



**Te Uru Rākau**  
Forestry New Zealand

# A Better Emissions Trading Scheme for Forestry

Proposed Changes to the Climate Change (Forestry Sector) Regulations  
2008 to support amendments to the Climate Change Response Act 2002

Te Uru Rākau Discussion Paper No: 2019/01

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# Minister's Foreword

Forestry has a major role to play in supporting New Zealand to transition to a low emissions economy. Through the Emissions Trading Scheme (ETS), people who plant forests are rewarded for the benefits we all receive from the contribution trees make to tackling climate change.

Major improvements are coming to the ETS that will make it more attractive to plant new forests, increasing the amount of carbon we're storing. This includes a suite of policy changes to the forestry parts of the ETS, which are included in the Climate Change Response (Emissions Trading Reform) Amendment Bill. Alongside these amendments, we are also working to consider broader issues such as accounting for non-forest plantings like riparian planting and shelterbelts on farms.

For forests, the scheme will be simpler, more flexible and less risky to participate in making forestry a more attractive option for farmers, and other landowners looking to diversify their land use and income streams, while creating environmental benefits. For example, changes like the move to averaging accounting after 2021 will do away with the need to repay carbon credits when the trees are harvested, provided they are replanted.

Farmers make up the majority of the current forestry participants in the ETS. They need the flexibility to manage their land how they want, and to be able to take up new opportunities. Under the proposed improvements, forests using averaging accounting will be able relocate without having to surrender NZUs for the deforested area, and will be covered for adverse events like storms and fires.

These improvements will support landowners to plant trees on farms, or allow native forest to regenerate, which can address environmental issues like erosion, water quality and climate change, increase habitats for a range



of native species and enhance our natural landscapes. At the same time, landowners receive revenue and diversify their income streams.

Decisions about investing in land for forestry will become less risky with improvements to the emissions ruling process. People considering land for forestry will know whether land they are considering is eligible for registration in the ETS, before they invest.

The new permanent forests also offer incentives for forestry like tagged NZUs allowing you to differentiate your NZUs on the basis of greater ecological benefits associated with permanent forests. Past sales of the NZUs from indigenous forests indicate buyers are likely to pay a premium for carbon stored by these forests.

This discussion document outlines the detail of how these important forestry policies included in the Amendment Bill will work through proposed Regulations.

We want to hear from a wide range of stakeholders including existing foresters, forestry consultants, farm-foresters and Māori landowners interested in carbon forestry through the ETS. We encourage you to take part and submit your views between 5 November to 20 December.

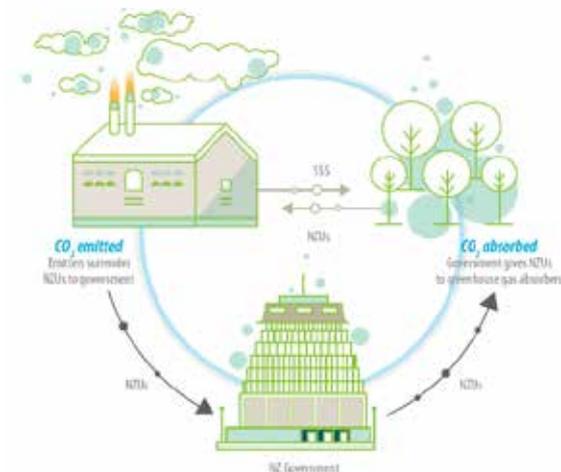
Hon Shane Jones  
Minister of Forestry

# Context

## What is the Emissions Trading Scheme (ETS)?

The ETS is established by the Climate Change Response Act 2002 (the Act), and was introduced in 2008 to help New Zealand meet its international climate change targets.

The ETS acts as New Zealand's domestic marketplace for carbon.



Emitters of greenhouse gases must surrender New Zealand Units (NZUs - also called carbon credits) to the Government to account for their emissions. One tonne of carbon dioxide (or equivalent greenhouse gas) represents one NZU. Emitters need to purchase NZUs from the marketplace to cover their surrender obligations.

People who help store greenhouse gases, such as forest owners, can earn NZUs from the Government for their carbon storage. They can choose to keep these NZUs or sell them on the marketplace.

The price of the NZU is established by the market and depends on the supply and demand.

### There are two categories of forest in the ETS

There is a specific definition in the Act for forest which is counted in the ETS (called "forest land" in the Act). Forest is land that:

- is 1 hectare or more in size and made up of tree species capable of reaching 5 metres in height in that location;
- has the potential to reach a canopy cover width of 30 metres or more on average; and
- has the potential to reach a canopy cover of 30% or more in each hectare.

<sup>1</sup> Forest on land defined as "pre-1990 forest land" under the Act.

<sup>2</sup> Forest on land defined as "post-1989 forest land" under the Act.

The baseline date for greenhouse gas emissions, in the international climate change agreements New Zealand signed up to, is 1990. This creates two different categories of forest in the ETS:

### Pre-1990 forest<sup>1</sup>

These forests were already established before 1 January 1990 so are considered part of New Zealand's baseline carbon storage. New Zealand cannot count these forests towards its international obligations. Pre-1990 forests cannot join the ETS to earn NZUs, but are automatically in the scheme if they are deforested (i.e. changed to another land use) – NZUs must be paid to the Government to account for the loss in carbon storage. This means owners of pre-1990 forests can harvest and replant their forests without facing a carbon liability (i.e. they need to pay some NZUs back to the Government).

### Post-1989 forest<sup>2</sup>

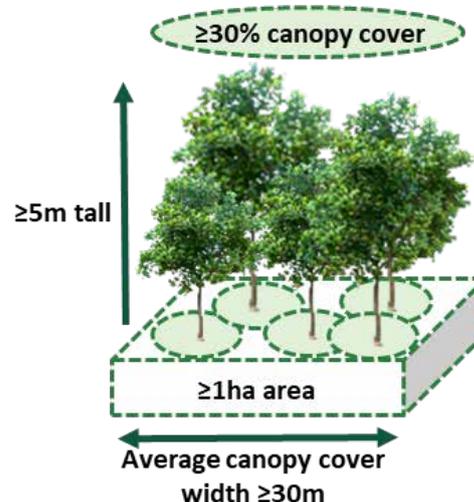
These forests were established after 31 December 1989 and are considered new carbon sinks, so New Zealand can count them towards its international obligations. Post-1989 forests can be voluntarily registered with the ETS to earn NZUs for their carbon storage. At the moment, post-1989 forests face a carbon liability when they harvest to account for the loss of carbon from their forest.

## The ETS is being amended to improve how the Scheme works for participants, and therefore make carbon forestry more accessible for a broader range of participants.

### The 2015 ETS Review

A review of the ETS was started in 2015 and completed in mid-2017. This review looked at how to improve the overall function of the ETS so it could best support New Zealand to meet its future climate change targets.

### Forest land definition: The potential to get to...



We need to plant more trees to meet New Zealand’s greenhouse gas reduction targets under the 2015 Paris Agreement and to support New Zealand’s shift to a low emissions economy. An estimated 89 million extra trees could be planted under the improved ETS over 10 years. This is on top of the 130 million trees likely to be planted under the ETS business as usual. The extra trees could remove an additional 9.5 million tonnes of carbon dioxide towards New Zealand’s greenhouse gas reductions targets.

The review identified some key issues with the overall ETS, including its forestry rules. These issues are limiting the effectiveness of the ETS for driving more tree planting. These included the overall complexity of the scheme and the NZU liabilities faced by forestry participants when they harvest their trees.

### The 2018 Consultation on Amendments to the ETS for Forestry

Policy proposals were consulted on in August and September 2018 and focused on improvements to post-1989 forestry in the ETS:

- Introducing averaging accounting; a method to change how forests earn and repay NZUs which recognises changes in carbon storage over the long term, rather than the short term, and avoids liabilities at harvest.
- Introducing a new permanent forest activity in the ETS to replace the Permanent Forest Sink Initiative under the Forests Act 1949; and
- Creating a package of operational improvements that help the ETS work better for participants.

### Changes are being made to the ETS for Forestry

Following the consultations, decisions were then made over the course of 2018 and 2019 to implement a number of new policies by amending the Act. These amendments are being implemented through the Climate Change Response (Emissions Trading Reform) Amendment Bill which is currently before the Environment Select Committee. Detail about the changes to forestry regulations are on the MPI website: [www.mpi.govt.nz/protection-and-response/environment-and-natural-resources/emissions-trading-scheme/emissions-trading-scheme-reviews](http://www.mpi.govt.nz/protection-and-response/environment-and-natural-resources/emissions-trading-scheme/emissions-trading-scheme-reviews)

#### Introducing averaging accounting

Averaging accounting is a new method for working out the carbon storage in a forest. Averaging accounting is being introduced because New Zealand has chosen to use averaging accounting for our international reporting, and applying it domestically to the ETS will

encourage afforestation and better align our domestic and international carbon accounting. At the moment, post-1989 forests registered in the ETS use an accounting method known as the stock-change approach.

- Under stock change accounting, the ETS forestry participant (the participant) accounts for any changes in carbon in their forest, even if a loss is temporary. When the trees are harvested, participants must surrender back to the Crown a large portion of the NZUs they’ve earned from the forest’s growth, even if the forest will be replanted.
- Under averaging accounting the participant will account for the long-term changes in carbon in their forest. This means participants will earn NZUs up until their forest reaches its long-term average carbon storage (based on several cycles of growth and harvest). Participants will not usually need to pay any NZUs back to the Government when they harvest.

In July 2019, the Government announced it would only offer averaging accounting to forests that were first registered in 2019 or later. The accounting system that participants will have to use depends on when they registered their forest in the ETS:

Forests registered in 2018 or earlier	Forests registered in the ETS in 2019 or 2020	Forests registered in 2021 or later
Must continue to use the stock-change approach. This decision will be revisited in 2021.	Will use stock-change when first registered, and have the option of transitioning to averaging accounting after 2021.	Must use averaging accounting.

As part of introducing averaging accounting, there are also new policies that will improve the ETS for participants who use averaging accounting. These are:

- **carbon equivalent forest land swaps:** which allow participants to plant a second forest to avoid liabilities for deforesting an existing forest registered under averaging accounting; and
- **temporary adverse event cover:** so participants won’t have to pay back NZUs if some of their forest is affected by a temporary adverse event.

### Creating a “permanent post-1989 forest” activity

The Government has decided to replace the Permanent Forest Sink Initiative (PFSI) with a “permanent post-1989 forest”<sup>3</sup> activity in the ETS. Permanent post-1989 forests will remain on the stock- change accounting approach, as it will result in more NZUs for participants if they aren’t planning to harvest. This makes permanent forests a more attractive and viable option for post-1989 forest land. It will be easier for participants to financially benefit from the carbon stored in their forests, and simpler to administer for participants and the Government. It will also make it easier for rotational forests registered in the ETS to transition into permanent forests.

Forests registered as permanent post-1989 forest must not be clear-felled for at least 50 years after registration.

### Operational improvements

A number of operational improvements are being made, including:

- re-aligning mandatory emission return periods (MERPs) to coincide with Paris Agreement<sup>4</sup> deadlines, by having a shorter ‘mini-MERP’ from 2023–2025. This will bring our domestic reporting periods into alignment with our international reporting periods;
- enabling easier assessment of land eligibility in the ETS, by improving the emissions ruling<sup>5</sup> process and enabling a mechanism for people to check whether their forest land is eligible for the ETS;
- aligning stand-down periods for grant funded forests, with ETS entitlements;
- simplifying the process to transfer ETS interests when selling and buying forest land;
- pre-1990 offsetting improvements;
- simplifying tree weed deforestation exemptions for pre-1990 land;
- excluding post-1989 land with tree weeds from the ETS; and
- improving access to special circumstance exemptions from deforestation liabilities for land with multiple owners.

A number of additional minor and technical amendments to the legislation are being made which will improve the general operation of the scheme, make it more accessible to participants, and improve the efficiency of administration of the ETS for the Crown.

#### I’m a PFSI participant – what are my options?

In 2021, existing PFSI participants will have the choice to:

- join the ETS, either as:
  - a permanent post-1989 forest using carbon stock-change accounting; or
  - a post-1989 forest using the new averaging accounting method.
- leave the PFSI scheme altogether, removing all their forests from carbon accounting.

If you choose to register as a permanent post-1989 forest you will carry over the years you were in the PFSI into the new activity, rather than starting from scratch, provided you have not clear-felled your forest (e.g. while a post-1989 forest as you reconfigure your CAA). The 50-year restriction period will start when you first established your covenant.

If participants leave the PFSI scheme and later want to enter the ETS, their forest land would be assessed as a new registration as with any ETS forest. If they registered land as a permanent post-1989 forest, would start their 50 years as a permanent post-1989 forest from the date of registration.

We want to talk with PFSI participants to make sure they understand their options, and to answer any questions or concerns they might have about the transition. Please contact us on:

- Email: [pfsi@mpi.govt.nz](mailto:pfsi@mpi.govt.nz)
- Phone: 0800 00 83 33

<sup>3</sup> Note the Amendment Bill calls this activity “permanent forestry”. We have referred to post-1989 forest land registered in this activity as “permanent post-1989 forest” here for further clarity, as all forest land in this activity must be post-1989 forest land.

<sup>4</sup> The Paris Agreement is the current international agreement for carbon emissions reductions, which New Zealand is a party to. This agreement came into force in 2016 and its targets will take effect from 2021.

<sup>5</sup> Emissions rulings are the process through which a participant or interested party can apply to MPI to get clarification on whether they are a participant or eligible to be one, whether something is an activity under the Climate Change Response Act (the Act) or the correct application of regulations under the Act.

## What's in this consultation document?

While the major policy decisions on forestry changes are in the Amendment Bill, the detail of how they will be implemented will be in amendments to the Climate Change (Forestry Sector) Regulations 2008 (the Regulations), which sit under the Act.

We have included references to the relevant sections of the Amendment Bill for each proposal, so you can see

how the major policy will work, and be clear on what is in and out of scope of the Regulations.

In this consultation document, we are seeking feedback on a range of proposals for how we will change the Regulations to make the policy changes in the Bill, work in practice. The changes to the Regulations we are consulting on, are in Parts A, B, and C of this document, and listed below.

### Summary boxes

To help navigate the document, we have put summary boxes at the start of each section, in orange. These contain a summary of:

- why new regulations are needed;
- where you can find the relevant sections of the Amendment Bill; and
- the proposals you can provide feedback on.

### Part A: New ways to account for the carbon in forests

- **Averaging accounting:** creating the rules for when participants earn and surrender NZUs under averaging accounting, including rules to prevent earning NZUs for carbon storage in a forest before it is registered in the ETS.
- **Permanent post-1989 forests:** creating the rules to allow this new forest activity to earn NZUs for carbon storage, using the stock change approach.

### Part B: Reporting and claiming NZUs

- **Simplified reporting:** an option for simplified reporting for forests, in specific circumstances, under averaging accounting.
- **Input returns:** the option for participants to send us information so we can calculate emissions and removals.
- **Field Measurement Approach (FMA):** applying the FMA to more post-1989 forest categories.
- **Grant funded forests:** preventing NZUs being earned during a stand-down period.

### Part C: Managing forests in the ETS

- **Carbon equivalent forest land swaps:** being able to relocate a post-1989 forest which has reached its long-term average by planting elsewhere, so long as the new forest stores the same amount of carbon
- **Temporary adverse events:** an exemption from surrendering NZUs if a forest in the ETS is affected by a temporary adverse event, such as a storm or flood.
- **Tree weed management (wilding pines):** improving the exemptions from surrendering NZUs for tree weed management on pre-1990 land.
- **Best practice forest management:** authorising regulations to define what best practice forest management is under the Act.
- **Penalties:** introducing penalties for clear-felling a permanent post-1989 forest registered in the ETS.
- **Standards:** amending the Standards associated with the Regulations (e.g. the Geospatial Mapping Information Standard) to align with the changes in this document.

The consultation questions are at page 78 of this document, and online at [www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes](http://www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes).

### Your feedback

We welcome your feedback on our proposed changes to the Regulations in this document. You can submit on the whole document, or you can just choose the areas relevant to you. Consultation questions are in the green boxes in this document.

In this document we only provide comparison criteria for proposals that have multiple options. The proposals that have multiple options are limited to those where the higher level policy decision does not specifically define what we can do in the Regulations. In cases where there is a single option, we still want to know how this would impact you, so we can factor those impacts into our implementation.

When providing your feedback on how each proposal impacts you, please keep in mind that we have analysed each proposal using the criteria for the Emissions Trading Scheme Review, set out over the page.

## What criteria have we used to analyse our proposals?

The criteria we are using to analyse the proposals in this document are set out below. They are the same as the criteria used in the Regulatory Impact Analyses for the Emissions Trading Scheme Review.

The criteria analysis tables, for the proposals covered in each section, are at the back of each relevant section, in grey. A summary pros and cons table for each option within the body, based on the criteria analysis, is also included.

Primary criteria	Analysis of how the proposal will improve the ETS
Increases incentives to store forest carbon.	<p>Reduces ETS forestry financial risk and therefore increases the potential financial benefit from carbon when establishing new forests (both rotational and permanent) in New Zealand.</p> <p>Retains the ETS disincentive to deforest (i.e. from the requirement to surrender NZUs) and maintain or enhance ETS incentives to store extra forest carbon (i.e. from forest management).</p>
Administrative efficiency and effectiveness.	<p>Reduces or minimises administrative cost to the Crown.</p> <p>Ensures participant reporting is accurate and the Government can identify and manage non-compliance so scheme integrity is enhanced.</p>
Improves ease of compliance.	<p>Reduces compliance costs for participants and ensure the system and rules are easy to understand.</p> <p>Doing so could encourage more people (particularly smaller foresters) to enter and remain in the ETS. Changes to the rules should not result in unjustifiably high transition costs for participants.</p>
Secondary criteria	Analysis of how the proposal will improve the ETS
Allocates obligations and entitlements to support alignment with climate change targets.	<p>Increase alignment of entitlements and obligations (i.e. allocation of emissions NZUs) with climate change target accounting for carbon storage and emissions from forestry.</p> <p>This will help to ensure the mitigation effort the ETS drives reflects the level of difficulty New Zealand has to meet its climate change targets. Risk and burden sharing between the Crown (fiscal risk), participants, sectors and groups reflects level of contribution to climate change and mitigation ability.</p>
Provides durable regulatory certainty and predictability.	<p>Makes sure businesses, forest owners and participants have certainty and predictability about the rules and market conditions.</p> <p>This will prevent unnecessary disruption to business plans, and improve investor and participant confidence in the ETS for forestry.</p>
Avoids unintended consequences.	<p>Avoiding unintended consequences includes:</p> <ul style="list-style-type: none"> <li>• preventing the creation of perverse incentives;</li> <li>• minimising and appropriately managing any potential inequity between participants, sectors and groups.</li> </ul> <p>This will help to maintain the integrity and positive perceptions of the ETS for Forestry, particularly when eligibility decisions for new rules are being made.</p>
Consistent with wider climate change and wellbeing priorities.	<p>Consistency with the Government's wider climate change and wellbeing priorities includes:</p> <ul style="list-style-type: none"> <li>• reflecting the Crown's responsibilities as a Treaty partner;</li> <li>• encouraging economic growth and employment;</li> <li>• supporting social and environmental resilience;</li> <li>• supporting New Zealand's international reputation;</li> <li>• maintaining integrity of wider ETS settings.</li> </ul>

## Timeframe for consultation

This is the timeframe we expect to follow for the ETS Forestry Regulations consultation over 2019 and 2020:

### 5 November – 20 December 2019

We're seeking feedback on the proposed changes to the Regulations from the public, especially from:

- ETS forestry participants;
- forestry consultants and investors;
- farm-forestry organisations; and
- Māori landowners, landowners and organisations with an interest in carbon forestry.

Find out how to have your say and make a submission. Consultation questions are with each section of this document and a full list of questions is on page 78. Our online submission form containing all questions is at: [www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes/online-form](http://www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes/online-form)

### First half of 2020

Government expects to make a decision on changes to the Regulations.

### Wider ETS Consultations

MfE will also consult on proposed changes to other Regulations under the Climate Change Response Act 2002. The MfE Regulations are about enabling auctioning of NZUs and determining the unit supply settings for the ETS. If you would like to submit, or get further information about these consultations, please check the MfE website: [www.mfe.govt.nz/more/consultations](http://www.mfe.govt.nz/more/consultations)

## Have your say

We welcome written submissions on the proposals in this document. All submissions must be received by no later than **5pm on Friday 20 December 2019**.

You are welcome to submit on the whole document, or you can just choose the areas relevant to you.

There are three ways you can make a submission:

1. **Online through our website:**  
[www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes/online-form](http://www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes/online-form)
2. **Email directly to:** [etsforestryregs@mpi.govt.nz](mailto:etsforestryregs@mpi.govt.nz)
3. **Mail hard copy to:**  
Te Uru Rākau  
PO Box 2526  
Wellington 6140

If you mail your submission please make sure it arrives by close of business at 5pm on Friday 20 December 2019.

We will consider all relevant material in submissions, so you are welcome to provide information supporting your comments. Please make sure you include the following in your submission:

- the title of the consultation document;
- your name and title;
- the organisation's name (if you are submitting on behalf of an organisation, and whether your submission represents that whole organisation or a section of it);
- your contact details (such as phone number, address and email).

### Submissions are public information

Please note that your submission is public information. Submissions may be the subject of requests for information under the Official Information Act 1982. The Act specifies that information is to be made available to requesters unless there are sufficient grounds for withholding it, as set out in the Act.

Submitters may indicate grounds for withholding specific information contained in their submission, such as if the information is commercially sensitive or if they wish personal information withheld. Te Uru Rākau will take such indications into account when determining whether or not to release information.

### Where to find further information

Please go to the Te Uru Rākau website to find further information and make a submission:

[www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes](http://www.mpi.govt.nz/news-and-resources/consultations/proposed-climate-change-forestry-regulations-changes)

# PART A:

## New ways to account for the carbon in forests

# Averaging accounting: How it will work in practice

## Averaging accounting is being introduced as a new way of calculating changes in carbon stock

The Amendment Bill introduces averaging accounting. Regulations are needed to make averaging accounting work – we need to decide on the settings and rules for how averaging accounting will work in practice, from 2021.

See new sections of the Amendment Bill: 194FA to 194FD.

## Summary of proposed changes to the Regulations

We are seeking your feedback on your preferred settings for averaging accounting. The settings will determine how many NZUs participants earn, the ease of participating in the ETS, and the cost to the Crown.

We are also seeking your feedback on the rules to make averaging accounting robust.

We are seeking feedback on these settings:

1. How wide rotation bands should be.
2. When the assumed harvest age of a participant's forest should be when they join the ETS, in order to allocate that forest a default rotation band.
3. When the assumed harvest age within each rotation band should be.

We are seeking feedback on proposed rules for:

1. changing rotation bands;
2. changing forest type;
3. when a subsequent rotation forest can be treated as a first rotation;
4. preventing over-crediting following an artificially low rotation band.

## Part 1 – Introduction to averaging accounting

The Government is introducing averaging accounting through the Climate Change (Emissions Trading Reform) Amendment Bill (the Amendment Bill), which sets out the basic mechanics for averaging accounting in the Climate Change Response Act (the Act). The detail for how averaging accounting will work will be included in the Regulations that sit under the Act.

Averaging accounting is where ETS participants (participants) will account for, and report on, the long-term changes in carbon stock in their forests. Generally, this will mean that participants won't need to pay NZUs back to the Government following a short-term reduction in carbon (e.g. from harvest or an adverse event) as they would under stock-change accounting, so long as they replant within four years<sup>6</sup>. Figure 1 shows how averaging accounting will work compared to stock-change accounting.

Note that all average ages and rotation band widths in this document are for illustration purposes only. Final decisions on these will be made in 2020 after the submissions on this consultation have been considered.

### Key concepts for averaging accounting

There are some new concepts related to averaging accounting which are important to understand before providing feedback on the proposed settings and rules:

#### Key concept 1 – First rotation forests under averaging accounting will earn NZUs up to their average age

Under averaging accounting, an ETS participant's first rotation forest will earn NZUs up until it reaches its average age. The average age is based on the long-term average amount of carbon stored in the forest over several rotations of growth and harvest. During this period the participant will need to account for the carbon storage in each emissions return (the same as if they were on stock-change accounting).

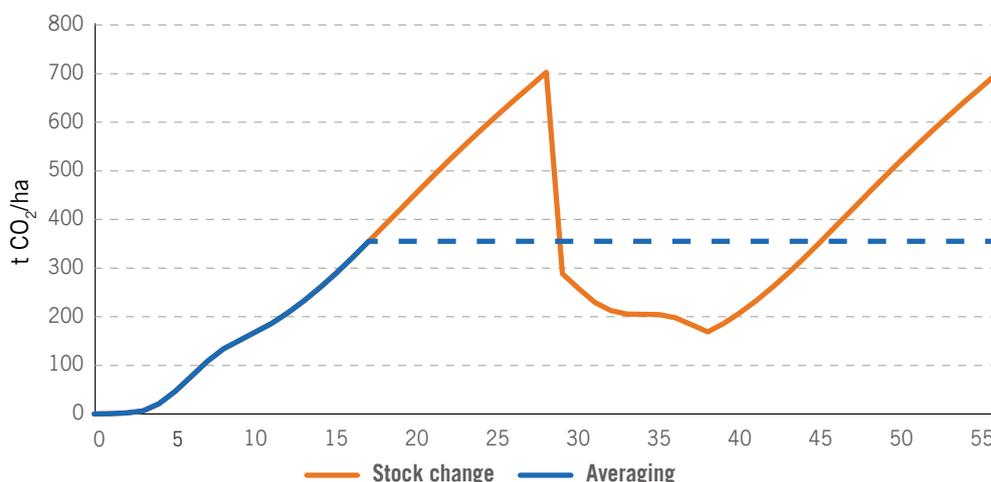
Once the forest reaches its average age (or is in its second or subsequent rotation) it will stop earning NZUs. Participants will only earn additional NZUs after this point if they significantly increase rotation length or change to a higher carbon-storing forest type – both of these increase the long-term carbon storage in the forest. Alternatively, if participants harvest earlier or change to a lower carbon-storing forest type they may need to pay NZUs back to the Government.

#### Key concept 2 – The average age is based on an “assumed” harvest age for that type of forest

The average amount of carbon the forest stores (and therefore the average age) is worked out using an assumed harvest age. Under averaging, we will assume a participant will harvest their forest at about the same age in every rotation, and that they will harvest at an age “typical” to their forest type.

<sup>6</sup> There are also tests for whether a forest has re-established or is re-establishing at 10 and 20 years after clearing under s179 of the Act.

**Figure 1: Earning NZUs under averaging accounting versus stock change accounting**



For example, a radiata pine forest is usually harvested at around age 28. If that forest is harvested at age 28, then over several rotations it will store about 350 tonnes of carbon on average. Using the default carbon tables, 350 tonnes of carbon equates to an average age of about 17.

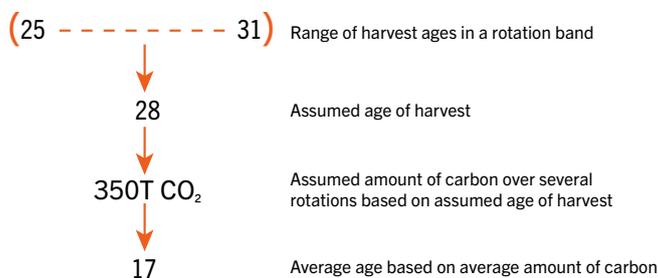
### Key concept 3 – A “rotation band” (the range of ages at which the forest may be harvested) will be allocated the same average age

To give participants flexibility in when they actually harvest their forest, averaging accounting will treat forests of the same type, that are harvested at ages within a few years of each other, the same – this range of harvest ages is called a rotation band. This means participants may harvest a few years earlier than usual, or a few years later, without having to pay NZUs back to the Government (or earn NZUs for extra storage).

In each rotation band, there will be one assumed harvest age which we’ll use to calculate the average carbon storage, and therefore the average age, of all forests within that band.

Figure 2 below shows how the concepts of rotation bands, harvest ages, and the average age fit together. We are seeking feedback on the exact settings for each of these concepts.

**Figure 2: An example of how the key concepts fit together**



The rotation band that is allocated to a participant when they register under averaging accounting, is the “default” rotation band, and its associated average age is the “default average age” their forests will earn NZUs up to. When the forest is harvested, at the next emissions return participants will either:

- stay on the same rotation band (with no change to NZU entitlement);
- move up to a higher band (and be entitled to more NZUs); or
- move down to a lower band (and need to surrender NZUs).

A table of rotation bands and average ages will be provided for all forest types. For consistency and simplicity, it will be based on the existing post-1989 forest default carbon tables. If participants are using the Field Measurement Approach they will use the average ages from these default carbon tables, but have carbon stocks calculated by their own specific carbon table.

### Previous stakeholder feedback on averaging accounting

In the August 2018 consultation, submitters strongly supported averaging accounting. Seventy-three percent of submitters agreed with its mandatory introduction. Submitters preferred the simplicity of averaging accounting, not having to surrender emissions at harvest, and agreed that it has the potential to increase tree planting.

## Part 2 – Settings for rotation bands and NZU credits

### Summary of proposals

These proposals determine the settings for rotation bands under averaging and how many NZUs participants will be credited for in each rotation band.

You can provide us feedback on your preferred options for:

- how wide rotation bands should be;
- when the assumed harvest age of a forest should be, in order to allocate the forest a default rotation band; and
- when the assumed harvest age within each rotation band should be.

Regulations need to prescribe the exact settings to make averaging accounting work in practice. The three issues we need to determine are:

- **How wide rotation bands should be** – this will impact how sensitive the accounting approach will be to changes in actual harvest age.
- **When the assumed harvest age of a forest should be, in order to allocate the forest a default rotation band** – we need to allocate a default rotation band when a forest is registered, which will determine the default average age of the forest. To do this, we need to make an assumption about when the forest will be harvested.
- **When the assumed harvest age within each rotation band should be** – the setting of the assumed harvest age in relation to the start and finish of the rotation band will affect the average age of each rotation band and the integrity of the ETS.

### Part 2A: How wide should each rotation band be?

The width of the rotation bands will impact how likely an ETS participant (participant) is to change to a different rotation band, when they change the year of harvest or their forest type. When a forest shifts between rotation bands, it will have a new average age. This means the participant will either earn additional NZUs, or need to pay NZUs back to the Government.<sup>7</sup>

For consistency and simplicity, we intend to apply the same rotation band width settings to all forest types (i.e. radiata pine, Douglas-fir, exotic softwoods, exotic hardwoods, and indigenous forest types will all have the same rotation band widths).

We are seeking feedback on the best setting for rotation band widths. There are three options, set out in the table below:

Option	Pros	Cons
<p><b>Option 1: Wide rotation bands</b></p> <p>For example, every rotation band is 7 years (18-24, 25-31, 32-38 years)</p>	<p>Simpler and cheaper for both a participant and us, as forests changing rotation bands will be less frequent.</p> <p>More certainty for a participant to trade NZUs as it is less likely a decision to harvest early will mean they need to pay back NZUs.</p>	<p>A participant will have to delay harvesting for longer before they move up rotation band to earn more NZUs.</p> <p>It is more likely we will over-credit participants who decide to harvest early, as wider bands measure average carbon stock less accurately than narrow bands.</p>
<p><b>Option 2: Narrow rotation bands</b></p> <p>For example, every rotation band is 3 years (21-23, 24-26, 27-29, 30-32 years)</p>	<p>It's more likely a participant will move up a rotation band and earn more NZUs if they decide to delay harvest.</p> <p>It's less likely we will over-credit participants who decide to harvest early, as narrow bands measure average carbon stock more accurately than wider bands.</p>	<p>Less certainty for a participant to trade NZUs if they cannot be precise about when they will harvest.</p> <p>Increased frequency of shifting rotation bands will lead to higher compliance and administration costs for both of us.</p>

<sup>7</sup> Participants don't need to surrender more NZUs than they have earned since they registered the forest (section 190 of the Act).

<p><b>Option 3: Mixed rotation bands</b></p> <p>For example, the default rotation band is 7 years and every other rotation band is 3 years (22-24, 25-31, 32-34 years)</p>	<p>Simpler and cheaper for a participant when they harvest at or around the common harvest age, as it's unlikely they will change bands.</p> <p>Allows a participant to balance the trade-off between extending harvest for more NZUs, with more costs to participate in the ETS.</p>	<p>Different width rotation bands will be more complicated. There are more timeframes to keep track of, which increases the difficulty of knowing when rotation bands change. This may lead to higher rates of reporting errors, leading to a greater burden for both of us.</p>
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### Consultation questions

1. Do you prefer wide rotation bands (Option 1), narrow rotation bands (Option 2), or mixed-width rotation bands (Option 3)? Why?
2. Exactly how wide (in years) should rotation bands be? Why?
3. Do you agree with applying the same rotation band width settings across all forest types? Why or why not?

## Part 2B: When should we assume a participant will harvest their forest (in order to allocate a default rotation band)?

We need to pre-determine the average age at the time an ETS participant (participant) registers. To do this, we need to know what rotation band to allocate them – this rotation band is the “default” rotation band. The default rotation band will determine the average age that participants will earn NZUs up to.

We propose the default rotation band should be based on (i.e. include) the most common harvest ages for that type of forest. This reduces the risk of over-paying or under-paying NZUs, as well as problems for the integrity of the ETS, if our assumed harvest age for a rotation band doesn't match when most of participants harvest their forests.

Because there is no single source of robust data for all the forest types, we are proposing to base the most common harvest ages on a range of available data sources:

- We intend to use the National Exotic Forest Description (NEFD) for radiata pine and Douglas-fir, because it has robust data on actual and intended harvest ages.<sup>8</sup> However, the NEFD has limited data for the other forest types.
- We intend to use the existing tables for pre-1990 forest land for exotic softwoods and exotic hardwoods.<sup>9</sup> Because there are two different regimes for exotic hardwoods, with very different harvest ages, we propose to use the typical saw-log harvest age of 30 years to set the default rotation band, rather than the pulp-wood harvest age of 15 years. This will avoid the Crown over-crediting saw-log participants – for those participants who run a pulp-wood regime it will mean having to pay back some NZUs when they first harvest.
- Data is even more limited for indigenous forests, so we intend to assume a very high harvest age. This will mean the default average age, which will determine when a participant stops earning NZUs on the stock-change approach, will also be very high. This would be revisited once we have better data on the different indigenous forestry models and establish more accurate default average ages, without prejudicing participants by giving them a default average age which is far lower than what it will be in practice. Clear-felling indigenous forest before it meets the default average age means a participant would have to surrender some NZUs, as for any other early harvest. Permanent post-1989 forests, which use stock change accounting, are also available, if a participant doesn't want to use averaging accounting.

We are seeking your feedback on whether there are any other sources of data we should use instead.

<sup>8</sup> The 2018 NEFD can be found at: [www.mpi.govt.nz/dmsdocument/34425-2018-nefd-report-pdf](http://www.mpi.govt.nz/dmsdocument/34425-2018-nefd-report-pdf)

<sup>9</sup> In Schedule 4 of the Climate Change (Forestry Sector) Regulations 2008.

The table below indicates the assumed harvest age that we intend to use for each forest type and what data we based that on:

Forest Type	Assumed harvest age	Source of data
Radiata pine	28	National Exotic Forest Description.
Douglas-fir	40	National Exotic Forest Description.
Exotic softwoods	45	Pre-1990 forest land tables.
Exotic hardwoods	30	Pre-1990 forest land tables, assuming a sawn-log regime.
Indigenous	150	Because national data is very limited, we will assume a very high harvest age.



### Consultation questions

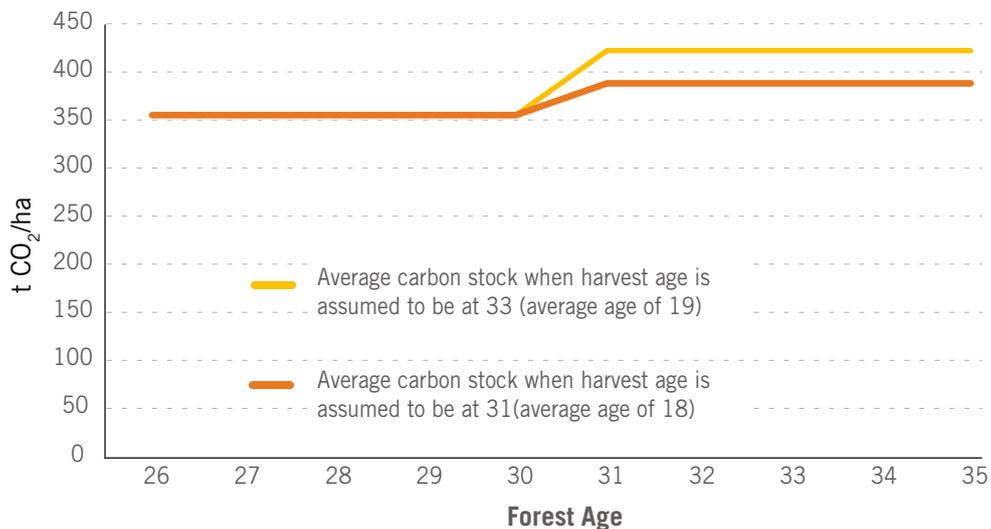
4. Do you agree with the proposed assumed harvest ages? Why or why not?
5. Do you agree with the approach to setting a very high harvest age for indigenous forests? Why or why not?
6. What impacts are there from setting these harvest ages?
7. Do you have an alternative assumed harvest age for indigenous forests, or alternative data sources we should use for other forest types? What are they?

### Part 2C: Where should we set the assumed harvest age within each rotation band?

We need to decide where the bounds of the rotation band will be in relation to the assumed harvest age. The earlier we set the assumed harvest age within a rotation band, the less likely the Crown will over-credit – this maintains the integrity of the ETS, but will mean a lower average age for everyone in the rotation band. The later we set the assumed harvest age, the more likely the Crown will be to over-credit, which will reduce the integrity of the ETS, but will mean a higher average age for forests in the rotation band.

Figure 3 below shows the difference in NZUs for a rotation band of 31-35 where we assume a participant harvests at age 31 (where the average age is 18 years) versus age 33 (where the average is 19 years).

Figure 3: Difference between average carbon stocks, due to different harvest assumptions



We are seeking feedback on your preferred settings for the timing of assumed harvest within the rotation band. The table below shows the three options:

Options	Pros	Cons
<p><b>Option 1: Early in the band</b> All rotation bands will have an assumed harvest age early in the rotation band.</p> <p>For example, for a rotation band between 14–18 years, the assumed harvest age for those forests will be 14 years, giving an average age of 9 years (based on a carbon stock of 235 tonnes CO<sub>2</sub> for radiata pine).</p>	<p>We are very unlikely to over-credit forests.</p> <p>The extent to which a participant needs to delay harvest to move up a band will be consistent, and the amount of additional NZUs they'll earn by moving bands will be the same, giving them greater certainty.</p>	<p>We are more likely to under-credit some forests.</p> <p>Creates a smaller incentive to plant compared to Option 2 because forests will have a lower average age and will receive fewer NZUs.</p>
<p><b>Option 2: In the middle of the band</b> All rotation bands will have an assumed harvest age in the middle of the rotation band.</p> <p>For example, for a rotation band between 14–18 years, the assumed harvest age for those forests will be 16 years, giving an average age of 10 years (based on a carbon stock of 265 tonne CO<sub>2</sub> for radiata pine).</p>	<p>We are unlikely to over or under-credit when forests are below, or in, the default rotation band.</p> <p>Each band will have a higher average age (compared to Option 1) and will earn more NZUs, creating a better incentive to plant.</p> <p>The extent to which a participant needs to delay harvest to move up a band will be consistent, and the amount of additional NZUs they'll earn by moving bands will be the same, giving them greater certainty.</p>	<p>We are likely to over-credit if a forest is in a rotation band above the default. This is because there is an incentive to extend rotation to just meet a higher band, but these forests will be credited as if a participant harvested in the middle of the band</p>
<p><b>Option 3: Mixed, depending on age (Preferred option)</b> Rotation bands up to and including the default rotation band will have an assumed harvest age in the middle of the band. Rotation bands above the default will have an assumed harvest age early in the rotation band.</p>	<p>We are unlikely to over-credit forests.</p> <p>Creates a larger incentive to plant forests, as forests in the default rotation band, will earn more NZUs compared with Option 1.</p>	<p>Reduced incentive for a participant to extend rotation length beyond the default compared with Options 1 or 2.</p> <p>Appears more complex, with different points where the average age occurs within different rotation bands. However, in practice the Regulations will set the average age for each rotation band in a table.</p>



### Consultation questions

8. Which option to do you prefer, and why?

## Regulatory Impact Analysis Tables

### A1: How wide should rotation bands be?

Neither options have:

- unintended consequences identified, or
- are inconsistent with wider climate change and wellbeing priorities.

	Wide (e.g. 7 years)	Narrow (e.g. 3 years)	Mixed (e.g. 7 year default band, others 2 years)
<b>Primary Criteria</b>			
Increases incentives to store carbon in forests.	<p>+</p> <p>The incentive is less because rotation length may have to be extended by a relatively long time with wider bands. For example, if a band is 21-30 years a planned rotation of 24 years would have to be extended by 7 years to move into the next band.</p> <p>Provides disincentive to shorten rotation length.</p>	<p>++</p> <p>The incentive is greater because rotation length would only have to be extended by a relatively short time with narrow bands. For example, if a band is 21-24 years a planned rotation of 22 years would have to be extended to 3 years to move into the next band.</p> <p>Provides disincentive to shorten rotation length.</p>	<p>+</p> <p>Most participants would have to wait for a while to move up between bands as most will be in a wide band.</p> <p>If a participant wants to then extend their rotation length to get more carbon, accounting will move through bands over a relatively short timeframe.</p> <p>Provides disincentive to shorten rotation length.</p>
Administrative efficiency and effectiveness for regulators.	<p>+</p> <p>Forests will shift between rotation bands rarely, reducing administrative effort.</p>	<p>-</p> <p>Forests will shift between rotation bands often, increasing administrative effort.</p>	<p>+</p> <p>Most forests will shift between rotation bands rarely, reducing administrative effort.</p>
Improves ease of compliance for participant.	<p>+</p> <p>Forests will shift between rotation bands less often, reducing workload and compliance costs for participants.</p>	<p>-</p> <p>Forests will shift between rotation bands often, increasing compliance effort and costs for participants, including requiring more reporting on second rotations.</p>	<p>+</p> <p>Most forests will shift between rotation bands rarely, reducing administrative and compliance effort for participants.</p>
<b>Secondary Criteria</b>			
Allocates obligations and entitlements to support alignment with climate change targets.	<p>0</p> <p>Wide bands would reduce the incentive to extend rotation lengths and so would likely result in a lower contribution towards our 2030 climate change target.</p>	<p>+</p> <p>Narrow bands would increase the incentive to extend rotation lengths and so would likely result in additional emissions reductions towards our 2030 climate change target.</p>	<p>+</p> <p>Mixed bands would increase the incentive to extend rotation lengths for most participants and so would likely result in additional emissions reductions towards our 2030 climate change target.</p>
Provides durable regulatory certainty and predictability.	<p>+</p> <p>Wide ranges of ages in rotation bands allow participants to plan harvests in the future with a margin for error and have relative certainty about if they will be entitled to earn NZUs or required to surrender NZUs to the Crown.</p>	<p>-</p> <p>Narrow ranges of ages in rotation bands mean participants will have to plan harvests of forests more carefully in the future, as there will not be much margin for error around harvesting ages and shifting between rotation bands.</p>	<p>+</p> <p>A wide range of ages in the default rotation band will allow participants to plan harvests in the future with a margin for error. Participants who wish to delay harvest to earn NZUs will have to be more careful about planning harvests as the rotation bands will be narrower.</p>

**A2: What the default rotation band for each forest type should be**

The band containing the most common harvest ages	
<b>Primary Criteria</b>	
Increases incentives to store carbon in forests.	+ Having this represents the most common harvest ages discourages early harvest, as participants would have to surrender units.
Administrative efficiency and effectiveness for regulators.	+ Having the default rotation band centred around the most common harvest ages for each forest type means that most participants will not have to change bands which means less demand on regulators.
Improves ease of compliance for participant.	++ Having the default rotation band centred around the most common harvest ages for each forest type means that most participants will not have to change bands and comply with regulatory requirements to calculate changes in entitlements.
<b>Secondary Criteria</b>	
Allocates obligations and entitlements to support alignment with climate change targets.	+ Using most common harvest age minimises the chance of having unexpected early or late harvests.
Provides durable regulatory certainty and predictability.	+ Having a default rotation band clearly defined to include the most common harvest age allows participants to be certain of their entitlements and compliance obligations.
Avoids unintended consequences.	0 Setting the default rotation band to represent the most common harvest ages minimises the risk of unintended consequences, however if there is a shift in what common harvest ages are, due to carbon or log market factors, participants may find they move out of the default age band and have greater workloads.
Consistent with wider climate change and wellbeing priorities.	0

**A3: Where should the average age for each rotation band be set?**

Where we set the average age for each rotation band has little impact on:

- the administrative efficiency and effectiveness for the regulator,
- the ease of compliance for participants;
- durable regulatory certainty and predictability; or
- unintended consequences.

	Early	Mid-point	Mixed
<b>Primary Criteria</b>			
Increases incentives to store carbon in forests.	- Participants would get fewer NZUs compared to setting the average rotation later in the band, so the incentive for them to store carbon will be reduced compared with other options.	0 Each rotation band will have a mid-point average age. The incentive to extend rotation lengths will be neutral overall i.e. less for those who intend to harvest later than the mid-point, and greater for those who intend to harvest earlier than the mid-point.	0 The incentive to extend rotation lengths will be neutral for bands up to and including the default band, and lower for those on bands above the default.
<b>Secondary Criteria</b>			
Allocates obligations and entitlements to support alignment with climate change targets.	- Would under-credit forests which are being harvested around the 'normal' harvest ages and below.	++ On aggregate would align with accounting for our climate change target.	+ On aggregate would align with accounting for our climate change target for forests in bands up to and including the default band, but would be misaligned for bands above the default band.
Consistent with wider climate change and wellbeing priorities.	- Systematically under-crediting forests will both reduce the afforestation incentive, and is not fairly attributing NZUs.	0 Using one average rotation age within a band is not a fair way to attribute NZUs as it over-credits some and under-credits others. However this is a trade-off between complexity and ease of administration and compliance.	- Those in bands above the default would be disadvantaged.

## Part 3 – Deciding our preferred rules

### Summary of proposals

These proposed rules set out how and when participants will earn or have to surrender NZUs under averaging accounting.

Participants can provide us any feedback on how the rules for:

- changing rotation bands; and
- changing forest type.

We also want your views on the preferred options on rules for:

- when a subsequent rotation forest can be treated as a first rotation; and
- preventing over-crediting following an artificially low rotation band.

### Proposed changes to the Regulations to create new rules for when participants earn or surrender NZUs under averaging

The Government has already decided the major rules around how and when forests will earn and surrender NZUs under averaging accounting<sup>10</sup>. The Regulations will implement these rules, providing the detail about how an ETS participant (participant) calculates changes in carbon stocks in a forest registered under averaging accounting and how many NZUs they will earn or surrender. Creating these rules will need us to build on the existing Regulations, and add new rules for changing between rotation bands and forest types.

We are seeking feedback on how the rules will work for:

- **What happens when participants change rotation bands** – we need to decide how many NZUs participants will earn or need to surrender and the calculation that is based on.
- **What happens when participants change forest type** – we need to decide how many NZUs, and when, participants will earn or need to surrender and the calculation that is based on.
- **How to prevent a recently deforested forest registering as a first rotation** – we need to decide how long we will prevent forests which have recently been deforested from registering as first rotation forests.
- **How to prevent over-crediting following an artificially low rotation band** – we need to decide how to assign an existing forest a rotation band when it has gone from a normal length rotation to a short length rotation, to avoid over-crediting.

#### Registering as a first rotation versus as a subsequent rotation forest under averaging

In the ETS we treat forests that join on their first rotation, as opposed to those that join on a later rotation, differently. This is because New Zealand can effectively only count the first rotation of a forest towards our international climate change obligations.

##### Registering as a first rotation forest under averaging

If a participant registers their forest in its first rotation the forest will be assigned a default rotation band. If the forest is below its average age, their forest will earn NZUs for its carbon storage from the start of the emissions return period in which it was registered, until it reaches its average age. From the time a participant registers, until their forest reaches its average age, they will need to calculate and report the carbon stock change at every voluntary and mandatory emissions return (as they would under stock change accounting).

If a participant registers their forest on its first rotation, and it is above its average age, they won't earn any NZUs unless they delay harvest and move to a higher rotation band.

##### Registering as a subsequent rotation forest under averaging

If a participant registers their forest in its second or subsequent rotation<sup>11</sup>, then the forest will be assigned a rotation band which includes its previous harvest age. This means they will only earn NZUs if they delay harvest and move to a higher rotation band.

<sup>10</sup> The full Regulatory Impact Assessment supporting these decisions can be found at [www.teururakau.govt.nz/dmsdocument/36546-emissions-trading-scheme-forestry-accounting-proposals-regulatory-impact-assessment](http://www.teururakau.govt.nz/dmsdocument/36546-emissions-trading-scheme-forestry-accounting-proposals-regulatory-impact-assessment)

<sup>11</sup> See section 194FD of the Amendment Bill for definitions of first and subsequent rotation forest land.

### Part 3A: Rules for changing rotation bands

When a participant registers, their forest will be assigned a default rotation band, and average age, based on the age we assume they'll harvest. A participant will earn NZUs according to these default settings. There are two ways they can then change their rotation band, and average age:

- If a participant harvests their forest when it is an age below their default rotation band, they will have to surrender NZUs equal to the difference between the default rotation band and their actual rotation band, based on harvest age. This will be done at the first emissions return after they harvest.
- If a participant leaves their trees and they grow to an age which is higher than the default rotation band, then they will earn NZUs equal to the difference between the default rotation band, and their new higher rotation band.

We intend that the rotation band of a participant's new rotation will include the actual harvest age of their previous rotation. For example, if they harvested their first rotation at age 32, they will remain on the rotation band that includes age 32 for their second rotation, unless they then harvest their second rotation earlier, or grow their trees to even higher ages.

#### Earning and repaying NZUs when changing rotation bands

We need to decide on the rules for how many NZUs a participant will need to repay, or be owed, when they change rotation bands.

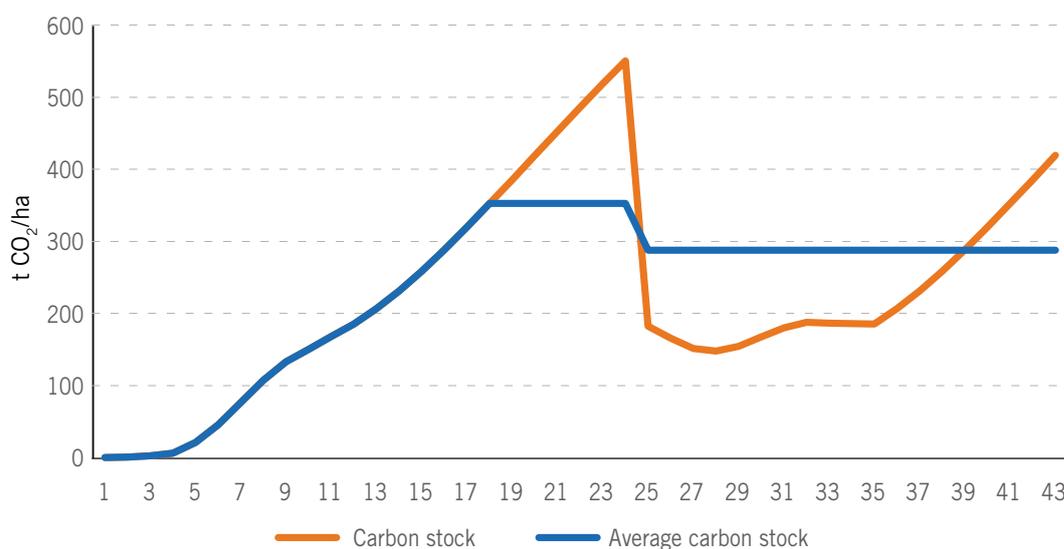
For simplicity, we intend to calculate this using the difference between NZU entitlements of the average ages of their initial rotation band versus their new rotation band<sup>12</sup>.

#### If a participant harvests earlier than their default rotation band

If a participant harvests earlier than their default rotation band, they will need to pay back an amount of NZUs equivalent to the difference in carbon stock of their new average age and their default average age to account for the loss in long-term carbon storage in their forest.

Figure 4 shows a forest with an assumed harvest age of 28 which has earned NZUs up until its default average age of 17. However, because the forest is actually harvested at age 24 it is only entitled to NZUs up until an average age of 15 (in a lower rotation band), so the participant must pay back the difference.

Figure 4: First rotation forest which is harvested before the default rotation band



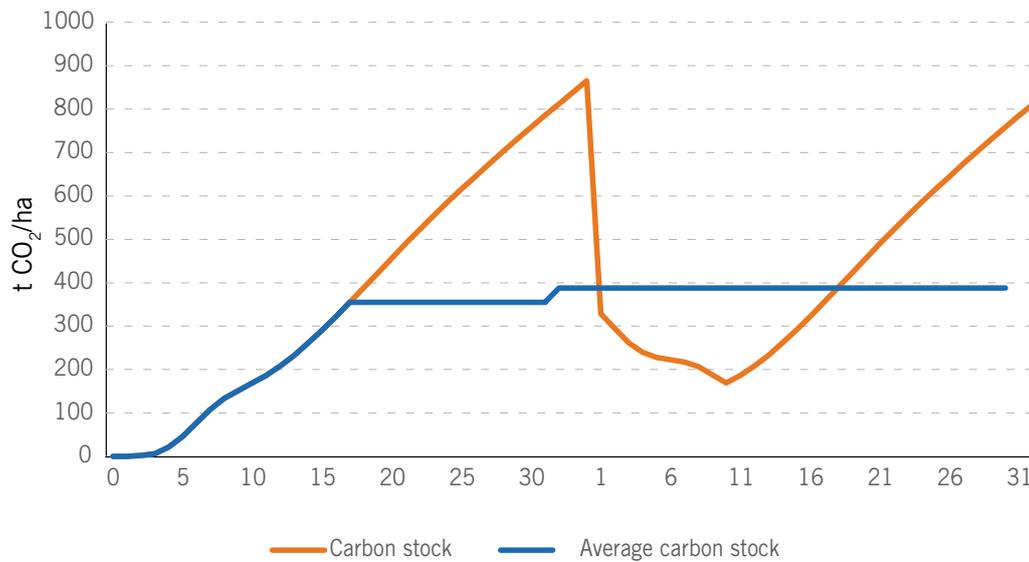
<sup>12</sup> Subject to s 190 of the Act, which limits unit surrender for a Carbon Accounting Area (CAA) to the total number of NZUs earned within the CAA over the lifetime of the CAA.

### If a participant harvests later than their default rotation band

A participant harvesting later than their default rotation band will be entitled to additional NZUs equivalent to the difference in carbon stock of their new average age and their default average age, to account for the additional long-term carbon storage in their forest.

Figure 5 shows a forest with an assumed harvest age of 28 which has earned NZUs up until its average age of 17 – because the forest is actually harvested at age 34 it is entitled to NZUs up to an average age of 19 (in a higher rotation band), so the participant is owed the difference. It earns that difference once it moves between rotation bands, at age 31.

Figure 5: First rotation forest that is harvested later than the default rotation band



### Consultation questions

9. Do you agree with our proposed rules for changing between bands? Why or why not?
10. How will our proposed approach impact participants?

### Part 3B: Rules for changing forest type

If a participant changes forest type under averaging accounting they will change the long-term average carbon stock associated with the average age of their forest, and thus the NZUs they are entitled to.

When a participant changes forest types, their new forest will be assigned to the default rotation band (and associated average age) for that forest type.

At the emissions return following harvest of their initial forest type, they will need to account for the changes in long-term carbon storage in their forest.

#### Earning and repaying NZUs when changing forest type

We intend to use a similar approach as that suggested for changing between rotation bands above.

Under this approach a participant will earn, or be liable to pay, NZUs equivalent to the difference in their forest's new default average age (based on the carbon stock for the new forest type) and their forest's previous average age (based on the carbon stock for the old forest type).

For example, if a participant's first rotation was radiata pine which they harvested within its default rotation band with an average age of 17 (and carbon stock of 350), and they decided to replant in softwoods, with a default average age of 22 (and carbon stock of 300), they will need to repay 50 NZUs.

The diagrams below shows how a participant will earn or surrender NZUs based on changing forest type post-harvest. This is the most common scenario for changing forest type.

#### Changing to forest type with lower average carbon stock

If a participant's new forest type has a default average carbon stock that is lower than the actual average carbon stock of the old forest, they must surrender NZUs at the first emissions return after their forest type changes.

Figure 6 below shows a forest changing from a forest type with a higher average carbon stock (orange line) to a forest type with a lower average carbon stock (yellow line). When the forest type changes, the participant will have to surrender NZUs, as shown by the blue line, representing average carbon stock.

#### Changing to forest type with higher average carbon stock

If a participant changes their forest type to one that stores higher average carbon, they will be entitled to NZUs for the increased storage. Our preference is for these extra NZUs to be issued when the age of the new forest reaches the default average age for that forest type.

Figure 6: A forest surrendering NZUs when changing forest type

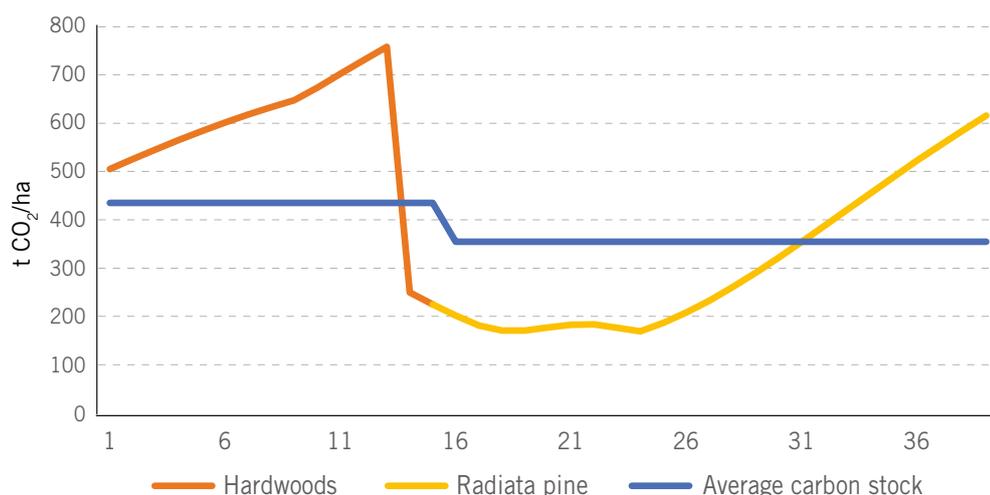
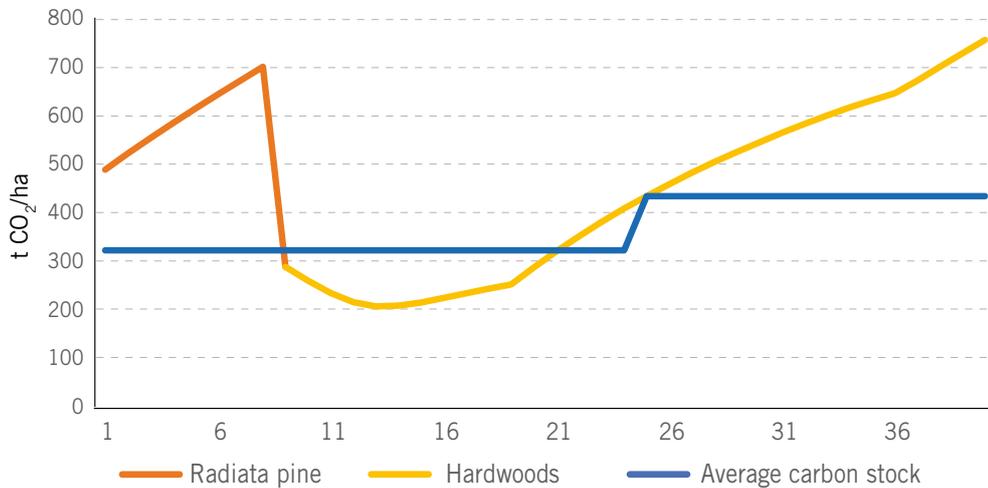


Figure 7 shows the average carbon stock of a first rotation forest changing forest type after harvesting from a type with a lower average carbon stock (orange line) to a type with a higher average carbon stock (yellow line). The total amount of NZUs it can earn is shown in blue. Note: The participant earns up to the new average carbon stock when the second rotation of the forest reaches the default average age for its forest type.

Figure 7: A forest earning NZUs when changing forest type



### Consultation questions

11. Do you agree with our proposed approach for accounting for changes in forest type? Why or why not, and what alternative approach would you suggest?
12. How will our proposed approach impact participants?

### Part 3C: Rules for when a subsequent rotation forest can be treated as a first rotation

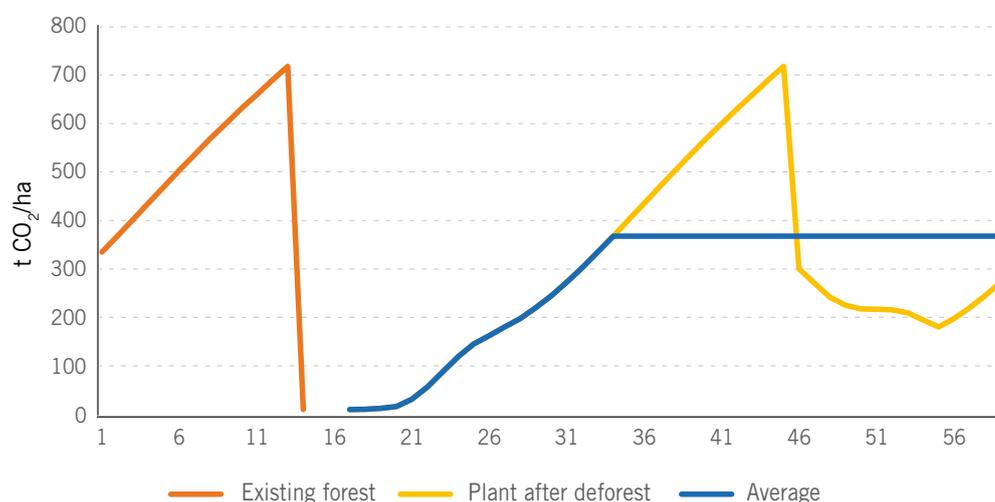
Under averaging accounting second (and subsequent) rotation forests won't earn NZUs unless there is a change in forest management, e.g. by delaying harvest or changing forest type.

This creates an incentive for a participant to deforest their land, replant it, and then enter it into the ETS as a 'new' first rotation forest. This is known as the deforestation loophole, effectively turning a second or subsequent rotation forest into a first rotation forest for the purposes of averaging accounting.

This is a problem, because New Zealand can effectively only attribute the growth of a forest's first rotation towards our international climate change obligations (regardless of whether it is in the ETS or not) – if a second rotation forest was allowed to join and earn NZUs up to the average, those NZUs would not represent new carbon storage. This could undermine the integrity of the ETS, raise questions about the environmental integrity of forestry NZUs, and be a significant cost to the Crown.

Figure 8 below shows how this loophole comes about. The second rotation forest (orange line) is deforested, and the carbon stock of the forest reduces to zero. Another forest is planted (yellow line), which earns NZUs (blue) as a first rotation forest. This forest could have earned NZUs up until the default average age for the forest type of the forest (or further, if the participant extended the rotation of the forest). This is compared earning no NZUs as a second rotation forest.

Figure 8: A forest exploiting the deforestation loophole and the amount of credits it could earn, if it were not closed



### Creating a “stand-down period” on land which has been deforested before it can be treated as a first rotation

The Amendment Bill introduces a “stand-down period”. When a forest is registered in the ETS, it will be checked to see if the land was forested during the “stand-down period” – if it was, it will be registered as second or subsequent rotation forest. This will apply to any deforestation from when the averaging sections of the Bill come into force (1 January 2021).

The decision to introduce this stand-down period was supported by a full Regulatory Impact Assessment: [www.teururakau.govt.nz/news-and-resources/consultation/a-better-ets-for-forestry](http://www.teururakau.govt.nz/news-and-resources/consultation/a-better-ets-for-forestry). It will make registering forest more complex, as registration processes will take longer with a further check about forest status.

### Stakeholder feedback on the deforestation loophole

The loophole was identified during the August 2018 consultation on proposed forestry ETS changes. This is your opportunity to provide feedback on our proposal for how long the stand-down period should be.

### Proposed changes to the Regulations to set the duration of the stand-down period

New Regulations are needed to set the length of the stand-down period. Regulations are the best place to set the stand-down period as they are more flexible than legislation – allowing us to respond to changes in factors which will influence whether participants are likely to leave land out of forest to register as first rotation. (e.g. a change in carbon price). This is so we can make sure the stand-down period is an effective way to prevent the land being replanted and registered as new forest.

We are proposing:

- a stand-down period of 15 years – this timeframe is based on Net Present Value (NPV) analysis<sup>13</sup> and is the calculated length of time required to remove all economic incentive to leave land out of forestry (based on a carbon price of \$25 per tonne);
- that if it becomes more attractive to use become a first rotation forest, the stand-down period may be extended – for example, if the carbon price increases, there is a greater incentive to leave the land deforested, making it necessary to extend the look-back period for it to remain effective.

For example, if the stand-down period was increased from 15 years to 20 years – the new stand-down period would apply retrospectively. This means that if a participant deforested their land in 2021, when the stand-down period was 15 years, they would have to wait until 2036 before they could earn NZUs as a first rotation forest. If, in 2035, the stand-down period was extended to 20 years, this new period would apply, and they would have to wait until 2041 to plant new forest and earn NZUs as first rotation forest.

We are seeking your feedback on whether the 15-year timeframe will be appropriate for the stand-down period.

The table below identifies the pros and cons of the 15-year timeframe for the stand-down period:

Preferred Option	Pros	Cons
A 15-year stand-down period will apply to all deforestation from commencement of the Bill.	<p>Will strongly discourage a forester from deforesting to exploit the loophole. Deforestation would likely be restricted to situations where the land is suitable for a different use.</p> <p>Having a longer stand-down period means land is less likely to be left deforested, when it actually should be in forestry.</p>	<p>An NPV analysis may over-estimate the time required to discourage the behaviour as it doesn't take into account practical land use considerations.</p> <p>NPV analysis cannot cater for all situations and scenarios.</p>



### Consultation questions

13. Do you agree with our preferred option? Why or why not?
14. How can we monitor this policy to make sure the length of the stand-down period is appropriate?
15. Are there any other factors we should consider when setting the length of the stand-down period?

<sup>13</sup> The NPV analysis included the benefit of receiving NZUs as a first rotation forest, factoring in the carbon price, log price, and opportunity cost of delayed earnings from harvest.

### Part 3D: Rules to prevent over-crediting following an artificially low rotation band

Under averaging accounting, a forester who registers their forest on its second (or subsequent) rotation will be assigned a default rotation band that includes the age they harvested their previous rotation (regardless of whether they were in the ETS or not).

This creates a situation where a forester could follow a normal length rotation with a very short rotation, lowering their average age. If the forester then runs a longer subsequent rotation, their forest will move up rotation bands to earn NZUs they would not otherwise be entitled to. There are variations on exactly how to have a short rotation and lower the average age, but the simplest way is:

- A forester runs a long rotation, harvests, and then registers their replanted forest with the ETS on a rotation band based on the harvest age of the long rotation. The forester then runs a short rotation on their replanted forest, and the forest is assigned to a lower rotation band.
- Because they haven't received any NZUs (being a subsequent rotation forest), the forester would not need to surrender any NZUs to account for this reduction in carbon stock.<sup>14</sup>
- When the forester replants and grows their trees back to a long rotation, they would earn NZUs for the difference between the average age of the short rotation and the average age of the long rotation.

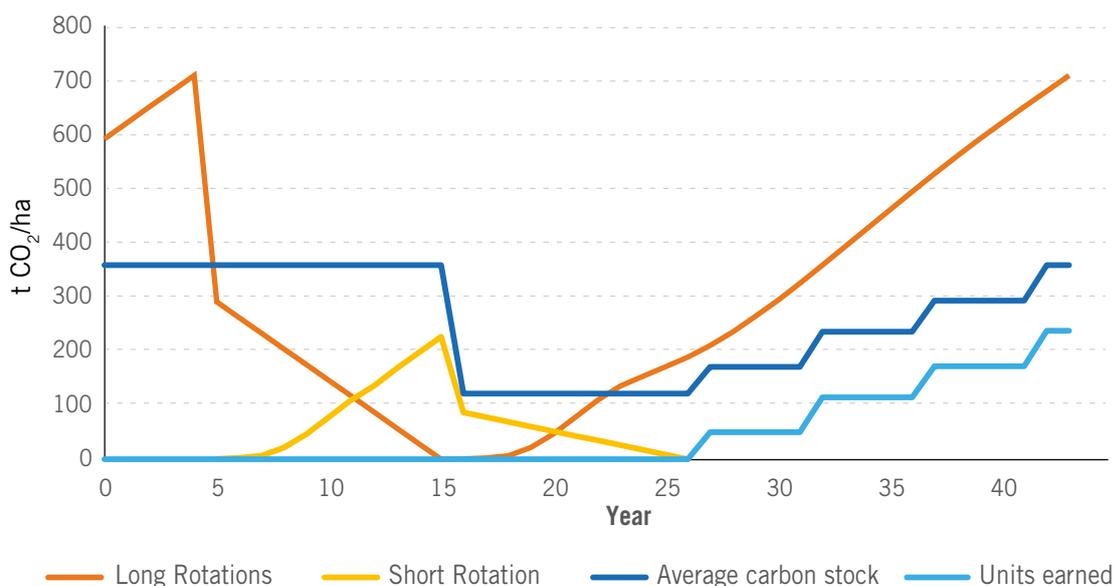
For example, if a forester harvests a forest at age 30 then registers in the ETS, and receives an average age of 17. They then harvest their trees when they are 10, receiving an average age of 5, but without having to surrender any NZUs for this drop in average age. They replant and grow their trees to 30, increasing their average age to 17 again, and earning NZUs for this increase.

Figure 9 shows this visually. The orange lines show the carbon stock of a second or subsequent rotation in the ETS, with two long rotations split by a short rotation. The dark blue line shows the average carbon stock, of the forest, which equals the NZU entitlement of a forest registered on its first rotation as it surrenders from the default average age to a lower average age. It then earns back up to the default by moving up age bands.

The light blue line shows the NZU entitlement of a forest registered on its second rotation, and how the forest earns NZUs when moving back up rotation bands on the forest's second long rotation. However, these NZUs do not represent any extra sequestration compared to the original rotation.

Allowing this situation to occur would cause NZUs to be issued for carbon storage which would not be additional compared to previous long rotations. This would lead to significant costs to the Crown, undermine the integrity of the ETS, and possibly create unintended consequences for the forestry sector.

**Figure 9: The unit entitlement and average carbon stock of a forest with a short rotation in between two longer rotations**



<sup>14</sup> Participants don't have to surrender NZUs that the land did not earn due to the surrender cap in the Act. The surrender cap means that liabilities from forest land are limited to the number of NZUs that land has earned from emissions returns since it was first registered.

## Stakeholder feedback

This situation was not consulted on in the August 2018 consultation as it has only been identified when the operational detail of averaging accounting was developed. This is your opportunity to provide feedback on our proposal.

### How to prevent over-crediting

#### Preferred Option: Create a “look-back period” of 15 years, and apply it:

- when subsequent rotation forest is registered; or
- is harvested and moves down a rotation band; or
- moves to a forest type with a lower default average age.

We propose to apply a “look-back period” in certain situations which will require a forest to use the oldest harvest age (and associated forest type) from the recent past to assign a rotation band. The application of a look-back period should close the loophole but also allow participants to make legitimate changes to forest management and not be unfairly prevented from earning NZUs in the future.

The Regulations will contain a rule covering the look-back period. The rule will determine the average age of a second or subsequent rotation forest. The rule will be applied at:

- registration of a second or subsequent rotation forest; and
- when a forest, which was registered on a second or subsequent rotation, is harvested and moves to a rotation band with a lower average age than its current rotation band; or
- when a forest changes forest type to a type with a higher default average age.

The rotation band the forest needs to use will be assigned by the highest harvest age<sup>15</sup> of either:

- the age at the most recent harvest; or
- any harvest on the same land in the last 15 years, but only if the most recent harvest was 2018 or later.

The table below shows the advantages and disadvantages of applying a lookback period.

Option	Pros	Cons
Create a “look-back period” applied at: <ul style="list-style-type: none"> <li>• registration of a second or later rotation forest; and</li> <li>• the emissions return after that forest is harvested and moves to a rotation band with a lower average age than the current rotation band.</li> </ul> <p>In these situations, the rotation band the participant needs to use to account for the forest will be assigned by the highest harvest age and forest type in the last 15 years.</p> <p><b>(Preferred option)</b></p>	<p>Prevents use of the long-short-long loophole to earn NZUs that don't contribute to additional carbon storage.</p> <p>Will provide a strong disincentive to have one short rotation period in order to earn more NZUs.</p> <p>15 year timeframe aligns with the preferred timeframe for the first rotation stand-down period, simplifying how the rules will work in practice.</p>	<p>Will increase the costs of administering emission returns where this rule has to be applied, as we will need to verify previous harvest age.</p> <p>Will require a participant to notify us in emissions returns when and where they have harvested, so we can apply the rule.</p>



## Consultation questions

16. Do you support the preferred option? Why or why not?
17. Do you have any other ways to prevent double crediting in this situation?
18. What are the likely impacts of closing the long-short-long loophole?

<sup>15</sup> If previous harvest was for a different forest type, the rotation band a participant must use will be determined by the previous forest type as well as highest harvest age.

## Regulatory Impact Analysis Tables

### Rules for when a subsequent rotation forest can be treated as a first rotation

The length of the stand-down period is unlikely to impact on the regulatory certainty and predictability of when subsequent rotation forests can be treated as first rotation forests, the administrative efficiency and effectiveness for regulators of the stand-down period, or the ease of compliance for participants.

Primary Criteria	
	A 15 year stand-down period applies to all deforestation from commencement of the Bill
Increases incentives to store carbon in forests.	+ Removes incentive to deforest land in order to re-enter it as a new forest under averaging, leading to more existing forest remaining in the ground.
Secondary Criteria	
Allocates obligations and entitlements to support alignment with climate change targets.	+ A stand-down period which removes the incentive to deforest and game averaging accounting will ensure the ETS assists New Zealand in reaching our climate change targets by reducing the risk of deforestation.
Avoids unintended consequences.	- There is a risk that participants will delay planting if the economic conditions shift so that they will still gain from deforesting and leaving land for 15 years before replanting.
Consistent with wider climate change and wellbeing priorities.	+ Maintains integrity of the ETS by sending a clear signal that Government will not provide NZUs for gaming behaviour.

### Rules to prevent over-crediting following an artificially low rotation band

Primary Criteria	
	Create a 'lookback period' to assign the average age of subsequent rotation forests as the highest average age in last 15 years.
Increases incentives to store carbon in forests.	+ Removes incentive to game averaging accounting in order to earn NZUs which do not represent an increase in sequestered carbon, retaining the incentive to leave forests in states where they are storing more carbon.
Administrative efficiency and effectiveness for regulators.	-- This rule will increase administrative workload by making the accounting rules under averaging more complex and requiring more checks on historical status of forests.
Improves ease of compliance for participant.	-- This rule will make it more difficult for participants to comply with the ETS by making the accounting rules under averaging more complex and requiring more checks on historical status of forests.
Secondary Criteria	
Allocates obligations and entitlements to support alignment with climate change targets.	+ Removing the incentive to game averaging accounting will ensure the ETS assists New Zealand in reaching our climate change targets by reducing the risk of the Crown issuing units for carbon stored which is not additional to the forests original storage.
Provides durable regulatory certainty and predictability.	+ Compared to leaving the loophole open, it enables participants to predict future NZU supply relative to allowing participants to repeatedly earn additional NZUs on existing forest land.
Avoids unintended consequences.	+ Risk that participants change forest type for long periods to get around the time-bar which closes the loophole. However this risk is small compared to leaving an incentive for participants to change forest types temporarily or run constructive short rotations which are likely to have larger flow-on impacts for forestry sector and land management.
Consistent with wider climate change and wellbeing priorities.	+ Maintains integrity of the ETS by sending a clear signal that Government will not provide NZUs for gaming behaviour.

## Permanent post-1989 forests: a new way to earn NZUs for carbon stored in forests which will not be clear-felled for at least 50 years

### A new permanent post-1989 forest activity is being created

The Amendment Bill creates a new permanent post-1989 forest activity. Regulations are needed so the number of NZUs a participant earns or needs to surrender can be calculated.

See new sections of the Amendment Bill: 186K and 194DA to 194EL

### Summary of proposed changes to the Regulations

Permanent post-1989 forests will use the stock change approach to account for their carbon stock change. The relevant parts of the current Climate Change (Forestry Sector) Regulations 2008 applying to post-1989 forests will apply.

We are asking whether there is anything else we need to take into account when applying the existing stock change approach to permanent post-1989 forests.

The Government has decided that permanent post-1989 forests will use the stock change approach when doing carbon stock change calculations - the same way as current PSFI forests. We need to amend the Regulations to extend the stock change approach to the new permanent post-1989 forest activity. Your feedback will be helpful to make sure we are aware of any possible impacts of these Regulations which we might need to manage.

This decision was supported by a full Regulatory Impact Analysis, available on our website.

### Stakeholder feedback

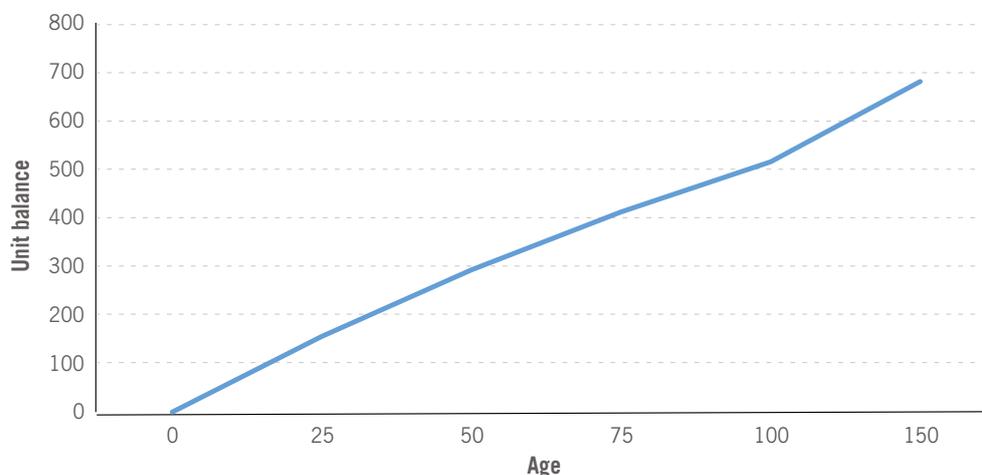
In the 2018 August consultation, 60 out of 72 submitters supported using the stock change approach for the permanent post-1989 forest activity if it was in the ETS. This was because it will maximise the long-term investments made by those with permanent post-1989 forests in the ETS.

### How it will work

To do this, we will use the parts of the Climate Change (Forestry Sector) Regulations 2008 (the Regulations) that currently apply to post-1989 forests. This will include:

- mapping information needed to register post-1989 forests;
- how carbon changes are calculated for the forests using the current carbon stock accounting approach;
- the detail of the Field Measurement Approach for areas of land greater than 100 hectares; and
- existing post-1989 forest carbon lookup tables for each forest type for areas less than 100 hectares.

**Figure 10: A forest registered under permanent post-1989 forest activity, earning NZUs on the stock change approach.**



This will mean that if a participant is currently in the ETS as a participant for post-1989 forest, or are a PFSI member, the operational rules of the ETS won't change much if they enter their forest in the permanent post-1989 forest activity.

### **No change to tagging permanent post-1989 forest NZUs**

Participants in the PSFI currently earn NZUs identified by the tag NZU\_PFSI. This lets them (and other market participants) trace the NZUs back to permanent forest, and there are reports that these NZUs receive higher prices.

The Environmental Protection Authority (EPA) runs the New Zealand Emissions Trading Register. Through the register, the EPA has the ability to tag NZUs. All NZUs are 'tagged' with information about where they've come from. NZUs are issued recording the activity which the NZU was issued for, or other information about how they were created (PFSI, post-1989 forestry, Industrial Allocation, etc.) along with a unique serial number.

This operational practice will continue for all NZUs issued from the Crown accounts, including units from permanent post-1989 forests.

### **Sometimes a permanent post-1989 forest participant might need to surrender NZUs**

Permanent post-1989 forest participants shouldn't need to surrender NZUs for at least 50 years. However, there are some cases where they may need to surrender NZUs (e.g. if the Minister for Climate Change permits a small area of permanent post-1989 forest to be removed).

If a participant needs to surrender NZUs for permanent post-1989 forest, they can use any NZU that can be used to meet compliance obligations in the ETS. It doesn't need to be tagged as coming from the permanent post-1989 forest.

### **Links to other permanent forests' proposals**

Other proposals in this document that link to permanent forests are:

- cover for temporary adverse events (page 55);
- determining carbon tables using the Field Measurement Approach (FMA) (page 37);
- penalties for clear-felling permanent post-1989 forest (page 73).



### **Consultation questions**

19. Are there any specific issues we should consider when applying existing Regulations to permanent post-1989 forests?

# PART B:

## Reporting and claiming your NZUs

# Simple reporting: an option for simplified reporting for some forests under averaging accounting

## Simplified reporting will be introduced in certain circumstances

The Government has agreed that where you don't need to report a change in carbon stock, Regulations will be made to simplify reporting obligations.

See new sections of the Amendment Bill: 194FC

## Summary of proposed changes to the Regulations

This proposal outlines an approach to indicate by a 'tick-box' that there is no change in carbon stocks to report.

You can comment on our proposal to simplify your ETS reporting when you don't need to calculate carbon stock changes.

## How it will work

We propose that if a participant has post-1989 forests using averaging accounting, they won't need to calculate changes in carbon stock in a Carbon Accounting Area (CAA) when:

- a forest doesn't change rotation band during an emissions return period (whether from harvest, growth, or changing forest type) due to the forest being second or subsequent rotation, or if it is a first rotation forest which is not shifting between rotation bands;
- a first rotation forest is affected by an adverse event. Reported changes in carbon stock will pause until the carbon stocks in the re-established forest are the same as before the adverse event.

For permanent post-1989 forests (subject to stock change accounting), changes in carbon stock won't need to be calculated from the time an adverse event affects the forest in any rotation, until the carbon stocks in the re-established forest are the same as before the event.

All CAAs will still need to be included in an emissions return for a MERP, unless regulations are made removing the requirement to report. Being able to report these situations simply and quickly will reduce participants' compliance costs.

## Stakeholder feedback on simplified "tick-box" reporting

This proposal was not included in the August 2018 consultation. This is your opportunity to provide feedback on our proposal.

## Proposed changes to allow simple reporting

The Regulations will contain rules which determine when a participant doesn't have to report a change in carbon stock for a CAA, and can use a "tick box" for the CAA instead. This will be when no forest in the CAA needs to report a change in carbon stocks due to:

- averaging (for example, where the forest has reached its average age, and is not changing rotation bands during the reporting period); or
- a temporary adverse event (when the carbon stock in the forest land affected by a temporary adverse event has not yet recovered to pre-event levels).

## Pros and cons of options

Preferred Option	Pros	Cons
<p>Include a provision in the Regulations on how to simply indicate (by tick-box) no reportable change in carbon stocks in a CAA. All CAAs will still have to be reported on, even if they can be simply reported.</p> <p>(Preferred option)</p>	<p>Ensures that the full set of CAAs for which participants have responsibilities, obligations and entitlements remains apparent in all mandatory emissions returns.</p> <p>Provides certainty over how and when participants will need to report for CAAs with no reportable change in carbon stock.</p> <p>Reduces compliance costs for on-going reporting for post-1989 forest land subject to averaging in second and subsequent rotations.</p>	



### Consultation questions

20. Do you support the introduction of tick box reporting? Why or why not?

21. Are there any other ways we could make reporting easier to comply with?

## Regulatory Impact Assessment

### Simple reporting

Proposals for simple reporting are unlikely to influence:

- the incentive to store carbon in forests;
- how obligations and entitlements are allocated to support alignment with climate change targets; or
- consistency with wider climate change and wellbeing priorities.

Include simple reporting, but still require CAA to be reported on	
<b>Primary Criteria</b>	
Administrative efficiency and effectiveness for regulators.	0 The Regulator would need to undertake compliance review, but this may be simpler than under the status quo.
Improves ease of compliance for participant.	+ Reduces the effort and compliance cost associated with reporting, while ensuring participants still report regularly on their forests.
<b>Secondary Criteria</b>	
Provides durable regulatory certainty and predictability.	+ Requires regular and predictable reporting requirements.
Avoids unintended consequences.	+ Provides transparency for participants and administrators, and helps avoid compliance consequences.

## Input returns: the option to send us your information so we can calculate your emissions and removals

### An option for Te Uru Rākau to calculate your returns is being introduced

The Amendment Bill will enable Regulations to allow you to provide your information to us, so we can calculate the emissions and removals for your returns. New Regulations would be required to create this service.

See new sections of the Amendment Bill: 194UA to 194UC

### Summary of proposed changes to the Regulations

This proposal outlines a service to calculate the emissions and removals for your emissions return.

You can have your say on:

A: which forestry activities should be covered?

B: what data or information must be supplied?

### Background

Emissions returns can have complex calculations. Minor (and occasionally major) errors are often made in emissions returns. Te Uru Rākau has to correct the returns and, if required by the Act, apply penalties which cause delay, frustration and costs to participants.

### Changes to the Regulations are needed to allow us to calculate the contents of emissions returns for participants

The Amendment Bill has created a power to introduce a service through Regulations, where ETS participants (participants) could choose to provide us with information about their forest registered in the ETS, and we could use that information to calculate the emissions and removals they need to put into emissions returns.

Changes to the Climate Change Information System (CCIS) would be needed to offer this service efficiently and systematically, and we need your input to help design the service to suit your needs.

### Stakeholder feedback on the future service to calculate contents of emissions returns

This proposal was not included in the August 2018 consultation, as the major impact on people and businesses will occur when we amend the Regulations to introduce this process. This is an opportunity to provide feedback on our proposal.

### How it will work

For us to calculate emissions and removals will require participants to:

- supply us with considerably more information than they currently do, particularly at registration, allowing us to define the sub-areas at the start and end of an emissions return period; and
- make sure the information we hold is accurate.

A participant could choose to accept our calculations and submit an emissions return using those numbers, or submit a return with different information.

Preparations to deliver this service would take some time to complete, and a date when the service will go live will be announced in the future. However, once it is available we expect it to offer:

- a substantially reduced compliance burden for participants, because in normal circumstances they will not have to calculate emissions and removals;<sup>16</sup>
- reduced risk of incurring penalties for incorrect calculations of emissions and removals (however, penalties will still apply if the information participants give us is incorrect or incomplete – as this would lead to an incorrect emissions return).

<sup>16</sup> There may be a small upfront compliance cost if a participant needs to provide extra information to us to use the service.

## Proposed changes to the Regulations for calculating your emissions and removals

The Regulations will specify all the detail to introduce this process, such as the rules relating to:

A. Which forests should be covered by the provision?<sup>17</sup>

B. What data or information must be supplied?

The Regulations will also specify how participants must supply information and how will it be returned to them. The detail will be set out in technical Standards created under the Regulations. These will be developed once we have a better idea of when participants will use the service, and what they need to provide.

At this stage we are seeking high-level feedback on what activities this service could be provided for, and the information we would need from participants to deliver the service. We will engage later on the detail of how it is implemented.

### A. Which forests should be covered by the provision?

Our preferred approach is to offer this service for all forestry activities, once we have developed a system which can accept and process the required information. However, the kind of information we will need from participants is likely to vary between forestry activities, and there are likely to be limits on how complex their Carbon Accounting Areas (CAAs) can be to use the service.

The Regulations will also be able to specify features of the forests which can use this service. This is important so we can limit the complexity of forests which use this service. A complexity limit is needed because it is significantly more difficult to calculate the emissions and removals for complex forests (such as CAAs with multiple forest types, or different age classes), particularly existing ones, in a systematic way. These limits, for example, could include a size threshold (e.g. offer service to CAAs which are 100ha or less); or we could set limits on how complex a CAA can be to use the service.

We want your feedback on where the limits should lie, and whether you would be willing to reconfigure your CAAs, or provide new, updated spatial information for their forests before being able to use the service.



### Consultation questions

22. Do you support our preference to offer this to all forest activities? Why or why not?

23. If the service was offered, which different forests would you like to see it offered too (e.g. under 100ha, CAA of one forest type)?

### B. What data or information must be supplied?

To calculate a participant's emissions or removals, we would need enough information from them to define the sub-areas in their CAA. This would often be considerably more information than they currently have to provide in their emissions returns. Any commercially sensitive information participants might have to provide to use this service will be protected under the Act, just like any information provided to us in an emissions return is protected now.<sup>18</sup>

We propose to create technical Standards to specify how the information needs to be supplied to us. The present Field Measurement Approach Information Standard, found at [www.mpi.govt.nz/dmsdocument/3667/direct](http://www.mpi.govt.nz/dmsdocument/3667/direct) provides an example of such a Standard.

The information we are likely to require depends on how complicated a participant's CAA is:

#### Simple CAAs

If a participant's CAA is relatively simple, with a single forest type which is all the same age, we will need the following information for current and past rotations of forest on the land:

- hectares;
- forest type;
- year planted; and
- year cleared (if applicable).

<sup>17</sup> Activities listed in Part 1 or 1A of Schedule 3 or 4, relating to: pre-1990 forest; pre-1990 offsetting forest; post-1989 forest; and permanent post-1989 forest (NEW).

<sup>18</sup> Section 99 of the Act prevents any sharing or publishing of this information except in certain circumstances such as with the permission of the participant, or in datasets where the information is sufficiently anonymised that individuals cannot be identified.

### Complex CAAs

If a participant's CAA contains a mixture of forest species and ages, we may need to define boundaries and subdivisions within the existing forest. These CAAs can become extremely complicated, particularly when clearing and replanting has occurred in multiple years, or over small areas.

It may be simpler for participants to submit geospatial data for these areas, so the forest on the land can be tracked through time (which becomes particularly important under averaging accounting).

The new process for reconfiguring CAAs will be available alongside an emissions return, helping participants split complex CAAs into a series of simpler CAAs. Depending on the final design of the service, this might be required in some circumstances if a participant wants to use the service.



### Consultation questions

24. Would you be willing to provide us with information required to define sub-areas to us? Why or why not?
25. What any other information you think we would require other than hectares, forest type, year planted and year cleared?
26. Are there other technological or software improvements we could introduce to make the ETS simpler to use and access?

## Field Measurement Approach (FMA): applying the FMA to more post-1989 forest categories

### The FMA will be updated for the new forest categories

We need to update the Regulations so the FMA will work for the new forest categories.

### Summary of proposed changes to the Regulations

These proposals look at the detail of applying the Field Measurement Approach to post-1989 forest.

You can have your say on:

- applying the 100 hectare threshold<sup>19</sup> for FMA participation to post-1989 forest categories;
- collecting and supplying FMA information for post-1989 forests subject to averaging accounting;
- collecting and supplying FMA information for permanent post-1989 forests.

### Background

The FMA is a method used to calculate how much carbon is in a post-1989 forest, based on data collected from that forest. We process the data collected on an ETS participant's behalf and develop a specific carbon look-up table for the participant's forest. They then use the table to complete calculations for their emissions returns.

Because using the FMA is a significant cost, currently only participants with more than 100 hectares of registered post-1989 forest need to use it. If they have less than 100 hectares of post-1989 forest registered in the ETS, then they use the default carbon look-up tables in the Regulations.

The FMA is implemented entirely through the Regulations, which currently only cater for existing post-1989 forests using the stock change approach. We need to update the Regulations to allow averaging and permanent post-1989 forests to use the FMA.

The changes to the FMA in the Regulations will complement future work to improve how the FMA is applied. In 2020/21, we expect options will be developed to reduce the cost of FMA monitoring for older forests on stock-change accounting – fewer measurements will be needed for such forests. This should particularly benefit permanent post-1989 forests, and indigenous forests, with their longer time horizons. Some of the proposals will also have implications for existing post-1989 forest under stock change accounting.

### We propose that collecting data for the mini-MERP from 1/1/2023 to 31/12/2025 will be optional

We propose to amend the Regulations so it is optional to collect FMA information in the “mini” Mandatory Emissions Return Period (MERP) currently proposed as 1/1/2023 to 31/12/2025. This is to reduce costs from having a short MERP. Instead participants will be able to use older carbon tables generated from FMA information collected during the present MERP.

### Stakeholder feedback on whether we should keep the FMA and its settings

In the August 2018 consultation, there was overall good support for continuing the FMA and its current settings:

- about 70% of respondents supported continuing with the FMA in its present form, and a further 15% wanted to be able to use the FMA (on a voluntary basis) below the present 100 hectare threshold; and
- about 15% wanted to see a higher threshold apply for the FMA, and/or for the FMA to be voluntary – largely because of the cost.

The Government is committed to looking at future opportunities to reduce costs through less frequent monitoring, and the use of new technology (if it is readily accessible). Options for making the FMA voluntary below a threshold area will be examined as part of work programmes in 2020/21.

<sup>19</sup> This 100-hectare threshold will still be based on land registered at any point in a MERP, regardless of whether all 100 hectares are included in a mandatory emissions return (as under averaging accounting, some land may be subject to tick box reporting).

## Proposed changes to the Regulations to apply the FMA

We do not need to change most of the FMA process to allow participants to accurately measure carbon stock changes and the average carbon stock, for averaging accounting or permanent post-1989 forest.

We need to make three changes to the FMA process to accommodate averaging and permanent post-1989 forests in the Regulations:

1. **Applying the 100 hectare threshold for FMA participations to post-1989 forest across “forest categories”<sup>20</sup>** – should the 100 hectare threshold at which a participant becomes subject to the FMA be based on the total registered area of post-1989 forest, or based on the area registered in each?
2. **Collecting and supplying FMA information for post-1989 forest subject to averaging accounting** – how will the FMA apply under averaging accounting, including decisions on when it will apply to a second (or subsequent) rotation forest if a participant:
  - wants to claim extra emissions NZUs by harvesting in a later rotation band than the default rotation band?
  - changes to a species in a different forest type?
  - significantly changes forest management?
  - resumes accounting for an area affected by a temporary adverse event?
3. **Collecting and supplying FMA information for permanent post-1989 forests.**

### 1. Applying the 100 hectare threshold for FMA participations to post-1989 forest across forest categories

The two options for when the 100 hectare threshold for FMA participation should apply are:

- **Option A:** FMA participation would be based on the total area of a participant’s registered post-1989 forest, aggregated across all registered forests (a carbon table specific for a participant will be developed for each category of forest based on information from sample plots in each category<sup>21</sup>); or
- **Option B:** FMA participation for each post-1989 forest category should be based on the area of forest registered in that category.

### Pros and cons of options

Options	Pros	Cons
<p><b>Option A:</b> We aggregate forest categories for the size threshold above which the FMA applies.</p>	<p>Simpler for a participant to administer (all land in the FMA, or not).</p> <p>The total registered area receives a more accurate carbon stock assessment than it would under the default carbon look-up tables.</p> <p>The cost of applying the FMA remains the same as at present.</p> <p>How accurately we measure average carbon stocks and changes at the total landholding level, will remain largely the same as now.</p> <p>Carbon tables specific to a participant would still be obtained for each forest category (based on information from sample plots in each category).</p> <p>The accuracy of the tables will increase as the area of land in a given category becomes larger.</p> <p>A participant will, as at present, have the option to request more sample plots to achieve better accuracy, if they wish.</p>	<p>Some loss in carbon stock assessment accuracy per forest category (but not on average over the total forest holding) – this is because if the number of sample plots allocated remains the same as at present, there will be fewer plots in each forest category.</p>

<sup>20</sup> “Forest categories” are used in this document to mean the permanent post-1989 forest activity, post-1989 forests using stock change, and post-1989 forests using averaging accounting. This is just for the FMA section of this discussion document.

<sup>21</sup> As at present, there would need to be a minimum number of plots in each forest category – 2 in each of the exotic or indigenous forests in that category. The default carbon tables in the Regulations are used if this is not the case.

<p><b>Option B:</b> We treat forest categories separately for size threshold above which the FMA applies.</p>	<p>Each forest category of 100 ha or more will get carbon tables specific to a participant that have the same accuracy as at present – as each category will receive the same number of sample plots for a given area as at present.</p> <p>Carbon tables specific to a participant for a given forest category should better reflect different forest management in that category.</p>	<p>May be more complex for a participant (they might be an FMA participant for only some of their forest).</p> <p>Land transactions may become more complicated given the variation in FMA requirements across multiple forest categories.</p> <p>The cost of applying the FMA will increase with forests over 100 ha in more than one forest category<sup>22</sup>.</p> <p>More areas of forest are likely to be required to use the default look-up tables in the Regulations, which may disadvantage some people.</p>
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## 2. Collecting and supplying FMA information for post-1989 forests subject to averaging accounting

Government decisions for when participants will earn or surrender NZUs mean we need further rules within the FMA to make sure we capture the necessary information from a forest. For post-1989 forests under averaging accounting that use the FMA we propose three general rules, and a few specific rules for how to apply the FMA certain situations.

### General rules

- FMA information will only need to be collected from sample plots during the first rotation, until the tree age in a plot exceeds the minimum age in the default rotation band for the forest type – this will remove the cost of on-going monitoring of forests under averaging accounting; and
- Once the area of first rotation forest is cleared, collection of FMA information stops and is no longer used to update a participant's specific carbon table – because, under averaging accounting, regulations can specify that carbon stock changes for that area will not be reported; and
- If a second or subsequent rotation forest is registered in the ETS for the first time, FMA requirements must be completed at least once, before any NZUs can be claimed for a forest growing a higher rotation band than the default band.

### Specific rules

Rules are also needed for how the FMA will apply to an area of second (or subsequent) rotation forest under averaging accounting when there is a change to the long-term average carbon stock. We propose this will require an emissions return, when:

- a second (or subsequent) rotation forest is harvested earlier, or left to grow later, than the default rotation band of the first rotation; or
- there has been a significant change in forest management (e.g. species or change in stocking rate between rotations<sup>23</sup>).

We also propose the following approach for second and subsequent rotation forests under the FMA, when an emissions return is required:

- a carbon table specific to a participant be developed from the FMA information collected from first rotation forest in the area (or from the surrounding area, if no first rotation information exists for the area);
- if there has been a change in forest type since the first rotation – an adjustment to the first rotation information be made, based on the ratio of carbon stocks for the first and subsequent rotation forests in the default carbon look-up tables in the Regulations;
- if there has been a significant change in stocking rate – the adjustment to the first rotation FMA information be based on the forest growth models that underpin FMA calculations.

As at present, a participant will be able to collect new FMA information at any time to update their specific carbon tables. If they chose to update the FMA information for an area of second or subsequent rotation forest that requires an emissions return, the information will be used to develop a carbon table specific to their for the area.

<sup>22</sup> Plots would be allocated to each forest category independently, under the same statistical approach as at present. For example, if a participant had 100 hectares of exotic forest in two different forest categories, they would receive 37 plots under Option A, but 60 plots under Option B.

<sup>23</sup> The stocking rate is the number of trees per hectare.

### 3. Collecting and supplying FMA information for permanent post-1989 forests

We propose that the FMA applies to permanent post-1989 forests in the way it presently applies to in post-1989 forests, with collection of FMA information at least once in each Mandatory Emissions Return Period. Note: we expect the proposals to reduce the frequency for FMA information collection for older forests in 2020/21.

#### Sample plots for the new post-1989 forest categories

We are not proposing to change the minimum and maximum numbers of permanent sample plots. These will remain at between 30–200 plots for exotic forests, and 15–100 plots for indigenous forests, as registered forest area varies from 100 to 10,000 hectares – with more plots if a participant wishes.



#### Consultation questions

##### Making FMA optional for the 2023-2025 mini-MERP

27. Do you agree with the proposal? Why or why not?

##### Determining the 100 hectare threshold for FMA

28. Which option do you prefer? Why?

29. Would your choice of options change if the frequency of FMA information collection could be reduced for older forests – e.g., if collection were reduced to 10-year intervals for exotic forests over 15 years, or for indigenous forest over 25 years?

##### How the FMA will apply to post-1989 forests under averaging accounting

30. Do you agree with the proposed approach to stop collecting FMA information from sample plots once a first rotation post-1989 forest under averaging accounting has been cleared? Why or why not? Please let us know if you have an alternative approach?

31. Do you agree with the proposed approaches for a second or subsequent rotation, to use first rotation FMA information to derive an appropriate carbon table specific to you? Why or why not? Please let us know if you have an alternative approach?

32. What do you suggest should be the threshold for requiring that a 'significant change in final stocking rate' between rotations must be taken into account?

##### Collection of FMA data from the new forest categories

33. Do you agree with the proposed approach to use the same provisions that are used for post-1989 forests under stock change for frequency of collection and number of plots when collecting and supplying FMA information? Why or why not?

##### The future of the FMA

34. Are there other options for application of the FMA that you think could be readily accessed by all FMA participants in the near future and should be considered?

## Regulatory Impact Assessment

### Making the FMA optional for participants during the 2023-2025 mini-MERP

Make FMA requirements optional for participants during the 2023-2025 mini-MERP	
<b>Primary Criteria</b>	
Increases incentives to store carbon in forests.	0 Participants can complete FMA requirements if they consider it is cost-effective under their particular circumstances.
Administrative efficiency and effectiveness for regulators.	+ Expected to reduce administrative effort overall.
Improves ease/cost of compliance for participant.	++ Should deliver cost savings to many FMA participants, with limited effect on overall accuracy of claimed emissions NZUs. Sufficient flexibility remains for those that have recently joined the ETS, or not completed FMA requirements recently.
<b>Secondary Criteria</b>	
Allocates obligations and entitlements to support alignment with climate change targets.	0 Has little impact on the allocation of obligations and entitlements and their alignment with climate change targets.
Provides durable regulatory certainty and predictability.	0 No longer-term effects.
Avoids unintended consequences.	0 Likely to result in a decrease in the accuracy with which emissions NZUs are allocated to participants in cases where FMA requirements were completed early in the prior mandatory emissions return period – especially for regenerated forests. Participants in this situation will need to be advised of the risks. Consequences are expected to be manageable provided participants are advised of possible risk. Participants can then weigh these against the cost of completing FMA requirements for a shorter time interval than usual, as appropriate.
Consistent with wider climate change and wellbeing priorities.	0 No longer-term effects.

## Aggregating forest categories for the FMA

How we aggregate forest categories for the FMA is unlikely to influence durable regulatory certainty and predictability.

	Option A: aggregate different forest categories for the size threshold by which the FMA applies (preferred)	Option B: treat each post-1989 category separately for the FMA
<b>Primary Criteria</b>		
Increases incentives to store carbon in forests.	+	++
	Better than default carbon tables, as FMA tables consistently allocate more emissions NZUs and are more equitable. More cost-effective than Option B without a significant loss in accuracy overall.	Best, as can provide carbon tables tailored to the forest categories that a participant chooses to focus on. However, not much (if any) advantage over Option A as forests become large, as all categories would have adequate plot numbers.
Administrative efficiency and effectiveness for regulators.	-	-
	Not as simple as default, otherwise similar to present.	Not as simple as default, otherwise similar to present
Improves ease/cost of compliance for participant.	+	-
	Depends on circumstances, but usually simpler than Option B.	Depends on circumstances, but usually more complex than Option A.
<b>Secondary Criteria</b>		
Allocates obligations and entitlements to support alignment with climate change targets.	+	++
	Better than default carbon tables, as FMA carbon tables are still more accurate at the whole forest level even with aggregated categories. More cost-effective than Option B if forest land areas are not much over 100 ha.	Best as expected to provide carbon tables tailored to the categories of forest land that a participant chooses to focus on. However, some categories may be excluded, and have to use default carbon tables which is disadvantageous. Less cost-effective if the area in each category is close to 100 ha.
Avoids unintended consequences.	+	+
	Better than default carbon tables which may considerably over-allocate emissions NZUs to poor performing forests.	Similar to Option A overall, at the level of a whole forest, though higher accuracy in some cases (at considerably greater cost).
Consistent with wider climate change and wellbeing priorities.	+	++
	Better than default as more explicitly recognises actual carbon gains and losses.	Best as expected to most accurately recognise carbon gains and losses, and efforts by foresters to increase carbon storage, though at increased cost in some cases.

## Grant funded forests: preventing credits being earned during a stand-down period

### Grant funded forests will not be able to claim credits during a stand-down period

The Amendment Bill will prevent some recipients of One Billion Trees (1BT) grants from receiving NZUs in the ETS for a specified stand-down period. New Regulations are needed to implement this.

See new sections of the Amendment Bill: 197 and 197A

### Summary of proposed changes to the Regulations

This proposal offers two options for preventing NZUs from being claimed during a stand-down period for a Grant Funded Forest:

1. Forest age option.
2. Deducting option.

You can choose between the two options and offer comment on other possible options.

### Background

Grants offered under the One Billion Tree Grant Programme (1BT) encourage the planting of forests by providing financial assistance. Because radiata pine forests have a strong commercial basis, there is a stand-down period from the ETS for in the contracts for 1BT Grant Funded radiata forests. This stand-down works in the following ways:

- The Grant Funded radiata pine forest may not register in the ETS for six years from 30 June in the year of planting.
- The landowner can then apply to register their forest in the ETS, but can't apply to claim NZUs for carbon storage in the preceding six years.

### Other species with 1BT Grant Funding

The stand-down period only applies to radiata pine forest which has received a 1BT Grant. Forests of other species (both native and other exotics) which have received 1BT Grant funding can apply to register in the ETS as soon as the forest is established. If these forests are registered they will be able to earn NZUs like any other forest, from the establishment date of the forest.

Please remember that the ETS and 1BT use different criteria to assess land. This means that 1BT Grant Funded land is not automatically eligible to register in the ETS.

### Changes to the Regulations are needed to prevent credits from being earned during a stand-down period

The Government has decided the best way to bring the stand-down period into the ETS is through the Amendment Bill and the Regulations.<sup>24</sup> The Amendment Bill introduces the machinery to prevent credits from being earned during a stand-down period. New Regulations are needed to provide details for which forests the stand down period will apply to.

### Stakeholder feedback on Grant funded forests

Grant Funded forests weren't included in the August 2018 ETS consultation. This is your opportunity to provide feedback on our proposal.

### Proposed changes to the Regulations regarding the stand-down period

The Amendment Bill proposes to allow Regulations that prescribe:

- Details of:
  - the grant funding programmes that the stand-down period applies to;
  - how long the stand-down period applies for; and
  - the detail enabling us to identify the forests that the stand-down applies to (e.g. radiata pine in this case); and make it clear that specified Grant Funded forests will not receive NZUs for carbon stock change during the stand-down period.

<sup>24</sup> See the Regulatory Impact Analysis for Climate Change Response Act 2002: Forestry Sector Operational Improvements (Part 2): [www.teururakau.govt.nz/dmsdocument/36573-climate-change-response-act-2002-forestry-sector-operational-improvements-part-2-ris](http://www.teururakau.govt.nz/dmsdocument/36573-climate-change-response-act-2002-forestry-sector-operational-improvements-part-2-ris)

We propose to create a table in the Regulations which looks like:

Grant Funding Programme	Stand-down Period	Forests included
One Billion Trees Grant Funding	6 years from date of establishment	Radiata pine forest type

If other funds are created which include stand-down periods, the list will be extended.

### Making the registration date clear

If a radiata pine forest is planted in 2019 under the 1BT scheme, the forest can't be registered in the Emissions Trading Scheme until at least 1 July 2025. The forest would therefore have to be registered after the stand down period as either:

- a permanent post-1989 forest using stock change accounting; or
- a post-1989 forest using averaging accounting.

A second table will detail the planting year and the first year which the forest can be registered in the ETS, for example:

Grant Funding Programme	Planting year	First date of registration
One Billion Trees Grant funded pine	2019	1 July 2025
	2020	1 July 2026

### Preventing NZUs being claimed within a Mandatory Emissions Return Period (MERP)

If a participant owns a forest established under a grant fund which has an ETS stand-down period, and they register in the ETS, they would normally claim for NZUs earned by the forest, back to the start of a MERP – even if that MERP includes years the participant was still in the stand-down period.

To allow participants to claim some NZUs in a MERP, but not those in the stand-down period, another rule will be introduced. A participant will need to calculate how many NZUs they are entitled to. There are two feasible options for integrating this calculation into existing accounting:

1. **Forest age option:** start crediting the forest with NZUs at the end of the stand-down period; or
2. **Deducting option:** deducting the change in the carbon stock during the stand-down period.

Whichever approach is used, it will apply to all grant funded forests listed in Regulations as having a stand-down period, whether they are registered as post-1989 forests using averaging accounting, or as permanent post-1989 forests using stock change accounting.

#### 1. Forest Age option

In this approach a participant would treat the grant funded forest which is subject to the stand-down period as a sub-area within the Carbon Accounting Area (CAA). However, rather than starting to calculate the carbon stock change from the start of the MERP (or when the forest was established) the carbon stock would be calculated from the end of the stand-down period (e.g. age six):

- Calculate the carbon stock change for all forest in the carbon accounting area which is not grant funded (using the usual approach).
- Calculate the carbon stock change in the Grant Funded Forest during the stand-down period, by setting the forest age to the end of the stand-down period. The result will be zero carbon stock change.
- Add the carbon stock change in the first two steps together for the CAA to determine NZU entitlement.

#### 2. Deducting option

In this approach a participant would calculate the carbon stock change of the Grant Funded forest from the start of the MERP. They then will deduct the stock change which occurred during the years the forest was still under the stand-down period:

- Calculate the stock change for all forest in their carbon accounting area.
- Calculate the stock change in the grant funded forest during between the start of the emissions return and the end of the stand-down period.
- Deduct the stock change during the Grant Funded Forest stand-down period from the total stock change.
- Use this to determine the NZU entitlement for the CAA.

**Pros and cons of options**

Option	Pros	Cons
<b>Option 1:</b> Forest age option	Aligns with the proposed approach to averaging accounting reporting, keeping the calculations of their entitlements simple when submitting their returns.	The use of different 'start' ages may create confusion.
<b>Option 2:</b> Deducting option	Clearly shows the impact of the Grant Funded Forest stand-down period on crediting.	Requires two sets of carbon stock change calculations. Requires a unique approach to be developed for these emissions returns. Adds complexity to voluntary returns and other reconciliation returns (e.g. when land is sold).

**Consultation questions**

35. Which option for calculating NZU entitlement for a grant funded forest do you prefer? Why?

## Regulatory Impact Assessment

### Options to calculate how many NZUs should not be claimed during a MERP

How we calculate the number of NZUs which should not be claimed during a MERP has little impact on:

- the incentive to store carbon in forests; or
- allocation of obligations and entitlements to support alignment with climate change targets.

	Forest Age Approach (start crediting the forest with NZUs at the end of the stand down period)	Deducting Approach (deducting the change in the carbon stock during the stand down period)
<b>Primary Criteria</b>		
Administrative efficiency and effectiveness for regulators.	- Complex for the regulator to audit.	- Complex for the regulator to audit.
Improves ease of compliance for participant.	+ Relatively easier methodology for participants.	- Methodology is somewhat more complex.
<b>Secondary Criteria</b>		
Provides durable regulatory certainty and predictability.	+ Makes it clear that NZUS can't be claimed during a stand-down period.	+ Makes it clear that NZUS can't be claimed during a stand-down period.
Avoids unintended consequences.	+ Would ensure that forest owners are not rewarded twice for establishing forests.	+ Would ensure that forest owners are not rewarded twice for establishing forests.
Consistent with wider climate change and wellbeing priorities.	+ Provides an equitable way of operating two afforestation incentives on a common area.	+ Provides an equitable way of operating two afforestation incentives on a common area.

# PART C:

## Managing your forest in the ETS

## Carbon equivalent forest land swaps: being able to relocate your post-1989 forest by planting elsewhere, so long as the new forest stores the same amount of carbon

### Carbon equivalent forest swaps are being introduced to help you manage your forest

The Amendment Bill introduces carbon equivalent forest land swaps. Regulations are needed to implement these forest swaps.

See new sections of the Amendment Bill: 194GA to 194KE

### Summary of proposed changes to the Regulations

This proposal specifies how carbon equivalent forest land swaps will work for post-1989 forests which use averaging accounting.

You can have your say on our preferred option for carbon equivalent forest land swaps including:

- what land you can use as new forest;
- the criteria your proposed new forest must meet;
- information you'll need to provide;
- how we'll calculate carbon equivalence; and
- how your new swap forest will be treated.

### Background

Carbon equivalent forest land swaps (forest swaps) are being introduced for post-1989 forests using averaging accounting. A forest swap is similar to "offsetting" for pre-1990 forests.

Forest swaps allow you to establish a forest (a new forest) to offset the carbon liabilities of another forest that you intend to deforest (an old forest). This means an area of post-1989 forest under averaging accounting could be deforested without needing to pay back NZUs, provided a forest of at least the same area, and expected to reach an equivalent carbon stock, is planted elsewhere. Forest swaps allow for forests in less suitable locations to be re-established elsewhere, which allows more flexible land use.

This section covers the regulatory proposals in more detail.

### Stakeholder feedback

Allowing post-1989 forests under averaging accounting to use forest swaps (referred to as offsetting during that Discussion Document)<sup>25</sup> was very well supported in the August 2018 consultation:

- 82% of submitters supported the proposal; and
- 18% were opposed or unsure, and almost all considered that forest swaps should be provided for all post-1989 forests, not just for post-1989 forests under averaging accounting.

### We need to create Regulations to implement forest swaps

To implement forest swaps in line with Government decisions, new Regulations are needed to define:

- when you can apply to establish a new forest via a forest swap;
- how we will calculate carbon "equivalence"; and
- how your swap forest will be treated under averaging accounting.

<sup>25</sup> The name has been changed in the Amendment Bill due to some key differences. Please refer to the Bill for the full process and to see how this differs from pre-1990 offsetting.

### How forest swaps will work

We're proposing a common underpinning principle to the approach we use for pre-1990 forest offsetting, with the aim of creating a carbon equivalent forest of:

- at least the same area; and
- at a new location.

The process for a forest swap is laid out in the Amendment Bill. It covers:

- when you can apply to establish a new forest via a forest swap;
- any other criteria your proposed swap forest must meet;
- information you will need to provide;
- the broad settings on how we will calculate carbon "equivalence"; and
- how your new swap forest will be treated.

### A. When you can apply to establish a new forest via a forest swap

A participant can apply to swap an area of post-1989 forest subject to averaging accounting provided it meets the following conditions:

- the forest in the Carbon Accounting Area (CAA) is planted (not naturally regenerated);
- the forest is either an averaging accounting forest that has reached the average age based on the default rotation band, or a subsequent rotation forest (or a mix); and
- the participant has submitted an emissions return to update the unit balance of the land.

Once an application is approved, the current CAA will be deregistered. The forest will no longer be in the ETS, so it can be deforested without surrendering NZUs, and there will be no further reporting requirements for the forest land.

We will create a new CAA which you will establish the new forest in. This land must be either:

- bare land which would qualify as a first rotation post-1989 forest. A forest must then be established no more than four years after the date of the application (if the original forest has not been cleared) or four years after clearing of the original forest began.
- first rotation post-1989 forest planted in the previous two years. The new forest may already exist at the time an application is made, provided it has been planted within two years of the date of application. Using existing forest lowers the risk of planting failure, which could mean the new forest is not established within four years.
- "excess" land from a previous forest swap application, which can be used if a participant is making the application within the timeframe in the Regulations.

Four years after the application (or when clearance happened) participants will have their land classified into one of three land types:

- **Remainder land**, which is the forest land needed to meet the criteria of equal area and carbon stock. This land will have the unit balance of the original CAA.
- **Excess forest land** which is forest land beyond what is needed to meet equal area and carbon stock criteria. If the participant chooses, this land will remain registered in the ETS and have a unit balance of zero.
- **Non-forest land**, area in the CAA which does not meet the definition of forest (e.g. due to not meeting 30% crown cover or area requirements) not have forest on it.

If participants do not have sufficient remainder land (either to meet the area or carbon stock requirement) they will need to surrender NZUs for the difference. If land is subject to an adverse event during the four year period, the area or carbon stock participants need to reach will be reduced so as not to penalise the participant.

### A1. Regulations needed to define what land is eligible to use for a forest swap

We need to create Regulations defining the timeframe for when participants can use 'excess land' from a previous forest swap in another application. We propose this timeframe to be:

- two years after the "release date" of the previous forest swap.<sup>26</sup>

Proposal	Pros	Cons
Participants can use excess land from a previous forest swap in another application up to two years after the release date of the previous forest swap.  (Preferred option)	Provides enough flexibility to allow participants to submit their notice of compliance <sup>27</sup> at the end of their current application period and submit a new application.  Aligns with rule of allowing forest planted in the previous two years to be part of the 'new forest' for an application.	Some ETS participants may prefer a longer timeframe to provide more flexibility.

### A2. Regulations will prescribe how participants need to provide us information

Regulations will prescribe the manner and form of the information we need. We propose to require the necessary information to allow us to make sure an ETS participant's application meets the requirements for carbon equivalence.

A participant must provide us with information in order to make sure the forest is carbon equivalent:

- geospatial information about the area of forest they intend to deforest, as well as the area and forest type of their proposed swap forest; and
- evidence that the area of proposed offsetting forest will qualify as post-1989 forest.

If the new forest exists when an application is made, evidence of the planting year and month will be needed.

We may also request other information we consider necessary to determine whether a new forest will be a carbon equivalent forest, including:

- the stocking rate of the forest the participant intends to clear;
- the planted, and intended final, stocking of the participant's new forest; and
- the silvicultural management plan for the proposed new forest.

We want to know whether there are any other things you think applicants will need to provide.

### A3. Regulations can prescribe criteria a proposed new forest must meet

The Amendment Bill also creates a power to prescribe new criteria which the new forest must meet, above what the Amendment Bill already requires. Currently, we do not propose any further criteria need to be prescribed. However, we would review this periodically, and want your views about whether any criteria may be needed.



#### Consultation questions

36. Do you agree with our proposed option to allow excess land from an old forest swap application to be used for a new application within two years of the old application finishing? Why or why not?

37. Are there any additional criteria we should prescribe for the new forest? If so, what are they?

38. Is there additional information we should request from applicants? If so, why?

<sup>26</sup> The release date is when the EPA issues a notice stating the forest swap has been completed and identifies any excess land.

<sup>27</sup> See section 194JB of the Amendment Bill for details of the notice of compliance with release criteria.

## B. How we will calculate carbon “equivalence”

The default carbon look-up tables in the Regulations will be used to calculate the carbon stock of the averaging accounting forest being deforested.

### Regulations needed so we can calculate carbon equivalence

We propose to create Regulations that calculate carbon equivalence between the new and old forests based on:

- default post-1989 forest carbon lookup tables; and
- using the average age of the old forest at the time clearing begins; and
- the default average age of the new forest, based on its forest type.

These will apply regardless of whether the old forest is using an FMA table. Note that the full unit balance of the old forest, including NZUs earned under FMA, will be transferred to the new land.

The forest type of the swap forest may be different to that of the old forest being deforested. The swap forest area will be adjusted accordingly, to make sure the total carbon stocks of the old forest are at least equal to the carbon stocks in the deforested area.

A final check will then be done to make sure the area of the new forest is at least equal to the area to be deforested. Any adjustments will be made to the area of new forest, if required, and the application will then be approved.

Proposal	Pros	Cons
Equivalence based on: <ul style="list-style-type: none"> <li>• default post-1989 forest carbon lookup tables; and</li> <li>• using the average age of the old forest at the time clearing begins; and</li> <li>• the default average age of the new forest, based on its forest type.</li> </ul> A final check to ensure areas of old and new forest are at least equal. [Preferred option]	Allows equivalence to be compared across FMA participants and forest ages, and forest types.  Ensures we are comparing “like with like” in regards to carbon storage.	Does not take into account carbon storage differences between default tables and FMA participant specific tables when calculating equivalence.



### Consultation questions

39. Do you agree with using default tables to calculate carbon equivalence between the old and new forests? Why or why not?

## C. How a new swap forest will be treated under averaging accounting

The Amendment Bill sets out how new forest will be treated under averaging (see the Amendment Bill for more details):

### The new forest

- Once a participant's new forest is established and approved, it will be registered in the ETS as a substitute for the old forest, and treated as if it is the old forests' subsequent rotation. The person who owns the land the new forest will be planted on will become the ETS participant (if they aren't already). Participation will be from when the new forest is registered in the ETS.
- The new forest will then be treated as a second or subsequent rotation forest, which was harvested at the default average age. It will have the same obligations and entitlements as any subsequent rotation forest under averaging accounting – if the new forest is deforested, the entire unit balance, including the balance transferred from the old forest, will have to be surrendered.

### The old forest

- The NZU balance associated with the old forest that was deforested will be calculated at the date clearing began. This balance will become the opening NZU balance for the offsetting forest.

### Excess land

- Excess land will be treated as first rotation forest with an establishment date reflecting when it was planted.

### Regulations needed to define how a new forest will be treated

The Amendment Bill sets out how a new forest is treated, but the Regulations will need to define the way to calculate the carbon stored. We propose that the new forest will be treated as a second rotation post-1989 forest which always has to use default tables, regardless of the participant's size.

Treating forests in this way will create additional complexity, as the new forest has to be specially tracked through time and will use different tables to other forests if the participant uses the FMA.

However, it prevents participants having the option to surrender NZUs for early harvest of the new forest on default tables, but being able to earn NZUs for extending the rotation length of the new forest on the FMA tables.



### Consultation questions

40. Do you agree with our approach to treating new forest as perpetually on the default tables once a forest swap has been completed? Why or why not?

## Regulatory Impact Assessment

### How long to allow excess land from a previous application be used for a new forest swap application

How long excess land is allowed to be used in a new forest swap application has little impact on the incentive to store carbon in forests.

Two years after release date	
<b>Primary Criteria</b>	
Administrative efficiency and effectiveness for regulators.	+ Two-year timeframe gives a clear date to use to assess whether land can be used, which lines up with similar timeframes for forest swap land eligibility.
Improves ease of compliance for participant.	++ Allows the participants to re-use excess land for further forest swaps with time to complete any compliance activity necessary for the land in the meantime.
<b>Secondary Criteria</b>	
Allocates obligations and entitlements to support alignment with climate change targets.	0 No impact.
Provides durable regulatory certainty and predictability.	+ Clear timeframe which aligns with other two year tests for land eligibility for forest swaps.
Avoids unintended consequences.	0 No unintended consequences identified.
Consistent with wider climate change and wellbeing priorities.	0 Has little effect on wider climate change or wellbeing priorities.

### How to calculate carbon equivalence

Default tables, using average age of old forest and default average age of new forest	
<b>Primary Criteria</b>	
Increases incentives to store carbon in forests.	0 Ensures that carbon is retained in forests based on 'normal' rotation lengths and behaviours.
Administrative efficiency and effectiveness for regulators.	++ Using default tables and default average ages ensures simple calculation of like-for-like across forest ages, regions and types.
Improves ease of compliance for participant.	+ Simple for participants to calculate carbon equivalence.
<b>Secondary Criteria</b>	
Allocates obligations and entitlements to support alignment with climate change targets.	0 Forests using the FMA will likely have to plant a forest with less carbon in it, based on a default table (as the FMA usually finds greater amounts of carbon than defaults). However the unit balance of the previous forest will be transferred, ensuring any excess NZUs from the FMA will still be surrendered if the new forest is later deforested.

Default tables, using average age of old forest and default average age of new forest	
<b>Primary Criteria</b>	
Provides durable regulatory certainty and predictability.	+ Clear and durable approach, which will align to any changes in default tables.
Avoids unintended consequences.	0 No unintended consequences identified.
Consistent with wider climate change and wellbeing priorities.	0 Has little effect on wider climate change or wellbeing priorities.

### How to define a new forest will be treated

New forest will always use default tables	
<b>Primary Criteria</b>	
Increases incentives to store carbon in forests.	- Participants won't be encouraged to store as much carbon in a forest as possible compared to if they were on FMA tables.
Administrative efficiency and effectiveness for regulators.	-- Complex and requires new forest to be tracked and accounted for separately to other land in perpetuity.
Improves ease of compliance for participant.	-- Complex and requires new forest to be tracked and accounted for separately to other land in perpetuity.
<b>Secondary Criteria</b>	
Allocates obligations and entitlements to support alignment with climate change targets.	+ Prevents participants gaming forestry in the ETS and minimising their surrenders and maximising their gains through using different tables.
Provides durable regulatory certainty and predictability.	+ This will be a clear and durable approach.
Avoids unintended consequences.	+ Prevents participants gaming forestry in the ETS and minimising their surrenders and maximising their gains through using different tables.
Consistent with wider climate change and wellbeing priorities.	0 Has little effect on wider climate change and wellbeing priorities.

## Temporary adverse events: an exemption from surrendering NZUs if a participant's forest is affected by a temporary adverse event

### An exemption from surrendering NZUs for temporary adverse events is being introduced

The Amendment Bill will create a new ability for forests to be exempt from surrendering NZUs for temporary adverse events. New Regulations are needed to provide details for the exemption.

See new sections of the Amendment Bill: 194MA to 194TA

### Summary of proposed changes to the Regulations

These proposals outline what a temporary adverse event is and the process for claiming an exemption.

You can have your say on:

- A: the types of adverse events that should qualify for an exemption;
- B: the minimum area affected before an event qualifies for an exemption;
- C: the minimum amount of carbon stock lost before an event qualifies for an exemption;
- D: how to notify us; and
- E: carbon stock calculations once an adverse event has been separated into a CAA.

### Background

Forests face a risk of damage from adverse events, such as fire or wind throw. If a participant's forest is registered in the ETS, when the trees are cleared<sup>28</sup> they will usually have to surrender NZUs to the Crown, and this can be expensive.

To help with the costs of temporary adverse events, the Government is introducing an optional exemption from surrender liabilities if a participant's forest is registered under averaging accounting, or in the permanent post-1989 forest activity<sup>29</sup>. If they use the exemption, they won't have to account for the carbon loss from an adverse event when:

- the type of event is listed in Regulations;
- the event results in a hectare ceasing to have forest species on that have, or are likely to have, tree crown cover of more than 30%;
- the area exceeds a minimum threshold defined in Regulations;
- the extent of the carbon stock lost is equal to or greater than a minimum prescribed the Regulations;
- the affected area is reforested within four years after the event.<sup>30</sup>

For permanent post-1989 forests, and first rotation forest using averaging accounting, we will manage the adverse event by temporarily suspending carbon stock accounting for the affected area.<sup>31</sup> Entitlements will start again when the carbon stocks in the re-established forest equal the carbon stocks before the event.

Forests using averaging accounting in second or subsequent rotations will qualify for the adverse events exemption, provided the area is re-established as forest and managed in the same way as the forest before the event.<sup>32</sup>

If a natural event is so severe that it permanently prevents a participant re-establishing forest on their land, then the affected area will be removed from the ETS, without them having to surrender NZUs (under section 188A of the Climate Change Response Act 2002).

<sup>28</sup> Defined in the Amendment Bill in relation to a tree as including: (i) felling, harvesting, burning, removing by mechanical means, spraying with herbicide intended to kill the tree, or undertaking any other form of human activity that kills the tree; and (ii) felling, burning, killing, uprooting, or destroying by a natural cause or event; and not including pruning or thinning.

<sup>29</sup> This exemption process is entirely distinct from the existing exemption process under section 60 of the Act.

<sup>30</sup> Meets subsection (a) of the forest land definition.

<sup>31</sup> Clearing due to an adverse event will not be counted as clearing in a rotation band earlier than the default rotation band.

<sup>32</sup> Second or subsequent rotation forests subject to averaging accounting that delay harvesting until a rotation band other than the default rotation band, will also benefit from the rules for adverse events during the delayed harvest period. Forest re-established after an adverse event will be treated as a first rotation forest for the purposes of carbon accounting, until it is cleared. This allows for relief from the effects of adverse events if the re-established forest is subject to yet another adverse event before it is cleared.

### Stakeholder feedback on an exemption for adverse events

In the August 2018 consultation, 70 of 87 submitters supported an exemption from emissions liabilities caused by adverse events for post-1989 forests subject to averaging accounting or permanent post-1989 forest. They supported the option because of its simplicity and mitigation of risk, and considered it would increase afforestation and ETS participation.

Out of 71 submitters, forty-four also thought this cover would reduce insurance premiums, and many thought that it will help de-risk ETS participation.

### How it will work

The process of creating an exemption for the emissions liabilities from adverse events will be shared between the Act and the Regulations. The Amendment Bill:

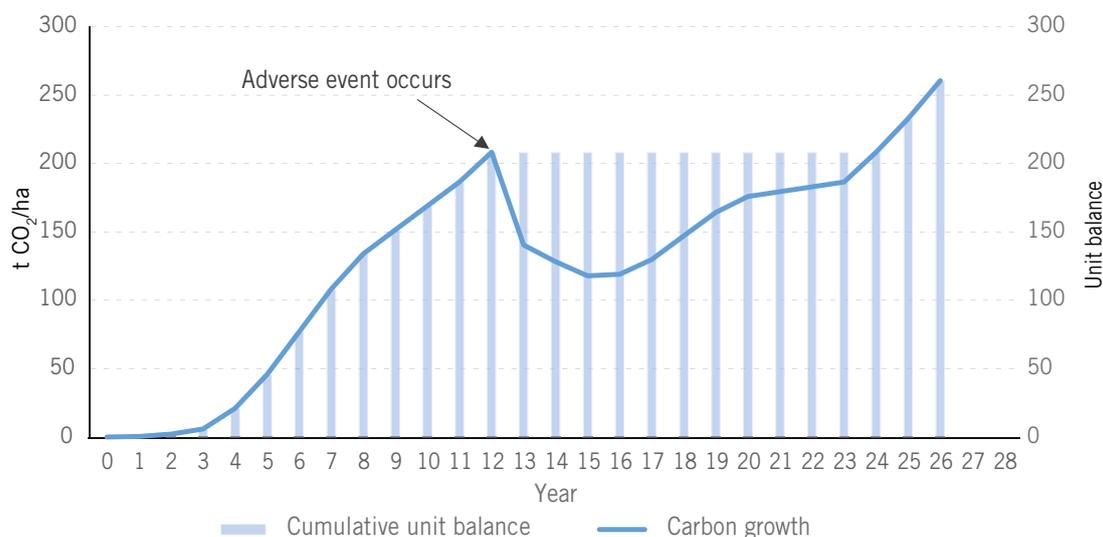
- provides the application process to get the emissions liability exemption;
- describes the conditions under which we must approve the exemption, and when the exemption stops; and
- requires that once the area has been approved for adverse event cover, a participant has to put it in a separate carbon accounting area (CAA)<sup>33</sup> until the area is entitled to earn NZUs again.<sup>34</sup>

Once these steps are complete, carbon gains and losses in the new CAA will not need to be calculated. There will be no changes in the NZU balance until the carbon stock has recovered to the value of the time of the adverse event. It will then start earning again as it did before the event.

The CAA will still need to be included in Mandatory Emissions Returns, but we propose participants only need to use simplified reporting [page 32 – refer to simplified reporting section].

Figure 11 shows a forest which suffers an adverse event. No surrender is needed when the adverse event occurs. Instead, the NZU entitlement of the land is frozen, until the age of the replanted trees reaches the same age as the trees cleared by the adverse event. The forest then continues earning as a first rotation forest.

Figure 11: Diagram representing a forest affected by an adverse event



### Changes to the Regulations are needed to implement the temporary adverse event exemption

Policy decisions require some aspects of the temporary adverse event exemption to be defined in the Regulations. We will create Regulations to define:

- A: the types of temporary adverse events which will qualify for an exemption;
- B: the minimum area affected before an event qualifies for an exemption;
- C: the minimum amount of carbon stock lost before an event qualifies for an exemption;
- D: how to notify us, including:
  - when the application needs to occur,
  - the form and format of information required to support the application; and
- E: carbon stock calculations once an adverse event has been separated into a CAA.

<sup>33</sup> Or multiple Carbon Accounting Areas (CAAs).

<sup>34</sup> There is also a simpler CAA reconfiguration process being introduced in the Amendment Bill, which will be used to isolate CAAs for these events.

## A: The types of temporary adverse events which will qualify for an exemption

The types of adverse events that qualify for an exemption will be defined in Regulations. This definition will include common natural events which are outside of a participant's control, for example fires, wind-throw, untreatable disease, and natural disasters.

The definition will also include the forest management needed to manage an adverse event (e.g. felling trees to create a firebreak).

We can define events using either:

- an exhaustive list; or
- a general catch-all.

### Pros and cons of options

Options	Pros	Cons
<p><b>Option 1:</b> Exhaustive list Define an adverse event based on list of possible events:</p> <ul style="list-style-type: none"> <li>• wind;</li> <li>• flood;</li> <li>• fire (other than a controlled burn);</li> <li>• pest attack;</li> <li>• disease;</li> <li>• natural disaster; and</li> <li>• any forest clearing undertaken as a result of best practice forest management following the event.</li> </ul> <p>(Preferred option)</p>	<p>A list provides certainty.</p> <p>A list is simple for a participant and for Te Uru Rākau to administer.</p>	<p>Lacks a catch-all to include unforeseen events which may occur and fall outside the definition.</p> <p>A declaration process may help participants but will not provide certainty over a wider range of events.</p>
<p><b>Option 2:</b> General definition Define adverse event broadly using the ordinary ecological meaning of "natural disturbance":</p> <ul style="list-style-type: none"> <li>• fire (other than a controlled burn); and</li> <li>• any natural disturbance (including but not limited to fire, wind, insect infestation, fungal disease); and</li> <li>• any forest clearing done as a result of best practice forest management following the event.</li> </ul>	<p>Provides a wide definition of adverse events so is more likely to include unforeseen events.</p> <p>Provides flexibility for participants.</p>	<p>Has wide scope for interpretation so may not provide certainty for participants, however, certainty will increase over time as more decisions are made on what is and is not an adverse event.</p> <p>May take significant time and resources to make early decisions on what counts as an adverse event (this is likely to decrease over time as precedent is built up).</p>



### Consultation questions

41. Do you support our preferred option (the exhaustive list)? Why or why not?
42. What adverse events would you add to the exhaustive list?
43. What harvesting will usually occur during the response to, and following, an adverse event?

**B: The minimum area affected before an event qualifies for an exemption**

A minimum area must be affected by an adverse event before the event will qualify for an exemption. This area will be defined in Regulations.

The Amendment Bill requires the land affected by an adverse event will need to be put into a separate CAA, so the minimum area of land affected needs to be at least one contiguous hectare. The minimum size will also help to control administrative burden for participants and Te Uru Rākau.

Any events smaller than the minimum area would not qualify for the emissions liability exemption, and any clearing of trees may need to be considered as part of an emissions return.

The minimum size could be either:

- 1 contiguous hectare of cleared forest; or
- 5 contiguous hectares of cleared forest.

**Pros and cons of options**

Options	Pros	Cons
<b>Option 1:</b> 1 contiguous hectare of cleared forest. <b>(Preferred option)</b>	Minimises risk of large administration costs from having to deal with many small events that would not necessarily require surrenders.	Excludes adverse events that remove small patches of trees across large areas.
<b>Option 2:</b> 5 contiguous hectares of cleared forest.	Will minimise complexity of determining edges of smaller areas of cleared areas	Excludes all but the larger temporary adverse events from receiving cover.

**Consultation questions**

44. Do you agree with our preferred option of a minimum threshold of one hectare? Why or why not?
45. Approximately how many adverse events that clear over one hectare have you experienced over the last 10 years?
46. Approximately how many adverse events clearing over five hectares have you experienced over the last 10 years?

**C: The minimum amount of carbon stock lost before an event qualifies for an exemption**

Under the Amendment Bill, an event must cause a minimum amount of carbon stock loss before it qualifies for an exemption.

We propose this should be 1t CO<sub>2</sub>-eqv which is equivalent to 1 NZU.

Because there is a minimum area requirement of at least 1 hectare, due to the land affected by the event having to be separated into its own CAA, we do not propose to put further restrictions on what qualifies as an event due to carbon loss.

Applying for an exemption due to a temporary adverse event is optional, and we think participants are the best placed to determine whether or not it is worth applying for an exemption due to the amount of carbon stock lost.

**Consultation questions**

47. Do you agree with our proposal to have a minimum carbon stock loss of 1t CO<sub>2</sub>-eqv, which is equivalent to 1 NZU? Why or why not?

## D: How to notify us

If participants want to access the temporary adverse event provisions, we propose they will have to notify us of an adverse event by providing:

- evidence of the event type;
- the start date of the event (or date of discovery, if date of event unknown); and
- description of the event with required geospatial information.<sup>35</sup>

This would allow us to verify an event has occurred and that the area claimed was cleared by the adverse event.

We propose to allow salvage or harvest as part of best practice forest management to be included in the adverse event cover (e.g. harvesting an entire slope for health and safety reasons if a smaller area was affected by an event). For permanent post-1989 forests, we don't propose to class any harvesting as best practice forest management, except for Health and Safety.

The notification process needs to balance being strict enough to prevent forests which were not cleared by an adverse event receiving an exemption, while being flexible enough to make sure participants can respond to events quickly under difficult circumstances, and keep compliance costs low.

### What happens if participants don't notify us of an event?

If participants don't notify us as required, they won't be able to apply for adverse events cover for that area of land. The land would then be accounted for as if it was cleared – if the participant was using averaging accounting, they will be assigned a lower rotation band for that area (see Figure 11).

If participants have permanent post-1989 forest, and don't notify us, the land will be treated as cleared, and they will have to surrender NZUs for the clearing. However, participants won't be liable for the clear-fell penalty for the area affected by an adverse event, whether they notify us or not (see page 73 for details of clear-fell penalty).

If the event was large enough, and their circumstances qualified, they may be able to be granted an exemption under section 60A of the Act.<sup>36</sup>

### Options for notifying us

We propose two options for when to notify us:

#### Option 1:

Before any harvest which is not best practice forest management, or the next emissions return for the CAA, whichever is sooner, participant must notify us with evidence of :

- event type;
- start date of the event (or date of discovery, if date of event unknown); and
- description of the event with required geospatial information.

#### Option 2:

Before any harvest which is not best practice forest management, a participant must notify us of a temporary adverse event with evidence of:

- event type;
- start date of the event (or date of discovery, if date of event unknown);
- description of the event, without geospatial information.

Before the next emissions return for the affected CAA, a participant will need to give us the required geospatial information.

<sup>35</sup> Existing rules in the Geospatial Mapping Information Standard for identifying forest gaps will apply, with additional allowance for edge-affected but still-standing trees.

<sup>36</sup> This has been extended to post-1989 forests – see section 60A inserted by the Amendment Bill.

## Pros and cons of options

Options	Pros	Cons
<p><b>Option 1:</b> Before any harvest which is not best practice forest management, or the next emissions return for the CAA, whichever is sooner, participant must notify us with evidence of :</p> <ul style="list-style-type: none"> <li>• event type;</li> <li>• start date of the event (or date of discovery, if date of event unknown); and</li> <li>• description of the event with required geospatial information.</li> </ul> <p>If the area was harvested outside of best practice forest management before notification, we would not grant an exemption for the adverse event.</p>	<p>Low risk of ineligible forest being granted an exemption from adverse events liabilities.</p> <p>Splits administrative work between mapping the affected area, and reconfiguring the forest into new CAAs.</p> <p>Participants will be certain of land status before doing their next emissions return.</p>	<p>Can be resource intensive for participants to cover large areas (although multiple applications for different parts would be acceptable), and resources may not be available so soon after an event.</p> <p>Reduces flexibility for participants in applying for an exemption from adverse events emissions liabilities.</p> <p>Strict approach likely to lead to some land missing an exemption because processes weren't properly followed.</p>
<p><b>Option 2:</b> Before any harvest which is not best practice forest management, a participant must notify us of a temporary adverse event with evidence of:</p> <ul style="list-style-type: none"> <li>• event type;</li> <li>• start date of the event (or date of discovery, if date of event unknown);</li> <li>• description of the event, without geospatial information.</li> </ul> <p>Before the next emissions return for the affected CAA, a participant will need to give us the required geospatial information.</p>	<p>Gives greater flexibility to participants.</p> <p>Lower risk of participants missing out on the exemption due to not following process.</p>	<p>High volumes of work may be submitted to us at once, causing delays in granting cover and reconfiguring CAAs.</p> <p>Participants may find, only after harvest, that they can't get imagery or information defining when the event started and when salvage occurred. This risk is reduced the longer the gap between the event and subsequent harvest.</p> <p>It is likely to be harder to satisfy us an area was affected by an event. We may have to collect geospatial information on participants' behalf.</p>



### Consultation questions

48. Which option do you prefer? Why?
49. Are there any other options for notification which we haven't considered here?
50. What areas do you consider need to be harvested following an adverse event for best practice forest management?

**E: Carbon Stock Calculations once an adverse event has been separated into a CAA**

The Regulations will pause entitlements and obligations over land affected by adverse events.

The CAA containing the land affected by the adverse event will be able to use simple reporting (see section on simple reporting page 32), recording zero carbon stock change, until the carbon stock of the land in the CAA equals its carbon stock before the event.

The rules in the Regulations will make sure that correct carbon stock changes are determined, even if pre-event carbon stocks are reached between the opening and closing of a MERP.

Once the CAA reaches the same carbon stock, for carbon accounting and reporting purposes it will be treated the same way as the forest before the event (using the same accounting approach, and if under averaging accounting as a first rotation, treated as first rotation). A participant can then manage their forest like any other forest (including merging the affected CAA back into a larger CAA).

**Consultation questions**

51. Do you support our proposed approach? If not, why not?

## Regulatory Impact Assessments

### How to define an adverse event

How we define an adverse event is unlikely to impact:

- the incentives to store carbon in forests;
- the allocation of obligations and entitlements to support alignment with climate change targets; or
- consistency with wider climate change and wellbeing priorities.

	Exhaustive List	General definition
<b>Primary Criteria</b>		
Administrative efficiency and effectiveness for regulators.	<p>+</p> <p>A list will be efficient for regulators to administer.</p>	<p>-</p> <p>A general definition, particularly when few decisions have been made under it, will be less efficient to administer for the regulator when compared to an exhaustive list.</p>
Improves ease of compliance for participant.	<p>+</p> <p>A list will make it simple for a participant to determine whether their event is covered by temporary adverse events cover.</p>	<p>-</p> <p>A general definition may be complicated for a participant to interpret and determine whether their event is covered by temporary adverse event cover.</p>
<b>Secondary Criteria</b>		
Provides durable regulatory certainty and predictability.	<p>+</p> <p>An exhaustive list will provide certainty to participants, particularly over time as more decisions are made on what is, or is not, captured by the events listed.</p>	<p>0</p> <p>A general definition will provide less certainty and predictability at the outset, but will become more certain and predictable over time as decisions are made under it.</p>
Avoids unintended consequences.	<p>0</p> <p>An exhaustive list will mean some rare events might be excluded from cover when similar events do get cover, or vice versa, where some events similar to ones excluded from the definition are captured.</p>	<p>++</p> <p>By creating a broad category of events, a general definition is unlikely to create situations where some events do or do not get cover when they would be expected to.</p>

## Minimum size threshold

The size threshold we use is unlikely to impact:

- the incentives to store carbon in forests;
- the allocation of obligations and entitlements to support alignment with climate change targets

	1 Hectare	5 Hectares
<b>Primary Criteria</b>		
Administrative efficiency and effectiveness for regulators.	+ Provides a minimum threshold which works with operational approaches.	+ Provides a minimum threshold which works with operational approaches.
Improves ease of compliance for participant.	+ Provides a clear threshold for the participant and allows them to account for the event simply once they have adverse event cover.	+ Provides a clear threshold for the participant and allows them to account for the event simply once they have adverse event cover.
<b>Secondary Criteria</b>		
Provides durable regulatory certainty and predictability.	+ Minimum threshold at 1 ha provides a durable approach to accounting for a temporary adverse event once it has occurred and is a clear threshold for participants to tell whether an event will qualify for adverse event cover.	+ Minimum threshold at 5 ha provides a durable approach to accounting for a temporary adverse event once it has occurred and is a clear threshold for participants to tell whether an event will qualify for adverse event cover.
Avoids unintended consequences.	0 Adverse events which occur that are smaller than the threshold may need to be accounted for in some circumstances.	- Only very large adverse events will be captured by the threshold, meaning smaller areas of clearing will have to be accounted for under normal rules.
Consistent with wider climate change and wellbeing priorities.	0 Adverse events below the threshold may need to be accounted for in some circumstances, but the impact of these on the participant is unlikely to be large compared to larger events.	- Only very large adverse events will be captured by the threshold, so participants will need to pay surrender liabilities for clearing which we don't need to account for internationally.

## Notification process

The notification process we use is unlikely to impact:

- The incentives to store carbon in forests;
- The allocation of obligations and entitlements to support alignment with climate change targets; or
- consistency with wider climate change and wellbeing priorities.

	Complete notification with immediate mapping	Split notification with delayed mapping
<b>Primary Criteria</b>		
Administrative efficiency and effectiveness for regulators.	<p>+</p> <p>Having mapping at time of notification will spread workload for TUR across a MERP and mean that all the processing for a temporary adverse event can occur at once.</p>	<p>-</p> <p>Allowing delayed provision of mapping material will likely create more workload for TUR towards the end of a MERP when participants will submit their information prior to a MER.</p>
Improves ease of compliance for participant.	<p>-</p> <p>Participants may struggle with collecting mapping information immediately following an adverse event.</p>	<p>+</p> <p>Allows participants to submit mapping information at a later date, when it suits them.</p>
<b>Secondary Criteria</b>		
Provides durable regulatory certainty and predictability.	<p>+</p> <p>Earlier provision of mapping information will make it more certain for participants as to whether an area receives adverse events cover while they manage their forest in the aftermath.</p>	<p>0</p> <p>Split provision of mapping information may mean participants do not receive cover for an area they thought they would when managing their forest in the aftermath. However participants can minimise the risk of this by submitting their mapping information as soon as possible.</p>
Avoids unintended consequences.	<p>0</p> <p>Risks participants missing out on adverse event cover due to being unable to map their area in the aftermath of an adverse event.</p>	<p>+</p> <p>Lower risk of participants missing out on adverse event cover due to being unable to map their area in the aftermath of an adverse event compared to immediate mapping information being required.</p>

## Tree weed (wilding pine) management: exemptions from surrendering NZUs for tree weed management on pre-1990 land

### Tree weed exemptions are moving to Regulations and being improved

The Amendment Bill will move the details of the pre-1990 forest tree weed exemption from the Act to the Regulations, and make some improvements to the exemption.

See new sections as amended by the Amendment Bill: 184, 185 and 185A

### Summary of proposed changes to the Regulations

We propose to move the operational detail of tree weed exemptions from the Act to Regulations to allow better management of tree weeds.

You can have your say on:

- the tree weed exemption application process;
- other criteria or priorities the Environmental Protection Authority must consider in deciding whether to grant an exemption; and
- how long the exemption lasts.

### Background

Tree weeds are forest species that can spread by natural seed dispersal into surrounding areas, such as pasture or tussock land. Limiting the spread of tree weed species, and eliminating the seed source, is important for New Zealand as most tree weed species spread very fast and cause a range of economic and ecological problems.

Tree weed exemptions under the ETS allow participants to deforest tree weeds in pre-1990 forest, without needing to surrender NZUs. This is to make sure tree weed clearance isn't discouraged.

Applications for the tree weed exemptions have to be made before deforestation. This is to make sure that all exemptions are for legitimate tree weeds, and that high-priority applications receive exemptions because there is a limit to the number of NZUs allocated for tree weed exemptions.<sup>37</sup>

### Improvements are being made to the tree weed exemption process

The Government has agreed to make the tree weed exemption process more flexible and move the relevant operational detail from the Act, where it currently is, into the Regulations. The Amendment Bill proposes to:

- remove the need to publish a public notice before tree weed removal;
- enable applications to be submitted at any time;
- allow land that was allocated NZUs under the pre-1990 forest allocation plan to be exempt from the need to pay back NZUs; and
- remove quantitative limits on emissions from tree weed clearance from being a consideration when prioritising applications.

### Stakeholder feedback on improving the tree weed deforestation exemption process

Stakeholders in the August 2018 consultation strongly supported the proposal to improve the tree weed deforestation exemption process for pre-1990 forest. The majority of those who supported the proposal said it would increase flexibility, simplify the exemption process and encourage good land stewardship.

Stakeholders were asked if they'd tried to control tree weeds on their land. The majority hadn't tried to control their tree weeds. The small number who had, stressed that tree weeds were usually among other tree species creating difficulties in removing them. There needed to be an option to clear large areas of weeds while being able to nurture non-tree weed species in their place.

<sup>37</sup> The Government has currently limited the emissions it will cover for the 5-year period from 2018 to 2022 to 1 million NZUs. This is to allow the Government to budget for, and maintain control over, the emissions liabilities. This means there are exemptions available for approximately 1500 hectares of tree weed forest.

## Proposed changes to the Regulations for getting an exemption for tree weed management

The Amendment Bill will allow new Regulations to be made which:

- establish the tree weed exemption application process and information requirements;
- determine how long an exemption lasts for;
- prescribe any other criteria or priorities that the Environmental Protection Authority (EPA) may consider in deciding whether to grant an exemption;
- allow us to prescribe any requirements or conditions for participants if their land is exempted; and
- provide for any other matters necessary for the exemption process to have full effect.

This section outlines the preferred options for:

- A: the tree weed exemption application process;
- B: other criteria or priorities the EPA must consider in deciding whether to grant an exemption; and
- C: how long the exemption lasts.

### A: The tree weed exemption application process

#### How it will work

We propose the exemption application process will require:

- a participant, or an authorised person (e.g. a Council Biosecurity Officer) to apply on the specified form, accompanied by a set fee (if any);
- the form will need to contain:
  - evidence that the land is pre-1990 forest land at the time of application, and that specified types of tree weed are the majority of the canopy cover;
  - details of the area of tree weeds being applied for (as per the current process); and
  - any further information which meets the criteria used to consider exemptions, and any other information we request to make our decision.

Applications will not need to be submitted by a specific date, and the Regulations will balance operational flexibility in the application process and certainty for participants about the requirements.

We can also develop streamlined processes and application forms for specific types of application – for example, multiple properties under the same programme of work, or for certain areas of the country.

#### Pros and cons of preferred option

Preferred Option	Pros	Cons
Require a participant or an authorised person to apply on a specified form with the set fee (if any). This will contain: <ul style="list-style-type: none"> <li>• evidence that the land is pre-1990 forest land; and at the time of application, that specified types of tree weed are the majority of the canopy cover;</li> <li>• details of the area of tree weeds being applied for (as per the current process); and</li> <li>• any further information on the criteria used to consider exemptions, and any other information we request to make our decision.</li> </ul>	Would provide a simple, flexible exemption process.  Make the administration efficient and effective for participants and Te Uru Rākau.	

(Preferred option)



### Consultation questions

52. Do you support our preferred option? If not, why not?

53. Are there any tree weed species, geographical areas, or landowners who should have fast-track application processes? Why?

54. With mixed species forests, what proportion of the trees should be tree weeds before the forest can qualify for an exemption? Why?

## B: Other criteria or priorities we must consider in deciding whether to grant an exemption

Some criteria are proposed to be mandatory for us to consider in granting an exemption. This will allow us to manage the amount of NZUs the Government is issuing under the exemption process, and make sure that exemptions from deforestation liability are only issued where there is a good case to be made for clearing tree weeds.

We propose the regulations will require:

- a tree weed control plan covering the area, if any exists; and
- other factors as relevant on a case-by-case basis.

This trades-off efficiency and low compliance costs for most applications, with a little bit of uncertainty about whether any other information is required. However, this uncertainty could be managed with clear guidance about when other factors will be relevant.

### Pros and cons of preferred option

Preferred Option	Pros	Cons
<p>When deciding on an application, we may consider:</p> <ul style="list-style-type: none"> <li>• whether a tree weed control plan is in place and whether it is sufficient; and</li> <li>• other factors as relevant on a case by case basis.</li> </ul> <p>(Preferred option)</p>	<p>Allows us to assess the plan to control the tree weeds, and the risk the tree weeds pose to the surrounding landscape.</p> <p>Encourages participants to plan their tree weed control before applying for an exemption.</p> <p>The public would be likely to support a more effective programme for removing tree weeds from the landscape.</p> <p>Low compliance costs for most applicants.</p>	<p>As other information may be requested on a case by case basis, participants may not have all the information needed when applying for an exemption.</p>



### Consultation questions

55. Do you support requiring a tree weed control plan as a criteria which we must consider? Why or why not?

56. What further evidence do you think we should consider when deciding to approve a deforestation liability exemption for clearing pre-1990 tree weeds?

### C: How long does the exemption last?

Currently, the Act requires participants to start clearing tree weeds within 2 years of the notification date of the exemption. The Amendment Bill will remove this requirement. We will need to create new timeframes for the exemptions in Regulations.

#### Preferred option

We propose that the exemption will apply to:

- any clearing within the approved area which occurs within 5 years of the approval date of the exemption; and
- we propose to include a right of renewal for a further 5 years, if:
  - a participant notifies us they want to renew the exemption; and
  - they have cleared some of the approved land within the initial 5-year exemption period.

#### Pros and cons of the preferred option

Preferred Option	Pros	Cons
The exemption will apply to: <ul style="list-style-type: none"> <li>• any clearing within the approved area which occurs within 5 years of the approval date of the exemption; and</li> <li>• include a right of renewal for a further 5 years, if:                             <ul style="list-style-type: none"> <li>– a participant notifies us they want to renew the exemption; and</li> <li>– they have cleared some of the approved land within the initial 5 year exemption period.</li> </ul> </li> </ul> (Preferred option)	Participants will have to apply less often compared to the status quo (which is 2 years) for long-term clearing plans on post-1990 forest land, reducing compliance costs.  Offers greater certainty for participants compared to the status quo of a 2 year exemption.  Lower administration costs for us compared to the status quo, where exemptions only last for 2 years.	



#### Consultation questions

57. Do you support extending the time a tree weed exemption lasts to five years, with a five year renewal option? Why or why not?

## Regulatory Impact Assessment

### New tree weed exemption process

Primary Criteria	
Increases incentives to store carbon in forests.	0 The process has little implications for the incentive to store carbon in forests.
Administrative efficiency and effectiveness for regulators.	+ The new process would be simpler and more efficient for the regulator.
Improves ease of compliance for participant.	+ The new process would be easier for applicants to comply with.
Secondary Criteria	
Allocates obligations and entitlements to support alignment with climate change targets.	0 Does not change the total obligation or entitlement compared to the current tree weed exemptions. It improves access to the already appropriate volume.
Provides durable regulatory certainty and predictability.	0 The proposed new regime does not improve regulatory certainty or durability.
Avoids unintended consequences.	0 No unintended consequences identified
Consistent with wider climate change and wellbeing priorities.	+ A new process that would result in this exemption process being managed more easily and efficiently for the regulator and applicants is consistent with wellbeing priorities.

### Requirement to provide tree weed control plan

This has little impact on:

- the incentives to store carbon; or
- the allocation of obligations and entitlements to support alignment with climate change targets.

Provision of a tree weed control plan, and other evidence on a case by case basis	
Primary Criteria	
Administrative efficiency and effectiveness for regulators.	+ This would allow the regulator to assess applicants more effectively and assist in decision-making.
Improves ease of compliance for participant.	- Involves more compliance for applicants.
Secondary Criteria	
Provides durable regulatory certainty and predictability.	+ Provides certainty for participants of what they need to provide
Avoids unintended consequences.	+ If a plan and any other relevant evidence is provided, there is less risk of unintended consequences occurring.
Consistent with wider climate change and wellbeing priorities.	+ Ensures exemptions will be for clearing areas which align with tree weed control objectives.

**Tree weed plans last for 5 years with a renewal option**

This proposal only impacts on administrative efficiency and effectiveness for regulators, and the ease of compliance for participants.

Primary Criteria		Exemption approvals last for 5 years with a renewal option
Administrative efficiency and effectiveness for regulators.	+	Better than the status quo.
Improves ease of compliance for participant.	+	Better than the status quo.

## Best practice forest management: establishing the requirements

### Best practice forest management will be defined in Regulations

The Amendment Bill will enable Regulations defining best-practice forest management. New Regulations are needed to define best practice.

See new sections as amended by the Amendment Bill: s179A

### Summary of proposed changes to the Regulations

This proposal is for how to define best practice forest management in the Regulations.

You can have your say on our preferred option to define New Zealand's best practice forest management in Regulations according to:

- practices in specific publications;
- defined practices from specific publications;
- other practices if agreed to by us.

### Background

Strips of land cleared on the margins of forests, but not replanted, can be removed from the ETS at no cost if the clearing meets various criteria under s 179A of the Act, including being "best-practice forest management".

This allows some flexibility for ETS participants to make small alterations to stand boundaries for practical reasons such as road widening for traffic safety, to accommodate setbacks from waterways, or any other purpose that is best-practice forest management.

#### To remove forest from the ETS without paying for deforestation, the forest must meet the following requirements:

- If the cleared land was post-1989 forest, it must be contiguous with the edge of post-1989 forest land that existed on the date of registration of the cleared land; and
- If the cleared land was pre-1990 forest, it must be contiguous with the edge of pre-1990 forest land which existed on 31 December 2007; and
- Be an area less than 1 hectare or that is less than 30m wide at its widest point; and
- Be required to be or remain cleared to implement New Zealand's best practice forest management; and
- Be used only for the purpose of implement New Zealand's best practice forest management.

Note that section 179A is proposed to be updated by the Amendment Bill, so:

- qualifying pre-1990 forests would not be treated as deforested; and
- post-1989 forests being cleared would have to be separated into their own Carbon Accounting Area (CAA) and deregistered from the ETS, but would not have to surrender NZUs.

### Stakeholder feedback on defining best practice forest management

Because defining best-practice forest management is a technical change, it wasn't included in the August 2018 Discussion paper and stakeholder feedback was not sought. This is your opportunity to provide feedback on our proposal.

#### How it will work

We propose the Regulations will contain a list of publications, which have forestry practices that we will consider best-practice forest management for the exception to deforestation liability. This will make it more certain what clearing will be able to be carried out to remove forest from the ETS without incurring liability for deforestation. Any clearing will still need to meet the other requirements in s 179A to be removed from the ETS.

Our preferred option is to amend Regulations so that New Zealand's best-practice forest management means (but is not limited to) practices listed in specific publications. Participants would still be able to provide evidence that clearing was best-practice forest management, even if the practice wasn't in the list.

For example, we could accept by default any practice which is included in the Approved Code of Practice for Safety and Health in Forestry Operations:

Publication
Approved Code of Practice for Safety and Health in Forestry Operations (published in 2012).

**Pros and cons of preferred option**

Option	Pros	Cons
Define New Zealand’s best-practice forest management in Regulations according to: <ul style="list-style-type: none"> <li>• practices in specified publications;</li> <li>• particular/specific practices from specific publications;</li> <li>• other practices if agreed to by us.</li> </ul> (Preferred option)	Creates more certainty about what types of forest management are considered best practice for the purposes of s179A.  Reduces costs of having to prove a practice is best-practice forest management.  Makes it easier for participants and Te Uru Rākau to apply the exception.	Participants may not realise the other criteria need to be met.



**Consultation questions**

- 58. What publications or practices do you think we should list as ‘best-practice forest management’? Why?
- 59. Where are inconsistencies likely to occur when interpreting ‘best practice forest management’ between various documents or practices?

## Penalties: introducing penalties for clear-felling permanent post-1989 forest registered in the ETS

### Penalties will be introduced for clear-felling permanent post-1989 forests

The Amendment Bill will enable Regulations to set penalties for clear-felling permanent post-1989 forests. New Regulations are needed to deem the value of the clear-felled forests.

See new sections of the Amendment Bill: 194ED-194EG

### Summary of proposed changes to the Regulations

This proposal sets out the options for calculating a deemed value of a clear-felled area of permanent post-1989 forest.

You can have your say on the way the penalty value is calculated, either by:

- **Option 1:** the actual age approach: calculating the carbon stock of the cleared area based on the age of the forest when it was cleared; or
- **Option 2:** the fixed-age approach: calculating the carbon stock of the cleared area based on the forest at 50 (the length of the first permanent forestry period).

### Background

The Amendment Bill makes permanent post-1989 forests in the ETS unable to be clear-felled while they are registered in the permanent post-1989 forest activity.<sup>38</sup> If an ETS participant clear-fells an area, as well as accounting for the carbon stock loss in the next Mandatory Emissions Return, they will face a financial penalty equal to the value of the trees cut down.

The penalties are designed to prevent clear-fell harvesting, be clear, and be simple to apply. No penalties will apply if the clearing was caused by an event defined as a temporary adverse event, regardless of whether a participant claims for temporary adverse event cover.

Participants will also have to re-establish the forest which is cleared. The forest will remain in the as permanent post-1989 forest once it is re-established, until the permanent forestry period runs out. If it is deforested, participants will face additional deforestation liabilities as set out in the Amendment Bill.

### How we define clear-felling a permanent post-1989 forest

Clear-felling is defined in the Amendment Bill as an area:

- of at least 1 hectare; and
- on which any trees are cleared or killed by any form of human activity, including by felling, harvesting, burning, removing by mechanical means, or spraying with a herbicide intended to kill the tree; and
- after that type of clearing or killing, has tree crown cover from forest species of 30% or less in each hectare.

### Stakeholder feedback on the penalty for clear-felling permanent post-1989 forest

Because defining the size of the deemed values for clear-felling permanent post-1989 forest is a technical change, it wasn't included in the August 2018 consultation and stakeholder feedback was not sought at that stage. This is your opportunity to provide feedback on our proposal.

### How it will work

The Amendment Bill proposes the maximum value of the clear-fell penalty to be the deemed value of timber that was clear-felled. This will be done by deeming a value of the timber on a per hectare basis.

The penalty is intended to remove all financial incentive to clear-fell permanent post-1989 forest during the 50-year permanent forestry period. This is particularly important to prevent efficient breaches of the permanence requirements, and stopping a forester from harvesting, selling the wood, paying the harvest liability and other penalties, and still making money.

The Amendment Bill sets the deemed value of the clearing as the maximum penalty, when the EPA applies to the High Court for a pecuniary penalty order against the participant whose land was clear-felled. This maximum may be reduced by the High Court if it finds there was a reasonable excuse for the clear-felling.

<sup>38</sup> A participant would remain as permanent post-1989 forests for 50 years after they first register as a permanent post-1989 forest (or for a further 25 years, should they exercise the option to remain in the activity after a first period). This is described in the Amendment Bill as "permanent forestry period" (new s 194EA).

We propose to calculate the maximum value of a clear-fell penalty using the following formula:

**Deemed value (in \$) =**

- A. deemed value of timber (in \$); x**
- B. area clear-felled (in hectares); x**
- C. carbon stock of forest, modified to remove non-timber carbon (see options around which age we should use to determine the carbon stock of the forest).**

These elements are set out below.

### **A. Deemed value of timber**

Penalties will be calculated from the most recently reported “forest type” for the area which is cleared. If new forest types are introduced, the penalty rates will be updated. Each forest type will have a deemed value for 1 m<sup>3</sup> of logs.

The weighted average of export log prices at wharf gate (AWG) over the last 3 years have been used to calculate the values for all forest types except indigenous forest.<sup>39</sup> We propose a price of \$400/m<sup>3</sup> for indigenous forests due to there being very large variation in indigenous timber prices and limited data.<sup>40</sup> This is greater than other forest types, due to the high value of some native timbers, as it needs to provide a disincentive for clear-felling forests with potentially very high values.

Deemed values are laid out below:

Radiata pine:	\$140/m <sup>3</sup> AWG
Douglas-fir:	\$150/m <sup>3</sup> AWG
Exotic softwoods:	\$135/m <sup>3</sup> AWG
Exotic hardwoods:	\$125/m <sup>3</sup> AWG
Indigenous:	\$400/m <sup>3</sup>

### **B. Area clear-felled**

The area of clearing as calculated by the Mapping Standard.

### **C. Carbon stock of forest, modified to remove non-timber carbon**

One tonne of carbon is very close to one tonne of wood, which is very close to 1 m<sup>3</sup> for most forests. This allows us to take the carbon stock of the cleared area as a close proxy for how many m<sup>3</sup> of logs were removed by clearing.

#### **Accounting for non-timber carbon**

However, non-timber carbon, which is not converted into logs, can form a significant amount of carbon in a forest (e.g. roots, stumps, heads, branches, litter and non-merchantable species). To account for this, we propose to only use three-quarters of the carbon stock in the calculation to calculate the penalty value. To achieve this, we will multiply the carbon stock by 0.75.

For simplicity, we propose to determine an area’s carbon stock based on the default carbon look up tables for the forest type which was cleared.

For example, if a hectare has a carbon stock of 788 T/CO<sub>2</sub>-e, the amount of timber we would assume is removed from the area is: **788 x 0.75 = 591m<sup>3</sup> of timber**

<sup>39</sup> Prices are sourced from MPI export data, using the mean price across all export markets where New Zealand exported more than 500m<sup>3</sup> of timber from a given forest type in a given year. This de minimis threshold represents roughly a hectare of timber, and is used to remove specialty products which are produced in small quantities or for very specific markets. They have been rounded to the nearest \$5.

<sup>40</sup> This variation is due to indigenous timber values having a very large range depending on the species, age, and location of the forest. Conversion rates of logs to lumber also vary.

### Deciding what age to use when calculating carbon stock

Further, to determine the carbon stock of an area, we also need to decide what age we use when calculating the carbon stock of the cleared area.

We are consulting on two options:

- **Option 1:** the actual age approach: calculating the carbon stock of the cleared area based on the age of the forest when it was cleared; or
- **Option 2:** the fixed-age approach: calculation the carbon stock of the cleared area based on the forest at 50 (the length of the first permanent forestry period).

### Pros and cons of options

Option	Pros	Cons
<p><b>Option 1:</b> The carbon stock at the age of the forest when it was cleared. This would be calculated using the default lookup tables.</p>	<p>Clear what the maximum penalty is, if a participant knows the carbon stock of the area being removed.</p> <p>Efficient to calculate for each forest type.</p> <p>Provides large disincentive against clear-fell harvesting at higher ages.</p> <p>Sets penalty for forest types where there is no clear market price.</p> <p>Takes into account size/age of trees which were harvested.</p>	<p>Approximate calculation only, may over or under penalise some participants.</p>
<p><b>Option 2:</b> The carbon stock when the forest has reached 50 years of age. This would be based on the default lookup tables. Using the carbon stock of each forest type when the tree age is 50, and the modifier to account for non-timber carbon, the following values would be used per hectare (rounded to nearest \$5000)</p> <p>Radiata pine: \$130,000/ha            Douglas Fir: \$110,000/ha            Exotic Softwoods: \$65,000/ha            Exotic Hardwoods: \$70,000/ha<sup>41</sup>            Indigenous: \$95,000/ha</p>	<p>Very clear what the maximum penalty will be.</p> <ul style="list-style-type: none"> <li>• Very efficient to apply from an operational perspective.</li> </ul> <p>Provides very strong disincentive to harvest, particularly when a forest is younger and the risk of efficient breach of the clear-fell restriction is highest.</p>	<p>Will over penalise young forests compared to the value of the timber removed.</p> <p>Penalty rate for exotic hardwoods could be limited to carbon stock at age 35, as that is where the lookup tables end.</p>

### Consultation questions



60. Which option (using the actual age of the trees, or assuming an age of 50) do you prefer to calculate the deemed value of timber? Why?

61. Do you think the deemed values are accurate, if not, what alternate data sources should we use?

<sup>41</sup> Penalty rate for exotic hardwoods limited to carbon stock at age 35, as the highest age in the default lookup tables. This rate would be updated if the lookup table is extended.

## Regulatory Impact Assessment

### What age to use when calculating the deemed value of timber

Neither option impacts:

- the ease of compliance for the participant; or
- the allocation of obligations and entitlements to support alignment with climate change targets.

	Option 1: Carbon stock at the age of the forest when it was cleared	Option 2: Carbon stock of the forest at age 50.
<b>Primary Criteria</b>		
Increases incentives to store carbon in forests.	+	++
	Provides strong disincentive to clear permanent post-1989 forests, leaving more carbon in the forest compared to clearing the forest.	Provides a very strong disincentive to clear permanent post-1989 forests, especially when they are young, leaving more carbon in the forest compared to clearing the forest.
Administrative efficiency and effectiveness for regulators.	0	0
	A formula is marginally less efficient for the regulator than a flat value per hectare, but this is not a large difference.	A flat value per hectare is more simple than a calculation based on carbon stock in forest, but not much more complex for the regulator.
<b>Secondary Criteria</b>		
Provides durable regulatory certainty and predictability.	0	+
	Formula will need to be worked out for participants to know how much their fine may be if they clear-fell permanent post-1989 forest.	Clear value per hectare for participants allows them to know how much their fine value may be if they clear-fell permanent post-1989 forest.
Avoids unintended consequences.	-	-
	May allow participants to harvest very young forests if there is particularly compelling reason to change land use.	May disincentivise risk averse participants from registering forest as permanent post-1989 forest.
Consistent with wider climate change and wellbeing priorities.	0	-
	Will accurately penalise forests compared to the amount they are likely to earn from the clearance.	Will heavily over-penalise young forests compared to the amount they are likely to earn from the clearance.

# Standards: making changes to Standards as a consequence of Regulations

## Summary of proposed changes

As a flow-on from changing the Regulations to introduce averaging accounting and permanent post-1989 forests, we'll need to make some small changes to the Geospatial Mapping Information Standard, and the Field Measurement Approach (FMA) Standards.

You can comment on whether you have any concerns about us making necessary changes to the Geospatial Mapping Information Standard and the FMA Standards.

## Changes to Standards will be needed to implement changes

When we change the Regulations to introduce averaging accounting and permanent post-1989 forests we'll also need to make changes to the:

- Geospatial Mapping Information Standards; and
- FMA Standards.

This is to make sure the Standards are in step with the new Regulations. We propose to also take the opportunity to simplify and clarify some minor and technical matters.

We would consult on the content of the Standards once Regulations have been developed.

## Stakeholder feedback on updating the Standards

The flow-on updates to the Standards were not part of the August 2018 consultation. This is your opportunity to provide feedback on our proposal.

## Proposed changes to the Standards

### 1. Geospatial Mapping Information Standard

The changes would allow the collection of geospatial information about:

- adverse events or clearing for best-practice forest management;
- carbon equivalent forest swaps; and
- post-1989 forests under averaging accounting, stock change accounting and permanent post-1989 forests.

### 2. FMA Standard, and FMA Information Standard

Minor and technical changes to:

- allow the FMA to be applied to all categories of post-1989 forests that exist under the new Regulations;
- improve the FMA by allowing a permanent sample plot to be navigated to directly using a GPS (i.e. remove the present step that requires navigating to a point about 30 m away);
- remove line-transect subsampling as an option, as it has never been used (FMA Standard, Part 6, clause 7);
- specify that a multi-stemmed tree should be counted as a single tree when determining the minimum tree count in a sample plot, sub-plot or subsample; and
- correct an inconsistency about collection of shrub information between different parts of the FMA Information Standard.



## Consultation questions

62. Do you support us updating the Geospatial Mapping Information Standard to reflect changes in the Regulations? Why or why not?

63. Do you support us updating the FMA Standard and FMA Information Standard to reflect changes in the Regulations, or to make the suggested minor and technical changes? Why or why not?

# Consultation questions

## Averaging accounting

### Consultation questions for rotation band widths

1. Do you prefer wide rotation bands (Option 1), narrow rotation bands (Option 2), or mixed-width rotation bands (Option 3)? Why?
2. Exactly how wide (in years) should rotation bands be? Why?
3. Do you agree with applying the same rotation band width settings across all forest types? Why or why not?

### Consultation questions for how to allocate the default rotation band

4. Do you agree with the proposed assumed harvest ages? Why or why not?
5. Do you agree with the approach to setting a very high harvest age for indigenous forests? Why or why not?
6. What impacts are there from setting these harvest ages?
7. Do you have an alternative assumed harvest age for indigenous forests, or alternative data sources we should use for other forest types? What are they?

### Consultation question for where in the rotation band we should assume participants will harvest

8. Which option do you prefer, and why?

### Consultation questions for how we account for changing rotation bands

9. Do you agree with our proposed rules for changing between bands? Why or why not?
10. How will our proposed approach impact participants?

### Consultation questions for how we account for changes in forest type

11. Do you agree with our proposed approach for accounting for changes in forest type? Why or why not, and what alternative approach would you suggest?
12. How will our proposed approach impact participants?

### Consultation questions for how to prevent second rotation forests joining as a first rotation

13. Do you agree with our preferred option? Why or why not?
14. How can we monitor this policy to make sure the length of the stand-down period is appropriate?
15. Are there any other factors we should consider when setting the length of the stand-down period?

### Consultation questions for rules to prevent over-crediting following an artificially low rotation band

16. Do you support the preferred option? Why or why not?
17. Do you have any other ways to prevent double crediting in this situation?
18. What are the likely impacts of closing the long-short-long loophole?

## Permanent post-1989 forests

19. Are there any specific issues we should consider when applying existing Regulations to permanent post-1989 forests?

### Simplified reporting

20. Are there any other ways we could make reporting easier to comply with?
21. Are there any other ways we could make reporting easier to comply with?

### Input returns

22. Do you support our preference to offer this to all forest activities? Why or why not?
23. If the service was offered, which different forests would you like to see it offered too (e.g. under 100ha, CAA of one forest type)?
24. Would you be willing to provide us with information required to define sub-areas to us? Why or why not?
25. What any other information you think we would require other than hectares, forest type, year planted and year cleared?
26. Are there other technological or software improvements we could introduce to make the ETS simpler to use and access?

## Field Management Approach

### Making FMA optional for the 2023-2025 mini-MERP

27. Do you agree with the proposal? Why or why not?

### Determining the 100 hectare threshold for FMA

28. Which option do you prefer? Why?
29. Would your choice of options change if the frequency of FMA information collection could be reduced for older forests – e.g., if collection were reduced to 10 year intervals for exotic forests over 15-years, or for indigenous forest over 25-years?

### How the FMA will apply to post-1989 forests under averaging accounting

30. Do you agree with the proposed approach to stop collecting FMA information from sample plots once a first rotation post-1989 forest under averaging accounting has been cleared? Why or why not? Please let us know if you have an alternative approach?
31. Do you agree with the proposed approaches for a second or subsequent rotation, to use first rotation FMA information to derive an appropriate carbon table specific to you? Why or why not? Please let us know if you have an alternative approach?
32. What do you suggest should be the threshold for requiring that a 'significant change in final stocking rate' between rotations must be taken into account?

### **Collection of FMA data from the new forest categories**

33. Do you agree with the proposed approach to use the same provisions that are used for post-1989 forests under stock change for frequency of collection and number of plots when collecting and supplying FMA information? Why or why not?

### **The future of the FMA**

34. Are there other options for application of the FMA that you think could be readily accessed by all FMA participants in the near future and should be considered?

### **Grant funded forests**

35. Which option for calculating NZU entitlement for a grant funded forest do you prefer? Why?

### **Carbon equivalent forest swaps**

36. Do you agree with our proposed option to allow excess land from an old forest swap application to be used for a new application within two years of the old application finishing? Why or why not?

37. Are there any additional criteria we should prescribe for the new forest? If so, what are they?

38. Is there additional information we should request from applicants? If so, why?

39. Do you agree with using default tables to calculate carbon equivalence between the old and new forests? Why or why not?

40. Do you agree with our approach to treating new forest as perpetually on the default tables once a forest swap has been completed? Why or why not?

### **Temporary adverse events**

41. Do you support our preferred option (the exhaustive list)? Why or why not?

42. What adverse events would you add to the exhaustive list?

43. What harvesting will usually occur during the response to, and following, an adverse event?

44. Do you agree with our preferred option of a minimum threshold of one hectare? Why or why not?

45. Approximately how many adverse events that clear over one hectare have you experienced over the last 10 years?

46. Approximately how many adverse events clearing over five hectares have you experienced over the last 10 years?

47. Do you agree with our proposal to have a minimum carbon stock loss of 1 CO<sub>2</sub>-eq, which is equivalent to 1 NZU? Why or why not?

48. Which option do you prefer? Why?

49. Are there any other options for notification which we haven't considered here?

50. What areas do you consider need to be harvested following an adverse event for best practice forest management?

51. Do you support our proposed approach? If not, why not?

### **Tree weed management**

52. Do you support our preferred option? If not, why not?

53. Are there any tree weed species, geographical areas, or landowners who should have fast-track application processes? Why?

54. With mixed species forests, what proportion of the trees should be tree weeds before the forest can qualify for an exemption? Why?

55. Do you support requiring a tree weed control plan as a criteria which we must consider? Why or why not?

56. What further evidence do you think we should consider when deciding to approve a deforestation liability exemption for clearing pre-1990 tree weeds?

57. Do you support extending the time a tree weed exemption lasts to five years, with a five year renewal option? Why or why not?

### **Best practice forest management**

58. What publications or practices do you think we should list as 'best-practice forest management'? Why?

59. Where are inconsistencies likely to occur when interpreting 'best practice forest management' between various documents or practices?

### **Penalties for clear-felling permanent post-1989 forest**

60. Which option (using the actual age of the trees, or assuming an age of 50) do you prefer to calculate the deemed value of timber? Why?

61. Do you think the deemed values are accurate, if not, what alternate data sources should we use?

### **Standards**

62. Do you support us updating the Geospatial Mapping Information Standard to reflect changes in the Regulations? Why or why not?

63. Do you support us updating the FMA Standard and FMA Information Standard to reflect changes in the Regulations, or to make the suggested minor and technical changes? Why or why not?

# Glossary of terms

Term	Definition
First rotation	Defined in s194FD of the Amendment Bill. Generally, this is: <ul style="list-style-type: none"><li>• land that has not been cleared since it became forest land; or</li><li>• land that has been deforested and remained deforested for the “stand-down period” defined in the Regulations, and then was re-established as forest.</li></ul>
Subsequent rotation	Defined in s194FD of the Amendment Bill. Generally, this is any forest that is not first rotation forest. First rotation forest is forest which has not yet been cleared. Subsequent rotation forest includes second and subsequent rotations.
Temporary adverse event	An event, such as a storm or fire, which temporarily disrupts the growth of a forest by removing all or part of the trees in an area.
New Zealand Units	New Zealand Units (NZUs) are the carbon credits which are generated by the NZ ETS and issued to participants for removals, or surrendered to account for emissions.

## Averaging Accounting Terms

Rotation band	A range of sequential ages when a forest may be harvested, which will be used to calculate participants’ NZU entitlements and surrenders under averaging accounting.  A default rotation band is given to a forest when a first rotation forest is registered in the ETS.
Harvest age	The age we assume all forests within a rotation band will be harvested. This is used to calculate the average age of that rotation band.
Average age	Each rotation band will have an average age where the trees reach the average amount of carbon they will store over multiple rotations. Participants are entitled to NZUs up to the forest’s average age.



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