## EXPLANATORY STATEMENT

Carbon Credits (Carbon Farming Initiative) Act 2011

Carbon Credits (Carbon Farming Initiative— Improved Forest Management in Multi-use Public Native Forest) Methodology Determination 2025

#### **Executive Summary**

In public native forests where commercial harvesting may occur, stopping or reducing harvesting will result in improved greenhouse gas emission outcomes compared to the continuation of existing harvesting practices.

This Determination provides for the registration of 'improved native forest management' projects under the *Carbon Credits (Carbon Farming Initiative) Act 2011* (CFI Act) that generate greenhouse gas abatement by stopping or reducing harvesting in multiple-use public native forests (INFM projects).

Registered INFM projects can generate Australian carbon credit units (ACCUs), which are able to be sold to entities that want to, or are required to, offset their emissions. The ability to generate and sell ACCUs incentivises INFM projects.

The provisions of the Determination ensure the abatement that is credited in INFM projects is **real and additional**, and that it can be used to help meet Australia's international climate change mitigation obligations. The Determination also ensures that credited sequestration must be maintained for at least 100 years.

Under the Determination, INFM projects can involve:

- stopping harvesting in a defined area ('carbon protection area'); and/or
- reducing harvesting across the project area.

The project area for an INFM project must consist of all public native forests designated for commercial forestry use in at least one whole forestry region, defined as a Regional Forest Agreement (RFA) region or, in areas not covered by an RFA, an equivalent region of not less than 1.5 million hectares.

Under the Determination, the net abatement amount that is used to determine ACCU issuances is calculated by reference to the difference between:

- an assumed level of harvesting in the project area in the absence of the INFM project (the 'baseline harvest level'); and
- the actual level of harvesting in the project area.

The baseline harvest level is the lower of:

- the most recent sustainable yield estimate published by the responsible State government agency for the project area over the period 1 July 2014 to 30 June 2024; and
- the modified sustainable yield estimate.

The modified sustainable yield is the sustainable yield for the project area discounted by the extent to which the level of actual harvesting was less than the sustainable yield in the baseline period (10-year period prior to the project application, excluding years affected by major wildfires). For example, if the level of harvesting over the baseline period was 60% of

the sustainable yield over this period, the modified sustainable yield will be calculated as the sustainable yield for the reporting period multiplied by 0.6.

The baseline harvest level must be revised at 5-year intervals and after major disturbance events such as wildfires.

For INFM projects to receive ACCUs, they must result in at least a 20% reduction in harvesting relative to the baseline harvest level.

The number of ACCUs issued to an INFM project for a reporting period is discounted if, and to the extent:

- the volume of wood extracted from the excluded sections of the proponent's public native forest estate (i.e. those parts of the public native forest estate in the jurisdiction in which the project is located that are not included in an INFM project) increases relative to a historically determined baseline; and
- the volume of wood extracted from private native forests in the same jurisdiction increases relative to a historically determined baseline.

A 5% deduction is also applied in calculating the net abatement amount to account for the risk of indirect leakage into other forests and non-wood products. The standard 5% risk of reversal buffer discount is also applied to INFM projects, consistent with the approach to other sequestration offsets projects.

INFM projects have a shortened crediting period of 15 years. However, they must have 100year permanence periods, which ensures the longevity of the credited sequestration.

The Determination includes additional permanence provisions that require the proponent to relinquish ACCUs if, after the end of the 15-year crediting period but before the end of the 100-year permanence period:

- harvesting resumes in any carbon protection area; or
- the volume of wood extracted from:
  - the project area;
  - o excluded sections of the proponent's public native forest estate; or
  - o private native forests in the jurisdiction in which the project is located,

exceeds prescribed baseline levels over any 2-year period.

The relinquishment requirement is doubled in the event of a resumption of harvesting in a carbon protection area.

After a project is registered, a project proponent may stop harvesting in additional carbon protection areas or further reduce the level of harvesting. However, the additional ACCUs generated by these types of further activities is limited.

INFM projects are subject to reporting, record-keeping and monitoring requirements.

## Legislative Authority

The Carbon Credits (Carbon Farming Initiative— Improved Forest Management in Multi-use Public Native Forest) Methodology Determination 2025 (the Determination) is made under subsection 106(1) of the Carbon Credits (Carbon Farming Initiative) Act 2011 (CFI Act) which gives the Minister the power to make a methodology determination by legislative instrument.

## Purpose

The purposes of the Determination are to:

- (a) incentivise 'improved native forest management' projects that increase carbon stocks in forest-related carbon pools, and avoid greenhouse gas emissions from these pools, by stopping or reducing harvesting in multiple-use public native forests (INFM projects); and
- (b) manage the risk of Australian carbon credit units (ACCUs) being issued to INFM projects for abatement that is not real, additional and permanent.

The Determination does this by providing rules for the registration and implementation of INFM projects under the CFI Act. INFM projects that are registered under the CFI Act can generate ACCUs, which are able to be sold to entities that want to, or are required to, offset their emissions. The ability to generate and sell ACCUs provides a way of incentivising INFM projects. Allowing entities to rely on ACCUs to meet their mitigation obligations and commitments reduces abatement costs, thereby contributing to Australia's efforts to meet its mitigation obligations under the Paris Agreement to the United Nations Framework Convention on Climate Change (Climate Change Convention). However, for ACCUs to perform this function, they must represent abatement that is real, additional to business-as-usual (i.e. it would not occur in the absence of the incentive provided by the CFI Act and ACCUs) and permanent (i.e. any credited sequestration must persist in the relevant carbon stocks for at least the length of the permanence period).

The Determination contains rules governing:

- eligibility for establishing and managing INFM projects;
- the calculation of abatement generated by INFM projects for the purpose of issuing ACCUs; and
- monitoring and reporting for registered INFM projects.

#### Background

The CFI Act enables the crediting of greenhouse gas abatement generated by sequestration projects, which remove carbon dioxide from the atmosphere by sequestering carbon in, and avoid emissions of greenhouses gases from, living biomass, dead organic matter and/or soils. For these projects to be eligible to receive ACCUs, they must be declared to be an eligible offsets project (commonly referred to as being 'registered'). To be registered, the Regulator must be satisfied that the project meets the requirements specified in subsection 27(4) of the CFI Act, which include that the project is covered by a methodology determination and meets the eligibility requirements set out in the applicable methodology determination.

Methodology determinations contain rules governing eligibility, the stratification of project areas, the conduct of activities in the project area and credited areas, the calculation of the net abatement amount that provides the basis for crediting, reporting, record-keeping and monitoring. The primary purpose of methodology determinations is to limit the integrity risks

associated with the issuance of ACCUs. Integrity in this context refers to the fact that, for ACCUs to perform their purpose—helping Australia to meet its international climate change mitigation obligations in a way that is consistent with protecting the natural environment and improves resilience to climate change—they must represent abatement that is real, additional and permanent. There are five main integrity risks associated with methodology determinations and the issuance of ACCUs:

- inaccurate measurement, where the method does not fully and accurately account for the emissions and removals that arise within the project boundary (i.e. directly related to the project activities and within the control of the proponent), resulting in the issuance of ACCUs for abatement that is not real;
- leakage, where the method does not appropriately account for the fact that projects may trigger increases in emissions or reductions in removals outside the project boundary that occur as a consequence of the project, resulting in the issuance of ACCUs for abatement that is not real.
- absence of additionality, where the method credits reductions in emissions and/or increases in removals that would have occurred anyway, without the incentive provided by the scheme;
- non-permanence, which refers to the risk associated with sequestration projects that credited sequestration is fully or partially released back into the atmosphere because of future events (anthropogenic or non-anthropogenic); and
- crediting ineligible abatement, which refers to the risk that methods could allow for ACCUs to be issued for abatement that cannot be used to meet Australia's international climate change mitigation obligations.

In deciding whether to make a methodology determination, the Minister must have regard to:

- (a) whether the determination complies with the offsets integrity standards in section 133 of the CFI Act;
- (b) advice from the Emissions Reduction Assurance Committee (ERAC) on the determination;
- (c) whether any adverse environmental, economic, or social impacts are likely to arise from carrying out projects under the determination; and
- (d) other matters (if any) as the Minister considers relevant.

The ERAC is an independent expert committee established to advise the Minister on methodology determinations. The Minister must not make or vary a methodology determination if the ERAC has advised that it does not comply with the CFI Act's offsets integrity standards.

The offsets integrity standards are intended to address the integrity risks associated with methodology determinations and the issuance of ACCUs. They include requirements that:

- methodology determinations should result in carbon abatement that is unlikely to occur in the ordinary course of events;
- methodology determinations should ensure removals, reductions and emissions are measurable and capable of being verified;
- methodology determinations should provide that carbon abatement used to ascertain the net abatement amount for projects must be 'eligible carbon abatement';

- methodology determinations should be supported by clear and convincing evidence;
- methodology determinations should provide for the deduction of material emissions that occur as a direct consequence of projects in the calculation of the net abatement amount; and
- estimates, projections and assumptions in methodology determinations should be conservative (in the sense of reducing the risk of over-crediting).

Projects that are registered as eligible offsets projects can generate ACCUs. ACCUs are personal property and, subject to sections 152 and 153, are transmissible by assignment, by will and by devolution by operation of law. Transactions involving ACCUs are effected through the Australian National Registry of Emissions Units, in accordance with the provisions of the CFI Act and *Australian National Registry of Emissions Units Act 2011*.

## **Overview of the Determination**

The Determination contains rules for the registration and implementation of INFM projects, covering eligibility, stratification of project areas, the conduct of activities in the project area, the calculation of the net abatement amount that provides the basis for crediting, reporting, record-keeping and monitoring.

## <u>Eligibility</u>

The Determination applies to offsets projects that:

- (a) involve a decision of the government of a State to stop or reduce timber harvesting in public native forests, which results in the removal of carbon dioxide from the atmosphere by sequestering additional carbon in trees and debris and the avoidance of the greenhouse gas emissions attributable to timber harvesting; and
- (b) can reasonably be expected to result in eligible carbon abatement.

An INFM project to stop timber harvesting must stop timber harvesting indefinitely across the whole of the project area or in one or more parts of the project area. Areas in which timber harvesting is stopped as part of an INFM project are known as 'carbon protection areas'.

An INFM project that reduces timber harvesting must reduce the total amount of timber harvesting in the project area by deferring harvesting and thereby extending the length of harvest rotations and reducing the volume of wood extracted from the project area over a given period. The reduction in timber harvesting can occur across the whole of the project area or only in one or more parts of the project area.

INFM projects can comprise one or more carbon protection areas where timber harvesting is stopped, and a reduction in timber harvesting in other parts of the project area.

To be registered under the Determination, the project area for the project must consist only of public native forests that are designated for commercial forestry use at the time the project is declared as an eligible offsets project, and that were designated for commercial forestry use for at least 10 years before the application was made under the Act for that declaration. The project area must consist of all public native forests designated for commercial forestry use in at least one whole forestry region. A 'forestry region' is defined under the Determination as:

- a region to which a regional forest agreement under the *Regional Forest Agreements Act 2002* applied on 1 July 2024; or
- in the case of public native forests that are not covered by any such regional forest agreement an area of those forests that is not less than 1.5 million hectares and that is

designated by the government of the relevant State as at 1 July 2024 as an applicable area for the purposes of the management of those forests.

Requiring projects to encompass at least one entire forestry region reduces the risk that a reduction in harvesting in one specific forest area could be substituted with increased harvesting in another area (i.e. leakage). It also increases confidence that forests in the region would be harvested in line with the baseline harvest levels (i.e. additionality).

The Determination contains several other eligibility requirements that are designed to mitigate integrity risks related to additionality and leakage. These include the following.

- (a) An area cannot be included in the project area of an INFM project if, at any time between 1 January 2000 and the date the project is registered as an eligible offsets project, a law of the Commonwealth or the relevant State stopped timber harvesting in the area (even if the law has since been repealed or amended to remove that prohibition) or the government of the relevant State made a decision to stop timber harvesting in the area (even if the decision has since been changed to remove that prohibition or the decision was scheduled to take effect after the date this Determination commences). This does not apply if the stopping of timber harvesting in the area was an interim or temporary measure to enable an assessment of the suitability of all or any part of the area for inclusion in an eligible offsets project or conservation reserve, or the decision to stop timber harvesting in the area was made in connection with an offsets project and on condition that the project is registered.
- (b) The cessation or reduction of timber harvesting that constitutes the project must not be required under a law of the Commonwealth or the relevant State that is in force when the registration decision is to be made or that was in force at any time between 1 January 2000 and the date that the registration decision is to be made. This does not apply if the law requiring the stopping or reduction of timber harvesting was an interim or temporary measure to enable an assessment of the suitability of all or any part of the area for inclusion in an eligible offsets project or conservation reserve and the law has since been repealed or amended to remove the requirement to stop or reduce timber harvesting.
- (c) The public native forests in the project area must have a sustainable yield estimate that was published by a relevant State government agency between 1 July 2014 to 30 June 2024. The sustainable yield estimate must cover each financial year in the period of 15 years from the date of project registration.
- (d) The stopping of, or reduction in, timber harvesting that constitute the project activities must be likely to achieve a reduction in the volume of wood extracted from the project area, during each 12 months of the crediting period, that meets the hurdle requirement in subsection 46(1). The hurdle requirement in subsection 46(1) specifies that the net abatement amount for a reporting period is zero (i.e. the project does not receive any ACCUs) unless the volume of wood extracted from the project area during each 12 month period (or part thereof if the final part of the reporting period is less than 12 months) of the reporting period is at least 20% less than the levels in the baseline scenario for that 12 month period. The periods that are used for these purposes are sequential and start from the date of project registration or the commencement of the relevant reporting period. For example, if a project had a 2½ year reporting period, the hurdle requirement would be evaluated for three periods: months 1 to 12 (period 1); months 13 to 24 (period 2); and months 25 to 30 (period 3).

Other eligibility requirements that apply to INFM projects include the following.

- The project proponent must be the government of the State in which the public native forests to which the project applies are located or an authority of the State designated by that government for the purposes of this Determination.
- Applicants must request a 100-year permanence period. INFM projects are not permitted to have 25-year permanence periods.
- A project application must be accompanied by a geospatial map of the project area in a digital format that shows the boundaries of the project area, the forestry region(s) in which the project area is located and any proposed carbon protection areas prepared in accordance with the INFM Mapping Guidelines.
- Before a project is registered, the project proponent must have entered into an agreement with the Regulator to address the risk of a resumption of timber harvesting after the end of the 15-year crediting period for the project. The effect of the agreement is to require the proponent to relinquish ACCUs if, in the period from the end of the crediting period to the end of the permanence period:
  - timber harvesting resumes in any part of a carbon protection area; or
  - the volume of wood extracted from the project area, excluded sections of the proponent's native forest estate, or the private native forest estate in the same jurisdiction exceed prescribed baseline levels.
- A project application must be accompanied by a management plan containing details of the project and how the proposed reduction in timber production will be achieved. The public native forests in the project area must be managed in accordance with the management plan over the term of the project. The management plan can be amended as necessary to reflect changes in management practices. However, an amended management plan cannot increase timber production during the crediting period or change the boundaries of carbon protection areas, other than to include additional land in the area.

#### Stratification of project areas and other required spatial information

The project must consist only of public native forests that are designated for commercial forestry, both at the time the project is registered and for at least the 10 years prior to the application for registration. 'Public native forests' are defined for these purposes as native forests in Australia on Crown land.

Native forests are defined as an area of land, defined at 0.2-hectare scale, containing trees that are within their natural range and that:

- (a) have reached, or have the potential to reach,  $\geq 2$  metres in height; and
- (b) have attained, or have the potential to attain, a crown cover of at least 20% of the area.

The definition of native forests excludes land that forms part of a plantation.

The project area must consist of all public native forests designated for commercial forestry use in at least one whole forestry region. Commercial forestry is defined for these purposes as 'the use of a public native forest for the purposes of obtaining wood for sale'.

An application for the registration of a project must be accompanied by a digital project map showing the boundaries of the project area, the forestry region(s) in which the project area is located, any proposed carbon protection areas, the distribution of each major vegetation group across the project area and the age class of the forests in the project area (within major vegetation groups). The project map must be prepared in accordance with the INFM Mapping Guidelines.

In addition to the project map, an application for the registration of an INFM project must also include a management plan. The management plan must contain a range of information, including:

- (a) the project map; and
- (b) the sustainable yield estimates for the public native forests by major vegetation groups;
- (c) the harvest level in the baseline scenario for the project area;
- (d) direct leakage baseline harvest level (which applies to the excluded sections of the proponent's public native forest estate) and the private native forests leakage baseline harvest level (which applies to the private native forest estate in the relevant state) for the project;
- (e) the volume of wood proposed to be extracted from the project area during each 12month period of the crediting period; and
- (f) details on how the proposed reduction in the volume of wood to be extracted will be achieved.

The current version of the management plan must be published on the proponent's website.

## Rules governing the conduct of management activities in the project area

The management plan must specify how the proposed reduction in timber production will be achieved and, as a condition of project registration, the proponent must ensure the project area is managed in accordance with the management plan.

Subject to the provisions of the management plan (including the requirement to stop harvesting in carbon protection areas and/or reduce harvesting across the project area) and the applicable permanence obligations, the Determination allows for ongoing forestry management activities in the public native forests in the project area, including harvesting and, where necessary, clearing (e.g. for emergency management purposes).

The potential for credited abatement to be affected by forest management activities is addressed through the processes governing the calculation of the net abatement amount and the permanence obligations. Broadly, harvesting (or clearing) in the project area reduces the credited abatement generated by the project. The permanence obligations in the CFI Act require proponents to maintain credited carbon stocks and, in the event of a significant reversal, to take steps to restore the credited sequestration. The Determination includes additional permanence provisions that require the proponent to relinquish ACCUs if, after the end of the 15-year crediting period but before the end of the 100-year permanence period, the volume of wood extracted from the project area, excluded sections of the proponent's native forest estate or the private native forest estate in the same jurisdiction exceed prescribed levels.

#### Calculation of the net abatement amount

Under the CFI Act, sequestration projects must submit offset reports for reporting periods of between 6 months and 5 years (ss 13, 76). Under the Determination, the net abatement amount for a reporting period is calculated in accordance with the formula:

$$NA_i = (\Delta CS_{pi} - \Delta CS_{bi}) + (ES_{bi} - ES_{pi}) - LD_i + CNAA_{i-1}$$

Where:

NA<sub>i</sub> is the net abatement amount for reporting period *i*.

 $\Delta CS_{pi}$  is the carbon stock change (in tonnes CO<sub>2</sub>-e) in included forest carbon pools in the project scenario over reporting period *i*.

 $\Delta CS_{bi}$  is the carbon stock change (in tonnes CO<sub>2</sub>-e) in included forest carbon pools in the baseline scenario over reporting period *i*.

 $ES_{pi}$  is the emissions (in tonnes CO<sub>2</sub>-e) from included sources in the project scenario over reporting period *i*.

 $ES_{bi}$  is the emissions (in tonnes CO<sub>2</sub>-e) from included sources in the baseline scenario over reporting period *i*.

LD<sub>i</sub> is the leakage deduction for reporting period *i*.

CNAA<sub>i-1</sub> is the carryover negative abatement amount from the previous reporting period (if any).

The carbon pools, emissions sources and greenhouse gases used to calculate the net abatement amount are summarised in Table 1. To reduce complexity and promote conservatism, the following carbon pools and emissions sources are excluded from the abatement calculations:

- (a) soil organic carbon;
- (b) methane (CH<sub>4</sub>) and nitrous oxide (N<sub>2</sub>O) emissions from wildfires or non-harvest related prescribed burns;
- (c) emissions from the combustion of fossil fuels in connection with forest management, other than timber harvesting or haulage operations; and
- (d) emissions from the combustion of fossil fuels in connection with the processing of harvested logs, the production of woodchips or the manufacture of solid wood products.

Carbon pool or emission source	Туре	Greenhouse gas
Carbon pool	Live above-ground biomass in the forest	Carbon dioxide (CO <sub>2</sub> )
	Live below-ground biomass in the forest	Carbon dioxide (CO <sub>2</sub> )
	Above-ground or below- ground forest debris	Carbon dioxide (CO <sub>2</sub> )
	Harvested wood products in service	Carbon dioxide (CO <sub>2</sub> )
	Harvested wood products in landfill	Carbon dioxide (CO <sub>2</sub> )
Emission source	Biomass burning from post harvest (slash) burns	Methane (CH <sub>4</sub> ) Nitrous oxide (N <sub>2</sub> O)
	Combustion of fossil fuels in connection with timber harvesting and haulage operations	Carbon dioxide (CO <sub>2</sub> ) Methane (CH <sub>4</sub> ) Nitrous oxide (N <sub>2</sub> O)

Table 1. Included carbon pools, emission sources and greenhouse gases

Carbon stock changes in the forest carbon pools (live above- and below-ground biomass and debris), and CH<sub>4</sub> and N<sub>2</sub>O emissions associated with post-harvest (slash) burns, are calculated using the Full Carbon Accounting Model (FullCAM). FullCAM is used to model forest carbon stocks associated with land use and management for Australia's National Inventory Report, ensuring alignment between the Determination and what is likely to be recorded in Australia's greenhouse gas accounts.

The issuance of ACCUs to INFM projects is subject to a 'hurdle requirement'. The hurdle requirement specifies that, with the exception of instances where the net abatement amount is negative, the net abatement amount is zero if:

- (a) the volume of wood extracted from the project area during each 12 months (or part thereof if the final part of the reporting period is less than 12 months) of the reporting period is not at least 20% less than the levels in the baseline scenario for the same 12month period (or part thereof); or
- (b) the volume of wood extracted from the project area from the date of registration until the end of the reporting period is not at least 20% less than the levels in the baseline scenario over that period.

Subject to the hurdle requirement, the net abatement amount is calculated in accordance with the following steps.

**Step 1:** The project proponent must conduct an initial forest inventory in the project area that is used:

- (a) to calibrate representative FullCAM model plots used to model carbon stock changes and emissions; and
- (b) to calculate the modified sustainable yield estimates used to determine the baseline harvest level (against which the net abatement amount is calculated).

**Step 2:** Representative FullCAM model plots must be developed based on the timber harvesting and related forest clearing to facilitate timber harvesting (eg for access roads, snig tracks and log landings) that occurred in the 5-year period prior to the end of the financial year prior to the making of the application for the declaration of the project as an eligible offsets project (the prior period). The model plots must be used to develop a prior period FullCAM forest estate model that provides estimates of the total net harvested area (in hectares) in, and logs produced (in cubic metres (m<sup>3</sup>) of logs produced) from, the project area that are within  $\pm 5\%$  of the actual values for the prior period.

**Step 3:** The baseline harvest level, in cubic metres (m<sup>3</sup>) of wood harvested, must then be calculated. The baseline harvest level, in volume of wood harvested, must be converted to a net area subject to harvesting in the baseline scenario (in hectares) using the prior period FullCAM forest estate model from Step 2. The baseline harvest level and the net harvested area in the baseline scenario are used to model carbon stock changes and emissions in the baseline scenario and are intended to reflect a conservative estimate of the level of harvesting in the project area in the baseline scenario in the absence of the declaration of the project as an eligible offsets project. The area cleared to facilitate timber harvesting in the baseline scenario must also be calculated using the ratio between the cleared area and logs produced (in cubic metres, m<sup>3</sup>) in the prior period and the baseline harvest level (in cubic metres, m<sup>3</sup>).

**Step 4:** Carbon stock changes in the forest carbon pools (live above and below ground biomass and debris), and CH<sub>4</sub> and N<sub>2</sub>O emissions associated with post-harvest (slash) burns, in the project and baseline scenarios are calculated using FullCAM in accordance with the FullCAM Guidelines. The modelling must be undertaken using the representative model plots derived from the forest inventory (Step 1), supplemented with additional model plots as necessary that reflect forest clearing events that are not directly related to timber harvesting. Generally, the same representative model plots are required to be used in the baseline and project scenarios, with harvest events (including post-harvest (slash) burns) and forest clearing events undertaken to facilitate harvesting included (in the baseline scenario) and excluded (in the project scenario) as relevant to reflect the nature of the project activities. The main exception to this relates to forest clearing events that are not directly related to timber production, which are modelled in the project scenario but excluded from the baseline scenario.

**Step 5:** Carbon stock changes in the harvested wood products carbon pool are then calculated. In the baseline scenario, the log inputs to the harvested wood products model are those generated by the baseline FullCAM forest estate model that is used to model carbon stock changes in the forest carbon pools. In the project scenario, the log inputs must be the actual logs harvested over the reporting period. To promote conservatism and avoid crediting ineligible abatement, pulplogs are assumed to be instantly oxidised following harvest in the project scenario, while they are modelled through their lifecycle in the baseline scenario. Other residue logs (e.g. firewood) are assumed to be instantly oxidised following harvest in both the project and baseline scenarios.

**Step 6:** In the project scenario,  $CO_2$ ,  $CH_4$  and  $N_2O$  emissions from fossil fuel combustion are then calculated. In the baseline scenario,  $CO_2$ ,  $CH_4$  and  $N_2O$  emissions from fossil fuel combustion are modelled using emission factors (emissions per m<sup>3</sup> of logs harvested) derived from the project scenario.

**Step 7:** The leakage deduction for the reporting period is calculated as the direct leakage deduction for the reporting period, plus the private native forests leakage deduction for the reporting period, plus the indirect leakage deduction for the reporting period.

**Step 8:** If the net abatement amount for a reporting period is negative, there are no carbon credits for the reporting period and the negative abatement amount is carried over to the following reporting period and deducted from the abatement achieved in that period.

#### **Reporting**

Under the CFI Act, to receive ACCUs, the project proponent must submit an offsets report about the project for the relevant reporting period (s 13). Offsets reports must be provided in the manner and form, and contain the information, prescribed in the legislative rules (*Carbon Credits (Carbon Farming Initiative)* Rule 2015) (s 76).

Subsection 106(3)(a) of the CFI Act allows methodology determinations to include additional requirements for offsets reports to include specified information relating to projects. The Determination includes additional information requirements for these purposes, including a requirement that offsets reports contain:

(a) a copy of the project map for the project;

- (b) the current management plan;
- (c) any other forest management plans that are required to be prepared in relation to timber harvesting and other forest management actions in the project area; and
- (d) details of the measures taken to promote the effective management of carbon protection areas, including in relation to the conservation of biodiversity and to the engagement of Aboriginal people in forest management actions in that area.

## Record-keeping

Part 17 of the CFI Act allows regulations or the legislative rules to be made that require proponents to make and keep specific information. As at May 2025, specific record-keeping requirements were contained in Part 17 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015*.

Subsection 106(3)(c) of the CFI Act allows methodology determinations to include additional requirements related to record-keeping. The Determination includes additional requirements for these purposes, including requirement for the project proponent to make and keep records of:

- (a) all timber harvesting and areas cleared to facilitate timber harvesting during a reporting period; and
- (b) the results of the monitoring of harvesting and clearing events undertaken in the project area.

## <u>Monitoring</u>

Subsection 106(3)(d) of the CFI Act allows methodology determinations to include requirements concerning project monitoring. The Determination includes requirements for project proponents to monitoring timber harvesting and clearing events (including post-harvest (slash) burns) in the project area that are required to be modelled in the project scenario.

## Summary of mechanisms to mitigate integrity risks

The rules in the Determination have been designed to mitigate the integrity risks associated with INFM projects and reflect the requirements of the offsets integrity standards. The most material integrity risks associated with the INFM method relate to:

- (a) additionality most notably, the risk that, in the absence of the incentive associated with the ACCU scheme, there could be policy or other changes that would result in a comparable decline in native forest harvesting to what is credited under the method; and
- (b) leakage particularly the risk that a decline in harvesting in public native forests could trigger an increase in harvesting in other native forests in Australia.

Other relevant integrity risks include the potential for over crediting as a result of inaccurate measurement of carbon stocks or emissions, and for credited increases in forest carbon stocks to subsequently be lost as a consequence of future events (e.g. increases in natural disturbance or a resumption of past harvesting practices).

The INFM method has been designed to mitigate these risks. The measures used for these purposes are summarised in Attachment B.

The risk mitigation measures in the Determination complement the requirements in the CFI Act governing project registrations. These general eligibility requirements include project-level additionality requirements (s 27(4A)):

- the 'newness requirement', which specifies that projects must not have begun to be implemented;
- the 'regulatory additionality requirement', which specifies that projects must not be required to be carried out by or under a law of the Commonwealth, a State or a Territory; and
- the 'government program requirement', which specifies that projects must be unlikely to be carried out under another Commonwealth, State or Territory government program or scheme in the absence of a declaration of the project as an eligible offsets project.

The newness and regulatory additionality requirements can be displaced by 'in lieu' requirements in methodology determinations. Under the Determination, the regulatory additionality requirement in subsection 27(4A)(b) is displaced by the following requirements.

- (a) An area cannot be included in the project area of an INFM project if, at any time between 1 January 2000 and the date the project is registered as an eligible offsets project, a law of the Commonwealth or the relevant State stopped timber harvesting in the area (even if the law has since been repealed or amended to remove that prohibition) or the government of the relevant State made a decision to stop timber harvesting in the area (even if the decision has since been changed to remove that prohibition or the decision was scheduled to take effect after the date this Determination commences). This does not apply if the stopping of timber harvesting in the area was an interim or temporary measure to enable an assessment of the suitability of all or any part of the area for inclusion in an eligible offsets project or conservation reserve, or the decision to stop timber harvesting in the area was made in connection with an offsets project and on condition that the project is registered.
- (b) The cessation or reduction of timber harvesting that constitutes the project must not be required under a law of the Commonwealth or the relevant State that is in force when the registration decision is to be made or that was in force at any time between 1 January 2000 and the date that the registration decision is to be made. This does not apply if the law requiring the stopping or reduction of timber harvesting was an interim or temporary measure to enable an assessment of the suitability of all or any part of the area for inclusion in an eligible offsets project or conservation reserve and the law has since been repealed or amended to remove the requirement to stop or reduce timber harvesting.

The government program requirement can be displaced by in lieu provisions in the legislative rules. As at May 2025, section 21 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015* operated in lieu of the government program requirement. None of the requirements in section 21 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015* were applicable to INFM projects covered by the Determination.

## **Documents incorporated by reference**

The Determination incorporates the following documents by reference: the Full Carbon Accounting Model (FullCAM); FullCAM Guidelines; Mapping Guidelines; Forest Inventory Protocol; Sustainable Yield Protocol; and the National Vegetation Information System. The Determination requires forest carbon stocks and  $CH_4$  and  $N_2O$  emissions associated with post-harvest (slash) burns to be estimated using FullCAM. FullCAM is the model used to estimate carbon stocks in vegetation and soils in Australia's National Inventory Report under the Climate Change Convention. This ensures alignment between the Determination and the National Inventory Report.

The Determination sets out requirements for using FullCAM, while more detailed requirements and instructions are provided in the FullCAM Guidelines. Projects are required to use the version of the FullCAM Guidelines that is published from time to time on the Department's website.

The Determination requires project proponents to prepare and maintain a digital project map that identifies:

- (a) the boundaries of the project area, the forestry region(s) in which the project area is located and any proposed carbon protection areas;
- (b) the spatial distribution of each major vegetation group across the project area; and
- (c) the age class of the public native forests in the project area within major vegetation groups (set out separately for carbon protection areas and other areas).

The project map must be prepared in accordance with the INFM Mapping Guidelines. Under the Determination, major vegetation groups must be defined in accordance with the latest publicly released version of the National Vegetation Information System.

The Determination requires projects to conduct an initial forest inventory in the project area. Forest inventories are also required at the 5th and 10th year of the project and following major disturbance events. The inventories are used to:

- (a) to calibrate the representative FullCAM model plots that are used to model carbon stock changes and emissions; and
- (b) to calculate the modified sustainable yield estimates that are used to determine the baseline harvest level (against which the net abatement amount is calculated).

The forest inventories must be prepared in accordance with the Forest Inventory Protocol that is published from time to time on the Department's website. The modified sustainable yield estimates must be prepared in accordance with the Sustainable Yield Protocol that is published from time to time on the Department's website for this determination.

The incorporation of FullCAM and the FullCAM Guidelines, Mapping Guidelines, Forest Inventory Protocol, Sustainable Yield Protocol and the National Vegetation Information System, as in force from time to time, is authorised by subsection 106(8) of the CFI Act.

## **Permanence** period

The CFI Act requires credited sequestration to be maintained for the length of the permanence period. Section 86A of the CFI Act specifies that the permanence period for sequestration offsets project must be 25 years or 100 years. In certain circumstances, the regulations or legislative rules can specify alternative permanence periods.

Section 23 of the CFI Act provides that, if a project is a sequestration offsets project, an application to the Regulator under section 22 must include a request that a project be subject to either a 100-year or 25-year permanence period. Once registered as an eligible offsets project, the permanence period is fixed – projects cannot move between permanence periods.

The Determination does not allow 25-year permanence periods. To be eligible for registration, applicants for registration must request a 100-year permanence period.

## **Determination details**

The Determination is a legislative instrument within the meaning of the Legislation Act 2003.

Details of the Determination are set out in <u>Attachment A</u>. Numbered sections in this explanatory statement align with the relevant sections of the Determination.

## **ATTACHMENT A: Details of the Determination**

## Part 1—Preliminary

### Section 1 – Name

Section 1 sets out the full name of the Determination as the *Carbon Credits (Carbon Farming Initiative— Improved Forest Management in Multi-use Public Native Forest) Methodology Determination 2025.* 

## $\underline{Section}\ \underline{2-Commencement}$

Section 2 provides for the Determination to commence on [a date to be specified].

### Section 3 – Authority

Subsection 106(1) of the CFI Act provides that the Minister may, by legislative instrument, make a methodology determination that: is expressed to apply to a specified kind of offsets project; sets out requirements that must be met for such a project to be an eligible offsets project; and provides that, if such a project is an eligible offsets project, the carbon dioxide equivalent net abatement amount for the project is taken to be equal to the amount ascertained using a method specified in the determination.

Section 3 states that the Determination is made under subsection 106(1) of the *Carbon Credits* (*Carbon Farming Initiative*) Act 2011 (the Act).

### Section 4 – Duration

Under subsection 122(1)(b)(i) of the CFI Act, a methodology determination remains in force for the period specified in the Determination.

Section 4 sets out the period that the Determination is in force. The Determination will remain in force between the commencement date and the day before it would otherwise be repealed in accordance with subsection 50(1) of the *Legislation Act 2003*.

## Section 5 – Definitions

Section 5 provides definitions for various terms used in the Determination. The definitions in in section 5 of the CFI Act also apply where applicable.

The following documents and models, as in force from time to time, are used in the Determination in a manner consistent with subsection 106(8) of the Act:

- FullCAM;
- FullCAM Guidelines;
- Mapping Guidelines;
- Forest Inventory Protocol;
- Sustainable Yield Protocol;
- National Vegetation Information System;
- National Greenhouse and Energy Reporting Regulations 2008; and
- National Greenhouse and Energy Reporting (Measurement) Determination 2008.

## Part 2—Offsets projects to which Determination applies

Subsection 106(1)(a) of the CFI Act provides that the Minister may make a methodology determination that is expressed to apply to a specific kind of offsets project. Part 2 of the Determination contains the description of the offsets projects to which it applies.

<u>Section 6 – Determination applies to projects to stop or reduce timber harvesting in public</u> <u>native forests</u>

Subsection 6(1) specifies that the Determination applies to an offsets project that:

- (a) involves a decision of the government of a State to stop or reduce timber harvesting in public native forests, which results in the removal of carbon dioxide from the atmosphere by sequestering additional carbon in trees and debris and the avoidance of the greenhouse gas emissions attributable to timber harvesting; and
- (b) can reasonably be expected to result in eligible carbon abatement.

Limiting eligibility to projects involving stopping or reducing harvesting in public native forests plays an important function in mitigating additionality risks. Projects that involve the cessation or reduction in harvesting on private land are not eligible under the Determination because of increased additionality risks.

While an eligible project must involve the cessation or reduction of harvesting in the project area, subsection 6(2) provides that forest management activities may be undertaken in the public native forests to which an offsets project applies. These forest management activities can include harvesting, weed and feral animal control, prescribed burns and emergency backburning, and mechanical clearing for firebreaks to prevent the spread of a wildfire. The inclusion of this provision clarifies that one or more of these activities can continue in the project area, provided that the project results in the cessation or reduction in harvesting.

Other forest management activities that can potentially generate abatement (e.g. reduced impact logging, weed and pest control, enrichment plantings and prescribed burning) are not eligible to generate credited abatement under the Determination. They can be undertaken in the project area, but any abatement generated as a result of the conduct of these activities is not counted towards the net abatement amount. This is because they carry significantly higher integrity risks than stopping or reducing harvesting, particularly in relation to additionality and confidence in generating abatement. There are multiple other drivers of the uptake of these activities (regulatory and market) and it is difficult to design robust processes to confine crediting to instances where uptake is genuinely additional. There is also considerable uncertainty about whether and when these activities are likely to generate abatement.

Section 7 - Projects to stop timber harvesting

Subsection 7(1) provides that a project to stop timber harvesting must involve the indefinite cessation of timber harvesting in the relevant area. Indefinite in this context refers to the length of the permanence period (100 years).

Subsection 7(2) clarifies that an offsets project to stop timber harvesting may relate to stopping timber harvesting across the whole of the project area or only in one or more parts of the project area.

Subsection 7(3) provides that an area in which timber harvesting is stopped as part of an offsets project is referred to as a **carbon protection area** under the Determination.

Subsection 7(4) prohibits the removal of a carbon protection area from, or a reduction in the size of a carbon protection area in, a registered INFM project. This ensures the permanence of credited forest carbon stocks by preventing a proponent from being credited for the abatement

associated with stopping harvesting in a carbon protection area, only to later recommence harvesting in the area. Subsection 7(4) also clarifies that additional carbon protection areas can be included in a project and existing carbon protection areas can be increased in size.

Subsection 7(5) clarifies that, even if a carbon protection area covers only a part of the project area, the whole area remains the project area. This assists with the management of additionality, leakage and permanence risks, by ensuring that the abatement calculations are based on harvesting levels across at least one whole forest region and that the permanence obligations apply across at least one whole forest region.

## Section 8 - Projects to reduce timber harvesting by deferral of harvesting

Section 8 serves two purposes:

- subsection 8(1) clarifies that projects involving reducing (rather than stopping) timber harvesting involve deferring timber harvesting and thereby extending the length of harvest rotations and reducing the volume of wood extracted from the project area over a given period;
- subsection 8(2) clarifies that projects involving reducing timber harvesting may relate to reducing timber harvesting across the whole of the project area or only in one or more parts of the project area; and
- subsection 8(3) clarifies that projects may comprise both stopping and reducing timber in different parts of the project area.

# Part 3—Project requirements

## Division 3.1—General

Subsection 106(1)(b) of the CFI Act requires methodology determinations to set out the eligibility requirements that must be met for a project to be registered. Under subsection 27(4)(c) of the CFI Act, the Regulator must not register a project unless it is satisfied the project meets the eligibility requirements specified in the methodology determination. Section 35 of the CFI Act states that regulations or legislative rules may empower the Regulator to revoke a project declaration if relevant eligibility requirements in subsection 27(4) have not been met. As at May 2025, section 32 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015* provided the Regulator with the power to unilaterally revoke a project declaration where it is satisfied the project does not meet the requirements in subsections 27(4)(a) to (c) and (l) of the CFI Act. The power to revoke a project declaration is contingent on the Regulator having consulted with the project proponent in accordance with section 33 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015 (Carbon Farming Initiative) Rule 2015* provided the Regulator with the project declaration is contingent on the Regulator having consulted with the project proponent in accordance with section 33 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015.* 

Part 3 of the Determination contains the following eligibility requirements for the purposes of subsection 106(1)(b) of the CFI Act.

Section 9 – Operation of this Part

Section 9 states that, as provided for in subsection 106(1)(b) of the CFI Act, Part 3 of the Determination sets out requirements that must be met for a project to be an eligible offsets project.

## **Division 3.2—Eligibility requirements**

Section 10 – Designation of public native forests for commercial forestry use

Subsection 10(1) provides that INFM projects must consist only of public native forests:

- (a) that are designated for commercial forestry use at the time the project is registered as an eligible offsets project; and
- (b) that were designated for commercial forestry use for at least 10 years before the application was made under the Act for registration.

There are three important parts of this eligibility requirement.

- It requires the project area to consist exclusively of 'public native forests', being land that satisfies the definition of native forest that is on Crown land. This means that, in mapping the project area, all non-forest areas must be excluded.
- It requires the project area to consist exclusively of public native forests that are designated for commercial forestry use at the date of the project registration. 'Commercial forestry use' is defined for these purposes as 'use of a public native forest for the purposes of obtaining wood for sale' (s 5). Subsection 10(2) specifies that a public native forest is designated for commercial forestry use if it is available for commercial forestry use under the applicable law relating to the use of the forest. Subsection 10(3) clarifies that a public native forest is still designated for commercial forestry use if it is designated for multiple uses, provided that its uses include commercial forestry. Subsection 10(5) clarifies that a public native forest is available for commercial forestry use even though: (a) a government authority may be required to carry out timber harvesting operations; (b) surveys, plans or other preliminary steps may be required before timber harvesting can commence; and (c) particular areas or trees must not be harvested because of environmental or operational requirements.
- It requires the project area to consist exclusively of public native forests that were designated for commercial forestry use for at least 10 years prior to the date of the submission of the project application.

These eligibility requirements perform an important integrity function by limiting eligible land to public native forests that, in the absence of the project, are likely to be harvested (see Attachment B for further details).

Subsection 10(4) clarifies that, if a carbon protection area becomes a national park or other reserve or subject to any laws passed after the date of project registration that prevent commercial forestry use in the area, it still remains part of the project area for the Determination. This also clarifies that the eligibility requirement for the land in the project area to be designated for commercial forestry use does not continue to apply after the date of project registration. Consequently, the Regulator could not revoke a project declaration on the basis that a carbon protection area is later transferred into a conservation reserve where commercial harvesting is prohibited.

#### Section 11 - No previous law or decision to stop or reduce timber harvesting

Subsection 11(1) provides that an area cannot be included in the project area of a project if, at any time between 1 January 2000 and the date of project registration:

- (a) a law of the Commonwealth or the relevant State stopped timber harvesting in the area (even if the law has since been repealed or amended to remove that prohibition); or
- (b) the government of the relevant State made a decision to stop timber harvesting in the area (even if the decision has since been changed to remove that prohibition or the decision was scheduled to take effect after the date this Determination commences).

The requirement in subsection 11(1) performs an important integrity function by excluding areas where, if they were able to be included in projects, the project activities that generate the

credited abatement (stopping or reducing harvesting) are likely to have happened anyway because of an existing or previous regulatory requirements, or a previous decision of a government to stop harvesting in the project area.

Subsection 11(2) provides that the eligibility requirement in subsection 11(1) does not apply if the relevant law stopping timber harvesting, or the decision to stop timber harvesting, was an interim or temporary measure to enable an assessment of the suitability of all or any part of the area for inclusion in an eligible offsets project or conservation reserve or it was imposed on condition that the area is included in an eligible offsets project.

Subsection 11(3) provides that, for a project to be eligible for registration under the Determination, the stopping or reduction of timber harvesting that is the basis of the project declaration must not be required under a law of the Commonwealth or a State:

- (a) that is in force at the date of the declaration; or
- (b) that was in force at any time between 1 January 2000 and the date of project registration (even if was not in force at the date of registration).

The requirement in subsection 11(3) performs an important integrity function by excluding projects that are likely to have happened anyway because of an existing or previous regulatory requirement. It also reduces the potential for gaming, whereby a State might change its laws in an attempt to register a project.

Subsection 11(4) provides that the eligibility requirement in subsection 11(3) does not apply if the relevant law requiring the stopping or reduction of timber harvesting in the area was an interim or temporary measure to enable an assessment of the suitability of all or any part of the area for inclusion in an eligible offsets project or conservation reserve and the law has since been repealed or amended to remove the requirement to stop or reduce timber harvesting. This is intended to enable relevant State Governments to prevent harvesting while public native forest areas are assessed for suitability for inclusion in an INFM project or conservation reserve without jeopardising their eligibility under the Determination.

By virtue of subsection 11(5), the eligibility requirements in the section operate in lieu of the regulatory additionality requirement in subsection 27(4A)(b) of the CFI Act. It is similar to subsection 20AA(1) of the *Carbon Credits (Carbon Farming Initiative) Rule 2015*.

Section 12 - Minimum size of project area

Subsection 12(1) specifies that the project area for an INFM project must consist of all public native forests designated for commercial forestry use (as provided by section 10) in at least one whole forestry region.

A 'forestry region' is defined for these purposes as (s 5):

- (a) a region to which a regional forest agreement under the *Regional Forest Agreements Act 2002* applied on 1 July 2024; or
- (b) in the case of public native forests that are not covered by any such regional forest agreement - an area of those forests that is not less than 1.5 million hectares and that is designated by the government of the relevant State as at 1 July 2024 as an applicable area for the purposes of the management of those forests.

The requirement for INFM project areas to encompass at least one whole forestry region performs an important integrity function by reducing additionality and leakage risks. If project areas were allowed to be defined as a smaller scale, proponents could selectively identify those parts of the public native forest estate that are unlikely to be harvested and include them in a project, without necessarily reducing harvesting and thereby reducing net emissions. By requiring project areas to cover whole forest regions, the Determination increases confidence that, in the absence of the project, the forests in the region will be harvested in line with the baseline harvest levels for the duration of the crediting period, even if it is not possible to determine which particular forests would be harvested. Further, by requiring projects to cover whole forestry regions, it reduces the scope for activity shifting (direct leakage) – any movement of harvesting within the region is captured within the boundaries of the project and is required to be accounted for in the calculation of the net abatement amount.

Subsection 12(2) specifies that the project area must not include any area:

- (a) that is excluded by the Determination from being included in the project area; or
- (b) that is included in the project area for another INFM project.

Section 77A of the CFI Act allows project proponents to divide projects into two or more parts and for each part to be treated as separate project. Subsection 77A(2) specifies that the division of a project must comply with any relevant requirements set out in the applicable methodology determination. For these purposes, subsection 12(3) provides that, for the purposes of subsection 77A(2), a division of an INFM project must not result in the creation of a part of the project area that is not at least one whole forestry region or take effect during a reporting period for the project.

### Section 13 - Minimum reduction in volume of wood extracted from project area

Section 13 provides that the stopping of, or reduction in, timber harvesting that constitute the project activities must be likely to achieve a reduction in the volume of wood extracted from the project area, during each 12 months of the crediting period, that meets the hurdle requirement in subsection 46(1).

The hurdle requirement in subsection 46(1) specifies that the net abatement amount for a reporting period is zero (i.e. the project does not receive any ACCUs) unless the volume of wood extracted from the project area during each 12 month period (or part thereof if the final part of the reporting period is less than 12 months) of the reporting period is at least 20% less than the levels in the baseline scenario for that 12 month period. The periods that are used for these purposes are sequential and start from the date of project registration or the commencement of the relevant reporting period. For example, if a project had a 2½ year reporting period, the hurdle requirement would be evaluated for three periods: months 1 to 12 (period 1); months 13 to 24 (period 2); and months 25 to 30 (period 3).

The hurdle performs an important function in mitigating additionality and leakage risks. It mitigates the risk of crediting minor, short-term fluctuations in harvesting associated with market or other business-as-usual conditions that would have occurred anyway, without the incentive provided by the scheme. For credits to be issued, there must be a significant reduction in harvesting that goes beyond normal interannual variability. The hurdle also mitigates the risk of leakage through cross-subsidisation by ensuring there is a structural shift in the native forest industry in the relevant region.

Section 14 – Published sustainable yield estimates for public native forests

The integrity of the Determination depends on ensuring the projection of harvesting in the baseline scenario is conservative, in the sense of being more likely to underestimate than overestimate the level of harvesting in the project area in the absence of the project. The Determination achieves this by using a two-part test to determine the baseline harvest levels, whereby the baseline harvest level is the lower of:

- (a) the last sustainable yield estimate published by the responsible State government agency for the project area over the period 1 July 2014 to 30 June 2024; and
- (b) the modified sustainable yield estimate calculated in accordance with sections 29 and 30.

Subsection 14(1) facilitates the application of this test by making eligibility contingent on the existence of a sustainable yield estimate for the public native forests in the project area that was published by the relevant State government agency over the period 1 July 2014 to 30 June 2024.

Subsection 14(2) requires the sustainable yield estimate to cover the sustainable yield for each financial year in the period of 15 years from the date of project registration.

If there is no published sustainable yield estimate that meets these requirements for the relevant public native forests, the forests cannot be included in an INFM project.

Subsection 14(3) clarifies that, if more than one sustainable yield estimate for a financial year was published by the relevant State government agency over the period 1 July 2014 to 30 June 2024, the most recent estimate is to be used for the purposes of the Determination (i.e. in setting the baseline harvest level).

### Section 15 – Project area mapping

Section 15 requires an application for the registration of a INFM project to be accompanied by a geospatial map of the project area that includes the:

- (a) boundaries of the project area, the forestry region(s) in which the project area is located and any proposed carbon protection area;
- (b) the spatial distribution of major vegetation groups in the project area; and
- (c) the age class of the public native forests in the project area, by major vegetation groups (set out separately for carbon protection areas and other areas).

Subsection 15(6) requires the project map to be revised if the project area is varied.

Subsection 15(7) provides that the project map must be prepared in accordance with the Mapping Guidelines, as published from time to time on the Department's website.

#### Section 16 – Project proponent

Section 16 provides that the proponent of an INFM project must be the government of the State in which the public native forests in the project area are located or an authority of the State designated by that government – for example, if the project involves carbon protection areas, this could be the authority responsible for national park management.

#### Section 17 - Permanence period for project of 100 years

Under section 23 of the CFI Act, an application for the registration of a sequestration offsets project must request the project be treated as either a 100-year or 25-year permanence period project. Under subsection 27(3) of the CFI Act, when the Regulator registers a sequestration offsets project, it must declare the project to be either a 100-year or 25-year permanence period project, based on the project proponents request.

An important integrity element of the Determination is the requirement for all INFM projects to be 100-year permanence period projects. This assures the credited carbon stocks persist for at least 100 years. The 100-year permanence period, in combination with the 15-year crediting period, also provide further assurance of additionality (e.g. the 100-year permanence period

avoids any potential resumption of harvesting, while the 15-year crediting period ensures this future avoided harvesting is not credited).

The requirement for INFM projects to have 100-year permanence periods is given effect through section 17, which requires an applicant for the registration of an INFM to request the Regulator to treat the project as a 100-year permanence period project.

## <u>Section 18 – Relinquishment of carbon credits if harvesting resumed during permanence</u> <u>period</u>

INFM projects are different from most other sequestration offset project types because the credited carbon stocks can be harvested, triggering the release of greenhouse gases into the atmosphere. In this respect, they are similar to plantation offset projects under the *Carbon Credits (Carbon Farming Initiative—Plantation Forestry) Methodology Determination 2022.* The CFI Act's permanence obligations and associated regulatory powers revolve around there being a reversal of credited removals (see ss 81, 82, 90, 91 and 97). With INFM projects, in the absence of specific requirements under the Determination, there could be ambiguity about whether there has been a relevant reversal of credited removals in the event that a State Government decided to resume harvesting in the project area after the end of the crediting period but prior to the end of the 100-year permanence period. The abatement benefits of INFM projects could also be undermined if, after the end of the crediting period but prior to the project is located to compensate for the restrictions on extracting timber from the project area.

To address these issues, it is intended that proponents of INFM projects relinquish ACCUs if, after the end of the 15-year crediting period but before the end of the 100-year permanence period:

- harvesting resumes in any carbon protection area; or
- the volume of wood extracted from the project area, excluded sections of the proponent's native forest estate (i.e. those parts of the public native forest estate in the jurisdiction in which the project is located that are not included in an INFM project) or the private native forest estate in the same jurisdiction exceed prescribed levels.

For the project area, the volume of wood extracted must not exceed the levels in the baseline scenario for the project. For the excluded sections of the proponent's public native forest estate, the volume of wood extracted must not exceed the direct leakage baseline harvest levels. For private native forests, the volume of wood extracted must not exceed the private native forests leakage baseline harvest levels.

This design feature is given effect via the requirement in subsection 18(1) for proponents to enter into an enforceable undertaking to address the risk of a resumption of timber harvesting after the end of the crediting period.

Subsection 18(2) clarifies that the enforceable undertaking is a binding undertaking given by the project proponent to the Regulator (whether by deed poll or other written instrument) to relinquish ACCUs in the event of a resumption of timber harvesting after the end of the crediting period for the project and before the end of the 100-year permanence period.

Subsection 18(3) specifies that a resumption of timber harvesting is taken to occur if:

- (a) timber harvesting resumes in any part of a carbon protection area for the project; or
- (b) in accordance with the modelling procedures set out in the agreement, during any 2-year period:

- i. the volume of wood extracted from the project area exceeds the levels in the baseline scenario for the project; or
- ii. the volume of wood extracted from the public native forests in the State in which the eligible offsets project is located (other than those in the project area for the project or in the project area for any other eligible offsets project) exceeds the direct leakage baseline harvest level under section 41; or
- iii. the volume of wood extracted from native forests in the State in which the project is located (other than from public native forests) exceeds the private native forests leakage baseline harvest level under section 42.

Subsection 18(4)(a) specifies that the enforceable undertaking must require the number of ACCUs to be surrendered in the event of a resumption of timber harvesting to be calculated in a manner consistent with the procedures for calculating the direct leakage deduction in section 41, only using a 10-year (rather than a 5-year) simulation period to estimate the difference in net emissions between the no harvest and harvest scenarios. The effect of this provision is to require the relinquishment obligation to be calculated using a FullCAM model harvest plot that represents the average emissions-intensity of harvesting from the project area, calculated over the 5-year period prior to project registration. The exceedance volume is converted to a harvest area using the representative model harvest plot in accordance with subsection 41(4)(b). The derived harvest area is then modelled in a 10-year quasi-project scenario, while a no-harvest version of the same model plot is included in a de facto 10-year quasi-baseline scenario. The relinquishment obligation is calculated as the difference between net emissions in the quasi-project scenario over the 10-year period.

Subsection 18(4)(b) specifies that, if there is a resumption of timber harvesting in a carbon protection area, the number of ACCUs to be surrendered must be calculated as double the number derived using the method described in subsection 18(4)(a).

## Division 3.3—Management plan for project area

The Determination requires project proponents to prepare and maintain a management plan for the project area and to manage the public native forests in the project area in accordance with the management plan. The management plan can be amended over the course of the project, provided the amendments do not increase the volume of wood proposed to be extracted from the project area during each 12 months of the crediting period. To promote transparency, the current version of the management plan must be published on the proponent's website at all times over the life of the project.

The management plan enables the Regulator to assess the project against the eligibility requirements and ensures transparency in key integrity measures, including the harvest level in the baseline scenario, the direct leakage baseline harvest level and the private native forests leakage baseline harvest level. It also mitigates integrity risks by ensuring the proponent adheres to the planned reduction in harvesting and preventing increases in harvesting after the project has commenced. Notably, failure to comply with the management plan provides a basis for the Regulator to unilaterally revoke a project's declaration as an eligible offsets project under section 32 of the *Carbon Credits (Carbon Farming Initiative) Rule 2015*.

The obligations regarding the preparation, maintenance and implementation of management plans for INFM projects are contained in sections 19, 20 and 21.

Section 19 – Preparation of management plan

Subsection 19(1) requires the project proponent to prepare a management plan for the project area.

Subsection 19(2) requires an application for registration of an INFM project to include the management plan.

Subsection 19(3) specifies that the management plan must include:

- the project map;
- the last sustainable yield estimate published by the responsible State government agency for the project area over the period 1 July 2014 to 30 June 2024, broken down by major vegetation groups;
- the harvest level in the baseline scenario for the project area (in cubic metres of logs produced and hectares harvested);
- the direct leakage baseline harvest level and the private native forests leakage baseline harvest level for the project (in cubic metres of logs produced);
- the volume of wood proposed to be extracted from the project area during each 12 months of the whole 15-year crediting period; and
- details on how the proposed reduction in the volume of wood to be extracted will be achieved.

## Section 20 – Amendment and publication of management plan

Subsection 20(1) provides that a project proponent may amend the management plan and provide it to the Regulator.

Subsection 20(2) clarifies that the management plan may be amended at any time before or after the project's registration.

Subsection 20(3) clarifies that an amended management plan must include the information required under Division 3.3, which includes the information detailed in subsection 19(3).

Subsection 20(4) prevents an amended management plan from increasing the volume of wood proposed to be extracted from the project area during each 12 months of the crediting period. This means that the first management plan that is submitted sets a limit on the volume of wood that can be extracted from the project area. Any subsequent amendments to the management plan can only maintain this volume or further reduce it.

Subsection 20(5) requires the current version of the management plan to be published on the proponent's website at all times over the life of the project.

Section 21 – Compliance with management plan

Section 21 provides that the eligibility requirements for registration as an INFM project include the requirement that the public native forests in the project area are managed in accordance with the management plan. Making the implementation of the management plan an eligibility requirement for registration means the Regulator can unilaterally revoke a project declaration in the event of non-compliance with the plan. If a project declaration is unilaterally revoked, the Regulator can require the proponent to relinquish ACCUs under section 89 of the CFI Act.

# Part 4—Crediting period for projects

## Section 22 - Crediting period for projects of 15 years

Subsection 69(2) of the CFI Act provides that the crediting period of a sequestration project (or designated savanna project) can be either 25 years or another period specified in the applicable methodology determination.

Section 22 of the Determination specifies that the crediting period for INFM projects is 15 years.

Shortening the crediting period to 15 years is intended to mitigate the risk that, in the absence of the registration of an INFM project, there could have been future declines in harvesting in the project area due to policy or other changes.

## Part 5—Net abatement amount

## **Division 5.1—Preliminary**

## Section 23 - Operation of this Part

Section 23 provides that, for the purposes of subsection 106(1)(c) of the CFI Act, Part 5 of the Determination specifies the method for calculating the carbon dioxide equivalent net abatement amount for INFM projects in relation to a reporting period.

Section 24 - Carbon pools and emission sources relevant to calculating net abatement amount

Section 24 contains the details of the carbon pools, emissions sources and greenhouse gases that are relevant to calculating the net abatement amount. These are summarised in the table in subsection 24(1) (see Table 1 on page 7 above).

Subsection 24(2) clarifies that the following carbon pools and emissions sources are excluded in calculating the net abatement amount for INFM projects:

- (a) soil organic carbon;
- (b) CH<sub>4</sub> and N<sub>2</sub>O emissions from wildfires and non-harvest related prescribed burns;
- (c) emissions from the combustion of fossil fuels in connection with forest management (other than timber harvesting or haulage operations); and
- (d) emissions from the combustion of fossil fuels in connection with the processing of harvested logs, the production of woodchips or the manufacture of solid wood products.

The soil organic carbon pool is excluded because there is a high degree of uncertainty about the effects of harvesting, and stopping or reducing harvesting, on soil organic carbon stocks. In most cases, stopping or reducing harvesting in public native forests should increase soil organic carbon stocks. However, whether and the extent to which this occurs is uncertain. Due to this, the exclusion of the soil organic carbon pool promotes conservativism in the calculation of the net abatement amount.

The exclusion of  $CH_4$  and  $N_2O$  emissions from wildfires and non-harvest related prescribed burns is based on the conservative assumption that the extent and severity of these fires are unaffected by harvesting. Due to this, it is conservatively assumed that, in the absence of the INFM project (and the associated reduction in harvesting), the extent and severity of wildfires and non-harvest related prescribed burns would be the same as in the project scenario.

The exclusion of emissions from the combustion of fossil fuels associated with forest management (other than timber harvesting or haulage operations) is based on the assumption

they are likely to be the same in both scenarios, or higher in the baseline than the project scenario (meaning their exclusion is conservative).

The exclusion of emissions from the combustion of fossil fuels in connection with the processing of harvested logs, the production of woodchips or the manufacture of solid wood products is conservative.

Section 25 - Summary of method for calculating net abatement amount

Section 25 summarises the method for calculating the net abatement amount for INFM projects.

Subsection 25(1) explains that the net abatement amount for a reporting period is calculated in accordance with Equation 1 as the difference between the carbon stock change in the project scenario and the carbon stock change in the baseline scenario, plus the difference in emissions from included sources in the baseline scenario and emissions from included sources in the project scenario, minus the leakage deduction, plus the carryover negative abatement amount (if any) from the previous reporting period.

Subsection 25(2) summarises the eight main steps involved in calculating the net abatement amount (see pages 10-11 above).

## Division 5.2—Calculation of net abatement amount

Section 26 - Equation for calculating net abatement amount

Subsection 26(1) contains Equation 1, being the equation for the calculation of the net abatement amount.

Subsection 26(2) provides that the project proponent must model the relevant baseline and project scenarios in accordance with Part 5.

Subsection 26(3) clarifies that the calculation of the net abatement amount is subject to the hurdle requirement in section 46.

## **Division 5.3**— Forest inventory

Section 27 - Requirement for forest inventories

Section 27 requires project proponents to undertake a forest inventory in the project area. The initial inventory is Step 1 in the summary of the method for calculating the net abatement amount (in section 25). The forest inventory is used for two purposes:

- (a) to calibrate the representative FullCAM model plots that are used to model carbon stock changes and emissions; and
- (b) to calculate the modified sustainable yield estimates that are used to determine the baseline harvest level (against which the net abatement amount is calculated).

Forest inventories are required to be carried out prior to the end of the first reporting period, within 6 months of the 5<sup>th</sup> and 10<sup>th</sup> anniversaries of the registration of the project and following any major disturbance event.

The inventories play an important integrity function by ensuring the FullCAM model plots are appropriately calibrated and providing the basis for the calculation of the modified sustainable yield. The modified sustainable yield is critical to the integrity of the method because it sets the baseline harvest level against which the net abatement amount is calculated. If the baseline harvest level does not reflect a conservative estimate of the level of harvesting in the absence of the project, it will lead to the crediting of abatement that is not additional. Forest inventories are required following the 5-year and 10-year anniversaries of the project registration, and following major disturbances, to ensure the modified sustainable yield contains to provide a reliable basis on which to forecast what the level of harvesting would be in the project area if the INFM project was not declared. For example, if there is a major wildfire in the project area during the crediting period that reduces the available timber that could be harvested, the requirement to undertake a forest inventory and recalculate the modified sustainable yield after the wildfire will ensure this is reflected in the baseline harvest level.

These requirements are reflected in subsections 27(1), (2), (3) and (4).

Subsection 27(1) requires the project proponent to conduct a forest inventory in the project area in accordance with the Forest Inventory Protocol published from time to time on the Department's website for the Determination.

Subsection 27(2) provides that forest inventories in the project area must be conducted:

- (a) prior to the end of the first reporting period;
- (b) within the 6-months period commencing on the 5th and 10th anniversary of the declaration of the project as an eligible offsets project; and
- (c) within 6 months of a major disturbance event.

'Major disturbance events' are defined in section 5 as:

a disturbance that is likely to reduce carbon stocks by more than 15% across more than 20% of the net harvestable area. For this definition, the net harvestable area is determined as at the date the application was made for the declaration of the project as an eligible offsets project.

Subsection 27(3) provides that the inventory undertaken under subsection (2)(a) must be used:

- (a) to calibrate the representative FullCAM model plots that are used to model carbon stock changes and emissions under this Determination; and
- (b) to calculate the modified sustainable yield estimate that is used to determine the baseline harvest level under Division 5.5.

Subsection 27(4) clarifies that the forest inventories undertaken under subsection (2)(b) or (c) must be used to calculate the revised modified sustainable yield estimate that is used to determine the baseline harvest level under Division 5.5.

## Division 5.4— Representative model plots and baseline estate model

Section 28 - Development of representative FullCAM model plots and baseline estate model

Section 28 requires the project proponent to develop:

- (a) representative FullCAM model plots based on timber harvesting in the 5-year period prior to the end of the financial year prior to the making of the application for project registration (prior period) (the representative harvest plots required under section 28(1));
- (b) representative FullCAM model plots that simulate the clearing of forests that was undertaken to facilitate timber harvesting (e.g. for roading, logging trails and log landings) in the project area in the prior period (the representative clearing plots required under section 28(3)); and

(c) a prior period FullCAM forest estate model that provides estimates of the total net harvested area (in hectares) in, and logs produced (in cubic metres (m3) of logs produced) from, the project area that are within  $\pm 5\%$  of the actual values for the prior period.

This is Step 2 in the summary of the method for calculating the net abatement amount (in section 25).

The representative harvest plots must reflect the forest types (at the major vegetation group level) in which harvesting occurred, the harvesting practices used to harvest wood from each of the forests and the average age of the trees at which harvesting occurred in the forest types using each defined combination of harvest practice and forest type over the prior 5-year period. There must be one representative plot for each forest type, harvest practice and age of harvesting combination.

One representative clearing plot must be developed for each forest region in the project area. The representative clearing plot developed for a forest region must reflect the average carbon density of the forests that were cleared in the region to facilitate harvesting over the prior period.

The representative harvest plots, representative clearing plots and prior period FullCAM forest estate model are used for four purposes.

- The prior period FullCAM forest estate model is used to convert the volume of wood harvested in the baseline scenario (in cubic metres) into the net harvested area in the baseline scenario (section 30).
- The plots and model are used to develop the baseline FullCAM forest estate model and project FullCAM forest estate model (section 35).
- The plots and model are used to calculate the direct leakage deduction (sections 35 and 42).
- The plots and model are used to calculate the private native forests leakage deduction (sections 35 and 43).

The approach to the development of the representative FullCAM model plots and prior period FullCAM forest estate model is intended to reduce the scope for gaming by promoting transparency and verifiability.

The requirements governing the development of the representative FullCAM model plots and prior period FullCAM forest estate model are set out in subsections 28(1)-(8).

Subsection 28(1) requires the project proponent to develop representative FullCAM model plots that simulate harvesting in public native forests in the project area based on the forest types and harvest practices from the prior period (5-years prior to the end of the last financial year prior to the making of the application for registration).

Subsection 28(2) specifies requirements that the representative harvest plots must satisfy.

- Subsection 28(2)(a) specifies that each representative harvest plot must simulate harvesting in 1 hectare of public native forests.
- Subsection 28(2)(b) specifies that the representative harvest plots must reflect: (i) the forest types (at the major vegetation group level) in which harvesting occurred; (ii) the harvesting practices used to harvest wood from each of the forest types (e.g. clear felling, single tree selection); and (iii) the average age of the trees at which harvesting

occurred in the forest types using each defined combination of harvest practice and forest type, in the prior period.

- Subsection 28(2)(c) specifies that one representative harvest plot must be developed for each combination of the characteristics in subsections (b)(i), (ii) and (iii). The details of how this must be done are provided in subsections 28(2)(c)(i), (ii) and (iii).
  - Subsection 28(2)(c)(i) specifies that the forest types must be reflected through the number assigned to the maximum live above-ground biomass (represented by the parameter *M* in FullCAM) in the plots and each forest type must be assigned one estimate of *M* only, calculated as the average from the area covered by each forest type in the project area.
  - Subsection 28(2)(c)(ii) specifies that the harvesting practices must be reflected through: (A) the percentage of the forest that is affected by the harvest event;
    (B) the proportion of stem biomass that is assigned to wood products and deadwood in the plots; and (C) whether there is a post-harvest (slash) burn and the characteristics of the burn (where relevant).
  - Subsection 28(2)(c)(iii) specifies that the average age at which harvesting occurs must be reflected through the average age of the trees, and the age of the oldest trees, at the time of harvest in the plots and the age of the trees and the age of the oldest trees must be the same in each plot.
- Subsection 28(2)(d) provides that, with the exception of the parameters referred to in subsection 28(2)(c), the parameters in the representative harvest plots must be the same as those used to simulate harvesting events in the project area for the purposes of the National Inventory Report, as at the time the project is registered. This ensures alignment with the approach used to estimate emissions and removals in the National Inventory Report.
- Subsection 28(2)(e) requires the representative harvest plots to be able to support the development of a prior period FullCAM forest estate model under subsection 28(5) that meets the accuracy requirements in subsection 28(7).
- Subsection 28(2)(f) requires the representative plots to be developed in accordance with the FullCAM Guidelines.

Subsection 28(3) requires the project proponent to develop representative FullCAM model plots that simulate clearing of forests in the project area in the prior period that was undertaken to facilitate timber harvesting (e.g. for roads, logging trails and log landings).

Subsection 28(4) specifies requirements that the representative clearing plots must satisfy.

- Subsection 28(4)(a) specifies that each representative clearing plot must simulate clearing of 1 hectare of public native forests.
- Subsection 28(4)(b) specifies that one representative clearing plot must be developed for each forest region in the project area. This simplified approach is used because the abatement calculations are confined to modelling counterfactual clearing events (i.e. clearing events in the baseline scenario that would have occurred in the absence in the INFM project). The counterfactual nature of the modelled clearing event means it is not possible to determine where in the project area it would have occurred.
- Subsection 28(4)(c) specifies that the representative clearing plot for a forest region must reflect the average carbon density of the forests that were cleared in the region to

facilitate harvesting over the prior period. This is required to be reflected in the representative clearing plot by:

- the number assigned to the maximum live above-ground biomass (represented by the parameter M in FullCAM) in the plot, calculated as the average across the relevant forest types affected by the clearing in the prior period; and
- the clearing must be assumed to occur when the live above-ground biomass in the modelled forest plot reaches 75% of its maximum, in the second rotation of a harvesting cycle that occurs at the same age.
- Subsection 28(4)(d) specifies that the representative clearing plot for a forest region must reflect three assumptions:
  - that all of the modelled area is cleared (subsection 28(4)(c)(i));
  - that all of the cleared biomass goes to deadwood (i.e. no logs are recovered for timber products) (subsection 28(4)(c)(ii)); and
  - there is no planting or regeneration after the clearing event (subsection 28(4)(c)(iii)).
- Subsection 28(4)(e) provides that, except as provided for in subsections 28(2)(c) and (d), the parameters in the representative harvest plots must be the same as those used to simulate clearing events in the project area for the purposes of the National Inventory Report, as at the time the project is registered.
- Subsection 28(4)(f) requires the representative clearing plots to be developed in accordance with the FullCAM Guidelines.

Subsection 28(5) requires the proponent to develop the prior period FullCAM forest estate model in accordance with the FullCAM Guidelines using the representative harvest plots and representative clearing plots. The prior period FullCAM forest estate model must be designed to estimate the changes in forest carbon stocks, and emissions of CH<sub>4</sub> and N<sub>2</sub>O from post-harvest (slash) burns, from the harvesting (including activities undertaken to facilitate harvesting) that occurred in the project area over the prior period.

Subsection 28(6) contains the accuracy requirements for the prior period FullCAM forest estate model. These require the model's estimates of the total net harvested area (in hectares) in, and logs produced (in cubic metres (m<sup>3</sup>) of logs produced) from, the project area for the prior period must be within  $\pm 5\%$  of the actual values for that period. In practice, meeting these accuracy requirements will require iteration in the prescribed parameters in subsection 28(2)(c). This calibration step ensures the model is sufficiently accurate for its designated uses under the Determination.

## Division 5.5—Baseline harvest levels

Division 5.5 requires the proponent to:

- calculate the baseline harvest level in cubic metres (m<sup>3</sup>) of wood harvested and then to convert this into the net area subject to harvesting in the baseline scenario (baseline net harvest area); and
- calculate the area cleared to facilitate harvesting in the baseline scenario.

This is Step 3 in the summary of the method for calculating the net abatement amount (in section 25).

The baseline harvest level, baseline net harvest area and the area cleared to facilitate harvesting in the baseline scenario are used to model carbon stock changes and emissions in the baseline scenario. They are intended to reflect a conservative estimate of the harvest related activities in the project area in the absence of the INFM project.

Section 29 - Calculating baseline harvest levels, in volume of wood harvested

Subsections 29(1) and (2) specify that the baseline harvest level, in cubic metres  $(m^3)$  of logs produced, must be calculated as the lower of the:

- modified sustainable yield estimate (calculated under subsection 29(1)); and
- the last sustainable yield estimate published by the responsible State government agency for the project area over the period 1 July 2014 to 30 June 2024 (as referred to in section 14) (see subsection 29(2)).

The modified sustainable yield estimate is calculated under subsection 29(1) as follows.

- (a) If there is a sufficient correlation for the project between the sustainable yield and log production during the baseline period (defined as a coefficient of determination (R<sup>2</sup>) of equal to or greater than 0.7) – the modified sustainable yield estimate is the estimated sustainable yield multiplied by the average log production to sustainable yield ratio over the baseline period.
- (b) If there is not a sufficient correlation for the project between the sustainable yield and log production during the baseline period (defined as a coefficient of determination  $(R^2)$  less than 0.7), the estimate is either:
  - i. if the log production to sustainable yield ratio over the baseline period was equal to or greater than 0.8 in all years the estimated sustainable yield multiplied by 0.8; or
  - ii. if the log production to sustainable yield ratio over the baseline period was less than 0.8 in any year the estimated sustainable yield multiplied by the lower of the average log production to sustainable yield ratio over the baseline period or 0.6.

Subsection 29(3)(a) provides that, for the purpose of calculating the modified sustainable yield estimate, the baseline period is the 10-year period prior to the end of the last financial year before the lodgement of the application for registration. However, subsection 29(3)(b) allows for the exclusion of financial years from the baseline period where harvesting in those years was affected by a major wildfire event. Financial years that can be excluded are limited to years where more than 25% of the net harvestable area in the project area was affected by wildfire and the 2 subsequent financial years following the event year. For these purposes, the net harvestable area is calculated at the time of the wildfire, not at the time of the application for registration.

Subsection 29(4) requires the modified sustainable yield estimate to be calculated:

- (a) prior to the end of the first reporting period (the initial modified sustainable yield estimate); and
- (b) within the 6-month period commencing on the 5th and 10th anniversary of the declaration of the project as an eligible offsets project (the revised modified sustainable yield estimate); and
- (c) within 6 months of a major disturbance event (the revised modified sustainable yield estimate).

The note below subsection 29(4) clarifies that, when calculating a revised modified sustainable yield estimate, the log production to sustainable yield correlations and ratios must be taken from the baseline period, not the 10-year period prior to the date of the recalculation.

The requirement to recalculate the modified sustainable yield estimate is important as it ensures the baseline harvest level continues to be a conservative estimate of the level of harvesting in the project area in the absence of the INFM project.

Subsection 29(5) specifies that modified sustainable yield estimates must be based on the projected sustainable wood yield of sawlogs and pulplogs, excluding residues such as firewood. The exclusion of residues ensures further conservatism in the baseline harvest level. Additional conservatism is provided by the fact that, when calculating changes in the carbon stocks in the harvested wood products carbon pool, and calculating the direct leakage deduction and the private native forests leakage deduction, all wood extracted from the relevant forests are accounted for, including residues.

Subsection 29(6) clarifies that initial and modified sustainable yield estimates must account for Commonwealth and State laws that affected the ability to harvest timber in the project area, as at the date of project registration. This ensures that subsequent legal changes made after the registration of the project– such as the declaration of a national park or other conservation reserve over all or part of a project area – do not reduce the baseline harvest level.

Subsection 29(7) requires initial and modified sustainable yield estimates:

- to be prepared in accordance with the Sustainable Yield Protocol (published from time to time on the Department's website for this Determination); and
- verified by an independent qualified assessor contracted by the Regulator.

These requirements ensure the modified sustainable yield estimates are robust and meet appropriate standards. The requirement for verification to be conducted by an independent qualified assessor contracted by the Regulator is intended to reduce the risk of funding bias (the tendency for the outcomes of verification and research processes to reflect the interests of the funder).

Subsection 29(8) requires the project proponent to re-imburse the Regulator for the costs of contracting an independent qualified assessor to verify initial or revised modified sustainable yield estimates.

Subsection 29(9) requires the project proponent to publish all data relied on in the preparation of modified sustainable yield estimates.

## <u>30 - Calculating baseline harvest levels, in net harvested area</u>

Section 30 requires the baseline harvest level in the reporting period (in cubic metres of wood harvested) to be converted into a net harvest area equivalent (in hectares) (baseline net harvest area). This must be done by dividing the estimate of logs produced (in cubic metres) by the area-weighted average log yield (in m<sup>3</sup> per hectare) from the prior period FullCAM forest estate model developed under section 28.

## Section 31 - Calculating area cleared to facilitate harvesting in the baseline

Section 31 requires the area cleared to facilitate timber harvesting in the baseline scenario (in hectares) for the reporting period to be calculated by:

- calculating the ratio between the cleared area (in hectares) and logs produced (in cubic metres, m<sup>3</sup>) in the prior period (by dividing the area cleared (in hectares) to facilitate timber harvesting in the project area in the prior period by the logs produced (in cubic metres, m<sup>3</sup>) in the project area in the prior period); and
- multiplying this ratio by the harvest level in the baseline scenario for the reporting period (in cubic metres (m3) of logs produced), as calculated under sections 29.

## Division 5.6— Carbon stock change

Division 5.6 specifies how the carbon stock changes in the forest carbon pools (live above and below ground biomass and debris), and  $CH_4$  and  $N_2O$  emissions associated with post-harvest (slash) burns, in the project and baseline scenarios must be calculated. This must be done using FullCAM and following the requirements in the FullCAM Guidelines.

This is Step 4 in the summary of the method for calculating the net abatement amount (in section 25).

The modelling must be undertaken using the representative harvest plots and representative clearing plots derived from the forest inventory (Step 1), supplemented with additional model plots as necessary to reflect forest clearing events that are not directly related to timber harvesting. Generally, the same representative model plots are required to be used in the baseline and project scenarios, with harvest events (including post-harvest (slash) burns) and clearing events undertaken to facilitate forest harvesting (e.g. for roading, logging trails and log landings) included (baseline scenario) and excluded (project scenario) as relevant to reflect the nature of the project activities. The main exception to this relates to forest clearing events that are not directly related to timber harvesting, which are modelled in the project scenario but excluded from the baseline scenario.

## Section 32 - Calculating carbon stock change in included carbon pools

Section 32 contains Equation 2, which is used to calculate the carbon stock change in the forest carbon pools over the relevant reporting period in both the project and baseline scenarios. The carbon stock change in the forest carbon pools in the project and baseline scenarios are used in Equation 1 (section 26) to calculate the net abatement amount.

Section 33 - Calculating included carbon stocks

Section 33 contains Equation 3, which is used to calculate the carbon stock in the forest carbon pools at the end of the reporting period (for the purposes of Equation 2).

Section 34 - Modelled events for estimation of carbon stocks in carbon pools

Section 34 prescribes the events that can be modelled in calculating the carbon stock in the forest carbon pools at the end of the reporting period (for the purposes of Equation 3).

Subsection 34(1) prescribes the events that can be modelled in the baseline scenario, which are limited to:

- (a) timber harvesting (including post-harvest (slash) burns); and
- (b) clearing of forests to facilitate timber harvesting (e.g. for roading, logging trails and log landings).

Subsection 34(2) prescribes the events that can be modelled in the project scenario, which are limited to:

- (a) avoided timber harvesting;
- (b) avoided clearing of forests to facilitate timber harvesting; and

(c) other clearing of forests, including for management roads and fire trails (except where the clearing involves the re-clearing of management roads or fire trails that were cleared in the 10 years prior to the date the application was made for the declaration of the project as an eligible offsets project).

### Section 35 – Modelling of carbon stocks in trees and forest debris

Section 35 specifies how forest carbon stocks at the end of the reporting period in the project and baseline scenarios must modelled (for the purposes of Equation 3).

Subsection 35(1) requires the modelling of forest carbon stocks (carbon mass of trees and forest debris) at the end of the reporting period to be done using FullCAM and in accordance with the FullCAM Guidelines.

Subsection 35(2) specifies how the forest carbon stocks must be modelled in the baseline scenario for the first reporting period. For these purposes, the forest carbon stocks must be calculated using a 7-step method.

**Step 1:** Calculate the proportion of the total net harvested area for the prior period allocated to each of the representative harvest plots from subsection 28(1) in the prior period FullCAM forest estate model (subsection 35(2)(a)).

**Step 2:** Calculate the net harvested area in the baseline scenario (in hectares) in the reporting period by dividing the net harvested area in the baseline scenario for each financial year covered by the reporting period by 12 (to derive an average baseline harvested area for each month) and summing the average baseline harvested area for each month in the reporting period (subsection 35(2)(b)).

**Step 3:** Calculate the modelled baseline harvest area by subtracting the net harvested area in the reporting period (in hectares) from the net harvested area in the baseline scenario (in hectares) over the reporting period from subsection 35(2)(b) (subsection 35(2)(c)). This means the only harvest events that are modelled are those that are avoided in the project scenario, based on the assumption that the other harvesting that occurs in the project scenario would have occurred in the baseline scenario (i.e. there is no relevant change in carbon stocks between the two scenarios).

**Step 4:** Allocate the modelled baseline harvest area (from subsection 35(2)(c)) to the representative harvest plots from subsection 28(1) by multiplying the proportion from subsection 35(2)(a) for each plot by the total modelled baseline harvest area for the reporting period. The use of this approach assumes the harvesting that occurred in the prior period is representative of what would have occurred in the absence of the INFM project (subsection 35(2)(d)).

**Step 5:** Establish the basis for modelling the clearing undertaken to facilitate timber harvesting in the baseline scenario by calculating the modelled baseline cleared area for the reporting period and allocating the area to the representative clearing plots from subsection 28(3) (subsection 35(2)(e)). This is done in two stages.

- (a) Calculate the modelled baseline cleared area for the reporting period by:
  - i. multiplying the logs harvested in the project area in the reporting period (in cubic metres, m<sup>3</sup>) by the ratio between the cleared area (in hectares) and logs produced (in cubic metres, m3) in the prior period (from subsection 31(1)); and
  - ii. subtracting the result from the area cleared to facilitate timber harvesting in the baseline scenario (in hectares) from section 31.

(b) Allocate the modelled baseline cleared area to the representative clearing plots from subsection 28(3) in proportion to the volume of wood harvested in the baseline scenario in each forest region in the project area.

Step 6: Develop a baseline FullCAM forest estate model using:

- (a) the representative harvest plots and the allocated modelled baseline harvest areas; and
- (b) the representative clearing plots and the allocated modelled baseline cleared areas.

The harvest and clearing events must be scheduled to occur in the estate model at the date of project registration (subsection 35(2)(f)).

**Step 7:** Estimate the forest carbon stocks at the end of the reporting period using the baseline FullCAM forest estate model (subsection 35(2)(g)).

Subsection 35(3) specifies how the forest carbon stocks must be modelled in the baseline scenario for subsequent reporting periods. The method for subsequent reporting periods is similar to the first reporting period, involving the:

- calculation of the modelled baseline harvest area and modelled baseline cleared area (subsections 35(3)(a) and (c)); and
- allocation of the modelled baseline harvest area and modelled baseline cleared area to the representative harvest plots and representative clearing plots respectively (subsections 35(3)(b) and (d));
- modification of the baseline FullCAM forest estate model from the previous reporting period through the addition of the new plots, modelled harvest area and modelled cleared area (subsection 35(3)(e)); and
- calculating the forest carbon stocks at the end of the reporting period using the modified baseline FullCAM forest estate model (subsection 35(3)(f)).

Subsection 35(4) specifies how the forest carbon stocks must be modelled in the project scenario for the first reporting period. For these purposes, the forest carbon stocks must be calculated using a 9-step method.

**Step 1:** The modelled avoided harvest area (in hectares) for the reporting period must be the same as the modelled baseline harvest area from subsection 35(2)(c) (subsection 35(4)(a)).

**Step 2:** Allocate the modelled avoided harvest area (in hectares) to the representative harvest plots from subsection 28(1) by multiplying the proportion from subsection 35(2)(a) for each plot by the total modelled avoided harvest area for the reporting period (subsection 35(4)(b)).

**Step 3:** Remove the harvest events from the representative harvest plots, thereby creating 'mirror' avoided harvest plots (subsection 35(4)(c)).

**Step 4:** The modelled avoided cleared area to facilitate timber harvesting (in hectares) for the reporting period must be the same as in subsection 35(2)(e)(i) (subsection 35(4)(d)).

**Step 5:** Allocate the modelled avoided cleared area to the representative clearing plots from subsection 28(3) in proportion to the volume of wood harvested in the baseline scenario in each forest region in the project area (subsection 35(4)(e)).
**Step 6:** Remove the clearing events from the representative clearing plots, thereby creating 'mirror' avoided clearing plots (subsection 35(4)(f)).

**Step 7:** Establish the basis for modelling clearing in the project area over the reporting period for purposes unrelated to timber harvesting by:

- (a) mapping the relevant cleared area in accordance with the Mapping Guidelines; and
- (b) allocating the cleared area to representative FullCAM model plots developed in accordance with the FullCAM Guidelines that simulate the clearing events (subsection 35(4)(g)).

Step 8: Develop a project FullCAM forest estate model using only:

- (a) the representative avoided harvest plots (Step 3) and the allocated modelled avoided harvest areas (Step 2);
- (b) the representative avoided clearing plots (Step 6) and the allocated modelled avoided cleared areas (Step 5); and
- (c) the representative clearing plots and allocated cleared areas (step 7).

The plots must be added to the model at the date of project registration (subsection 35(4)(h)).

**Step 9:** Estimate the forest carbon stocks at the end of the reporting period using the project FullCAM forest estate model (subsection 35(4)(1)).

Subsection 35(5) specifies how the forest carbon stocks must be modelled in the project scenario for subsequent reporting periods. The method for subsequent reporting periods is similar to the first reporting period, involving the:

- calculation of the modelled avoided harvest area and modelled avoided cleared area (subsections 35(5)(a) and (d)); and
- allocation of the modelled avoided harvest area and modelled avoided cleared area to the representative harvest plots and representative cleared plots respectively (subsections 35(5)(b) and (e));
- removal of the harvest events from the representative harvest plots and clearing from the representative cleared plots (subsections 35(5)(c) and (f));
- mapping of any forests cleared in the project area during the reporting period (other than for timber harvesting or to facilitate timber harvesting) in accordance with the Mapping Guidelines and the development of representative model plots to simulate these clearing events (subsections 35(5)(g));
- modification of the project FullCAM forest estate model from the previous reporting period through the addition of the new plots, modelled avoided harvest area, modelled avoided cleared area and area cleared for purposes not directly related to timber harvesting (subsections 35(5)(h)); and
- calculating the forest carbon stocks at the end of the reporting period using the modified project FullCAM forest estate model (subsection 35(5)(i)).

Section 36 - Modelling of carbon stocks in harvested wood products

Section 36 specifies how the harvested wood products (HWP) carbon pool (carbon mass of HWP) must be modelled in the baseline and project scenarios (for the purposes of Equation 3).

Section 36(1) specifies that [the designed HWP model] must be used to determine the HWP carbon pool at the end of the reporting period in the baseline and project scenarios. [Input is being sought on the preferred HWP model]

Section 36(2) provides that, in the baseline scenario, the volume of wood harvested in a reporting period that is inputted to the [HWP Model] must be equal to the baseline harvest levels, in cubic metres (m3) of logs produced, for the reporting period, calculated by:

- (a) dividing the baseline harvest level for each financial year covered by the reporting period by 12 (to derive a monthly baseline harvest level); and
- (b) summing the baseline harvest level for each month in the reporting period.

Section 36(3) provides that, in the project scenario, the volume of wood harvested in a reporting period that is inputted to the [HWP Model] must be the actual logs harvested over the reporting period, minus pulplogs and other residue logs (e.g. firewood). The exclusion of pulplogs and other residue logs promotes conservativism. This is because it creates an artificial imbalance in the coverage of the stocks in the project and baseline scenarios, whereby the carbon in these logs is assumed to persist (and degrade) in the baseline scenario but instantly oxidise in the project scenario.

Subsection 36(4) requires the modelling of the HWP carbon pool to be carried out in accordance with the [HWP Modelling Guidelines].

# Division 5.7—Emissions from included sources

Division 5.7 details how emissions from included sources must be calculated. The included sources for these purposes are:

- CH<sub>4</sub> and N<sub>2</sub>O emissions from post-harvest (slash) burns; and
- CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions from the combustion of fossil fuels associated with timber harvesting and haulage operations.

Other emissions that can occur in the project scenario, including  $CH_4$  and  $N_2O$  emissions from wildfires, are excluded on the basis they are likely to be the same or lower in the project scenario relative to the levels that would have occurred if the INFM project had not been registered (baseline).

Section 37 – Emissions from included sources

Section 37 contains Equation 4, which is used to calculate emissions from included sources (in tonnes  $CO_2$ -e) in the reporting period, in either the project scenario or the baseline scenario (for the purposes of Equation 1).

Section 38 - Calculating emissions from post-harvest (slash) burns

Subsection 38(1) contains Equation 5, which is used to calculate CH<sub>4</sub> and N<sub>2</sub>O emissions (in tonnes CO<sub>2</sub>-e) from post-harvest (slash) burns in the reporting period, in either the project scenario or baseline scenario (for the purposes of Equation 4).

Subsection 38(2) contains Equation 6, which is used to calculate  $CH_4$  emissions (in tonnes  $CO_2$ -e) from post-harvest (slash) burns (for the purposes of Equation 5).

Subsection 38(3) contains Equation 7, which is used to calculate  $N_2O$  emissions (in tonnes  $CO_2$ -e) from post-harvest (slash) burns (for the purposes of Equation 5).

Subsection 38(4) requires emissions of  $CH_4$  and  $N_2O$  from post-harvest (slash) burns to be determined using FullCAM in accordance with the FullCAM Guidelines and the modelling procedures in section 35.

Section 39 - Calculating emissions from combustion of fossil fuels in project scenario

Subsection 39(1) contains Equation 8, which is used to calculate  $CO_2$ ,  $CH_4$  and  $N_2O$  emissions (in tonnes  $CO_2$ -e) from the combustion of fossil fuels associated with timber harvesting and haulage operations over a reporting period in the project scenario (for the purposes of Equation 4). Equation 8 specifies that these emissions are calculated as the sum of  $CO_2$ ,  $CH_4$  and  $N_2O$  emissions (in tonnes  $CO_2$ -e) from the combustion of each fuel used for these purposes.

Subsection 39(2) contains Equation 9, which is used to calculate  $CO_2$ ,  $CH_4$  and  $N_2O$  emissions from the combustion of different fuels in the reporting period (for the purposes of Equation 8).

Section 40 - Calculating emissions from combustion of fossil fuels in baseline scenario

Section 40 contains Equation 10, which is used to calculate CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions (in tonnes CO<sub>2</sub>-e) from the combustion of fossil fuels associated with timber harvesting and haulage operations over a reporting period in the baseline scenario (for the purposes of Equation 4). These emissions are calculated using the emissions intensity of harvesting and haulage operations in the reporting period (emissions from the combustion of fossil fuels associated with timber harvesting and haulage operations divided by the logs harvested, in cubic metres, m<sup>3</sup>). The emissions intensity of harvesting and haulage operations in the reporting period is multiped by the baseline harvest level (in cubic metres, m<sup>3</sup>) in the reporting period, as calculated under Division 5.5 (section 29). This approach ensures projects are not credited for improvements in the emissions intensity of harvesting and haulage operations, based on the conservative assumption that these improvements would have occurred in the absence of the INFM project.

# **Division 5.8—Leakage deductions**

Division 5.8 specifies how the leakage deduction must be calculated for the purposes of Equation 1 when determining the net abatement amount for a reporting period.

The leakage deduction is comprised of three components:

- the direct leakage deduction;
- the private native forests leakage deduction; and
- the indirect leakage deduction.

The direct leakage deduction and private native forests leakage deduction are only applied when specified thresholds are exceeded for log production in the relevant forest estates. The indirect leakage deduction is always applied, regardless of evidence on the existence of relevant indirect leakage.

The direct leakage deduction must be applied if the volume of wood extracted from the excluded sections of the proponent's public native forest estate exceeds the direct leakage baseline harvest level. If the direct leakage baseline harvest level is exceeded, the exceedance is deemed to be attributable to the project and credited abatement is reduced accordingly. This is intended to address the risk of direct leakage through activity shifting.

The private native forests leakage deduction must be applied if the volume of wood extracted from private native forests in the jurisdiction in which the project is located exceeds the

private native forests leakage baseline harvest level. If the private native forests leakage baseline harvest level is exceeded, the exceedance is deemed to be attributable to the project and credited abatement is reduced accordingly. This is intended to address the risk of indirect leakage to private native forests.

The indirect leakage deduction must be applied when calculating the net abatement amount. This accounts for indirect leakage risks, other than those associated with private native forests in the jurisdiction in which the project is located.

The leakage deduction complements the other mechanisms in the Determination to address leakage risks, including:

- the requirement for project areas to consist of all public native forests designated for commercial forestry use in at least one whole forestry region (which reduces the scope for direct leakage through activity shifting); and
- the hurdle requirement (which mitigates the risk of leakage through crosssubsidisation by ensuring there is a structural shift in the native forest industry in the relevant region); and
- the additional permanence provisions contained in section 18, which mitigates the risk of activity shifting after the crediting period.

## Section 41 – Leakage deduction for reporting period (LDi)

Section 41 contains Equation 11, which is used to calculate the leakage deduction  $(LD_i)$  in the reporting period (for the purposes of Equation 1). The leakage deduction is calculated for these purposes as the sum of the direct leakage deduction, private native forests leakage deduction and indirect leakage deduction.

#### Section 42 - Direct leakage deduction (DLD<sub>i</sub>)

Subsection 42(1) specifies that the direct leakage deduction provisions in section 42 apply to the public native forests in the State in which the INFM project is located, other than those in the project area for the project or in the project area for another eligible offsets project.

Subsection 42(2) specifies that a direct leakage deduction applies in calculating the leakage deduction for a reporting period if the volume of wood extracted from the excluded sections of the public native forest estate (as identified in subsection 42(1)) exceeds the direct leakage baseline harvest level.

Subsection 42(3) provides that the direct leakage baseline harvest level (in cubic metres, m<sup>3</sup>) is the lower of:

- (a) the average volume of wood extracted from the excluded sections of the public native forest estate over the baseline period (determined in accordance with Division 5.5); and
- (b) the modified sustainable yield estimate for the excluded sections of the public native forest estate (determined in accordance with Division 5.5).

Subsection 42(4) specifies that, if a direct leakage deduction applies:

 (a) the exceedance volume under subsection 42(2) is calculated by subtracting the direct leakage baseline harvest level under subsection 42(3) from the volume of wood extracted from the public native forests in the reporting period; and (b) a modelled harvest area must be derived by dividing the exceedance volume by the area-weighted average log yield (in m<sup>3</sup> per hectare) from the prior period FullCAM forest estate model developed under section 28.

Subsection 42(5) specifies that the direct leakage deduction  $(DLD_i)$  must be calculated as the difference between the net emissions (in tonnes CO<sub>2</sub>-e) from harvesting and not harvesting the modelled harvest area (derived under subsection 42(4)(b)) over a 5-year simulation period. This must be calculated using Equation 12, which is provided in subsection 42(5).

Subsection 42(6) specifies how the parameters in Equation 12 must be calculated. The carbon mass of trees and forest debris in the harvest and no-harvest scenarios must be modelled using FullCAM in accordance with section 35. For these purposes, timber harvesting and post-harvest (slash) burns are the only events that can be modelled in the harvest scenario and these events must be removed in modelling the corresponding no-harvest scenario. No other events can be modelled. Subsection 42(6)(c) ensures relevant references to the baseline and project scenarios in Equations 2, 3, 4, 5, 6 and 7, and section 35, are taken to mean the harvest (baseline) and no harvest (project) scenarios respectively. Subsection 42(6)(d) clarifies that references to the reporting period in relevant sections must be taken to mean the 5-year simulation period.

The use of a 5-year simulation period for these purposes is conservative as it tends to maximse the difference in net emissions between the two scenarios.

## 43 - Private native forests leakage deduction (PNFLD<sub>i</sub>)

Subsection 43(1) specifies that the private native forests leakage deduction provisions in section 43 apply to native forests in the State in which the eligible offsets project is located (other than public native forests) that may be used for the purposes of obtaining timber for sale.

Subsection 43(2) specifies that a private native forests leakage deduction applies in calculating the leakage deduction for a reporting period if the volume of wood extracted from private native forests in the relevant state exceeds the private native forests leakage baseline harvest level.

Subsection 43(3) provides that the private native forests leakage baseline harvest level is the average volume of wood (in cubic metres,  $m^3$ ) extracted from the private native forests in the relevant state over the 10-year period before the end of the last financial year before the application for the registration of the INFM project was made.

Subsection 43(4) specifies that, if a private native forests leakage deduction applies:

- (a) the exceedance volume under subsection 43(2) is calculated by subtracting the private native forests leakage baseline harvest level under subsection 43(3) from the volume of wood extracted from those native forests in the reporting period; and
- (b) a modelled harvest area must be derived by dividing the exceedance volume by the area-weighted average log yield (in m<sup>3</sup> per hectare) from the prior period FullCAM forest estate model under section 28.

Subsection 43(5) specifies that the private native forests leakage deduction (PNFLD<sub>i</sub>) is the difference between the net emissions (in tonnes  $CO_2$ -e) from harvesting and not harvesting the modelled harvest area over a 5-year simulation period. This must be calculated using Equation 13, which is provided in subsection 43(5).

Subsection 43(6) specifies how the parameters in Equation 13 must be calculated. The carbon mass of trees and forest debris in the harvest and no-harvest scenarios must be modelled using

FullCAM in accordance with section 35. For these purposes, timber harvesting and postharvest (slash) burns are the only events that can be modelled in the harvest scenario and these events must be removed in modelling the corresponding no-harvest scenario. No other events can be modelled. Subsection 43(6)(c) ensures relevant references to the baseline and project scenarios in Equations 2, 3, 4, 5, 6 and 7, and section 35, are taken to mean the harvest (baseline) and no harvest (project) scenarios respectively. Subsection 42(6)(d) clarifies that references to the reporting period in relevant sections must be taken to mean the 5-year simulation period.

The use of a 5-year simulation period for these purposes is conservative as it tends to maximise the difference in net emissions between the two scenarios.

## <u>44 – Indirect leakage deduction (ILD<sub>i</sub>)</u>

Section 44 contains Equation 14, which is used to calculate the indirect leakage deduction  $(ILD_i)$  in the reporting period (for the purposes of Equation 11). The indirect leakage deduction is calculated for these purposes as 5% of the difference between the carbon stock change in the project and baseline scenarios (calculated using Equation 2), minus the direct leakage deduction (calculated using Equation 12) minus the private native forest leakage deduction (calculated using Equation 13).

#### Division 5.9—Carryover negative abatement amount

## Section 45 - Calculating carryover negative abatement amount

Section 45 provides that, for the purpose of determining the net abatement amount for the reporting period in accordance with Equation 1, the carryover negative abatement amount  $(CNAA_{i-1})$  is calculated as:

- (a) zero, if the net abatement number for the previous reporting period  $(NA_{i-1})$  was equal to or greater than zero; or
- (b) equal to the net abatement number for the previous reporting period  $(NA_{i-1})$  if this number was less than zero.

#### Division 5.10—Hurdle for eligible carbon abatement

Division 5.10 contains the hurdle requirement, which provides that projects are only eligible to receive ACCUs in a reporting period if the volume of wood extracted from the project area is at least 20% below the levels in the baseline scenario, both in each 12-month segment of the reporting period (or part thereof if the final part of the reporting period is less than 12 months) and on aggregate since the date of project registration through to the end of the reporting period. This is given effect by making the net abatement amount zero unless these requirements are met. Under section 13 in Division 3.2, to be eligible for registration, the reduction in the volume of wood extracted from the project area relative to the baseline harvest level must be likely to exceed the 20% hurdle in each 12-month segment of the crediting period.

The hurdle requirement serves two integrity functions:

• it mitigates the risk of crediting minor, short-term fluctuations in harvesting associated with market or other business-as-usual conditions – for credits to be issued, there must be a significant reduction in harvesting that goes beyond normal interannual variability; and

• it mitigates the risk of leakage through cross-subsidisation by ensuring the level of crediting reflects the extent to which there is a structural shift in the native forest industry in the relevant region.

<u>Section 46 – Minimum reduction in volume of wood extracted from levels in baseline scenario</u>

Subsection 46(1) provides that the net abatement amount in relation to a reporting period is zero if the volume of wood (in cubic metres, m<sup>3</sup>) extracted from the project area during each 12 months of the reporting period is not at least 20% less than the levels in the baseline scenario for each such 12-month period. The note to subsection 46(1) clarifies that, if a reporting period is greater than 12 months, the hurdle for eligible carbon abatement applies to each 12-months period sequentially, measured for any such 12-months period against the baseline scenario for that 12-months period.

Subsection 46(2) specifies that, if the reporting period:

- (a) is less than 12 months subsection (1) applies to that shorter period as if the reference to 12 months were a reference to the reporting period; or
- (b) is more than 12 months but is not a multiple of 12 months subsection (1) applies (in addition to each such 12-months period) to the balance of the reporting period as if the reference to 12 months were a reference to the balance of the reporting period.

Subsection 46(3) provides that the net abatement amount in relation to a reporting period is also zero if the volume of wood (in cubic metres,  $m^3$ ) extracted from the project area during the period from the declaration of the project as an eligible offsets project until the end of the reporting period is not at least 20% less than the levels in the baseline scenario for that period.

Subsection 46(4) specifies that section 46 does not apply if the net abatement amount calculated under this Part is (but for this section) a negative amount. This ensures negative abatement amounts are carried over into subsequent reporting periods.

# Division 5.11—Factors and parameters from external sources

#### Section 47 - Factors and parameters from external sources

Subsection 47(1) provides that, if a calculation in the Determination includes a factor or parameter that is defined or calculated by reference to another instrument or writing, the factor or parameter to be used for a reporting period is the factor or parameter referred to in, or calculated by reference to, the instrument or writing as in force at the end of the reporting period.

Subsection 47(2) specifies that subsection 47(1) does not apply if the Determination specifies otherwise or it is not possible to define or calculate the factor or parameter by reference to the instrument or writing as in force at the end of the reporting period.

# Part 6— Reporting, record keeping and monitoring requirements

The CFI Act contains general reporting, record keeping and monitoring requirements. However, Determinations can include additional requirements that supplement the general requirements. Part 6 of the Determination contains additional requirements for these purposes.

# **Division 6.1—Reporting requirements**

Section 48 – Operation of this Division

Section 48 specifies that, for the purposes of subsection 106(3)(a) of the CFI Act, Division 6.1 sets out additional reporting requirements for INFM projects.

#### Section 49 – Information required in offsets reports

Subsection 49(1) provides that offsets reports for a reporting period must include:

- (a) a copy of the project map for the project; and
- (b) the current management plan for the project; and
- (c) any other forest management plans that are required to be prepared in relation to timber harvesting and other forest management actions in the project area as at the end of the reporting period;
- (d) in the case of any carbon protection area details of the measures taken to promote the effective management of that area (including in relation to the conservation of biodiversity and to the engagement of Aboriginal people in forest management actions in that area).

These provisions are intended to promote integrity and transparency in the operation of INFM projects.

Subsection 49(2) specifies that, if in modelling a management action or disturbance event in FullCAM in accordance with the FullCAM guidelines, the project proponent specified that a portion of the project area was affected by a FullCAM event, the offsets report must describe how the portion was estimated.

Subsection 49(3) specifies that if a calculation in the Determination includes a factor or parameter that is defined or calculated by reference to another instrument (or writing) as in force from time to time, and it is not possible to define or calculate the factor or parameter by reference to the instrument (or writing) as in force at the end of the reporting period, the offsets report must include:

- (a) the versions of the instrument or writing used;
- (b) the start and end dates of each use;
- (c) the reasons why it was not possible to define or calculate the factor or parameter by reference to the instrument or writing as in force at the end of the reporting period.

#### **Division 6.2—Record-keeping requirements**

Section 50 – Operation of this Division

Section 50 specifies that, for the purposes of subsection 106(3)(c) of the CFI Act, Division 6.2 sets out record-keeping requirements for INFM projects.

Section 51 – Records relating to timber harvesting and clearing to facilitate timber harvesting

Subsection 51 requires the project proponent to make and keep records that evidence the timber harvesting and areas cleared to facilitate timber harvesting in the project area in the reporting period, including on the extent of harvesting and clearing and the harvesting practices that were used.

Section 52 – Records relating to monitoring of harvesting and clearing events

Subsection 52 requires the project proponent to make and keep records that result from the monitoring of harvesting and clearing under section 55 and evidence the actions that were undertaken in the project area.

Section 53 – Mapping and imagery of harvested and cleared areas

Subsection 53 specifies that the records that are made and kept for the purposes of sections 51 and 52 must include:

- (a) maps of the areas harvested and cleared that are prepared in accordance with the Mapping Guidelines; and
- (b) date-stamped and geo-referenced remotely sensed imagery of the harvested and cleared areas.

#### **Division 6.2— Monitoring requirements**

#### Section 54 – Operation of this Division

Section 54 specifies that, for the purposes of section 106(3)(d) of the CFI Act, Division 6.3 sets out monitoring requirements for INFM projects.

#### Section 55 – Monitoring harvesting and clearing events

Section 55 requires project proponents to monitor all timber harvesting and clearing events (including post-harvest (slash) burns) in the project area that are required to be modelled in the project scenario.

Integrity risk	Mitigants	Determination reference
Additionality	<b>Risk:</b> The overarching additionality risk is that projects will be credited for emission reductions, or increases in removals, that would have happened anyway, without the incentive provided by the ACCU scheme. This can happen by crediting reductions in native forest harvesting that would have happened anyway. It can also happen if increases in forest carbon stocks, or reductions in emissions, that are due to other non-additional management activities are credited.	
	Mitigants: Key mitigants included in the Determination to address additionality risks are as follows.	
	(a) Projects must involve stopping or reducing harvesting in public native forests. Projects involving the cessation or reduction of harvesting on private native forests, where there is high uncertainty about the location and extent of harvesting and thus a higher additionality related risk, are not eligible.	s 6
	(b) Projects must be located on Crown lands containing native forests that are designated for commercial forestry use at the date of project registration and were designated for commercial forestry use for at least 10 years before the application was made for the declaration. This excludes projects on public lands that were unlikely to be harvested.	s 10
	(c) Project activities that generate credited abatement are confined to stopping or reducing harvesting. Other forest management activities that can potentially generate abatement (e.g. reduced impact logging, weed and pest control, enrichment plantings and prescribed burning) are not eligible to generate credited abatement under the Determination. They can be undertaken in the project area, but any abatement generated as a result of the conduct of these activities is not counted towards the net abatement amount. This is because they carry significantly higher integrity risks than stopping or reducing harvesting, particularly in relation to additionality and confidence in generating abatement. There are multiple other drivers of the uptake of these activities (regulatory and market) and it is difficult to design robust processes to confine crediting to instances where uptake is genuinely additional. There is also considerable uncertainty about whether and when these activities are likely to generate abatement.	s 6 & Part 5
	<ul> <li>(d) Land cannot be included in a project area if, at any time between 1 January 2000 and the date the project is registered, a law of the Commonwealth or the relevant State stopped timber harvesting in the area (even if the law has since been repealed or amended to remove that prohibition) or the government of the relevant State decided to stop timber harvesting in the area (even if the decision has since been changed to remove that prohibition or the decision was scheduled to take effect after the date this Determination commences). This excludes areas where, if they were able to be included in projects, the project activities that generate the credited abatement (stopping or reducing harvesting) are likely to have happened anyway because of an existing or previous regulatory requirements, or a previous decision of a government to stop harvesting in the project area.</li> </ul>	s 11(1)
	(e) The stopping or reduction of timber harvesting that provides the basis for the project must not be required under a law of the Commonwealth or a State that is in force at the date of the project registration or was in force at any time between 1 January 2000 and the date of the project registration (even if was not in force at the date of the declaration). This	s 11(3)

# ATTACHMENT B: Measures to address integrity risks related to additionality, leakage, measurement and permanence

	<ul> <li>excludes projects that are likely to have happened anyway because of an existing or previous regulatory requirement. It also reduces the potential for gaming, whereby a State might change its laws in an attempt to register a project.</li> <li>(f) Project areas must consist of all public native forests designated for commercial forestry use in at least one whole forestry region. By requiring project areas to cover whole forestry regions, the Determination increases confidence that forests in the region would be harvested in line with the baseline harvest levels.</li> <li>(g) Baseline harvest levels are derived using conservative sustainable yield estimates, equal to the lower of the modified sustainable yield estimates must be calculated at project commencement and then updated at years 5 and 10 and following major natural disturbances. By using the sustainable yield to derive the baseline, the Determination accounts for the risks that harvesting may decline anyway because of a reduction in harvestable forest timber. The method of deriving the modified sustainable yield, thereby reducing the risk of the baseline harvest levels being unrepresentative and insufficiently conservative.</li> <li>(h) Projects have 15-year crediting periods, with credited abatement limited to the abatement generated over this period. Limiting crediting to 15 years mitigates the risk of projects being issued credits for abatement that would have occurred anyway due to future changes in government policy.</li> <li>(i) Projects are only eligible to receive ACCUs in a reporting period if the volume of the reporting period. Project registration in also contingenetion, both in each 12-month segment of the reporting period registration through to the end of the reporting period. Project registration is also contingent on projects being likely to satisfy this hurdle requirement in each 12-month segment of the crediting period. The hurdle requirement mitigates the risk of crediting minor, short-term fluctuations in harvesting associate</li></ul>	s 12 ss 29 & 30 s 22 ss 13 & 46 s 17
Leakage	Risk: The main leakage risks relate to the following.	
	<ul> <li>Direct leakage through activity shifting – proponents being credited for reductions in harvesting in the project area but then increasing harvesting elsewhere in their native forest estate.</li> <li>Direct leakage through cross-subsidisation – proponents being credited for reductions in harvesting in the project area, but they then use the revenues from the sale of ACCUs to subsidise harvesting elsewhere in their native forest estate.</li> <li>Indirect leakage to private native forests – proponents being credited for reductions in harvesting in the project area, but the resulting emission reductions are offset by an increase in harvesting in private native forests in the same jurisdiction that is attributable to the project (i.e. via increased log prices and/or increased demand from mills for logs from private forests).</li> </ul>	

•	Indirect leakage to public native forests in other states – proponents being credited for reductions in harvesting in the project area, but the resulting emission reductions are offset by an increase in harvesting in public native forests in other states that is attributable to the project (i.e. via increased log prices and/or increased demand from mills for logs from other public forests). Indirect leakage into forests in other countries – proponents being credited for reductions in harvesting in the project area, but the resulting emission reductions are offset by an increase in harvesting in forests in other countries that is attributable to the project (i.e. via increased global log prices). Indirect leakage into more carbon-intensive products – proponents being credited for reductions in harvesting in the project area, but the resulting emission reductions are offset by an increase in emissions associated with the production and consumption of carbon-intensive substitutes (e.g. cement, steel, aluminium) that is attributable to the project (i.e. via	
	increased wood product prices).	
Mitiga	ints: Key mitigants included in the Determination to address leakage risks are as follows.	
	<ul> <li>Project areas must consist of all public native forests designated for commercial forestry use in at least one whole forestry region. This reduces the scope for direct leakage through activity shifting.</li> <li>In calculating the net abatement amount, a direct leakage deduction must be applied if the volume of wood extracted</li> </ul>	s 12
	from the excluded sections of the proponent's public native forest estate exceeds the direct leakage baseline harvest level. If the direct leakage baseline harvest level is exceeded, the exceedance is deemed to be attributable to the project and credited abatement is reduced accordingly. This conservatively addresses the risk of direct leakage through activity shifting.	ss 26, 41 & 42
(c	) Projects are only eligible to receive ACCUs in a reporting period if the volume of wood extracted from the project area is at least 20% below the levels in the baseline scenario, both in each 12-month segment of the reporting period (or part thereof) and on aggregate since the date of project registration through to the end of the reporting period. Project registration is also contingent on projects being likely to satisfy this hurdle requirement in each 12-month segment of the crediting period. The hurdle requirement mitigates the risk of leakage through cross-subsidisation by ensuring there is a structural shift in the native forest industry in the relevant region.	ss 13 & 46
(d	) In calculating the net abatement amount, a private native forests leakage deduction must be applied if the volume of wood extracted from private native forests in the jurisdiction in which the project is located exceeds the private native forests leakage baseline harvest level. If the private native forests leakage baseline harvest level is exceeded, the exceedance is deemed to be attributable to the project and credited abatement is reduced accordingly. This conservatively addresses the risk of indirect leakage to private native forests.	ss 26, 41 & 43
	A 5% indirect leakage deduction must be applied when calculating the net abatement amount. This accounts for indirect leakage risks, other than those associated with private native forests in the jurisdiction in which the project is located.	ss 26, 41 & 44
	The Determination includes additional permanence provisions that require the proponent to relinquish ACCUs if, after the end of the 15-year crediting period but before the end of the 100-year permanence period, the volume of wood extracted from excluded sections of the proponent's public native forest estate exceed the direct leakage baseline harvest level. This mitigates the risk of activity shifting after the crediting period.	s 18

	(g) The Determination includes additional permanence provisions that require the proponent to relinquish ACCUs if, after the end of the 15-year crediting period but before the end of the 100-year permanence period, the volume of wood extracted from private native forests in the jurisdiction in which the project is located exceed the private native forests leakage baseline harvest level. This mitigates the risk of indirect leakage to private native forests after the crediting period.	s 18
Measurement error	<b>Risk:</b> The main measurement-related integrity risk is that error in the estimation of relevant emissions and removals results in projects being over-credited.	
	<b>Mitigants:</b> The risk of over-crediting due to measurement error is mitigated through the adoption of a conservative approach to the estimation of abatement, covering the construction of the baseline scenario, the estimation of emissions and removals in the project scenario, and the application of leakage discounts. Key mitigants included in the Determination that are specifically designed to ensure conservativism in the estimation of relevant emissions and removals include the following.	
	<ul> <li>(a) The Determination excludes the soil organic carbon pool from the abatement calculations, even though the avoidance of harvesting is likely to increase soil organic carbon stocks.</li> </ul>	s 24(2)
	(b) The Determination excludes emissions from the combustion of fossil fuels associated with the processing of harvested logs, the production of woodchips or the manufacture of solid wood products, which promotes conservativism.	s 24(2)
	(c) In calculating the net abatement amount, the Determinations requires pulplogs to be instantly oxidised following harvest in the project scenario but not in the baseline scenario. This creates an intentional inconsistency in the scenarios, which promotes conservativism in the abatement estimates.	ss 26 & 36(3)
	<ul> <li>(d) INFM projects must conduct an initial forest inventory in the project area. Inventories are also required at the 5th and 10th year of the project and following major disturbance events. The inventories are used to: (i) calibrate the representative FullCAM model plots that are used to model carbon stock changes and emissions; and (ii) calculate the modified sustainable yield estimates that are used to determine the baseline harvest level (against which the net abatement amount is calculated). The inventories increase confidence in the robustness of the abatement calculations.</li> <li>(e) The Determination requires the net abatement amount to be calculated using representative FullCAM plots that reflect</li> </ul>	s 27
	<ul> <li>the forest types, harvesting practices and harvest age of the forests over the 5-year period prior to the end of the last financial year prior to the registration of the project. The use of historical data for these purposes ensures verifiability and limits opportunities for gaming in modelling forest carbon stocks in the project and baseline scenarios.</li> <li>(f) CO<sub>2</sub>, CH<sub>4</sub> and N<sub>2</sub>O emissions from fossil fuel combustion must be calculated in accordance with National Greenhouse and Energy Reporting Scheme methods. This ensures consistency in approach across projects and other relevant methods.</li> </ul>	ss 26, 29 & 35 ss 26, 39 & 40
Permanence	Risk: The permanence risk associated with INFM projects is that the credited increases in forest carbon stocks could be lost through natural disturbances or subsequent changes in management practices, including the resumption of harvesting after the end of the crediting period.	
	Mitigants: Key mitigants included in the Determination to address permanence risks are as follows.	

(a) INFM projects must have 100-year available under the INFM method.	permanence periods. The option of having 25-year permanence periods is not s 17	
(b) Like all sequestration projects under	the ACCU scheme, a 5% risk of reversal buffer discount is applied when is is intended to insure the scheme against reversals that occur during the permanence CFI Act,	, s 16
(c) INFM projects are subject to the state the permanence period.	andard CFI Act obligations to protect and maintain the credited carbon stocks over CFI Act, 91, 97, 1	
(d) The Determination includes addition	nal permanence provisions that require the proponent to relinquish ACCUs if, after 179, 180	
	iod but before the end of the 100-year permanence period, harvesting resumes in any ne of wood extracted from the project area, excluded sections of the proponent's	
public native forest estate or private baseline levels. For the project area	e native forests in the jurisdiction in which the project is located exceed prescribed , the volume of wood extracted must not exceed the levels in the baseline scenario	
volume of wood extracted must not	bd. For the excluded sections of the proponent's public native forest estate, the exceed the direct leakage baseline harvest level over any 2-year period. For the	
	tion in which the project is located, the volume of wood extracted must not exceed aseline harvest level over any 2-year period. The relinquishment requirement is	
	n of harvesting in a carbon protection area. These requirements enhance the security the nature of the protected carbon stocks and ensuring they cover the forest carbon	
stocks across the proponent's entire		