

Integrity Problems with the ERF's 2022 Plantation Forestry Method

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1. Introduction

Since 2014, the centrepiece of Australia's climate policy has been the Emissions Reduction Fund (ERF), a \$4.5 billion fund that incentivises emissions reduction activities across the economy and forms the basis of Australia's carbon market. Under the ERF, projects that reduce emissions receive Australian carbon credit units (ACCUs)—a type of financial product—that can be sold to the Australian Government and private entities that are required to, or that voluntarily choose to, offset their emissions.

Earlier this year, we went public with details of serious integrity issues with the ERF, labelling it 'environmental and taxpayer fraud'. While a number of long-held concerns with the scheme exist, we initially focused our critique on the ERF's most popular carbon credit methods: human-induced regeneration (HIR); avoided deforestation; and landfill gas. Our analysis suggests the majority of the ACCUs issued to projects under these methods do not represent abatement that is real (emissions have not been reduced) or additional (the reduction would have happened anyway).

Over the past few months, questions have been raised about the integrity of the 2022 plantation forestry method, which was introduced in the final months of the Morrison Government.¹ This paper explains the nature of the concerns about the integrity of this new method.

2. Some context – the 'old' 2017 commercial plantations method

The Plantation Forestry 2022 method replaced a previous commercial plantations method that was made in 2017.² The 2017 commercial plantations method provided for only two types of projects:

- the establishment of new plantations on land that was previously used for other non-forest purposes; and
- the conversion of short-rotation plantations to long-rotations (what should involve shifting from pulplog to sawlog production).

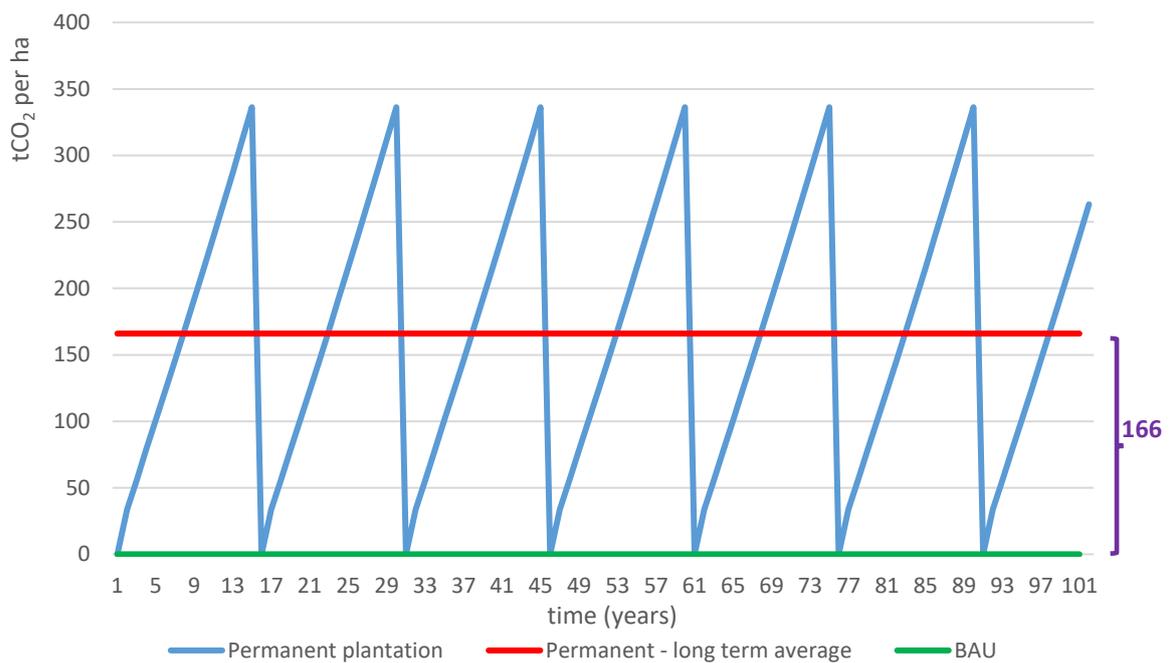
The greenhouse gas abatement from these projects arises from the fact they increase the long-term average stock of carbon that is stored in the plantation forests, and the wood products that are derived from them, relative to a business-as-usual scenario (BAU) in which the plantation is not established or the rotation lengths are not extended. This is illustrated in Figure 1, which shows the increase in the long-term average carbon stock in a hypothetical 1 hectare new plantation project, relative to the case if it had continued to be used for other non-forest purposes (e.g. cropping or

¹ *Carbon Credits (Carbon Farming Initiative—Plantation Forestry) Methodology Determination 2022.*

² *Carbon Credits (Carbon Farming Initiative—Plantation Forestry) Methodology Determination 2017.*

grazing).³ In the BAU scenario, the onsite carbon stock is near zero. In the project scenario, the establishment of the plantation results in the sequestration of carbon dioxide (CO₂) in the forest. In this scenario, the forest is harvested every 15 years, which produces the signature ‘sawtooth’ pattern in the onsite stock of CO₂. Notwithstanding the periodic harvesting, provided the plantation is repeatedly re-established, there is a significant increase in the long-term average carbon stock (it goes from 0 tonnes (t) CO₂ to 166 tCO₂).

Figure 1. Hypothetical increase in long-term onsite carbon stock from plantation establishment relative to business-as-usual scenario (BAU) involving cropping or grazing



The 2017 commercial plantations method limited eligibility to plantation establishment and rotation extensions to minimise additionality risks; or the risk of crediting abatement that would have occurred anyway.⁴ Both of these activities rarely happen in the absence of government support. Most of Australia’s 1.01 million hectares of softwood plantations (e.g. pines) were established between 1960 and the mid-1990s through a series of Commonwealth and state subsidy programs, and most of Australia’s 711,000 hectares of hardwood plantations (e.g. eucalypts) were established between the mid-1990s and 2010 as a result of the tax incentives associated with forestry managed investment schemes (MISs).⁵ ACCUs constitute a new form of subsidy to help expand the plantation

³ For simplicity, we have confined the carbon pools to onsite above- and below ground carbon and have not included debris or harvested wood products.

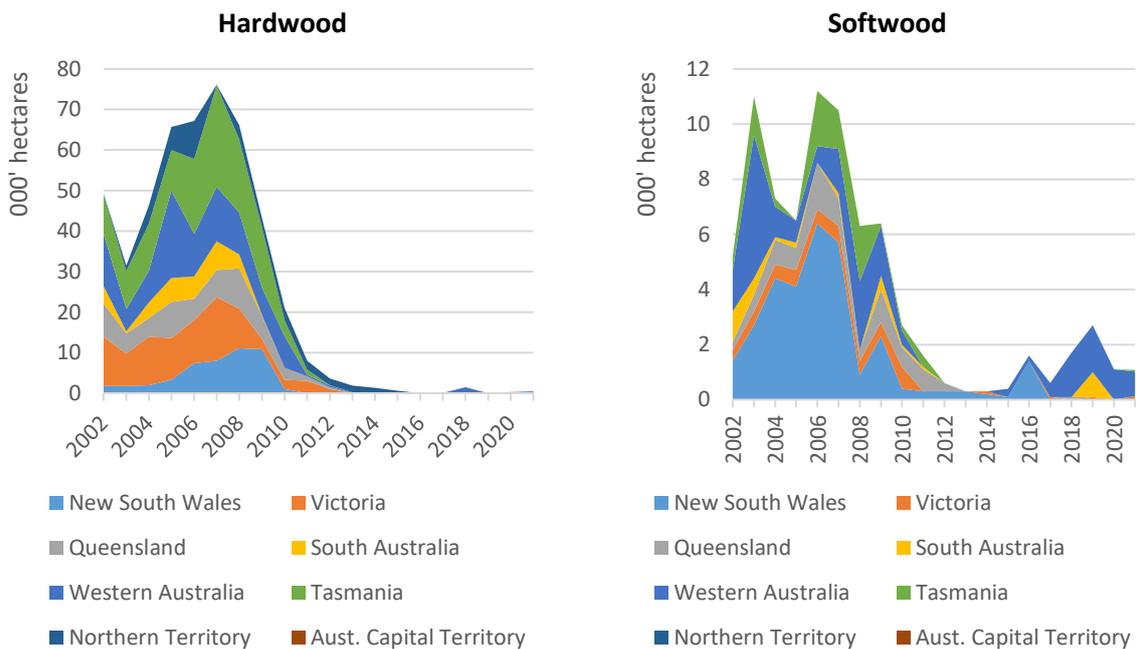
⁴ Additionality risks were further mitigated by excluding certain types of plantations and confining eligibility to plantations established in National Plantation Inventory regions, where there was reliable data on plantation establishment. See *Explanatory Statement: Carbon Credits (Carbon Farming Initiative) Act 2011, Carbon Credits (Carbon Farming Initiative—Plantation Forestry) Methodology Determination 2017*.

⁵ Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) (2022) *Australian forest and wood products statistics, September and December quarters 2021*. Commonwealth of Australia, Canberra; Dargavel, J. (1995) *Fashioning Australia’s Forests*. Oxford University Press.

estate and incentivise the shift from short-rotation plantations that produce pulplogs to long-rotation plantations that produce sawlogs.

The strength of the argument in support of the additionality of new plantation establishment projects is evident from the trends in new plantations. As Figure 2 shows, since the collapse of the forestry MISs in the wake of the 2008 global financial crisis, barely any new hardwood or softwood plantations have been established. The only exception is a couple of thousand hectares of softwoods that have been established in Western Australia since 2017, mostly with state government support.

Figure 2. Plantation establishment in Australia, by type and jurisdiction, 2002 to 2021



Source: ABARES (2022) *Australian forest and wood products statistics, September and December quarters 2021*. Commonwealth of Australia, Canberra.

3. The 2022 plantation forestry method

The 2017 plantation forestry method was revoked in early 2022.⁶ It was replaced by the 2022 method which is designed to ‘provide more opportunities for the plantation forestry industry to participate in the ERF’.⁷ The new method retains the original two project types and adds two more:

- continuing plantation projects, where proponents get ACCUs for re-establishing a plantation after it has been harvested; and
- permanent planting projects, where proponents get ACCUs for converting an existing plantation to a permanent planting that is not harvested.

⁶ *Carbon Credits (Carbon Farming Initiative—Plantation Forestry—Revocation) Instrument 2022*.

⁷ Clean Energy Regulator (2022) ‘Plantation forestry method’. Available at: <https://www.cleanenergyregulator.gov.au/ERF/Choosing-a-project-type/Opportunities-for-the-land-sector/Vegetation-methods/plantation-forestry-method> (12 August 2022).

Continuing plantation projects and permanent planting projects are essentially avoided deforestation projects, or what can be called ‘avoided plantation conversion projects’. Projects get credits for not converting the plantation to another non-forest land use. Similar to the original two project types, the abatement from these projects supposedly arises from the fact they increase the long-term average stock of carbon stored in the forests (and, where relevant, harvested wood products), relative to a BAU in which the plantation forest is cleared and the land is converted to cropping or grazing land.

The concerns about the integrity of the 2022 plantation forestry method relate primarily to avoided plantation conversion projects.⁸ The concerns about these project types centre on two issues:

- whether plantations that register for avoided plantation conversion projects would have been converted to cropping or grazing in the absence of the incentive provided by the ERF (i.e. is the abatement from these projects likely to be additional); and
- whether the approach to estimating the abatement from continuing plantation projects is sufficiently conservative.

Carbon offsets are a high risk environmental policy instrument – it is easy to credit false abatement and, where this occurs, it can result in a net increase in greenhouse gas emissions. Reflecting this, the first principle of carbon offsetting is that credits should only be issued where there is high confidence that the credited abatement is real and additional. This is why the ERF’s offsets integrity standards require the methods to only credit abatement that is ‘unlikely to occur in the ordinary course of events’ and to be supported by ‘clear and convincing evidence’, and for all of the assumptions, projections and estimates in methods to be ‘conservative’.⁹

4. Why the 2022 plantation forestry method fails the offsets integrity standards

The 2022 plantation forestry method does not satisfy the offsets integrity standards because of three issues concerning avoided plantation conversion projects.

1. The inclusion of avoided plantation conversion projects in the method is predicated on the assumption that there is likely to be a significant contraction in the plantation estate and that this can be avoided by the provision of ACCUs to plantations that are likely to convert to non-forest land uses. The problem is there is no credible evidence that there is likely to be a significant contraction in the plantation estate any time in the foreseeable future. Australia’s plantation estate has only ever experienced one significant episode of plantation conversions, and that has occurred over the past decade. Since 2009, the hardwood estate has shrunk by almost 300,000 hectares – the softwood estate has been relatively stable.¹⁰ The contraction in the hardwood estate was an inevitable consequence of the distortions

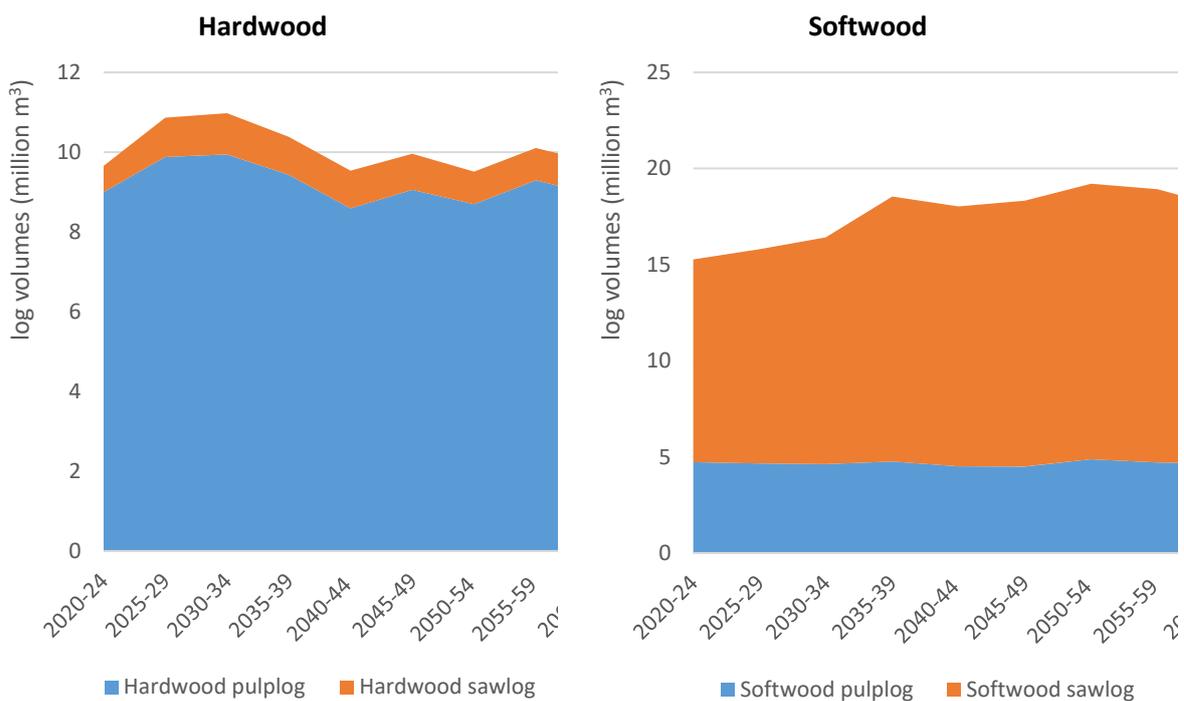
⁸ The integrity of plantation establishment and rotation extension projects could be improved by requiring all projects to have 100-year permanence periods or modifying how the long-term average carbon stock is calculated in the project scenario for projects with 25-year permanence periods to account for the risk of reversion after the permanence period has ended.

⁹ *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth), s 133(1).

¹⁰ ABARES (2022) *Australian forest and wood products statistics, September and December quarters 2021*. Commonwealth of Australia, Canberra.

created by the tax incentives associated with forestry MIS. A significant number of plantations were established in unviable locations, too far from processors and/or with poor growing conditions, simply to access the tax concessions. In the wake of the global financial crisis in 2008 and the collapse of the forestry MISs, the forestry industry warned that up to 300,000 hectares of hardwoods could be lost.¹¹ That inevitable rationalisation of the hardwood estate has now largely occurred and it is unlikely there will be significant ongoing losses from the estate – there will undoubtedly be some losses at the margins but most of the estate is likely to remain intact. This view accords with the most recent information published by the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES), particularly its *Australian plantation statistics and log availability* report.¹² The 2021 report forecasts log availability over the period 2020 to 2064, based primarily on information provided by owners and managers of plantations. The report forecasts a slight decline in hardwood log production, and a significant increase in softwood log production, over this period (Figure 3). These forecasts sit uncomfortably with the notion that there is likely to be significant further losses from the estate.

Figure 3. ABARES log availability forecasts, 2020 to 2064, by log type



Source: Legg, P., Frakes, I., Gavran, M. (2021) *Australian plantation statistics and log availability 2021*. ABARES. Canberra, Australia.

¹¹ Australian Forest Products Association (AFPA) (2015) *Plantations. The Missing Piece of the Puzzle*. AFPA, Canberra.

¹² Legg, P., Frakes, I., Gavran, M. (2021) *Australian plantation statistics and log availability 2021*. ABARES. Canberra, Australia. See also Downham, R., Gavran, M. (2020) *Australian plantation statistics 2020 update*. ABARES. Canberra, Australia.

2. To guard against the risk of ACCUs being issued to projects for the avoidance of plantation conversions that were never going to happen, the 2022 plantation forestry method requires the chief executive officer or chief financial officer of the proponent to submit a declaration that attests that, if the plantation did not receive ACCUs, it would be ‘converted to a viable non-forest land use within 24 months or forest would not be re-established on the land’.¹³ This declaration must be accompanied by a ‘financial assessment prepared or reviewed by a qualified independent person’ that ‘demonstrates that in the absence of the scheme, the plantation forest is likely to convert to a feasible non-forest land use that is financially attractive relative to continuing the plantation’.¹⁴ For these purposes, a financial assessment is deemed to demonstrate that a plantation would be converted if it finds there is an alternative non-forest land use that is likely to generate higher returns than the plantation (without ACCUs).¹⁵ There are four problems with relying on this process to identify plantations that would be converted to non-forest land uses if they do not receive ACCUs.
 - a. It is reliant on the good faith of the chief executive officer or chief financial officer making the declaration and/or their fear of being prosecuted for making a false declaration.
 - b. The consultant that prepares or reviews the financial assessment is paid by the applicant, giving rise to a risk of funding bias (the well-known and well-studied tendency for consultants and researchers to be influenced by who pays them).
 - c. Financial assessments of this nature require the making of a significant number of largely subjective decisions about a variety of issues that can materially influence the forecast returns from competing land uses; for example, concerning discount rates and future land values, commodity prices and production costs. Due to this, it is inherently risky to rely on them to assess the likelihood of conversions because of the range of defensible assumptions, the incentives for proponents to select assumptions that favour their desired outcome, and the asymmetries of information that exist between the proponent and other parties, including auditors and the Clean Energy Regulator.
 - d. The test of whether plantations would be converted is flawed because it assumes that, if an alternative non-forest land use would generate higher returns, the plantation will always be converted. For example, if the internal rate of return (IRR) of cropping the land is 12% and the IRR from continuing the plantation on the land (without credits) is 11%, a project will satisfy the test and the method will assume the conversion will occur unless ACCUs are provided, even though the plantation is profitable. This is not credible, and it is far from conservative, because it ignores the

¹³ *Carbon Credits (Carbon Farming Initiative—Plantation Forestry) Methodology Determination 2022*, Sch 3, s 6(1) and Sch 4, s 6(1).

¹⁴ *Carbon Credits (Carbon Farming Initiative—Plantation Forestry) Methodology Determination 2022*, Sch 3, s 6(2) and Sch 4, s 6(2).

¹⁵ Clean Energy Regulator (2022) *Financial assessment guidance for the 2022 plantation forestry method*. Commonwealth of Australia, Canberra, p 2.

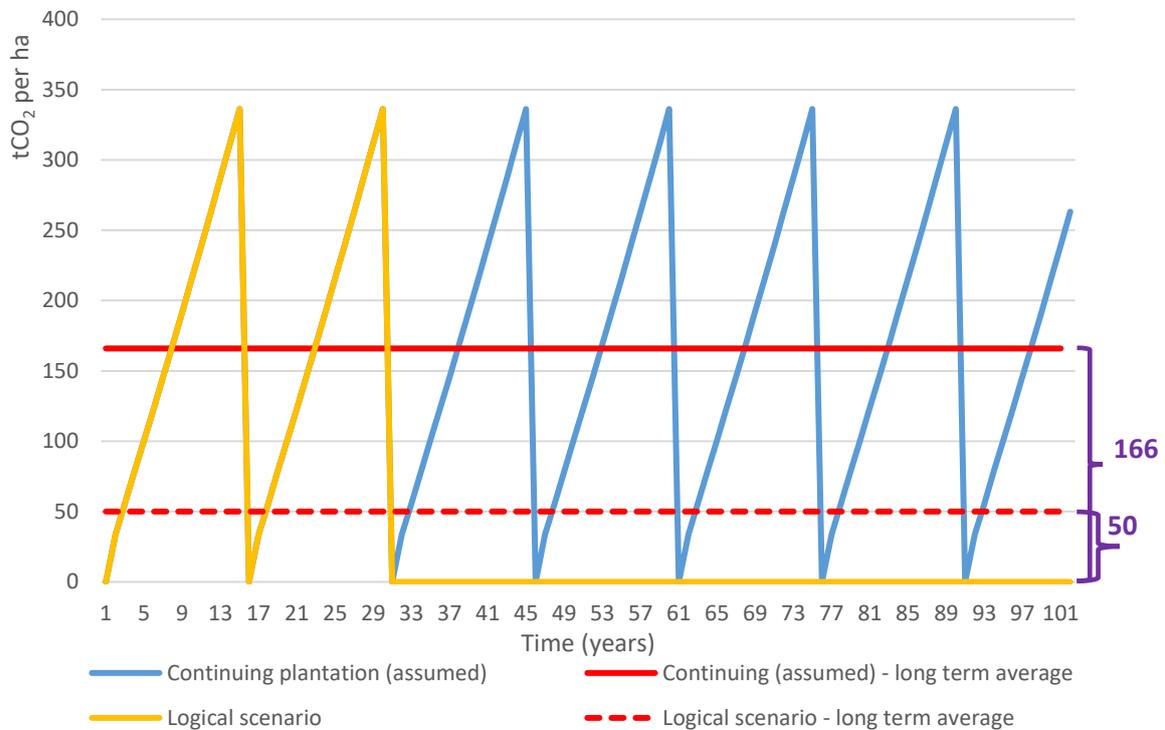
reality that many (if not most) landowners do not ‘optimise land use’ in the sense of ensuring that every parcel of land is devoted to the land use that provides the maximum possible rate of return, unadjusted for risk. Land use choices are driven by a variety of factors, including the producer’s knowledge and experience with particular production systems, their desire to diversify to reduce risk, and the extent to which their business is linked to, or integrated with, nearby processors. This is the case with many plantation owners and growers. They are specialised and often integrated with mills, and the fact there is an alternative, potentially higher earning land use is unlikely to sway them to convert, unless the plantation is not providing reasonable returns.

3. The approach to estimating the abatement from continuing plantation projects is not conservative and is illogical. This stems from the assumptions made in estimating abatement. To do this, proponents must model a project scenario in which the plantation is assumed to be re-established and harvested repeatedly over a 100-year modelling period (for continuing plantation projects). The abatement from the project is then assumed to be the difference between the long-term average carbon stock in the project scenario and the stock if the plantation is converted to an alternative non-forest land use (in the hypothetical shown in Figure 4, the estimated abatement under the assumed continuing plantation scenario is 166 tCO₂ per ha). The ACCUs reflecting the abatement are then issued in equal instalments over 15 years.¹⁶ For this abatement calculation to make sense, it is necessary to assume the plantation will be the highest earning or only legally viable land use throughout the 100-year modelling period and that the landholder, and future landholders, will not subsequently decide to convert the plantation to an alternative land use, even after the project has stopped receiving ACCUs and the ‘permanence period’ has ended (the period over which they are legally required to maintain the plantation under the ERF legislation, which can be 25 years). Hence, somehow the projects must be likely to be cleared now in the absence of the issuance of ACCUs because there is a higher earning alternative land use, but the same plantation must be likely to be repeatedly replanted into the future without ACCUs and after the proponent is released from their permanence obligations. This is illogical and fundamentally unbelievable – if a plantation is likely to be cleared now, surely it will be equally susceptible to being cleared in the future, after the project has stopped receiving ACCUs and it is beyond its permanence period? Given this, the only logical way of estimating the abatement from these projects is to assume proponents will convert the plantation to a non-forest use at the end of their permanence period. In the hypothetical in Figure 4, where the project is assumed to have a 25 year permanence period, this would reduce the abatement from 166 to 50 tCO₂ per ha.¹⁷

¹⁶ *Carbon Credits (Carbon Farming Initiative—Plantation Forestry) Methodology Determination 2022*, s 47.

¹⁷ The measurement issues associated with permanent planting projects relate mainly to the question of whether they would be converted to a non-forest land use under business-as-usual conditions. A potential way of improving the integrity of permanent planting projects would be to use a baseline that assumes the land will continue to be used as a plantation. With this approach, the abatement from permanent planting projects would be calculated as the difference in the long-term average carbon stock in the scenario where it is

Figure 4. Abatement under hypothetical continuing plantation project (25-year permanence period), method scenario vs logical scenario



5. Way forward

The inclusion of avoided plantation conversion projects has cast a cloud over the integrity of the 2022 plantation forestry method and done further harm to the reputation of the ERF. Thankfully, the method is still subject to disallowance in the Australian Parliament.

The Australian Government should immediately vary the method to remove the option of undertaking continuing plantation projects. Permanent planting projects could be retained but only if the method was varied to ensure the baseline for such projects, against which abatement is calculated, is the continued use of the land as a plantation. The alternative is that the method could be disallowed, and the Minister for Climate Change could then make a new method that confines project eligibility to plantation establishment, rotation extensions and, if the baseline is revised, permanent planting projects. The method's integrity could be further improved by requiring all projects to have 100-year permanence periods or modifying how the long-term average carbon stock is calculated in the project scenario for projects with 25-year permanence periods to account for the risk of reversion after the permanence period has ended.

There is an opportunity to realise low-cost, high-integrity abatement opportunities in the plantation sector. These opportunities should not be put at jeopardy by the inclusion in the plantation method of project types and measurement approaches that lack credibility and, by any sensible measure, do not satisfy the offsets integrity standards.

transitioned to a permanent planting relative to the long-term average carbon stock in the scenario where it continues to be used as a plantation.