Integrated Reforestation and Avoided Re-clearing (IRAR) Method

Case for an Integrated Method Combining ACNR, Environmental Plantings and Assisted Natural Regeneration

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1. Introduction

Landholders interested in undertaking ACNR projects will generally have properties comprised of:

(a) deforested areas that have regrown and achieved forest cover (secondary forest) and that are at high risk of re-clearing and meet the proposed ACNR eligibility requirements;

(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).
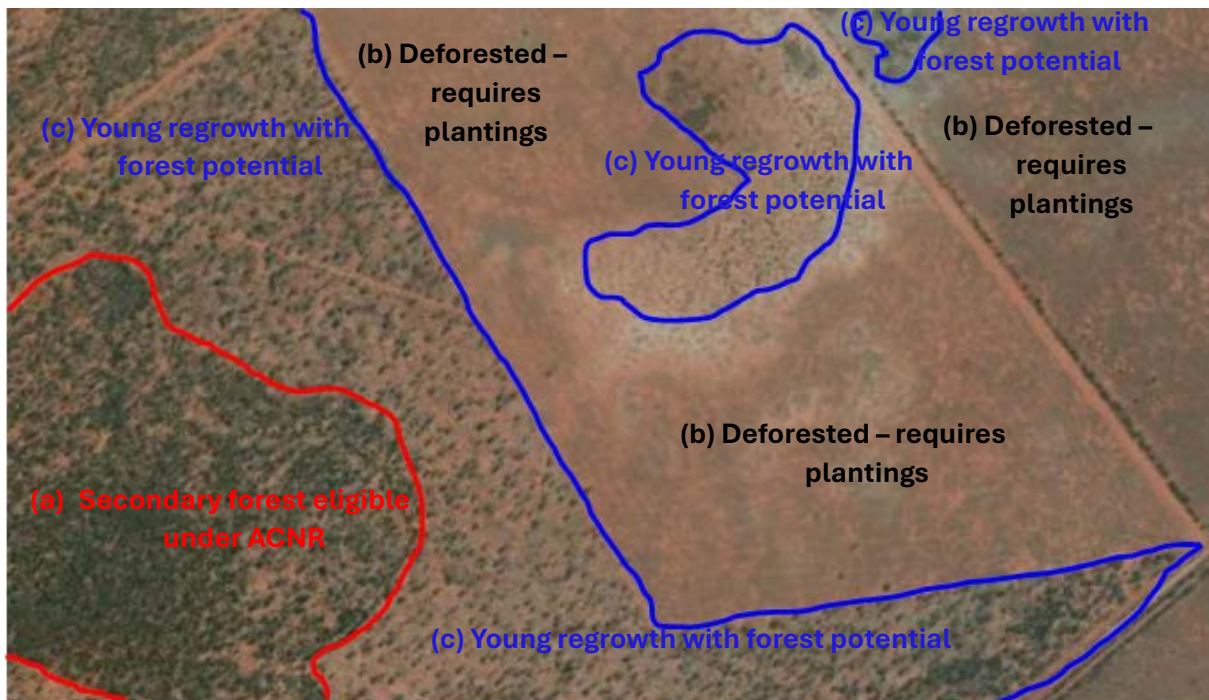
Currently, if the landholder wanted to undertake a ACNR project on (a) and a reforestation project on the remainder of the land in the image they would be required to register three separate ACCU projects:

- Project A in (a) (with one carbon estimation area);

- Project B in the (b) areas (with two carbon estimation areas); and

- Project C in the (c) areas (with three carbon estimation areas).

This would result in the landholder incurring the additional transaction costs and having to navigate the complexity associated with registering and undertaking three separate projects.

2. Benefits of an integrated native forest protection and reforestation method

A well-designed method that integrated ACNR and reforestation on deforested lands through plantings and/or assisted natural regeneration could offer several benefits. It would:

- reduce the transaction costs and complexity associated with undertaking ACNR and reforestation projects on the same land.

- enable reforestation carbon estimation areas to combine environmental plantings and assisted natural regeneration. To date, this has not been possible under the ACCU scheme. For example, under the existing environmental plantings method and the proposed new environmental plantings method, projects must exclude areas containing natural regeneration, which adds to the complexity of stratifying carbon estimation areas. This misses a clear opportunity, with substantial abatement potential, to enable projects to combine regeneration with supplementary plantings. This integrated approach reflects and encourages best practice restoration approaches and can greatly reduce the costs associated with reforesting previously deforested lands – planting costs are high and utilising natural regeneration where possible can significantly reduce project costs. .

- as a result of the above efficiencies, provides greater abatement potential than the separate methods combined.

- reduce the total number of ACCU scheme methods and therefore complexity of the Scheme as a whole.

provide a single method for all eligible previously cleared lands, thereby capturing simply, and in an approach that also captures the suite of best-practice land restoration activities, a significant slice of the carbon abatement potential in Australia's landscape. provide a single, high integrity native forest protection and reforestation method, which would help distinguish projects and their ACCUs in the market as high integrity, with clear additionality and easily observed outcomes.

3. How to accommodate reforestation through plantings and assisted natural regeneration in the method

The simplest way of creating an integrated native forest protection and reforestation method is to combine:

- the proposed improved ACNR method;

- the existing environmental plantings method (or a slightly updated version of it);[1] and
- the now expired human-induced regeneration method, with minor edits to ensure it is explicitly confined to deforested lands.[2]

While simple in concept, this approach would lead to fewer complications and internal inconsistencies, particularly in relation to crediting, permanence periods and land eligibility.

The proposed improved ACNR method front-loads crediting over approximately 10 years for projects with a 100-year permanence period, to incentivise longer permanence because of their higher level of integrity. Projects under a combined method would also have the option of either 50- or 100-year permanence periods; 25-year permanence periods will not be an option. In contrast, under the existing environmental plantings method and expired human-induced regeneration method, projects have the option for 25-year permanence periods and crediting is based on stock change over the 25-year crediting period, based on the assumption of a zero baseline.

Including an option for 25 year permanence, rather than the recommended 50 or 100 years, would create complications in an integrated method because permanence period requirements apply at the project level, not the carbon estimation area level. For example, if a project was comprised of an improved ACNR carbon estimation area and an environmental planting carbon estimation area, it would have to have a 50- or 100-year permanence period. However, a project with only environmental planting and assisted natural regeneration carbon estimation areas could opt for a 25-year permanence period. This is illogical and would reduce the integrity of the integrated method. Most registered environmental planting projects (58%) have opted for 100-year permanence, despite 25 being an option, so restriction to 50 or 100 year options should not preclude uptake, particularly with additional incentives from earlier crediting as proposed.

The proposed improved ACNR method also contains a modified definition of 'forests' and 'forest cover', where the forest cover threshold is defined at [100 or 625] m^2 scale. In contrast, under the environmental plantings method and expired human-induced regeneration method, forest cover is defined at the 0.2 ha (2,000 m^2) scale. The use of the [100 or 625] m^2 scale in the improved ACNR method is intended to reduce the risk of crediting pre-existing forested areas that are at low risk of being cleared.

To promote integrity and consistency, the proposal is for the integrated method to:

- define forest cover at the [100 or 625] m^2 scale;

- require all projects to have 50- or 100-year permanence periods, regardless of the nature of the project activities undertaken in the carbon estimation areas; and

- adopt a consistent approach to crediting across activities, based on whether projects have 50- or 100-year permanence periods.

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[1] *Carbon Credits (Carbon Farming Initiative) (Reforestation by Environmental or Mallee Plantings—FullCAM) Methodology Determination 2014*.
[2] *Carbon Credits (Carbon Farming Initiative) (Human-Induced Regeneration of a Permanent Even-Aged Native Forest—1.1) Methodology Determination 2013*.

3.1 Land eligibility for environmental plantings and assisted natural regeneration

The integrated method would require that, for land to be included in an environmental planting and/or assisted natural regeneration carbon estimation area it:

- 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.

3.2 Crediting for projects with 50-year permanence periods

For projects with 50-year permanence periods, total net abatement for environmental planting and/or assisted natural regeneration carbon estimation areas would be calculated as the modelled change in carbon stocks in live and dead biomass over the 25-year crediting period, assuming a zero baseline, minus CH_4 and N_2O emissions from biomass burning. The credits representing this abatement would be allocated in roughly equal instalments over the 25-year crediting period (i.e. linear allocation).[3]

There are three notable aspects of this approach.

a) Credits will be allocated in equal instalments over the crediting period, adjusted for emissions from biomass burning.

b) It assumes a zero baseline, even where there is regeneration on site at the commencement of the project. The benefit of this approach is its simplicity – it avoids the need for complicated approaches to account for the biomass in regeneration and the potential for cycles of re-clearing in the baseline scenario. The zero baseline is based on the assumption that, if an area of land has previously been deforested and kept in a non-forest state for at least 10-years, any biomass onsite at project commencement is likely to be lost over time through subsequent re-clearing or other factors related to land management. The integrity of this approach is upheld via:

  o the exclusion of land with forest cover and defining forest cover at the [100 or 625] m^2 scale;

  o linear crediting and the mandatory 50-year permanence period, which will ensure the credited abatement will generally be significantly less than the amount sequestered in the forest over its permanence period.

c) Contrary to the approach used in the environmental plantings method, emissions associated with fuel use would be excluded on the basis they are not material. Fuel use in the project scenario will also typically be materially lower than in the baseline

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[3] An option could be included for environmental planting and/or assisted natural regeneration carbon estimation areas to be credited based on stock change over the reporting period if onsite biomass at commencement is less than a prescribed amount.

scenario, where the land continues to be used for agricultural production or similar purposes.

3.3 Crediting for projects with 100-year permanence periods

For projects with 100-year permanence periods, total net abatement for environmental planting and/or assisted natural regeneration carbon estimation areas would be calculated as the modelled change in carbon stocks in live and dead biomass over the 25-year crediting period, assuming a zero baseline. Emissions from biomass burning (wildfires and prescribed burns) would be excluded from calculations, rather than deducted from sequestration as they are in shorter projects. This is justified for permanent projects because loses from fires can be expected to be recovered over the long run.

The credits reflecting this abatement would be allocated in equal instalments over the first 10 years of the project. This will ensure alignment with the approach used for projects with 100-year permanence periods under the proposed improved ACNR method.