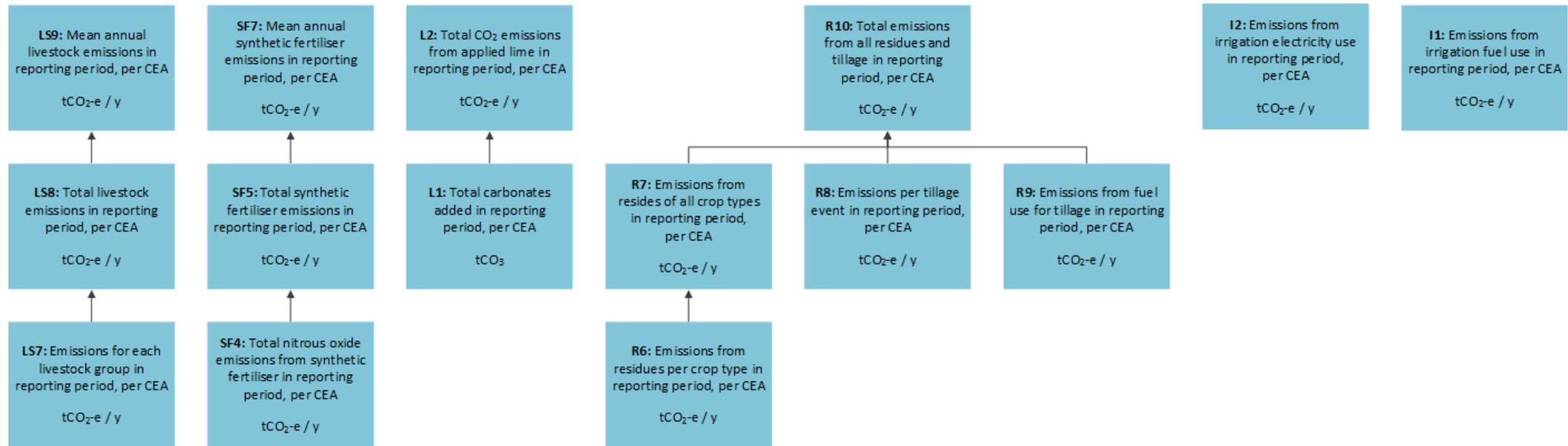
What's tCO₂-e?

CO₂-e expresses the warming effect of different greenhouse gases as an equivalent amount of carbon dioxide. It is the amount of carbon dioxide that would give the same warming effect as each greenhouse gas that is emitted or stored by an activity. For example, methane (CH₄) has a Global warming potential (GWP) of 25, which means 1 tonne of CH₄ is 25 tonnes of CO₂-e.

Only those greenhouse gases from emissions sources outlined in Section 46 are included when calculating CO₂-e for a soil carbon project.

For each CEA, identify which emissions sources listed in Sections 67–71 are relevant to your project. Use the equation trees in Figure 6 to calculate project emissions from livestock, synthetic fertiliser, lime, crop residues and irrigation energy use. If the project is a sustainable intensification project and irrigation is chosen as the management action, calculation of irrigation energy use is compulsory (Section 71).

Figure 6: Equation trees for calculating total emissions during the project reporting period for each carbon estimation area



See Figure 6: Equation trees for calculating total emissions for each carbon estimation area

The equation tree in Figure 6 shows how to calculate total emissions during the project reporting period for each CEA.

You must calculate project emissions from livestock, synthetic fertiliser, lime, crop residues and irrigation energy use. An individual equation tree for each emission source, in Figure 6, steps through the calculations. Equation numbers are at the top left of each box.

A summary of the required equations and the relevant sections of the method is given below.

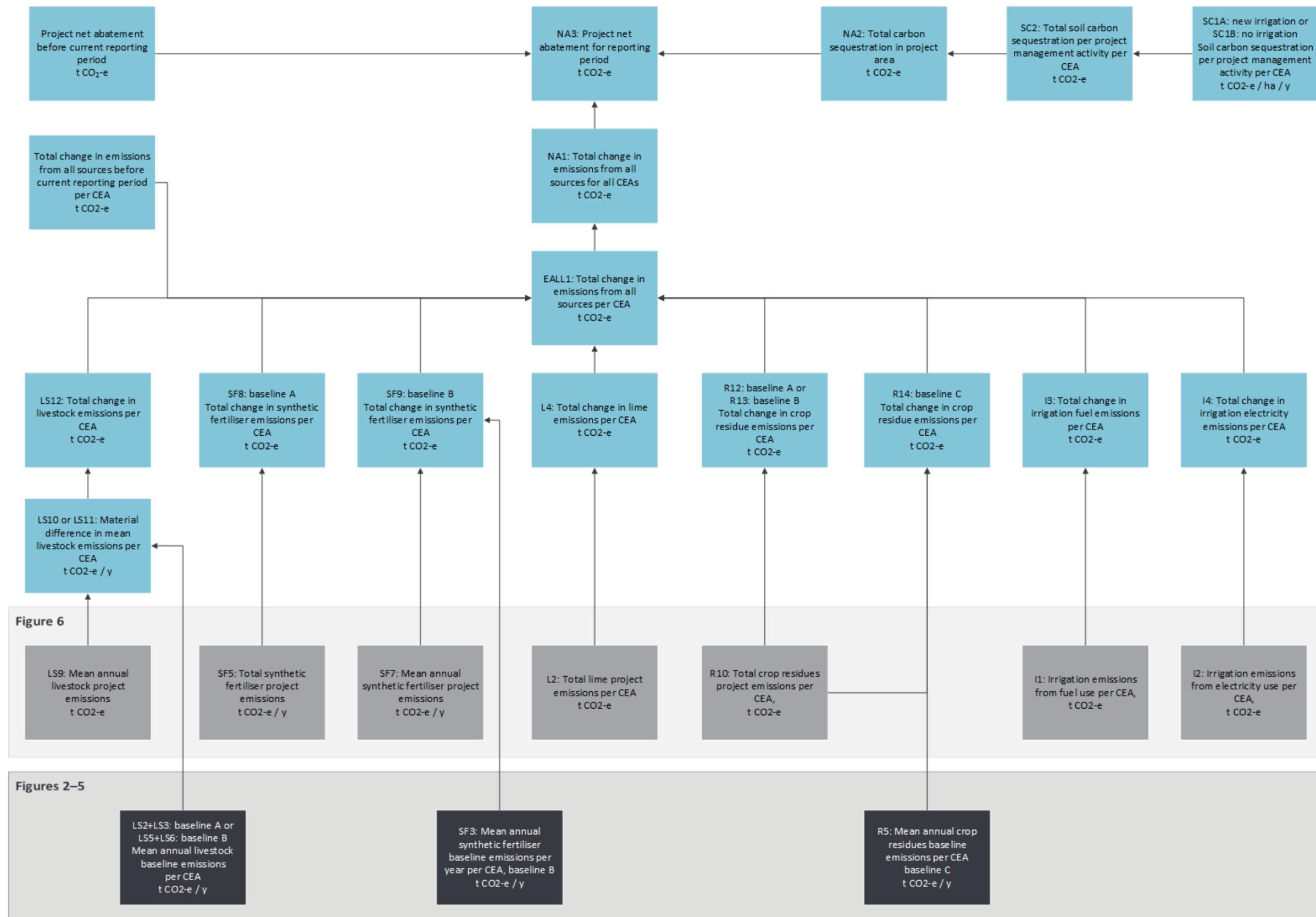
- Livestock emissions: Equations LS7–LS9, Section 67
- Synthetic fertiliser emissions: Equations SF4–SF7, Section 68
- Lime emissions: Equations L1–L2, Section 69
- Crop residue emissions: Equations R6–R10, Section 70
- Irrigation energy use: Equations I1–I2, Section 71

Data needed to complete the sequence of equations are drawn from a number of sources. Some data come from the [National Greenhouse and Energy Reporting Regulations](#), some are already available for you in the methodology determination, and others are drawn from the [National Inventory Report 2013](#) and from data you will produce as a result of running your project.

Calculating the net amount of abatement and number of ACCUs

This is the final step in the calculations to determine the number of ACCUs that may be issued for a reporting period. At this stage, the total change in carbon stock for the project area is calculated and then converted to tonnes of carbon dioxide equivalents or CO₂-e (see Equations NA1, NA2 and NA3 and the net abatement equation tree in Figure 7). An overview of the calculation is given in Section 47.

Figure 7: Equation tree for calculating net carbon abatement for a project



See Figure 7: Equation tree for calculating net carbon abatement for a project

The equation tree in Figure 7 shows how to calculate net abatement. Equations for calculating baseline (highlighted in green) and total project emissions (highlighted in blue) are shown along the bottom of this equation tree for each type of project emission (livestock, synthetic fertiliser, lime, crop residues and irrigation energy use). Total emissions are then subtracted from the baseline amount to give you the net greenhouse gas abatement for your project in t CO₂-e.

The equation numbers are at the top left of each box. Note that two calculations from before the current reporting period do not have equation numbers (project net abatement, and total change in emissions from all sources). However, in the first project reporting period, both values are zero.

The steps are:

- Calculate the amount of carbon sequestered in the soil over your project area for the duration of your project as t CO₂-e according to Equations SC1 (A or B) and SC2 in Section 49.
- Calculate baseline emissions from each source relevant to your project area as t CO₂-e/y, as outlined in Figures 2-5.
- Calculate project emissions from each source relevant to your project area as t CO₂-e or t CO₂-e/y, as outlined in Figure 6.
- Calculate the total change in emissions as t CO₂-e for your project. Some emission types have alternative equations for calculating the material difference in emissions, depending on which baseline was applied (such as livestock baselines A and B; see Sections 72–75). You must also estimate the material change in emissions from all sources for each CEA for the reporting period, as shown in Equation EALL1 (Section 81) and Equation NA1 (Section 82).
- Use Equation NA3 to calculate the total net abatement from total change in emissions (from Equation NA1) and total sequestration (from Equation NA2).
- If you have reported a depletion event in a CEA, use Equations D1–D4 (not shown in Figure 7: see following box) to calculate the number of years until you can start to claim any carbon sequestration.

Depletion events

If project management activities stop in a CEA and are not replaced by other approved activities, or if there is 30% bare soil in a CEA, the soil organic carbon that has already been sequestered starts to be released back into the atmosphere. This is called 'carbon depletion'.

For example, a depletion event occurs if a pasture renovation, soil acidity or nutrient management strategy is not followed. Sections 89–91 describe how to determine if a depletion event has occurred; when the event is taken to have stopped; and how to account for the event. Section 97 outlines when you must notify the Regulator of the depletion event.

If a depletion event occurs, the amount of carbon sequestered in the entire CEA is taken to be zero, until the soil carbon is replenished after project management activities recommence (Sections 90–91).

Once a depletion event is taken to have commenced, the depletion rate of soil carbon is calculated at a constant annual rate of one-seventh of the carbon sequestered, until seven years have elapsed. The replenishment rate is defined by the project management activity being undertaken and its sequestration value. You need to use Equations D1–D4 to calculate how long the replenishment period will last once you have recommenced project management activities. This will determine when you can start to claim carbon sequestration in that CEA.

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 5 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 have not been in place for the entire reporting period, ACCUs may not be issued for some or all of that reporting period.

For a soil carbon project, specific records need to be kept to show you are monitoring your project management activities (Sections 98–101). If you fail to monitor livestock, carbon abatement for the entire CEA will be zero (Sections 100 and 102). Penalties to the amount of carbon abatement, and therefore ACCUs, will apply if you do not monitor other parameters in your management plans (Section 103).

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 Act. Audits are required where indicated in your project's audit schedule, which the Clean Energy Regulator will provide following registration of your project.

For soil carbon projects, the first report must be made between six months to five years from the date the project was declared eligible and then up to every five years thereafter. You can divide your project areas into two or more parts when you report, as long as CEAs are not divided (Section 104).

Sections 93–96 list 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 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 ACCUs 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 Act. The crediting period for a soil carbon 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](#).

The Clean Energy Regulator recommends you engage your auditor early when developing your project to ensure the project is auditable and to help the auditor 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 circumstances 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 can change your soil carbon project management activities, but only in limited circumstances: for example, if they are likely to increase carbon sequestration (Sections 85–88).

Resources

- For more information on participating in the Emissions Reduction Fund visit www.cleanenergyregulator.gov.au
- For more information regarding method development visit 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 \(current version\)*](#)
 - » [*Carbon Credits \(Carbon Farming Initiative\) Regulations 2011*](#)
 - » [*Carbon Credits \(Carbon Farming Initiative\) Rule 2015*](#)
 - » [*Carbon Credits \(Carbon Farming Initiative—Sequestration of Carbon in Soil Using Default Values\) Methodology Determination 2015*](#)
 - » [*Explanatory statement*](#)
- [*Guidelines—Qualified Person under the Estimating Sequestration of Carbon in Soil Using Default Values Determination*](#)
- [*Standard Parameters and Emissions Factors*](#)
- Enquiries on participating in the Emissions Reduction Fund telephone 1300 553 542 or email to enquiries@cleanenergyregulator.gov.au