Improved Avoided Clearing of Native Regrowth

Discussion paper

Queensland Government

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1. Overview

1.1 Overview of Improved Avoided Clearing of Native Regrowth Method

The proposed Improved Avoided Clearing of Native Regrowth (IACNR) method will incentivise the retention of regrowth native forests that are at high risk of re-clearing, by creating Australian Carbon Credit Units (ACCUs) from the sequestered carbon and avoided emissions associated with a commitment to cease re-clearing.

The carbon changes typically associated with avoided clearing activities include carbon pools for live above and below ground biomass (CO_2), and forest debris (CO_2), as well as emissions from biomass burning (CH_4 and N_2O).

With the current Avoided Clearing and Native Regrowth (ACNR) method expiring on 31 March 2025, there is an opportunity to update the method to increase flexibility, integrity and ease of use to drive an increase in the method's use.

Conservatism of carbon abatement and additionality considerations are managed through the eligibility criteria, permanence periods, and the modelling and calculation of abatement, and have been considered in proposed changes to the method.

The proposed IACNR method differs to the current ACNR method most significantly in the following areas:

- **Criteria of land eligibility** - to identify land at high risk of clearing, eligibility criteria in the proposed method require the project site to have been comprehensively cleared 8 to 25 years prior to registration. The criteria excludes land that would be at risk of land degradation if re-clearing occurred (i.e. land that is at low risk of re-clearing).
- **Options for permanence periods** - given the proposed clearing history eligibility criteria above, the usual 25-year permanence period option will not be suitable, and therefore 50- and 100-year permanence periods are proposed.
- **Abatement calculation & crediting** – including a compressed crediting proposal for 100-year permanence projects, allowing early crediting in acknowledgement of the increased abatement and reduced risks of reversal with this permanence period .

Other changes proposed include.

- Changes to definitions of 'native forest cover', 'forest' and 'clearing event/comprehensively cleared' and how they are applied.
- Adding avenues for measuring stocks and emissions in baseline and project scenarios.
- Including optional inputs for baseline scenarios including windrow burning.
- Changing the way in which natural disturbances are integrated into modelling.

1.2 Overview of an option for an integrated method

The Queensland Government has the opportunity to further enhance the carbon abatement and co-benefit potential of the proposed IACNR method, and contribute more broadly to a streamlined ACCU Scheme, by integrating environmental plantings and assisted natural regeneration activities into the proposed improved avoided clearing method, to create an Integrated Reforestation and Avoided Re-clearing (IRAR) method for land with a history of comprehensive clearing.

There is currently no ACCU Scheme method for assisted natural regeneration, and previous and existing vegetation methods have required separate project registrations for different forest regrowth and forest cover scenarios, adding complexity and transaction costs. Integrating these eligibility criteria and activities into a single method could streamline the process and reduce costs, by allowing a single project to deliver ACCUs on land that has any combination of regrowth that has not reached forest cover, regrowth that has attained forest cover, or no regrowth.

We would like to test the interest in this integrated option during our initial stakeholder engagement process. See **Part 6**, below, for more details of this proposal.

2. First Nations opportunities

The proposed method will increase opportunities for First Nations peoples to develop or participate in projects that avoid the clearing of native regrowth forests. These opportunities will be most relevant to First Nations peoples with interests in and businesses on lands that have a history of being cleared for agricultural purposes and have an on-going agricultural use.

During the development of this method, we will work with First Nations groups to understand these opportunities more fully.

FEEDBACK QUESTION:

Q: Are there specific issues relevant to First Nations people that should be considered in the design of this method?

3. Activities and eligibility

3.1 Eligible Project activity

Eligible project activities involve the retention of secondary forests where they have experienced historic comprehensive clearing by mechanical or chemical means, through a commitment to cease re-clearing activities for the duration of the permanence period.

A significant source of net emissions in Australia is from re-clearing of secondary native forest, which directly increases greenhouse gas emissions and also reduces the potential for ongoing sequestration into the biomass carbon pools in the regrowing forest. Over the past decade, direct emissions from re-clearing of secondary forests (averaging almost 350,000 hectares per year (ha.yr-1)) amounted to 11 million tonnes of CO2-e yr-1. Additional non-direct emissions stemming from the decomposition of biomass and soil emissions after clearing events occurred at an unknown rate.

While the majority of re-clearing is for agriculture, principally grazing, and most of the re-clearing occurs in Queensland and New South Wales (these two jurisdictions accounted for 67% and 17% respectively of secondary forest clearing over the period 2013-2022), the method is proposed to have as broad a national application as possible.

Retaining secondary native forests will increase carbon pools from live and dead biomass and avoid greenhouse gas emissions from clearing events and post-harvest burns. An increase in carbon sequestration occurs through the retention of vegetation for a 50-to-100-year period by discontinuing the re-clearing events that typically occur every 5 to 30 years.

Projects will abate greenhouse gas emissions through the following pathways:

a) by retaining secondary forests, which avoids emissions from the release of carbon stored in live and dead biomass and soils (soil organic carbon), and methane and nitrous oxide from post-harvest burns.
b) by letting vegetation grow beyond the age it is typically cleared, so that carbon sequestration can continue as the vegetation grows.

Abatement can be reduced through wildfires, prescribed burning and non-fire related natural disturbances. The impacts of these events on credited carbon stocks and emissions will be accounted for in the calculation of the net abatement amount for projects with 50-year permanence periods but will be presumed to be immaterial in projects with 100-year permanence because the longer permanence period provides assurance that biomass losses from fires will be replenished over the permanence period.

3.2 Project eligibility requirements

To be eligible, projects must retain secondary native forests (not plantations or environmental plantings) on eligible lands.

Eligible lands will be defined as areas:

Criteria	Rationale
That have previously been subject to human-induced conversion of native forest to a non-forest land use	To ensure that regeneration is attributable to cessation of clearing, rather than regeneration of naturally disturbed areas that would have occurred in any case.
That have *native forest cover* at the date of the application for project registration	Confines the method to areas that have achieved forest cover following deforestation or re-clearing.
'Native forest cover' will be defined for these purposes as: land dominated by trees that: *(i) are located within their natural range;* *(ii) have not been planted;* *(iii) have attained a crown cover of at least 20% of the area of land, when defined at [100 or 625] m2 scale; and* (iv) *have reached a height of at least 2 metres (adapted from ACNR method, s 5).* The exclusion of plantings from the application of forest cover for this method acknowledges that plantings are at low risk of being cleared. In an integrated method, this exclusion would apply to avoided clearing only.	
That have not been cleared of native vegetation within 7 years of the date of the application for project registration	Removes incentives to re-clear forest or regenerating forest to become eligible for ACCUs under the method. This criterion is broader than restrictions in s20AA(1)(e) of the CFI Rule, to further reduce risks specific to this method.
That were *comprehensively-cleared* for agricultural purposes 8 to 25 years prior to the date of the application for project registration	Limits the application of the method to lands for which there are likely to be continuing economic incentives to re-clear. Limits the method to land that is subject to comprehensive clearing, excluding partial clearing (e.g. fodder harvesting) where regulations may require regeneration, and the land management objective does not require repeated clearing at relatively short-term intervals.
'Comprehensive clearing' will be defined for these purposes as: the comprehensive removal of trees by mechanical or chemical means from at least 90% of the land, defined at [100 or 625] m2 scale, other than small trees (i.e. less than ~5 cm diameter at breast height) that survive the clearing event by virtue of their size. This definition is intended to require projects to divide the area of interest into 10m x 10m or 25m x 25m cells (or pixels) and to exclude cells where less than 90% of the area has been subject to clearing. The finer scale at which forest will be defined in the method (moving from 0.2ha in the ACNR method to 100m^2 or 625m^2 will achieve greater accuracy in calculating the extent of regenerating forest for abatement calculations. The decision on whether to use 100m^2 or 625m^2 will be informed by engagement with stakeholders through the development process. The new definition of 'comprehensive clearing' when compared to the definition of 'clearing event in the ACNR method, provides greater clarity and standardisation for its interpretation.	
Where the landholder has the *unrestricted legal freedom* to	Reduces risk associated with regulatory additionality and focuses on agricultural clearing which is often not subject

comprehensively re-clear the land for agricultural purposes	to other regulation, including offsetting or similar requirements.
'Unrestricted legal freedom' will be defined for these purposes as: the legal entitlement to comprehensively re-clear the land for agricultural purposes, without needing government approval or having to comply with requirements to allow the cleared area to regenerate or to provide compensation of any kind to mitigate the environmental impacts of the clearing event, including by undertaking environmental offsets or setting aside other areas for conservation purposes.	
Where there is limited risk of land degradation from re-clearing	Reduces additionality risks by excluding lands where re-clearing is unlikely to occur because it is likely to cause land degradation, which would be unpalatable to landholders and/or likely subject to regulatory restrictions. The initial proposal is to exclude land with a slope of 10% or greater, but further exclusions will be considered through the consultation process.

FEEDBACK QUESTION:

Q: Are the definitions for eligible land able to be easily interpreted or applied in all jurisdictions that you work in?

Q: The definition of eligible lands currently includes the exclusion of lands with slopes of 10% or greater. What other indicators could be considered to demonstrate that land is of limited risk of re-clearing?

Q: At what scale should forest be defined in the method – 100m^2 or 625m^2? Why?

3.3 Permanence

IACNR projects will have permanence periods of either 50 years or 100 years. The known risk of significant re-clearing of secondary forests that are up to 25 years of age, and the inclusion of these forests in the method eligibility criteria, necessitates the exclusion of a 25-year permanence period.

If a 25-year permanence option was offered it is likely to increase the risk of projects simply deferring clearing. Requiring projects to have either 50- or 100-year permanence periods will ensure that there is still additionality in the retention of the forests.

The Climate Change Authority has recommended that the ACCU Scheme increases the average permanence and durability of carbon stored under the ACCU Scheme, in line with common international practices. By making the permanence period options 50 and 100 years, we are seeking to build confidence, for both buyers and project proponents, in the integrity of ACCUs issued under this method.

FEEDBACK QUESTION:

Q: Noting that introducing a 50-year permanence period option would be new to the ACCU Scheme, what are the opportunities and challenges that you see with introducing this change?

4. Abatement calculations

4.1 Baseline and project scenarios

The following rules are proposed to be used to establish baseline carbon stocks:

- Land within the carbon estimation area is assumed to be subject to ongoing cycles of re-clearing, regrowth and re-clearing over the modelling period.
- Carbon stocks in live and dead biomass and CH_4 and N_2O emissions from biomass burning will be modelled in both the baseline and project scenarios using the Full Carbon Accounting Model (FullCAM).
- Where there have been at least two past clearing events, the first baseline clearing event will be assumed to occur when the regenerating forest reaches the age when it was last cleared, plus two years (as per the existing ACNR method).
- Where the area has not been subject to two past clearing events, the first baseline clearing event will be assumed to occur 15 years after the modelling start date.
- Windrow burns are modelled in baseline scenarios only where the proponent can demonstrate that a windrow burn followed a clearing event.
- Any events modelled into the baseline are to occur at the same interval during the modelling period.
- Projects with a 50-year permanence period will:
    - include natural disturbances into both baseline and project scenarios when they occur; and
    - require baseline carbon stocks to be calculated at the end of each reporting period.
- Projects with a 100-year permanence period will:
    - not include natural disturbance within modelling as the loss of carbon stocks will be expected to be replenished during the permanence period; and
    - require baseline carbon stocks to be calculated at project commencement, assuming average climate conditions
- Projects that opt for direct measurement will be required to re-measure live tree biomass in years five and 10 of the project.

The baseline model is conservative as it considers natural regeneration to be consistent over time when, in practice, it is likely to decline over time as seed and root stocks diminish.

FEEDBACK QUESTION:

Q: Are the rules for baseline assessment for projects under the IACNR method appropriate and reasonable?

4.2 Abatement calculations

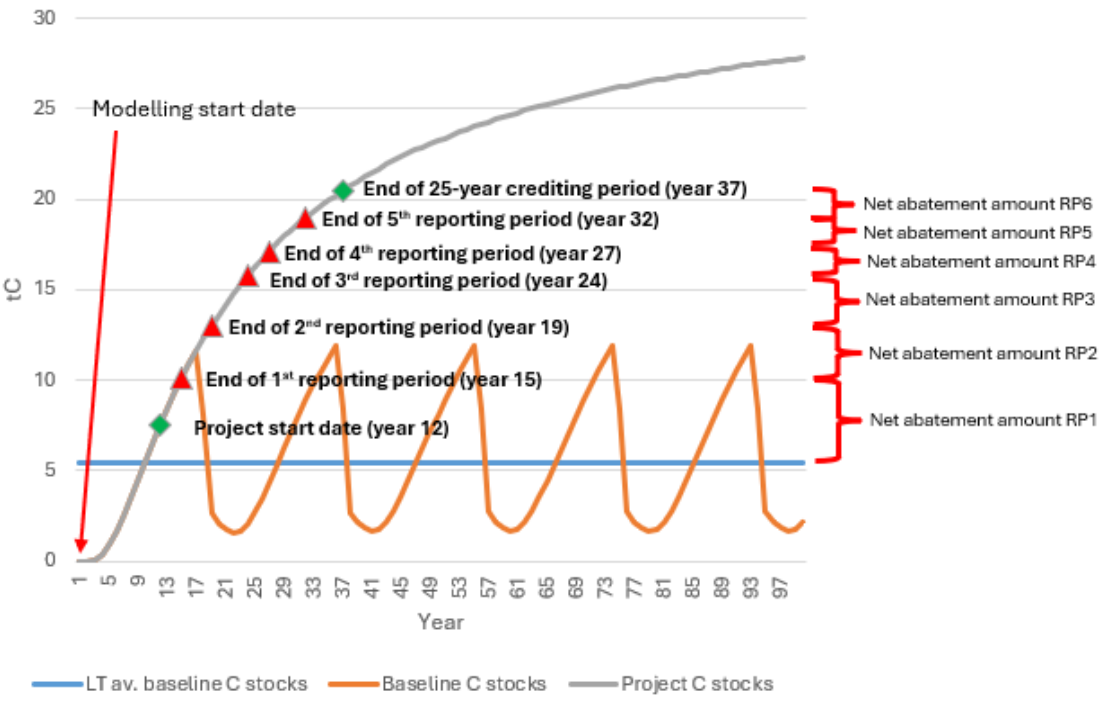
Two options are proposed for net abatement calculations, with the use of these dependent on the permanence period that is selected.

Approach A

This is the existing ACNR approach and can be used for projects with either a 50-year or 100-year permanence period where:

- total net abatement is calculated as the difference between the project carbon stocks at the end of the crediting period and the long-term (100-year) average baseline carbon stocks, minus CH_4 and N_2O emissions from biomass burning.
- ACCUs are allocated at the end of each reporting period.

Figure 1. Hypothetical illustration of calculation of net abatement amount for reporting periods under Approach A (existing ACNR approach) for 1 hectare carbon estimation area, assuming no emissions from biomass burning*

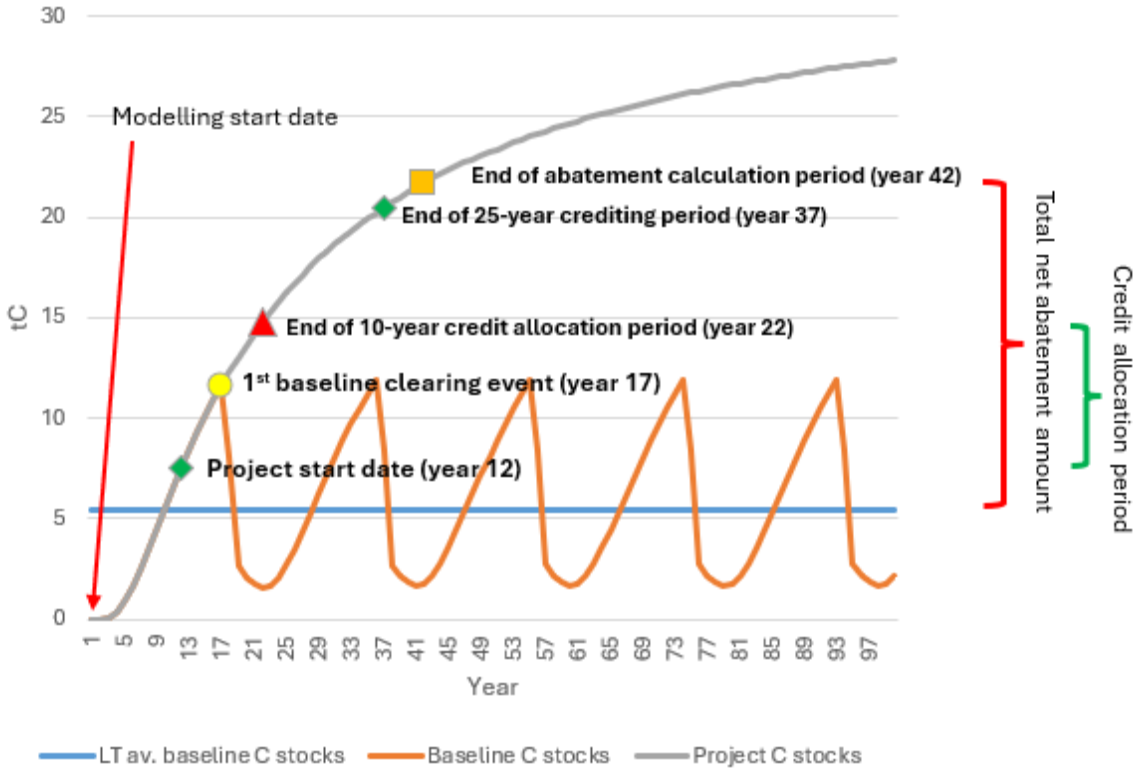


Approach B

This new approach can be used for projects with a 100-year permanence period where:

- total net abatement is calculated as the difference between the project carbon stocks at the end of the 25th year after the first baseline clearing event and the long-term (100-year) average baseline carbon stocks.
- ACCUs are allocated in equal instalments over the first 10 years of the project, unless the direct measure modelling is chosen. In this instance, a 5% buffer will be held back and given in year 11 pending the outcomes of the third measurement.

Figure 2. Hypothetical illustration of calculation of net abatement amount under Approach B (end of the crediting period net stocks approach) for 1 hectare carbon estimation area*



FEEDBACK QUESTION:

Q: Are the options for calculating abatement for projects under the IACNR method appropriate and reasonable?

4.3 Direct measurement

A direct measurement option will be available and requires the following steps:

- An initial inventory at the start of the project which will require the estimation of above-ground live tree biomass through sampling and direct measurement.
- The results from the initial inventory will be used to recalibrate the FullCAM forest plots that are used to model forest carbon stocks in the baseline and project scenarios.
- The FullCAM forest plots will be recalibrated by adjusting the estimate of maximum biomass (M), based on the age of the regrowth on the date of the inventory.
- To ensure conservativism, there will be a maximum limit on upward revisions of M, provisionally set at 25% above the applicable average M across the carbon estimation areas of the project.
- Carbon stocks in above-ground live tree biomass will also be required to be re-measured in years five and 10 of the project (i.e. the 2nd and 3rd measurement inventories).
- If direct measurement is selected, you are unable to switch modelling options following project registration.

4.4 Carbon Pools and Emissions Sources

The following tables summarise the carbon pools and sources, and events that will be accounted for in the abatement calculations.

Table 1. Carbon pools and emissions sources

Carbon pool or source	Type	Greenhouse gas
Carbon pool	Live above ground biomass	Carbon dioxide (CO_2)
Carbon pool	Live below ground biomass	Carbon dioxide (CO_2)
Carbon pool	Above ground forest debris	Carbon dioxide (CO_2)
Carbon pool	Below ground forest debris	Carbon dioxide (CO_2)
Emissions source NB: Except for projects with 100-year permanence period	Biomass burning	Methane (CH_4) Nitrous oxide (N_2O)

Table 2. Events and associated type of greenhouse gas accounted for

Event	Greenhouse gas
Clearing	Carbon dioxide (CO_2)
Biomass burning (prescribed burning and wildfire) NB: Except for projects with 100-year permanence period	Methane (CH_4) Nitrous oxide (N_2O)
Other natural disturbances NB: Except for projects with a 100-year permanence period	Carbon dioxide (CO_2)

Table 3. Coverage of relevant sinks and sources in the baseline and project scenarios

Scenario	Forest carbon	Biomass burning: projects with a 50-year permanence period	Biomass burning: projects with a 100-year permanence period
Baseline scenario	Carbon stock change in above- and below- ground live biomass and debris	Methane (CH_4) and Nitrous oxide (N_2O) emissions from post-clearing windrow burns (where applicable) and wildfires	Excluded
Project scenario	Carbon stock change in above- and below- ground live biomass and debris	Methane (CH_4) and Nitrous oxide (N_2O) emissions from prescribed burns and wildfires	Excluded

FEEDBACK QUESTION:

Q: Are the carbon pools and emissions sources correctly identified?

4.5 Accounting for periodic variation

Natural variability in forest carbon stocks can occur through three main pathways:

- climate related variability in carbon stocks in live and dead biomass;
- climate related variability in soil organic carbon (SOC) levels; and
- natural disturbances.

Climate related variability in carbon stocks in live and dead biomass

The extent to which the method addresses climate related variability in carbon stocks in live and dead biomass will depend on whether projects opt for a 50- or 100-year permanence period.

- For projects with a 50-year permanence period, the effects of seasonal variability will be captured in the FullCAM estimates of the carbon stocks at the end of each reporting period.
- For projects with a 100-year permanence period, abatement will be based on projected carbon stocks under average climate conditions. However, because the projects have a 100-year permanence period, the abatement estimates will still be conservative because projects will only be credited for approximately 70%-75% of the total additional sequestration in biomass generated by the project over the permanence period.

Projects will be required to use the most up-to-date version of FullCAM available at the end of the reporting period.

Climate related variability in SOC levels

The SOC level present in an area is impacted by rainfall and climate, making them highly variable through time. To avoid additionality risks and prevent projects from being credited for fluctuations in SOC stocks that are due to seasonal variability,, abatement calculations will not include SOC measurements. This provides some conservatism in the abatement calculations as it is understood SOC levels will be higher in areas with secondary native forests compared to cleared areas.

Natural disturbances

The extent to which the method addresses natural disturbances will depend on whether projects opt for a 50- or 100-year permanence period.

- For projects with 50-year permanence periods, the carbon stock changes and emissions associated with natural disturbances must be included in both the baseline and project scenarios as and when they occur. This will reduce the risk of over-crediting by ensuring projects account for the magnitude and timing of emissions from relevant pools (e.g. higher emissions from debris in the project scenario).
- For projects with 100-year permanence periods, carbon emissions from natural disturbances are not calculated into baseline and project scenarios. The benefit of an extended permanence period means where natural disturbances occur, carbon stocks are likely to be replenished. Methane and nitrous oxide emissions are likely to be relatively
- small compared to the total sequestration generated by the projects.

FEEDBACK QUESTION:

Q: Have the natural drivers of carbon stock variability been accurately identified?

Q: Are the treatments for natural disturbances and climate variability adopted under the different permanence periods appropriate and reasonable?

Q: Do you agree with this approach to excluding SOC? If not, do you have an alternative solution to manage variability in SOC that excludes variation driven by rainfall and climate?

4.6 Accounting for leakage

Consideration of leakage risks for this method are outlined below.

Leakage comes in two main forms: direct and indirect.

- **Indirect leakage** refers to instances where the benefits of the abatement within the project boundary are negated by market-induced increases in emissions or reductions in removals outside of the project boundary.
- **Direct leakage**, also known as activity shifting, refers to instances where the project proponent physically moves the emitting activity to another location, while claiming credits for the reduction in emissions at the initial site of the activity.

Indirect leakage

The risk of ACNR projects triggering an increase in land clearing domestically via indirect means is low. This is because any reduction in red meat and fibre production that is associated with the projects is unlikely to impact relevant prices. The primary markets—in meat and fibre from cattle, sheep and goats—are competitive and trade exposed. The likely eligible areas are also responsible for a small proportion of production in relevant domestic and international markets. Due to these factors, market prices are unlikely to be affected by any decrease in production that arises from the projects. In the absence of a change in market prices, there is no economic incentive for landholders to try to increase production by clearing additional land.

Direct leakage

There is a risk of ACNR projects triggering direct leakage, where the project proponent protects one area but then clears another instead. When considering land clearing activities, landholders can face barriers such as impacts to productivity, land values and their ability or willingness to access capital.

Graziers in Australia tend to have relatively low debt levels, reflecting landholders' reluctance to borrow due to the fear of being unable to meet debt servicing commitments during hard times (e.g. drought and periods of low commodity prices). The cash income of grazing businesses is also often relatively modest, including in the regions where ACNR projects are most likely to be initiated. The reluctance to borrow and relatively low surplus cash levels can impede the ability of

landholders to finance clearing activities, even where they are likely to be profitable. ACNR projects could alleviate this barrier by providing landholders with additional cash resources, which could then be used to fund vegetation clearing.

The risk of this type of direct leakage is not unique to avoided clearing projects; it is associated with all agricultural-related carbon projects, particularly those involving grazing lands. To date, it is unclear whether existing carbon projects have triggered material direct leakage. There is some anecdotal evidence of it being associated with human-induced regeneration and avoided deforestation projects in western New South Wales and Queensland. However, the issue has not been properly analysed.

A leakage discount could be applied to avoided clearing projects to address the risk. However, if a discount is applied, it should be applied across all relevant methods and project types. To provide an evidence base for this decision, further research could be undertaken on the extent of any direct leakage associated with existing human-induced regeneration and avoided deforestation projects.

FEEDBACK QUESTION:

Q: Have the leakage risks and their severity been accurately identified?

Q: Are there leakage risks specific to this method that have not been identified? Are these risks able to be addressed appropriately within the method's conservativeness measures?

5. Total abatement potential

5.1 Total abatement potential

Modelling has been undertaken to assess total abatement potential, with a concentration on Queensland data as it was available (Table 4).

Table 4. Key outcomes after 10 years or 25 years of clearing reductions that are plausible under ACNR method changes. Differences between baseline 2020-21 clearing rates and reduced clearing scenarios for regrowth aged 10 to 25 years.

	Change in forest extent (ha x 1000)		Change in biomass and debris carbon stocks (Mt CO_2-e)		ACCUs (millions)	
	10 yrs	25 yrs	10 yrs	25 yrs	10 yrs	25 yrs
S1: Clearing 10% less than 2020-21 for regrowth aged between 10 and 25 years since disturbance	55.5	73.0	3.8	6.6	3.0	5.5
S2: Clearing 25% less than 2020-21 for regrowth aged between 10 and 25 years since disturbance	155.8	219.8	11.3	20.9	8.9	17.3
S3: Clearing 50% less than 2020-21 for regrowth aged between 10 and 25 years since disturbance	324.8	477.7	23.8	46.7	17.7	34.8

Based on data that was available, it is estimated that new ACNR projects in New South Wales could generate 75,000 to 440,000 ACCUs per year over 10 years (95,000-595,000 tCO2-e yr-1 of abatement). The remaining jurisdictions could provide in the order of 5-10% of the estimated potential for Queensland (maximum of 177,000 ACCUs per year, or abatement of 240,000 tCO2-e yr-1).

The use of Approach B could significantly increase the number of ACCUs generated over the forward 10-year period, depending on the uptake of 100-year projects. Importantly, high uptake of 100-year permanence would also result in higher likely levels of overall abatement that would more than cover the increase in ACCU generation.

In terms of accessibility, the proposed method is comparable to other existing or proposed ACCU methods. Improving the accessibility could occur by developing the Integrated Reforestation and Avoided Re-clearing method option and including plantings and/or human assisted regeneration.

FEEDBACK QUESTION:

Q: Does this modelling reflect your expectations or understanding of the total abatement potential, noting that there are a range of factors that will determine uptake of the method?

6. Option for an Integrated Reforestation and Avoided Re-clearing Method

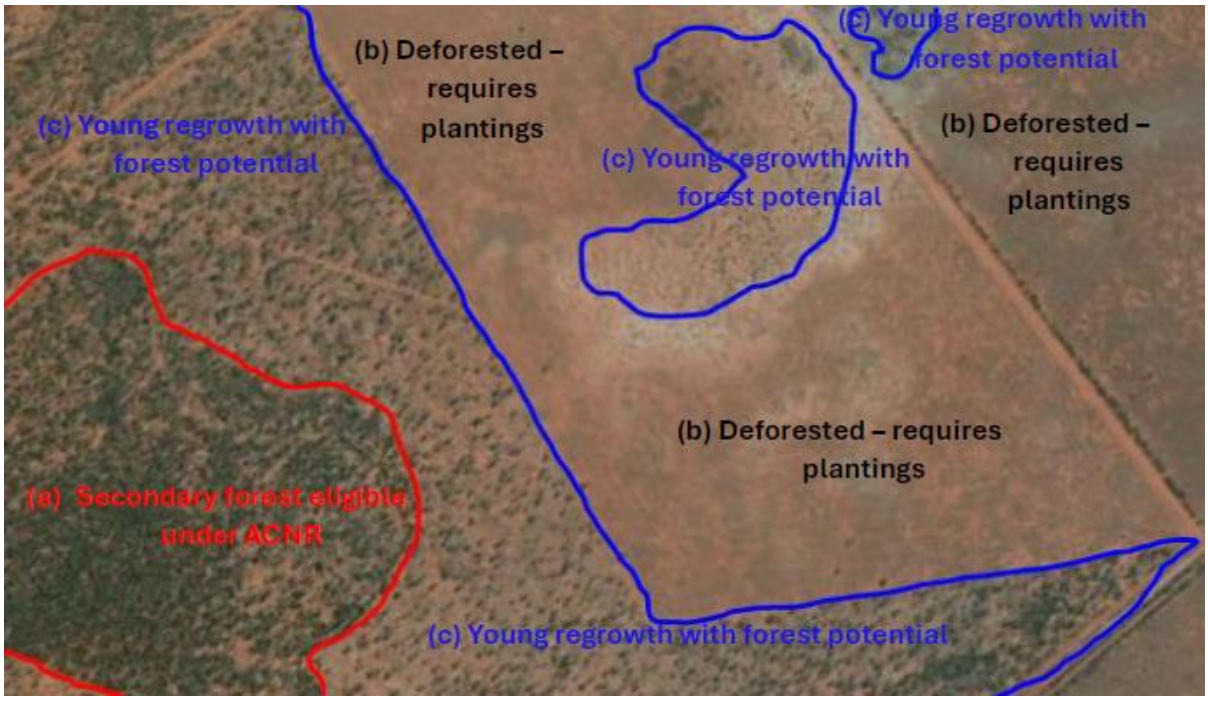
6.1 Overview of option

There is an opportunity to expand the scope of the Improved Avoided Clearing Native Regrowth to include environmental plantings and assisted natural regeneration. Under this option, it is proposed to combine the proposed IACNR method, the updated version of the existing environmental plantings method and an assisted regeneration approach taking elements from the expired native forests from managed regrowth and human-induced regeneration methods.

Typically, agricultural landscapes are made up various land cover including:

a. deforested areas at high-risk of re-clearing that have regrown and achieved forest cover (secondary forest);
b. deforested areas with no or little regrowth that require plantings if they are to be reforested;
c. deforested areas with young regrowth that has the potential to achieve forest cover if it is not re-cleared; and
d. other areas (e.g. remnant vegetation and secondary forests that are not eligible under the ACNR method).

This is illustrated in the image below, showing an area of land in western Queensland comprised of (a), (b) and (c).



The lowest risk, highest integrity sequestration opportunities are associated with (a) avoided re-clearing, (b) the reforestation of cleared areas through environmental plantings and (c) assisted natural regeneration, or a combination of environmental plantings and assisted natural regeneration.

Currently there are no ACCU methods for assisted natural regeneration and it is not captured in the proposed IACNR method. If an assisted natural regeneration on cleared lands method is made, a landholder with (a), (b) and (c) on their land would need to register 3 separate ACCU projects to realise the associated opportunities. This would result in the landholder incurring the additional transaction costs and complexity associated with registering and undertaking three separate projects rather than having them integrated within one project.

Benefits of this approach include:

- Reduced transaction costs and complexity.
- Increased abatement potential by allowing carbon estimation areas to contain areas with reforestation, environmental plantings and assisted natural regeneration.
- Allowing this combination will encourage land restoration best practice by reducing costs associated with reforesting previously deforested lands.
- The combination of activities into one method will reduce complexity of the scheme by minimising the total number of ACCU scheme methods.
- Despite the potential complexities of an 'integrated' method, the proposed method will produce outcomes with high integrity, clear additionality and easily observed outcomes
- ACCUs that should be attractive to, and valued by, buyers.

6.2 How will it work?

- Common elements with the IACNR method proposal include the proposed permanence periods, crediting process and scale for defining forest cover.
- Areas with plantings and assisted natural regeneration would need to meet the following land eligibility criteria:
    - must have previously been subject to a native deforestation event, involving the human induced conversion of native forest to a non-forest land use;
    - not have had forest cover for 10-years prior to the date of the application for project registration (consistent with criteria in the expired HIR method); and
    - have the potential to achieve native forest cover through plantings and/or assisted natural regeneration.

Attachment D to the EOI contains more detailed information about the Integrated Reforestation and Avoided Re-clearing Method proposal.

FEEDBACK QUESTION:

Q: Do you support the development of an integrated method?

Q: If an integrated method is developed, are there additional considerations that should be made in addition to what has been discussed within this document and the EOI?

Attachment 1 – Offset Integrity Standards

Information on the offsets integrity standards can be found here: ERAC Information Paper on the Offsets Integrity Standards.

Additionality

A method should result in carbon abatement that is unlikely to occur in the ordinary course of events (disregarding the effect of the Act).

Non-additionality from approving projects that would not have cleared eligible vegetation is an important integrity risk for the proposed method. To address this, the method has been designed to exclude this risk through the land eligibility criteria, including;

- the requirement for a landholder to have unrestricted legal freedom to clear and not be bound to retain vegetation under any government approval process.
- Restricting eligibility to areas where re-clearing is likely to occur. . For example, areas with ≥10% slope are currently proposed to be ineligible due to high erosion risk, and therefore reduced risk of re-clearing. Further possible criteria related to potential for land degradation will be a priority for consultation.
- The following factors have been considered to reduce the risk of capturing projects that are unlikely to re-clear due to low economic benefits:
    - The land must have been comprehensively cleared for agricultural purposes 8 to 25 years prior to the date of the application for project registration. Probability of re-clearing is reduced through time, removing the potential of capturing properties that are more likely to have retained vegetation after year 25.

The risk of future policy changes to regulating re-clearing on agricultural land that would result in a landholder being required to retain vegetation within projects areas, particularly changes that will be sustained over time and effectively enforced, are considered unlikely due to strong opposition of impacting property rights and expert advice for regulatory stability.

Behaviour change of landholders may occur through emerging market access and a change of stakeholder expectations resulting in reduced clearing. It is expected that the land being captured under the eligibility criteria will still be at risk of re-clearing events due to economic drivers. This reduces the likelihood of landholders being responsive to these types of requirements, where they have alternative markets to supply to and alternative sources of capital. The available evidence suggests these alternatives will be available into the foreseeable future, which will blunt the capacity of market access and stakeholder requirements to materially alter the incentives faced by relevant landholders. Additionally, market access restrictions that may come into effect would have to be punitive to producers re-clearing existing agricultural land (as opposed to targeting primary clearing/deforestation), which seems unlikely.

Measurable and verifiable

A method involving the removal, reduction or emissions of greenhouse gases should be measurable and capable of being verified.

Robust and conservative measurement will be assured through the proposed approaches to calculating the net abatement amount. The following measures are of note:

- FullCAM will model emissions from live and dead biomass, and biomass burning.
- Proponents will have the option of directly measuring carbon stocks in live tree biomass in the project area to calibrate FullCAM plots. Re-measurement of carbon stocks in live tree biomass will be required in years 5 and 10. For 100-year projects using abatement calculation under approach B, 5% of ACCUs will be held back until year 11 of the project pending the outcomes of the third measurement inventory.
- The SOC pool will be excluded from the abatement calculations. As this is a conservative approach, no risks are associated with the measurement of soil carbon abatement.
- To ensure baseline carbon stocks are accurate, windrow burns are to be included in baseline scenarios only when they occur, rather than always being assumed to occur.
- How natural disturbance effects is modelled has been updated:
    - for projects with 50-year permanence periods, natural disturbances be included in both the baseline and project scenarios as and when they occur; and
    - for projects with 100-year permanence periods, the carbon stock changes and emissions associated with natural disturbances be excluded from both the baseline and project scenarios.

Eligible carbon abatement

A method should provide abatement that is able to be used to meet Australia's international mitigation obligations.

Australia has committed to meet obligations under the Paris Agreement, specifically to reduce emissions by 43% below 2005 levels by 2030 and net zero emissions by 2050.

The CFI Act 2011 defines the term 'eligible carbon abatement' as meaning carbon abatement resulting from the carrying out of an offsets project that is able to be used to meet Australia's climate change targets under the Kyoto Protocol or the Paris Agreement. That section also defines the term 'carbon abatement' as meaning removal of any greenhouse gases from the atmosphere or avoidance of release of any greenhouse gases into the atmosphere.

Australia has committed to meet obligations under the Paris Agreement, specifically to reduce emissions by 43% below 2005 levels by 2030 and net zero emissions by 2050.

Carbon abatement through sequestration in forests or avoided emissions from forest clearing are eligible abatement, as they can be accounted for in Australia's National Greenhouse Gas Inventory.

Evidence-based

A method should be supported by clear and convincing evidence.

The following measures have been integrated into the method to ensure it upholds clear abatement additionality and robustness in its measurements, verification, treatment of leakage and project emissions:

- The definition for eligible land has been designed to mitigate the risk of crediting for business as usual scenarios and facilitate consistent estimations of sequestration in regenerating native forests.
- Evidence on the robustness of the approach to measurement (FullCAM and related measurement approaches) is detailed in Australia's National Inventory Report.
- The design of modelling integrates accuracy and conservatism by allowing project specific data to be used such as when windrow burns occur and natural disturbance events.
- Abatement calculations are confined to the carbon pools with demonstrable links to evidenced, anthropogenic tree clearing, with the exclusion of soil organic carbon.

These measures have been covered in further detail throughout this document and within the EOI.

The evidence of the robustness of the approach to addressing additionality risks relies particularly on data from the Queensland Statewide Landcover and Trees Study.

Project Emissions

Material greenhouse gas emissions emitted as a direct result of the project should be deducted.

It is not expected that projects under this method produce a measurable emission. Emissions from fossil fuel use are omitted because they are likely to be immaterial and the same, if not lower, in the project scenario relative to the baseline scenario, which would involve repeated comprehensive clearing events that are likely to be emissions-intensive activities.

Conservatism

Where a method involves an estimate, projection or assumption, it should be conservative.

Measures in the proposed ACNR method to ensure conservatism include the following.

- Stringent land eligibility requirements that mitigate additionality and measurement risks by confining the application of the method to areas that have forest cover at project commencement and are at high risk of re-clearing.
- Projects will be required to have either a 50 or 100-year permanence period, meaning only 50%-75% of total sequestration will be credited. An additional permanence period discount of ~3-5% could also be applied to projects with 50-year permanence periods, if this was considered necessary.
- The exclusion of the SOC pool from abatement calculations, where there is an expectation of an increase in SOC related to project activities.
- The use of a baseline scenario that assumes ongoing cycles of re-clearing, regrowth and re-clearing, when in reality the extent of natural regeneration after comprehensive re-clearing events is likely to decline over time as native soil seed stocks diminish.

- The inclusion of a requirement for projects to evidence windrow burns in the last comprehensive clearing event if they want to include windrow burns in the baseline scenario.
- Including the effects of natural disturbances in both the baseline and project scenarios as and when they occur for projects with 50-year permanence periods.

FEEDBACK QUESTION:

Q: Are there issues that you would like to address in relation to the Offset Integrity Standard assessment of the IACNR method that you haven't addressed already?