Australian Government
Department of Climate Change, Energy, the Environment and Water

Australian Carbon Credit Unit Scheme: Integrated Farm and Land Management method development

March 2025 update

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Acknowledgement of Country

We acknowledge the Traditional Owners of Country throughout Australia and recognise their continuing connection to land, waters and culture. We pay our respects to their Elders past and present.

Overview

This document provides an update on development of the Integrated Farm and Land Management (IFLM) method under the Australian Carbon Credit Unit (ACCU) Scheme. It summarises the elements in the method design the department considers are broadly settled, elements we intend to include that need further work, and mechanisms available to manage uncertainty and risk in the method.

This will be the first method to combine multiple activities that store carbon in the land in a single method. Existing regeneration, planting and soil projects will be able to transfer to the new method. Enabling multiple activities on the same property provides greater flexibility to land managers. It is intended there will be opportunities to expand the method over time – to add new carbon pools, activities and technologies. It is important the method is designed in a way that allows this expansion.

This method has been in development for several years. Government development commenced under the Clean Energy Regulator in 2022 before method development functions moved to the department in 2023. The Carbon Market Institute (CMI) and the CMI IFLM Taskforce have been continually engaged in development of the method and are working closely with the department.

The development of the IFLM method is complex and the department is taking the necessary time to ensure the method is well informed, has high integrity and achieves greater flexibility for land managers. The department is considering how to best manage issues such as how to attribute change to project activities in highly variable natural systems, and how to attribute abatement to project activities where there is limited general evidence to confidently predict the abatement outcome. Creditable abatement must be evidenced to result from the project (additional), be conservative and comply with the rest of the legislated Offsets Integrity Standards (OIS) (See ERAC Information Paper on the Offsets Integrity Standards).

Input from a broad range of stakeholders will enable the method to be robust, consistent with the OIS and simplify participation. The department is establishing two stakeholder reference groups to support this input. Lessons learned from the performance of existing regeneration, planting and soils methods are also being considered as the method is developed.

Development of this method, and ensuring it delivers genuine abatement to contribute to emissions reduction across Australia, remains a high priority for the government.

Method development status update

Scope

The IFLM method will enable crediting of carbon stored from:

- managed regeneration and plantings of native forest, and
- improvements to soil carbon.

All activities that store carbon in the land and can complement a farm's primary operations.

The method will be designed as a 'framework' style method to enable the addition of activities, measurement approaches and carbon pools over time. This will be through the proponent-led method development process (Developing new ACCU Scheme methods - DCCEEW).

The department has considered several activities to be out of scope for this version of the method.

These include:

- Commercial plantation forestry
- Emissions avoidance activities, including the management of livestock and fire management

Reforestation by Environmental or Mallee Plantings

For permanent planting activities under the IFLM method, approaches will be very similar to those in the recently made *Reforestation by Environmental or Mallee Plantings 2024 method*. Minor changes will increase flexibility and enable interaction with other IFLM activities.

It is anticipated under the IFLM method:

- Planting activities in wide and narrow belt plantings and block plantings of mallee plants and native species local to the area will be permitted
- Establishment and ecological infill planting will be permitted, and
- Net abatement estimates will be determined using either the Full Carbon Accounting Model (FullCAM) or a hybrid approach where direct measurements adjust model outputs.

Under consideration

These elements will be further assessed to determine whether they can be developed and meet the OIS in a timely manner or be deferred to be considered as a future update to the method. They include:

- Whether FullCAM-equivalent models could be used. Qualification of models would require a process to transparently validate each model against FullCAM. The ERAC plans to work with technical experts to inform what this process could involve. The department is considering whether this is likely to be available for this version of IFLM, could be incorporated later via a document referred to by the method, or be included in a future update to the method.

- Whether project areas and Carbon Estimation Areas initially proposed to undertake regeneration activities could transition to planting activities where regeneration does not occur.

Soil carbon

Activities to improve soil carbon and estimate net abatement under the IFLM method will be similar to those permitted in existing ACCU Scheme soil carbon methods.

It is anticipated requirements under the IFLM method will include:

- Carrying out one or more eligible management activities on agricultural land that can reasonably be expected to result in eligible carbon abatement, and
- Hybrid measure-model approaches can continue to be used.

Under consideration

There are several issues under consideration:

- The periodic review of the *Carbon Credits (Carbon Farming Initiative – Estimation of Soil Organic Carbon Sequestration using Measurement and Models) Methodology Determination 2021* (Soil Organic Carbon 2021 method) by the ERAC with an estimated completion date of mid-2025.
  - Outcomes of this review will be considered in the IFLM method where possible.
- To what extent abatement in soil can be credited on land where a proponent is also undertaking a planting or regeneration activity.
  - Net abatement estimates in earlier ACCU Scheme methods did not consider the natural movement of carbon from vegetation into the soil, with the exception of one carbon pool cited as part of the rationale for conservative estimates of the other. It is important to ensure estimates remain conservative when carbon stocks in both vegetation and soils are included in the net abatement estimation approaches.

Native Forest Regeneration

The department's review of the evidence base for native forest regeneration is ongoing. It is informed by a range of views including from scientific experts and carbon farming industry practitioners, and lessons learned from the performance of existing Human Induced Regeneration projects.

In our engagement to date, we have heard rainfall is a key determinant of forest regrowth, and that grazing management also has an impact, but it is variable and hard to predict. Baseline conditions, including what suppressors are present, impact how complex it is to determine the proportion of regrowth that can be attributed to project activities.

Where a baseline is flat or static (such as where land has been completely cleared, and kept clear through mechanical or chemical destruction), change from the project is easier to attribute.

Where a baseline is highly dynamic with lots of 'noise' from multiple drivers including rainfall variability, the changes arising from project activities is harder to predict, measure and attribute. More method design levers (see Box 1) are needed to provide confidence the abatement occurred because of the project activities. Further calculations are likely to be needed to compare project changes against what would likely have happened without the project.

For example, where project activities are focussed on the management of grazing and weeds, the department is working to determine how the method could best distinguish regrowth attributable to these management actions, from regrowth attributable to changes in rainfall over time. In these cases, only some of the measured change in regrowth in the project area may be attributable to the project at a point in time. Careful consideration of the method settings is needed to ensure only additional abatement is credited.

This issue remains under consideration.

On cleared lands

This includes regeneration that occurs on land previously cleared of forest and where regeneration was prevented from attaining forest cover during the baseline via periodic mechanical or chemical destruction. For these projects, the project activity is the removal of these activities and other suppressors of vegetation growth/forest regeneration to allow forest cover to be attained.

It is anticipated the IFLM method will include:

- Baseline periods of sufficient length to show vegetation is unable to attain forest cover due to mechanical and/or chemical destruction and potentially other suppressors. The period would be longer than expected for woody seedlings to attain forest cover. Baseline carbon stocks would be defined as the average carbon stock over the baseline period and it would be anticipated the average baseline carbon stock would remain static.
- Eligible projects would need to provide evidence:
  - The land was subject to a comprehensive clearing event,
  - Mechanical and/or chemical destruction of vegetation/woody biomass occurred during the baseline period,
  - The project area did not attain forest cover during the baseline period,
  - At project commencement that existing biomass is appropriately low to support conservative modelled estimates,
  - Mechanical and/or chemical destruction of vegetation/woody biomass is likely to continue in the absence of the project, and
  - The proposed project area has forest potential. This could be via comparison to reference ecosystem sites.
- All growth in vegetation, above the average baseline carbon stock, can be included in the net abatement amount, assuming all increases in biomass are due to the project.
- Abatement would be estimated using a hybrid model (FullCAM)-measure approach or model only approach.
- Reporting would be required to demonstrate growth has occurred and forest cover will be or has been attained, including through regeneration checks to ensure only eligible land is credited.

Under consideration

Issues still under consideration, include:

- How FullCAM-equivalent models could qualify for use in the future.
  - Qualification of FullCAM-equivalent models would require a process to allow each model to be transparently validated against FullCAM.
  - The ERAC plans to work with technical experts to inform what this process could involve. The department is considering whether this is likely to be available for this version of the method, could be incorporated later as a document referred to by the method, or be included in a future update to the method.
- How a hybrid measure-model approach would be implemented, and if included, whether it could be the same as the hybrid approach for planting activities. Whilst the department considers a hybrid measure-model approach has advantages, it is important to ensure the approach can be appropriately implemented.
  - The department considers a hybrid measure-model approach preferable to measure-only. This guards against the risk of bias via adverse selection – where projects select the measurement approach that maximises project-level credits, leading to over-crediting at an aggregate level. This risk can be mitigated with limits incorporated into hybrid approaches.

On uncleared lands

The department plans to include regeneration on land that has not been subject to a comprehensive clearing event within the prescribed period for "cleared lands" and where vegetation growth has been suppressed due to past management activities, including grazing.

3 broad land categories are being considered within this definition:

1. Land not previously cleared that has not attained forest cover over an extended baseline period and has potential to attain forest cover,
2. Land not previously cleared that has already attained forest cover,
3. Land not previously cleared that does not have forest potential and will never attain forest cover.

The department is considering how best to handle a number of matters related to regeneration on uncleared land to ensure the method meets the OIS. These are:

- **Baseline trends –** Projects with static and declining baselines provide greater certainty that abatement can be attributed to project activities, and abatement estimates will be conservative. In addition, uncertainty can be reduced by using extended baseline periods to help identify enduring trends and reduce 'noise'.
  - Where a project has an increasing trend in biomass during the baseline period, it is more likely the project activities may bring forward the attainment of forest cover, but not increase aggregate permanent sequestration, compared to what would have occurred without the project.

- **Rainfall impacts on regrowth –** Rainfall needs to be accounted for to determine the portion of abatement that can be attributed to the project activities. For example, the department are assessing whether this could be achieved through method levers such as comparing trends in regeneration rates on project areas and comparable lands ('control sites'), and/or deferring issuance of some credits until there is enough project data to be confident eligible abatement has been achieved.

- **Growth rates** – In some landscapes and vegetation communities, growth rates are slow, and it may take decades to detect biomass increases above the noise of natural variability. For these situations there may not be reasonable abatement within the 25-year crediting period.

    - The relatively low potential biomass and high temporal and spatial variability of rangeland ecosystems makes it difficult to detect clear signals in regeneration attributable to specific management actions, like grazing management.

- **Grazing impacts –** Scientific studies conclude that grazing management can have an impact, but it is not yet clear by how much. Work is ongoing to determine which method levers (for example using comparison sites and/or deferred crediting) may be able to manage these uncertainties.

For each of the 3 land categories, the department is considering whether one or more of the method levers described in Box 1 below can sufficiently reduce the level of risk associated with these uncertainties.

Box 1: Method design levers to manage uncertainty

There are multiple method levers that can be used to ensure the integrity of credited abatement.

- **Project eligibility –** Entry requirements, including eligible lands for projects to operate on. This lever can limit participation to areas more likely to deliver genuine abatement.
- **Baselines** – The length of the baseline period, and the evidence required to support estimates of what occurred during that period. This lever can be used to provide confidence of what would happen without the project (the counterfactual scenario).
- **Comparison (or 'control') sites** – Requirements for selecting and monitoring comparison sites, to ensure they are representative of what would likely have happened in the absence of the project. This lever can be used to demonstrate the degree of change resulting from the project activities.
- **Estimation approaches –** Choice of estimation approaches (e.g. model only, measure only or a mix of measure and model) that are permitted under the method. This lever can be used to reduce errors in estimates and risks of over-crediting.
- **Discounts and deferral –** The quantity and timing of credits issued for estimated abatement. Discounts could be used to reduce credits where uncertainty is high; deferral could be used to manage uncertainty in the early stages of a project, where it may be most difficult to distinguish the impacts of project activities from other factors.
- **Land management strategies –** Requirements for what needs to be included in land management plans. This lever can be used to provide evidence that demonstrates management is occurring as intended by the method.
- **Records and reports** – Requirements as to what must be included in records, offset reports and monitoring schedules, and the evidence supporting this.
- **Independent audits** – Frequency of audits and other external checks that assess the project is operating consistent with the intention of the method, and appropriate measures are being taken to provide confidence in the net abatement estimates.

The department is considering how these levers can manage the uncertainties to meet the OIS:

- **Additionality** – Approaches need to distinguish the regeneration likely to have occurred in the absence of the project from the regeneration due to the project activities. Only change resulting from the project is additional
- **Measurable and verifiable** - Measurement approaches and technologies should be appropriate to detect modest management signal amongst background variability
- **Clear and convincing evidence** - The evidence shows grazing management can have an impact, but it is variable and hard to predict
- **Conservativeness** - Method levers must sufficiently account for uncertainty and bias. This includes accounting for abatement at risk of being lost to a reversal event, or negated by regeneration in comparison areas (diminishing or eliminating the eligible abatement over time).

The department is continuing to consider the evidence to determine how we can include regeneration on land that has not been previously cleared. No decisions have yet been made.

Next Steps

Stakeholder engagement

The method is being developed by the department in a co-design consultation approach with stakeholders. The department has reviewed work completed by the CMI IFLM Taskforce, heard a breadth of views on current and alternate settings for planting, regeneration and soils projects from carbon service providers, land managers, the Clean Energy Regulator, auditors, academics and subject matter experts. We appreciate the input so many have provided to inform development of the method to date. The department is considering this feedback as we continue to refine the detail required to complete development of the method.

Further consultation and engagement will include establishment of two department-led stakeholder reference groups as well as ongoing engagement with the CMI IFLM Taskforce. The stakeholder reference groups are:

- An IFLM Stakeholder Reference Group. Members will include researchers, representatives from the CMI, representatives from the CMI IFLM Taskforce, other carbon service providers, the Clean Energy Regulator, industry (including agriculture representatives), First Nations and environmental groups.
- An IFLM State and Territory Government Reference Group.

The reference groups are intended to provide a breadth of views and expert feedback on technical and operational considerations and assess alignment of proposed approaches with policies and programs across state and territory jurisdictions. Reference Group membership is by invitation and limited to an advisory role. It is anticipated the Reference Groups will meet monthly.

The department will also continue to engage with the CMI IFLM Taskforce to consider their completed technical papers and proposed method options.

Other engagement will include public consultation by the ERAC on an exposure draft of the method and ongoing targeted engagements by the department.

The department will also provide regular, high-level stakeholder updates on the progress of the method's development including through information update papers published on our website and shared with the department's IFLM stakeholder mailing list. These updates will seek to ensure the broad range of interested stakeholders have information on the status of the method as it is developed.

Development timeline

The department aims to deliver an exposure draft of the IFLM method to the ERAC in the second half of 2025 for assessment to release for public consultation.

Please direct enquiries about the IFLM method to ACCUMethods@dcceew.gov.au.