



Emissions Trading Scheme forestry package

Draft Regulatory Impact Assessment material

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Contents

Coversheet: Permission to consult - ETS forestry accounting improvements.....	4
Coversheet: Permission to consult - creating a permanent post-1989 forest activity in the Climate Change Response Act 2002.....	9
Coversheet: Permission to consult - ETS forestry sector operational improvements.....	15
ETS forestry background.....	19
Regulatory Impact Assessment: ETS forestry accounting.....	23
Regulatory Impact Assessment: Creating a permanent post-1989 forest activity in the Climate Change Response Act 2002.....	90
Regulatory Impact Assessment: Forestry Sector Operational Amendments to the ETS	128

1. This document contains RIA material to support Ministerial decisions on a package of New Zealand Emissions Trading Scheme (ETS) forestry proposals for consultation in 2018. The three coversheets and their corresponding RIA relate to the three major sets of proposed changes to the ETS forestry settings. The ETS forestry background section provides relevant background information for all three sets of changes.

Coversheet: Permission to consult - ETS forestry accounting improvements

Advising agencies	Ministry for Primary Industries, Ministry for the Environment
Decision sought	Approval to consult with the public on ETS forestry accounting proposals as part of the ETS forestry package
Proposing Ministers	Hon James Shaw; Hon Shane Jones

Summary: Problem and Proposed Approach

Problem Definition

What problem or opportunity does this proposal seek to address? Why is Government intervention required?

One of the major issues for forestry identified as part of a recent review of New Zealand's Emissions Trading Scheme (ETS) (which concluded in the middle of 2017) was that financial risk, reporting requirements and complex calculations associated with accounting for emissions at harvest reduce incentives to enter the ETS and establish new forests.

From 2021, significant misalignment between the ETS accounting approach (used to surrender and allocate New Zealand emission units - NZUs) and the international accounting approach (used to determine the contribution New Zealand forests make to climate change targets) could undermine the ability of the ETS to drive mitigation in line with climate change targets and increase ongoing fiscal risk to the Crown.

Proposed Approach

How will Government intervention work to bring about the desired change? How is this the best option?

MPI suggests consulting with the public on a number of proposals that could increase ETS forestry participation and afforestation incentives. The proposals and the reasons they have been chosen are outlined below.

Proposals to change how emissions units are accounted for

- Replace the current ETS forestry accounting approach with averaging accounting for all people who register new forests (newly established forests on bare land) in the ETS. Averaging accounting removes ETS participants' (participants) financial risk, complexity and ongoing reporting requirements associated with accounting for emissions at harvest (as they only need to account for emissions removals/receive NZUs until their forest reaches its long-term average carbon stock and account for emissions/surrender NZUs upon deforestation). This is expected to significantly increase the incentive for people to establish and register new forests in the ETS and could improve the ability of the scheme to drive emissions reductions in line with international targets.
- Have one of three potential accounting approach options for people with existing forests in the ETS (forests already planted and registered in the ETS that were first established after 1989): the current accounting approach; averaging accounting; a one-off and one-way option to use either the current accounting approach or averaging accounting.

Averaging accounting does not produce an afforestation incentive for existing forests. The three options trade-off simplicity, risk and burden sharing, and short and long term fiscal and NZU supply impacts.

- Averaging accounting transition and detailed design proposals. These aim to prevent ETS participant confusion, reduce administrative and fiscal costs and give the public a good understanding of how the new rules could apply to them.

Harvested wood products proposals

The two proposals below to provide the value the Crown derives from the slow release of emissions from harvested wood products (HWP) to the forestry sector involve making trade-offs.

- Pass on the HWP value to participants using averaging accounting. This would reinforce the averaging afforestation and participation benefits.
- Establish a research and development fund to encourage the development of longer live harvested wood products. Doing so could increase climate change mitigation (carbon dioxide removals from the atmosphere) and Crown revenue.

Temporary adverse events accounting proposal

- No longer require participants using averaging accounting to surrender NZUs to the Crown if the carbon in their forest reduces as a result of a temporary adverse event. This will better reflect the impact that temporary adverse events have on the Crown's accounts and could increase participation and afforestation rates.

Offset planting proposal

- Enable participants to offset deforestation emissions liabilities by establishing a carbon equivalent forest elsewhere. This would increase land use flexibility which could assist regional economic development and environmental planning. It could also increase participation and afforestation rates.

Section B: Summary Impacts: Benefits and costs

Who are the main expected beneficiaries and what is the nature of the expected benefit?

ETS forestry participants

The greatest direct benefit will be for people who register new forests in the ETS. Under averaging accounting, they will be able to sell a greater proportion of the NZUs they are allocated at a lower risk, increasing the financial return from establishing new forests (and growing them on their first rotation). This impact would be higher and potentially apply to a greater extent for existing forests if the HWP value was also provided to participants.

Averaging accounting would enable eligible participants (those who have established new forests and potentially those with existing forests) to use a simpler approach to account for the carbon stored in their forests. There would also be less need to require them to undertake detailed reporting as frequently.

The temporary adverse events accounting proposal would reduce financial risk (and in many cases the need to have forest insurance) for participants. Allowing offset planting will increase land use flexibility for participants, and lessen the cost associated with surrendering NZUs to the Crown upon deforestation.

Wood processors

The HWP fund option would directly benefit wood processors. It could also have flow on benefits to those who do not receive the fund as the sector could develop and grow.

The Crown/Government

Introducing averaging accounting is projected to result in lower ongoing fiscal risk to the Crown as NZUs will be allocated in a way that drives mitigation in line with New Zealand's climate change targets. Offsetting will reduce Crown exposure to deforestation emissions.

Te Uru Rākau and the Environmental Protection Authority (EPA)

Averaging accounting reduces the complexity of returns and the need to monitor forest growth in detail after it reaches its long-term average carbon stock. This could significantly reduce Te Uru Rākau and EPA administrative effort. If all participants were required to use averaging accounting, Te Uru Rākau's IT system and processes would also be much simpler to administer.

Local government/communities

Increased tree planting due to introducing averaging accounting for new forests could assist community efforts to reduce soil erosion and improve economic development. Planting offsets and the removal of temporary adverse event emissions liabilities could also assist regional development and environmental planning, as it would enable more flexible use of land and reduce the risk of investing in carbon forestry.

Where do the costs fall?

ETS forestry participants

Requiring people with existing forests registered in the ETS to adopt averaging accounting could disrupt some land owners' business plans and create a financial burden. Te Uru Rākau could mitigate this in part through the suggested transitional measures. Some of the detailed design options for averaging accounting are simpler than others for participants to use. However, in most cases the averaging accounting would still make the ETS for forestry easier to use than the status quo.

The Crown/Government

Requiring people with existing forests registered in the ETS to continue to use the existing accounting method could increase long term fiscal risk to the Crown (as it could undermine the ability of the ETS to allocate and surrender NZUs to incentivise the right amount of mitigation to meet climate change targets). Whereas, requiring these participants to use averaging accounting would reduce short term fiscal income to the Crown (from reduced NZU surrender requirements) and create short term fiscal risk (from increasing NZU supply into the ETS which could reduce climate change mitigation effort). Providing the HWP value to participants using averaging accounting would amplify these impacts.

Providing the Crown's HWP value to participants or to the wood processing sector (by establishing an 'industry good' fund) would reduce Government fiscal income (but it would do so to drive incentives to sequester additional carbon from the atmosphere).

Te Uru Rākau and the EPA

Te Uru Rākau will need additional budget to set up new systems and processes and assist participants to understand how to use the new rules. Enabling the use of two accounting approaches would require ongoing extra administrative effort and extra IT capability.

What are the likely risks and unintended impacts, how significant are they and how will they be minimised or mitigated?

The greater the number of options for eligibility to averaging accounting and the greater the number of design features, the more risk there is of ongoing administrative costs or participant non-compliance (or reluctance to enter the ETS as it is seen to be too complex). To mitigate these risks it is possible to develop a more sophisticated IT system and provide greater assistance to participants (it is also possible to choose to implement the simpler design and eligibility options available).

The HWP fund and offset planting proposals could result in unintended impacts for the New Zealand economy (e.g. for the wood processing sector or for land prices). MPI will undertake further research to determine how to appropriately target a potential HWP fund and whether extra consideration of wider environmental and economic impacts is required.

Identify any significant incompatibility with the Government's 'Expectations for the design of regulatory systems'.

There are no significant incompatibilities with the Government's 'Expectations for the design of regulatory systems'. The proposals will make some key design changes, but this is to ensure that the ETS forestry accounting rules and related operational settings can more effectively meet the Climate Change Response Act 2002's purpose: *to enable New Zealand to meet its international climate change obligations*.

Section C: Evidence certainty and quality assurance

Agency rating of evidence certainty?

How confident are you of the evidence base?

We have a strong set of evidence; based on research, modelling, a previous high level ETS consultation, and consultation on the detailed proposals with an expert forestry sector stakeholder group and relevant government agencies.

To be completed by quality assurers:

Quality Assurance Reviewing Agency:

The Treasury, the Ministry for Primary Industries, and the Ministry for the Environment.

Quality Assurance Assessment:

The panel consider that the draft RIA (Regulatory Impact Assessment) partially meets the quality assessment criteria.

Reviewer Comments and Recommendations:

The RIA contains all the options, including additional options that were considered by MPI and have not been included in the Discussion Document. It outlines the problem definition and the objectives and criteria used to evaluate the options.

While the technical side is strong, the policy implications of the options are not always clear and neither is the cumulative impact of the policy proposals in this assessment and the two companion RIA (for the permanent forest sink initiative and operational improvements). It is also not clear from the RIA how the whole package fits together to ensure it is balanced and coherent. These

issues will need to be addressed in the post-consultation regulatory impact analysis when MPI is seeking final decisions from Cabinet on the preferred package. Further work will be required on the costs and benefits of the options in the preferred package, including the fiscal cost to the Crown, and the impacts on stakeholders. Although the consultation process should elicit some information on this, further analysis and modelling will be required. The analysis will also need more detail on how the proposals will be implemented and the implementation risks addressed.

Responsible Manager

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DRAFT

Coversheet: Permission to consult - creating a permanent post-1989 forest activity in the Climate Change Response Act 2002

Advising agency	Ministry for Primary Industries (MPI)/ Te Uru Rākau, Ministry for the Environment
Decision sought	Approval to consult public as part of the package of changes to forestry in the ETS
Proposing Ministers	Minister of Forestry, Minister for Climate Change

Summary: Problem and Proposed Approach

Problem Definition

What problem or opportunity does this proposal seek to address? Why is Government intervention required?

The Permanent Forest Sink Initiative (PFSI) is an alternative carbon scheme to the Emissions Trading Scheme (ETS), and is administered under the Forests Act (1949). The scheme aims to encourage the establishment of new permanent forests on private land by enabling owners of eligible post-1989 forest land to covenant their forest with the Crown in return for emissions units (NZUs), which are differentiated from those earned through the ETS.

However, the PFSI has not achieved the expected number of participants or hectares in permanent forestry since it came into force in 2008. For instance, approximately 80 per cent of PFSI-registered forest is native forest (12,000ha). In comparison, there is more than twice the area of native forest (33,000 ha) registered in the ETS.

Two reviews of the PFSI have identified that the scheme is complex for participants, costly to join, and is difficult to comply with in comparison with the ETS. The PFSI only has 60 participants with 15,464 hectares of registered forest, and this has not increased in recent years.

Meeting our long term international climate change commitments effectively will likely mean New Zealand needs to increase the amount of permanent forest planted and maintained in perpetuity. New Zealand also has a range of land use issues (e.g. soil erosion and flood prone catchments) that could be addressed or improved through an increase in permanent forest cover, including native forests.

There are approximately 1.16 million hectares of highly erodible land in New Zealand, which is well suited for permanent, rather than rotational forests. Developing an effective way for land owners to access carbon income from permanent forests is expected to encourage forest establishment on this land.

Proposed Approach

How will Government intervention work to bring about the desired change? How is this the best option?

The forestry package needs to be consulted on.

A final version of this RIA will support the 'forestry package' of decisions Cabinet will make in late 2018/early 2019 on the accounting approach to post-1989 forests, enhancing the treatment of permanent forests and a series of operational improvements to the ETS.

Prior to that Cabinet paper, Ministers and officials intend to hold a public consultation on the issues in the forestry package. This version of the RIA is intended to provide the background to the options in the discussion document *A Better ETS for Forestry: Proposed amendments to the Climate Change Response Act 2002* and address why some options were not included in the discussion document.

Feedback from the consultation period will be used to refine the final options presented to Cabinet. This feedback will be particularly useful for permanent forests as there are a number of design considerations which relate to how stakeholders will perceive the opportunity to establish permanent forests, and there is no preferred position based on fiscal or cost/benefit analysis.

The permanent post-1989 forest proposal.

The proposed intervention is to offer permanent forests as a new Schedule 4 (voluntary) activity in the Climate Change Response Act 2002 (CCRA), and therefore into the ETS, to simplify processes and incentivise more permanent afforestation.

Feedback during PFSI reviews in 2013 and 2015 indicated that participants found the PFSI complex, costly and administratively time consuming. These factors also deter new entrants.

We are proposing to define 'permanence' within this new activity as 50 years in forest (effectively clear fell harvest may not occur during those 50 years¹) with the option at 50 years to enter another non-harvest period or shift to a harvest regime and surrender NZUs. It is expected that the majority of participants will sign up for a new period as the income from NZU sales will continue, and there is a high rate of 'recommitment' being signalled in other covenants (e.g. Nga Whenua Rahui covenants are for 25 years). Offering this flexibility will increase the incentive for foresters to sign up to the new activity, as they will know that there will be the option to exit the activity if a future land owner makes the decision, albeit within a long timeframe.

This new activity will require a different accounting approach to the averaging proposal for other participants. Simply transitioning permanent forests into the ETS on the same basis as rotational forests would not provide an appropriate and sufficient incentive for establishment of permanent forests. Crediting permanent forests only up to the average of rotational forests would not recognise (and credit) the full carbon sink in the permanent forest. Permanent forests need to receive NZUs over their full growth to incentivise establishment and foregone income in other uses.

The intent of this proposal is threefold:

- To make permanent forest a more attractive and viable option for land owners by providing a potential revenue stream while a permanent forest is growing;
- Simplifying the administration of permanent forests for land owners and the government; and
- To increase the amount of permanent forest registered in the ETS which will reduce the incentive to deforest (at present registered forests face a deforestation liability, while forests outside the ETS do not).

A system that recognises carbon storage over the long term should also provide the security of cash flow to enable land owners of highly erosion prone or marginal land to transition existing forests into a non-harvest management regime.

¹ Provision is made in the PFSI for limited harvest that maintains the integrity of the forest,

The current parts of the Forests Act which govern the PFSI would be removed as they are no longer necessary (i.e. the PFSI would be disestablished). There may need to be a transition period where both the Forests Act and the CCRA are in force as we transition the PFSI participants into the ETS.

Section B: Summary Impacts: Benefits and costs

Who are the main expected beneficiaries and what is the nature of the expected benefit?

The immediate beneficiaries will be current PFSI participants who would operate under a simplified, more responsive system. The system will also be administratively simpler and cheaper for Government. In the longer term all New Zealanders will benefit as greater levels of permanent forest contribute to international targets to reduce net greenhouse gas emissions.

Establishing 100,000 ha of permanent forests (in the 2020s) will sequester between 1 and 3 million tonnes of carbon dioxide per year well into the 2050's. The lower estimate is based on native forest, while the upper estimate would be pine forest (e.g. retired production forest on erosion prone land). In contrast, the rotational pine forests established in the 2020s are a negligible sink in the 2050s because they would have reached their average stock in the 2040s.

In addition, forests offer a range of ecosystem services. Properly sited forests contribute to the environmental (e.g. carbon sequestration, erosion control, biodiversity), economic (e.g. timber, honey), social (e.g. recreation opportunities) and cultural (e.g. Mātauranga Māori) wellbeing of the land owners, local communities and New Zealand.

Native forests and permanent forests face higher establishment and maintenance costs than harvested exotics, but recent economic modelling indicates that (excepting land opportunity costs) the monetised benefits can be as high as 9.2 times the cost of forest establishment. Where land is highly erosion prone or otherwise unsuitable for rotational forest or extensive pastoral farming, permanent forests provide a range of benefits, including carbon farming.

The most clearly measurable monetised benefits will be from:

- The carbon sequestration in permanent forests (via NZUs) to the land owner and recognition against our international target for the Crown. This will be higher per hectare than under the averaging accounting approach (i.e. the approach proposed for rotational forests registered in the ETS);
- Erosion control, where areas of permanent forests are integrated into catchments to reduce 'downstream' sedimentation from erosion and other land uses; and
- Any income from non-timber products (e.g. honey), which would be captured primarily by the land owner.

Where do the costs fall?

There will be some costs to introducing permanent forests into the ETS, though these are principally transition costs of moving PFSI participants to the ETS.

We intend to offer to transfer existing forests in the PFSI over to the new permanent forest activity in the ETS. This transfer will be on a one-for-one basis: forest in the PFSI would be reclassified as permanent post-1989 land, and considered to have joined this activity from the date of first registration in the PFSI.

It is proposed that carbon accounting for permanent forests continue with the stock change method because:

- Permanent forests are predominantly indigenous, and therefore slower growing; and
- Applying an averaging accounting approach would not provide sufficient reward to encourage the establishment of permanent forests.

Crediting permanent forest units up to the average does not fully reward the carbon sink in permanent forests. Although this will mean two accounting systems will continue to operate, the system for permanent forests will still be less administratively burdensome than the current system and should incentivise more permanent forests.

Compared to the PFSI, and other stock change crediting options, there will be no change in the number of NZUs allocated to permanent forests per hectare but, if this new activity is taken up by more participants, it will require the Government to issue more NZUs. However, this will represent greater carbon sequestration which is the objective of the ETS and the greater carbon sequestration will be recognised when New Zealand meets its international targets.

What are the likely risks and unintended impacts, how significant are they and how will they be minimised or mitigated?

The proposal increases the flexibility of the ETS system, encouraging more participation by a wider range of land owners, including farmers who may wish to use less productive areas of their farms for carbon farming. The proposal to introduce permanent forests as a schedule 4 activity within the CCRA means it will remain a voluntary choice for forest and land owners to register.

There is a minor risk that forest owners will not be aware of what they are signing up to. This will be managed via clear obligations in the legislation, and informing participants of the implications before registration (e.g. through guidance, handbooks). We believe this system will be clearer to understand than the existing PFSI system, as well as simplifying the relationship between rotational and permanent forest within the Government's climate change response effort.

The cost of insuring against natural events is a barrier to the uptake of permanent forests; as the premiums are based on total carbon stock in each hectare. Often the cost of insurance exceeds the carbon income. To address this we propose to extend the 'adverse event' cover (outlined in the accounting RIA) in the ETS to the permanent forest activity. Under this coverage the forest owner would have no obligation to surrender units for a decrease in carbon stock following an adverse event (e.g. wildfire or wind) if the forest is re-established. Rather, they simply do not earn units for the impacted area until carbon stocks are back to pre-event level.

High carbon prices present both an opportunity and a risk to permanent forests: the opportunity is that we will have more marginal production forest moving to permanent forest, but this may reduce timber supply if it occurs at a large scale. We propose to manage the downside risks of this transition through the design of the permanent forest activity so the incentive for creating a permanent forest will encourage movement, but does not over-incentivise this transition for forest close to the harvest age (by 'back paying' the units when the forest is under averaging). Land owners will be encouraged to make the transition to permanent forests either early in the rotation (so regional timber supply can be managed) or for the 50 years of carbon income from the permanent forest offers after the decision is made.

In designing the Permanent forest option, and the interaction with post-1989 forests, we need to manage the slight risk that very high carbon prices could encourage forest owners to switch between rotational and permanent activities within the ETS to maximise returns from receiving NZUs. If this occurred at a significant scale, it could reduce the timber supply within the region. This could particularly be a risk where a rotational forest receiving NZUs under the proposed

averaging approach is close to harvest age and the owner moves to the permanent forest activity.

There is a risk that, when the PFSI is disestablished, some of the participants will remove their forests from carbon forestry (i.e. do not transition to the ETS). We consider this a low risk as:

- Around 50 per cent of the forest is protected through other means such as QEII covenants (so will remain forest);
- The majority of PFSI participants are required to repay the units received if they exit carbon forestry (which may be a significant cost);
- The permanent forest activity offers similar financial incentives to remain in carbon forestry to the PFSI, but reduced administration costs; and
- Te Uru Rākau is looking to simplify this process as much as possible for the land owner.

How we transition for existing PFSI forests into the ETS, and how we make this as simple as possible, forms part of public consultation.

Identify any significant incompatibility with the Government's 'Expectations for the design of regulatory systems'.

There is no significant incompatibility with the government's expectations for the design of regulatory systems.

Section C: Evidence certainty and quality assurance

Agency rating of evidence certainty?

We are confident that the broad policy direction (to create a voluntary permanent post-1989 forest activity in the CCRA, and remove the PFSI provisions from the Forests Act) will be broadly supported. This was the conclusion of two reviews of the PFSI through consultation (in 2013 and 2015).

We have good evidence from an economic, legal, and administrative perspective that the policy proposal we are consulting on is desirable and viable. However, stakeholder groups have differing views on some of the details of the policy, and we wish to consult on these details before finalising the options to put to Cabinet late 2018/early 2019.

To be completed by quality assurers:

Quality Assurance Reviewing Agency:

A combined panel from MPI, MfE and TSY was used to review this regulatory impact assessment (RIA).

Quality Assurance Assessment:

Partially meets.

Reviewer Comments and Recommendations:

The proposals outlined in this regulatory impact assessment (RIA) should be considered as a package in combination with the RIAs on forestry accounting and operational improvements. The Panel considers that the RIA “partially meets” the quality assessment criteria for the purpose of informing Ministers’ decision on whether to release the attached discussion document.

The RIA clearly outlines the problem and a range of options have been considered. A large number of criteria have been used to evaluate the options and these will need to be narrowed down in the next stage, when the post-consultation RIA is prepared seeking Ministers’ final decisions.

Although the broad policy direction has been identified drawing on a sound evidence base, it will be important to test the design features of the preferred option during the consultation process to ensure the incentives are right. As indicated in the RIA, it is difficult to assess the magnitude of the impact at the national level because permanent forests in the ETS will be a voluntary activity and there is little evidence on the rate at which land owners will change land use to permanent forests. However, the consultation process should elicit some more information on the likely change in behaviour of forest owners and land owners in response to the proposed changes.

Post-consultation, further consideration will be required to determine how the proposals will be implemented and the implementation risks addressed.

Responsible Manager

Justine Gilliland
Deputy Director General
Sector Partnerships and Programmes
Ministry for Primary Industries

Coversheet: Permission to consult - ETS forestry sector operational improvements

Advising agencies	Ministry for Primary Industries (MPI)/Te Uru Rākau, Ministry for the Environment
Decision sought	Approval to consult the public as part of the package of changes to forestry in the ETS
Proposing Ministers	Hon James Shaw; Hon Shane Jones

Summary: Problem and Proposed Approach

Problem Definition

A key finding of the ETS review was that there are numerous operational and technical issues with the forestry sector provisions of the scheme that need to be improved, clarified or corrected. These issues add to the complexity of the scheme's administration.

Many of these issues have also been recognised by the administering agencies that operate the scheme since it was last reviewed in 2011. Current participants, and people thinking about planting new forests, view the complexity of the rules for forestry in the ETS as a barrier to taking part. This reduces the ability of the ETS to encourage forestry investment. There is also a lack of flexibility within the scheme which limits Te Uru Rākau's² ability to assist current or potential participants.

Proposed Approach

This Regulatory Impact Assessment (RIA) is intended to support public consultation on options for operational and technical improvements to the ETS. Consultation will be supported by the separate discussion document: *A Better ETS for Forestry, Proposed Amendments to the Climate Change Response Act 2002*. This impact analysis provides the technical background to options presented in that discussion document.

In the discussion document we propose 26 operational and technical changes to the ETS's enabling legislation, the Climate Change Response Act 2002 (CCRA) that will address the issues identified in the 2015/16 review. These proposed changes will increase forest owner confidence in the ETS by providing increased certainty of investment, reduced compliance burden and complexity for participants, and a more flexible framework for forests in the primary industries. While some non-legislative measures can be put in place, legislative change is necessary to provide the comprehensive improvements required to make the scheme more attractive.

Most of the issues identified have only one viable solution. Often this is because remedies have been tried in the past and not been effective, or the solution would present insurmountable risks to participants and/or the Crown. While all possible options are presented in this impact analysis, only viable solutions are presented in the discussion document.

² Te Uru Rākau is a business unit within the Ministry for Primary Industries with delegated responsibility for operations of the ETS from the Environmental Protection Authority.

By consulting on these proposed changes we expect to receive valuable feedback from existing and potential participants regarding whether the proposals address their concerns, and their preferred approach where multiple options are available.

Section B: Summary Impacts: Benefits and costs

Who are the main expected beneficiaries and what is the nature of the expected benefit?

The expected beneficiaries of operational and technical improvements to the ETS are:

- current and future ETS forestry participants who will experience easier compliance, simpler processes, and more clarity on their obligations; and
- the administering agencies (Te Uru Rākau and the Environmental Protection Authority (EPA)) who will benefit from simpler administration and processes.

Where do the costs fall?

It is expected that most of the options being consulted on will result in reduced compliance costs for forest owners who interact with the ETS. While there will still be some cost of participating in the scheme, it will be less than the status quo.

The changes proposed have low fiscal risk as the ETS operations. The changes either:

- mirror the international rules as they apply to New Zealand; and/or
- the fiscal considerations are separate to the decisions in this package as we are improving the delivery of policy initiatives the proposal implements occurs (e.g. we simplify the process around receiving an exemption and the exemption has already been appropriated).

There will be costs to Te Uru Rākau (and the EPA) from some of the proposals; however, the majority of these will be where a new process replaces a more complex/costly process. Overall we expect operational costs to be marginally lower as less effort is devoted to addressing non-compliance or fixing accidental participant errors. The staff time made available through the proposed changes will enable staff to focus on implementing the new areas of work (and better compliance systems).

The proposal to develop a definitive land layer (to determine eligibility in the ETS) will require an upfront investment. However, the size and timing of this investment will be determined by the level of detail required in the final map. Any cost of developing the map will need to be traded-off against the savings of operational costs through simpler land eligibility assessments. We intend to present options to implement the land layer, timelines, and costs, as part of the decision paper in December 2018. These options will be informed by the feedback from consultation.

We propose to extend the provisions that allow exemptions from emissions liabilities in certain circumstances. The provision we intend to do this through, Section 60 of the CCRA, requires the costs from granting each exemption, and where they fall, to be considered on a case-by-case basis, and the Minister for Climate Change must be satisfied the costs do not exceed the benefits.

What are the likely risks and unintended impacts, how significant are they and how will they be minimised or mitigated?

As these proposed changes are based on 10 years' of operational experience with the ETS, we expect that the risk of unintended impacts of these proposals will be minor. In some cases this minor risk can be mitigated through the Minister for Climate Change granting an exemption under Section 60 of the CCRA: where a participant can have their emissions liabilities, or participation, waived under certain conditions.

There is a wider operational risk for the forestry package around the implementation of the necessary redesign of Te Uru Rākau's ETS forestry software system (Climate Change Information System (CCIS)), detailed in the accounting RIA. The operational and technical changes we will consult on should not impact the delivery of the wider package.

Identify any significant incompatibility with the Government's 'Expectations for the design of regulatory systems'.

The changes are compatible with expectations for the design of regulatory systems as they aim to simplify systems, improve processes, correct deficiencies and provide more clarity on obligations.

Section C: Evidence certainty and quality assurance

Agency rating of evidence certainty?

We have high confidence in the evidence base which consists of submissions on the 2015/16 review, subsequent interviews with ETS participants, forest and land owners, and case history of problem areas since 2008.

To be completed by quality assurers:
Quality Assurance Reviewing Agency:

A combined panel from MPI, MfE and TSY was used to review this RIA

Quality Assurance Assessment:

Partially meets

Reviewer Comments and Recommendations:

The proposals outlined in this RIA should be considered as a package in combination with the RIA on the forestry accounting and the PFSI. The Panel considers that the RIA "partially meets" the quality assessment criteria for the purpose of informing Ministers' decision on whether to release the attached discussion document.

The RIA clearly outlines the current operational and technical problems with the forestry provisions of the ETS drawing on 10 years of operational experience with the ETS and a sound evidence base. For most proposals, only one option or set of options is proposed because the RIA is addressing areas where the existing legislation needs to be improved, clarified or corrected.

A large number of criteria have been used to evaluate the options and these will need to be narrowed down in the next stage, when the post-consultation RIA is prepared seeking Ministers' final decisions.

Responsible Manager

Justine Gilliland
Deputy Director General
Sector Partnerships and Programmes
Ministry for Primary Industries

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ETS forestry background

Contents

Climate change agenda	19
New Zealand ETS for forestry.....	19
Classes of forest in the ETS	20
ETS forestry accounting method	20
New Zealand forestry sector	21
Agencies interested in ETS forestry settings.....	22

- 1 This section provides key background information relevant for the New Zealand Emissions Trading Scheme (ETS) forestry package proposals outlined in the three RIA below.

Climate change agenda

- 2 The Government is committed to supporting global action against climate change. New Zealand's current climate change goal is to reduce emissions to 30 per cent below 2005 levels by 2030. To assist in reaching that goal the Government has made a commitment to plant one billion trees over the next 10 years. This year the Government also intends to introduce the Zero Carbon Bill to establish a new emissions target in legislation and provide certainty about New Zealand's long-term emissions goals.
- 3 These commitments reflect the need to support the international effort to prevent the potential catastrophic environmental effects of increasing global average temperatures, such as sea level rise and extreme weather events. New Zealand's transition to a low-emissions economy is likely to take time and depends on new technologies. Forestry will play a critical role as a carbon sink, particularly to help New Zealand meet its short term climate change targets.³ Increased forest planting is one of New Zealand's most effective and economically efficient carbon reduction options. It can help to reduce carbon dioxide emissions while also generating revenue for New Zealand businesses and making other environmental improvements (i.e. biodiversity and water quality).

New Zealand ETS for forestry

- 4 One economic driver for growth in forestry, is its inclusion in the ETS.⁴ The ETS is New Zealand's main policy tool for climate change mitigation. Its objective is to support and encourage global efforts to reduce greenhouse gas emissions by assisting New Zealand to meet its emission reduction targets and reducing net emissions below business as usual levels.⁵ It creates a market that puts a price on greenhouse gas emissions by requiring New Zealand emitters to either reduce their emissions or purchase emission units (NZUs) from

³ From recent reports from the Productivity Commission and GLOBE New Zealand, which are also consistent with modelling for the Zero Carbon Bill.

⁴ New Zealand is the first, and currently the only country in the world to include forestry in a national emissions trading scheme. The forestry sector petitioned for inclusion in the ETS as New Zealand has opportunity for forestry sector growth.

⁵ To below "business as usual" levels. Section 3 of the Climate Change Response Act 2002.

others (e.g. from foresters who have earned units for removing emissions) and surrender those NZU to the Crown.⁶

- 5 The scheme creates a financial incentive for businesses to invest in technologies and practices with lower emissions. It also encourages forest planting by allowing eligible foresters to earn New Zealand emission units (NZUs) as their trees grow and absorb carbon dioxide. Including forestry in the ETS creates an incentive for landowners to plant new forests, replant forests to avoid deforestation liabilities, and undertake forest management practices to sequester more carbon from their forests. ETS registration is voluntary for interested parties with eligible forests⁷ as it involves active forest monitoring, ongoing reporting, and allocations and surrenders of NZUs to the Crown.
- 6 To effectively drive emissions reductions to reach climate change targets, it is important to ensure the settings for how New Zealand accounts for emissions in the ETS are appropriately aligned with the relevant international accounting rules. As the ETS was initially designed to help New Zealand reach climate change targets for the first commitment period under the Kyoto Protocol (which ended in 2012), the current accounting rules relate to those international settings.

Classes of forest in the ETS

- 7 The Kyoto Protocol sets 1 January 1990 as the baseline from which changes to carbon emissions are measured. For this reason, only forests established after 31 December 1989 can be registered in the ETS. Section 4 of the Climate Change Response Act 2002 (the Act) has a number of tests to determine if ETS registrations qualify as post-1989 forest land.
- 8 People who own land which first had forest established on it before 1990 cannot claim NZUs for forest growth, but are required to surrender NZUs to the Crown upon deforestation of the forest (as the Crown must account for these emissions internationally). In the Act this land is termed pre-1990 forest land. A number of measures have been put in place to assist pre-1990 forest landowners with their deforestation obligations (such as offset planting to avoid deforestation emissions).
- 9 Exotic, indigenous, plantation and permanent forests can be registered in the ETS. Permanent forests currently also have the option to receive benefits through the Permanent Forest Sink Initiative (PFSI). Under the PFSI, landowners receive NZUs which they can sell at a premium in return for ensuring 'permanent' carbon removals by establishing a legal covenant on their land (must maintain their forest for at least 50 years).

ETS forestry accounting method

- 10 The ETS currently accounts and provides ETS forestry participants (participants) with NZUs for removals of carbon dioxide from the atmosphere as forests grows. Likewise, the ETS recognises carbon dioxide emissions releases and requires participants to surrender NZUs to the Crown if they deregister, deforest, or harvest.

⁶ As opposed to a carbon tax, the NZ ETS uses a market based approach to set a price on emissions, which can be complemented by an overall emissions cap that can be used to limit emissions to a certain level, which can be reduced over time.

⁷ ETS participants can be forest owners or holders of a registered forestry right or lease. Full description of forest class rules can be found here: <https://www.mpi.govt.nz/dmsdocument/4759/loggedIn>.

- 11 From 2021 onwards countries will make climate change commitments (nationally determined contributions – NDC) under the Paris Agreement.⁸ New Zealand has put forward a new intended averaging accounting approach to forestry and land use for the 2021-2030 target as part of its NDC. Averaging accounting recognises the long-term carbon stored in cyclical production forests. This means that short term emissions and removals of carbon from the atmosphere associated with harvest and re-growth in subsequent forest rotations are internationally accounted for as a long term average, rather than fluctuations over time. Moving to this method is estimated to lower the economic cost of New Zealand meeting its 2021-2030 target by \$8 - \$14 billion dollars.⁹
- 12 This change to international settings will mean from 2021 onwards, New Zealand's ETS forestry accounting approach will not align with how New Zealand forestry emissions are recognised internationally. Misalignment can impact the ability of the ETS to effectively drive the necessary amount of mitigation to reach climate change targets.

New Zealand forestry sector

- 13 The forestry sector is a significant industry in New Zealand, contributing an annual gross income of around \$5 billion, 1.5 per cent of New Zealand's GDP, and directly employs around 20,000 people.¹⁰
- 14 It contains a large range of stakeholders, not all of whom are eligible to enter into the ETS or currently registered in the ETS.¹¹ Many forests are owned by investors who hold diversified portfolios (of different forest species and non-forestry investments).¹² There are a number of dedicated 'carbon traders' whose business model revolves around making returns from forest carbon sequestration. Environmental groups and businesses are beginning to invest in forestry, particularly permanent and indigenous forests. Māori and Iwi also have a large and increasing stake in the forestry sector through claims, settlements, and negotiations.¹³ Some farmers have established small forests to make a return on land that is unsuitable for agricultural purposes.
- 15 The forestry sector includes both native and exotic species. 6.4m hectares (ha) of New Zealand's land use is covered in native forest.¹⁴ By comparison, only 1.7m ha of New Zealand land is used for exotic plantation forestry, of which around 90 per cent is radiata pine.¹⁵

⁸ Each country in the Paris Agreement provides a nationally determined contribution (NDC) which outlines the effort by that country to reduction national emissions and adapt to the impacts of climate change.

⁹ Or about 103 million tonnes of CO₂ at a carbon price of \$12.5 - \$25 per tonne relative to the status quo under the existing Kyoto Protocol rules.

¹⁰ <http://archive.stats.govt.nz/infoshare/> Table: Series, GDP (P), Nominal, Actual, ANZSIC06 detailed industry groups (Annual-Mar), <https://www.mpi.govt.nz/news-and-resources/open-data-and-forecasting/forestry/>

¹¹ In December 2017 there were around 2,150 forestry participants in the NZ ETS, covering an area around 326,000 hectares, with a further 12,000ha that is registered in the permanent forest sink initiative (PFSI). There is estimated to be around 330,000 hectares of possible post-1989 forestry land that was not registered in the NZ ETS (Based on the 2018 GHG Inventory submission estimates of total post-1989 forest).

¹² As at 2017, 92 per cent of plantation forestry is privately owned, four per cent is owned by a registered public company, two per cent is owned by local government, one per cent is owned by central government and the last one per cent is owned by state-owned enterprises. (https://www.nzfoa.org.nz/images/stories/pdfs/Facts_Figures_2016_per centC6per cent 92a_web version v3.pdf)

¹³ However, most Māori forestry is on "pre-1990 forest land".

¹⁴ <https://www.mpi.govt.nz/growing-and-harvesting/forestry/indigenous-forestry/>

¹⁵ https://www.nzfoa.org.nz/images/stories/pdfs/Facts_Figures_2016_per centC6per cent 92a_web version v3.pdf

- 16 The ETS for forestry currently contains two key groups:
 - a. Owners of large forests (80 per cent of forest land in the ETS is owned by participants with over 100ha) who aim to maximise returns from timber and carbon;
 - b. Owners of small areas of forest (80 per cent of forestry participants own less than 100ha) for whom forest is not their core business, and complex rules add significantly to their compliance costs.¹⁶
- 17 New Zealand currently has around 4.6 million ha of land potentially suitable for new forest establishment (plantation, or permanent protection forestry on land with high erosion risk). Not all of this land will be eligible to enter into the ETS (will be post-1989 forest land).¹⁷

Agencies interest in ETS forestry settings

- 18 Local government authorities have an interest in policy changes which affect the forestry sector. As implementers of the Resource Management Act 1991 (RMA) councils have responsibility to regulate environmental outcomes in their jurisdictions. Increased planting of both rotational and permanent forest (driven by improved carbon incentives) would likely have impacts on priority environmental outcomes for councils such as erosion control and freshwater management.
- 19 The Ministry for Primary Industries (MPI) will lead the consultation and advice on the policy proposals to the forestry accounting settings in the ETS. Te Uru Rākau, which is the branded business unit within MPI focused on forestry initiatives, will lead consultation on the operational changes to the forestry settings in the ETS and the proposal concerning the PFSI. Following legislative amendment and implementation of any changes, Te Uru Rākau will be in charge of monitoring and enforcing the operational changes to the forestry settings in the ETS, including the possible introduction of averaging accounting.

¹⁶ B18-0407

¹⁷ Note: this is land likely to physically support trees, not necessarily economic plantation forestry.

Regulatory Impact Assessment: ETS forestry accounting

Contents

Purpose.....	24
Limitations	24
Scope and focus of proposals in this RIA	25
Status quo	26
Problem definition.....	27
Opportunities to improve ETS forestry accounting settings.....	29
Objectives	31
Options and impact analysis	33
Averaging accounting eligibility proposals	37
1. Should everyone that registers new forests in the ETS use averaging accounting?	37
2. ETS accounting options for post-1989 existing forests (assumes all new forests use averaging accounting)	41
3. ETS averaging accounting transition options for post-1989 existing forests.....	47
4. Slower emissions unit (NZU) repayment options for post-1989 existing forests.....	47
Averaging detailed design proposals.....	49
5. From which date should new forests that register in the ETS use averaging accounting?	49
6. Calculating the long-term average carbon stock in forests	51
7. Converting a forest's long-term average carbon stock into a long-term average carbon stock age?	51
8. How should a change to the long-term average carbon stock age in regulations be applied to existing participants?	55
9. Ongoing reporting	57
10. How far back can a participant claim emissions units (NZUs) on entry into averaging?	59
11. Should the Government provide the international harvested wood products accounting value to the domestic forestry sector?.....	60
12. Should participants with post-1989 forests be liable for temporary adverse event emissions?...	65
13. Should post-1989 forest owners be able to use to planting to offset deforestation emissions? ..	67
Consultation (see consultation table in appendix 6 for stakeholder views).....	70
Implementation.....	71
Summary of conclusions and recommendations	72
Monitoring, evaluation and review	73
Appendices.....	74

Purpose

- 1 This draft Regulatory Impact Assessment (RIA) provides the Minister of Forestry and the Minister for Climate Change with analysis on a set of New Zealand Emissions Trading Scheme (ETS) forestry accounting proposals for public consultation.
- 2 In December 2017 Cabinet noted that officials are progressing work on forestry averaging and harvested wood products (HWP) accounting proposals to address issues raised during a recently completed review of the ETS (2015-mid 2017).
- 3 MPI is solely responsible for the analysis and advice provided in this draft RIA, except as otherwise explicitly indicated.

Limitations

- 4 This draft RIA includes analysis based on research, modelling, and consultation. Consultation material is limited to submitter views on issues with the ETS forestry settings and high level HWP and averaging accounting proposals. Officials have tested the detailed proposals contained in this draft RIA with relevant Government agencies and an expert forestry sector stakeholder group. Officials' ability to evaluate the size of the impact of the proposals is difficult, in some cases, as it depends on forest owner behaviour, as well as IT system and process changes which are still being planned (alongside the other ETS forestry package proposals).¹⁸
- 5 A number of assumptions have been made to undertake modelling (of ETS forestry emissions units allocations and surrenders and to determine forestry's likely contribution to New Zealand's international climate change targets).¹⁹ A detail description of the model used, assumptions and research completed is contained within Appendix 1. Assumptions used are based on a combination of external independent research, analysis and expert opinion.
- 6 Some modelling cannot be completed until after consultation. For instance, in cases where the likely uptake of the option depends on the level of stakeholder support (which is unclear). Additional research, analysis and modelling will also be needed to further assist our understanding of the costs and impacts on the New Zealand economy and the environment. ETS participant impact analysis was limited by restrictions on availability and use of participant specific data (data was aggregated and anonymised to protect privacy).
- 7 This draft RIA was developed under time constraints. The Minister of Forestry and the Minister for Climate Change intend to submit it to Cabinet alongside a decision paper on ETS forestry proposals for consultation in August/September 2018. This timing enables the Minister for Climate Change to fulfil his intention of making changes to the New Zealand Emissions Trading Scheme through a Climate Change Response Amendment Bill by the end of 2019 (CAB-17-MIN-0547.01 refers).

¹⁸ The ETS forestry package includes additional operational improvements and a proposal to replace the Permanent Forest Sink Initiative with a permanent forest category in the ETS.

¹⁹ This included using national estimates to project expected ETS participation and de-registration rates; future new forest planting, species composition, deforestation and harvesting rates and ages, average forest carbon storage at different tree ages, tree growth rates, and levels of compliance.

Scope and focus of proposals in this RIA

- 8 This draft RIA proposes a set of ETS forestry accounting changes to increase afforestation incentives, better enable the ETS to drive mitigation in line with climate change targets, and encourage planting “the right tree, in the right place, for the right purpose” (this is the goal of the One Billion Trees programme).
- 9 The proposals aim to address forestry accounting issues for ETS participants (participants) with forests first established after 1989 (post-1989 forests), and in particular people intending to plant new forests. This is important for climate change mitigation, as they increase the size of New Zealand’s forestry carbon sink.²⁰
- 10 The proposals have a particular focus on making the settings work for small forest owners who have indicated that the current rules are too complex and financially risky. Much of the additional land suitable for forestry is expected to be in smaller blocks, which could attract investment interest from people who are not forestry or ETS experts (e.g. farmers).
- 11 The proposals consider the need to support the Government’s climate change agenda. This includes:
 - its target to reduce New Zealand’s emissions to 30 per cent below 2005 levels by 2030; and
 - the proposed Zero Carbon Bill to establish a new emissions target in legislation and institutions to provide certainty about New Zealand’s long-term emissions goals (i.e. out to 2050).
- 12 These proposals are designed to work alongside the other ETS forestry package changes (contained in the other two draft RIA in this document) and complement the other related ETS review work streams, such as improvements to the unit supply framework, and wider ETS operational and technical improvements (including governance, and the compliance regime).
- 13 The draft RIA proposals are also consistent with the Government’s related environmental and economic and cultural priorities, such as:
 - a comprehensive programme to plant one billion trees over the next ten years;
 - successful implementation of the National Environmental Standards for Plantation Forestry (NES-PF) to maintain or improve the environmental outcomes associated with plantation forestry activities, including reduced erosion and cleaner waterways;
 - developing thriving regions, with a particular focus on improving employment opportunities;
 - improving biodiversity outcomes, including developing healthy soils; and
 - Māori development and being a responsible treaty partner.

Out of Scope

- 14 This draft RIA only considers proposals that relate to the problems identified with the forestry ETS regulatory settings (i.e. changes to the accounting rules under the Climate Change Response Act 2002 and its associated regulations). Other Government work programmes such as One Billion Trees, Wood First, and Te Uru Rākau’s ongoing forestry work programme are developing related non-regulatory forestry sector proposals. For example, the One Billion Trees programme is considering options such as grants and joint ventures to incentivise afforestation.

²⁰ Processes that removes carbon dioxide from the atmosphere and stores the carbon.

Status quo

ETS forestry current carbon stock change accounting approach

- 15 The current ETS forestry accounting approach is based on the method used to account for the contribution New Zealand forests made to climate change mitigation under the first commitment period of the Kyoto Protocol. It recognises changes in carbon stored in forests over the life of a forest.
- 16 This carbon stock change accounting approach results in the Crown providing emissions units (NZUs) to participants for increases in carbon stocks in their forest as it grows within a Mandatory Emissions Reporting Period (MERP). It also requires them to repay (surrender) a large proportion of these NZUs each time an event occurs where it is deemed forest carbon will be released to the atmosphere. Key emissions events include harvest, deforestation, and although less frequent, adverse events.
- 17 A large proportion of New Zealand's plantation forest estate is used for clear fell production (cutting down all of the trees in an area) which has regular cycles of planting, growing, harvesting, and replanting.

Figure 1 below shows an example of how a production forest would be allocated and required to surrender NZUs under the current carbon stock change accounting approach.²¹



Note 1: Generalised production forest carbon stock change accounting diagram. Shows the relationship between carbon dioxide removed from the atmosphere over time, the amount 'instantly emitted' upon harvest and the post-harvest residue left to decay over time.

Nationally Determined Contribution (NDC) accounting changes

- 18 From 2021, New Zealand will use averaging accounting to determine the contribution that post-1989 forests make to future climate change targets under the Paris agreement (including the 2030 target). This means, at an international reporting level, New Zealand will no longer need to account for emission liabilities at the point of harvest. Instead averaging accounting calculates the long-term average carbon stock of New Zealand's forests over long periods that include harvests. New Zealand will continue to account for any emissions upon deforestation. The modified approach better accommodates the cyclical nature of New Zealand's fast-

²¹ Note that this graph is similar to but differs from the "saw tooth" diagram shown in the ETS forestry package consultation document. This diagram shows actual likely NZU allocations and surrenders, whereas the "saw tooth" diagram which appears later in the document is indicative and shows forest growth up to the "long-term average carbon stock" of a forest.

growing production forests and aims to ensure only long-term permanent increases to our forest carbon sink count towards New Zealand's climate change targets.

Problem definition

Emissions liabilities at harvest

- 19 One of the major forestry issues identified as part of the ETS review which concluded in the middle of 2017, was that financial risk, high reporting requirements, and complex calculations associated with accounting for emissions at harvest, reduce incentives to enter the ETS for forestry and establish new forests.

Risky returns due to harvest liabilities

- 20 Participants with forests registered in the ETS that were established post-1989 can face significant financial risk if they sell emission units (New Zealand emissions units - NZUs) which they will need to surrender to the Crown at harvest. Any shortfall must be met, often by buying NZUs from the New Zealand carbon market of which the spot price varies overtime.
- 21 If the carbon price were to rise²², participants who sell their NZUs when the price is relatively low might need to spend significantly more buying NZUs on the spot market at harvest to fulfil their surrender obligation to the Crown.
- 22 This financial risk is particularly an issue for owners of small forests in the ETS, as they are less likely to have funds available to buy the NZUs needed to cover their surrender obligations (or have a business model where they hedge through the carbon market).²³
- 23 As a result many current participants, particularly those that have small forests, hold on to their NZUs to ensure they can cover their harvest liabilities.²⁴ This reduces the revenue which could have been available to them from trading NZUs, which reduces the overall incentive the ETS provides for afforestation.

High complexity and reporting requirements

- 24 Harvest liabilities impose a high compliance burden on participants. They must actively monitor forest growth and expected harvest liabilities over the life of the forest, even when management practices have not changed.
- 25 Te Uru Rākau puts significant effort into verifying the accuracy of emissions returns and correcting them as a significant portion of participants fail to follow the required carbon accounting methodologies. Even participants that put in significant effort and own large forests often are unable to understand or correctly comply with the rules.

²² The Productivity Commission has projected in their recent draft report that a higher carbon price (i.e. NZ\$75 to NZ\$200 a tonne of CO₂e) would be required to incentivise domestic emission reductions to meet New Zealand's potential future climate change targets (such as net zero by 2050).

²³ This was a comment made in Gibbons Holdings Limited's submission during the ETS review consultation (00130); New Zealand Forest Owners Association (00039) also made a similar submission.

²⁴ Provisional data from the EPA suggests that around 70 per cent of all current post-1989 participants who own less than 50ha of forest land have transacted less than 25 per cent of their units, compared to only around 20 per cent of those that own 500ha or more forest land.

ETS participation and afforestation

- 26 Annual New Zealand afforestation rates increased modestly when the ETS and the Afforestation Grant Scheme (AGS) was introduced in 2008, but have now returned to historic lows even though the price of carbon has risen to around \$21 a tonne of carbon dioxide (CO₂e²⁵). Since 2012 the rate of new forest planting has dropped to pre-ETS levels. This is likely due to the relative profitability of other forms of land use, high rural land prices, and up until more recently, the low price of carbon in the ETS combined with the long lead in following any new planting decisions based on the increasing price.²⁶
- 27 The number of participants that choose to have their eligible forests in the ETS has been declining since the end of 2012.²⁷

ETS forestry and international accounting misalignment from 2021

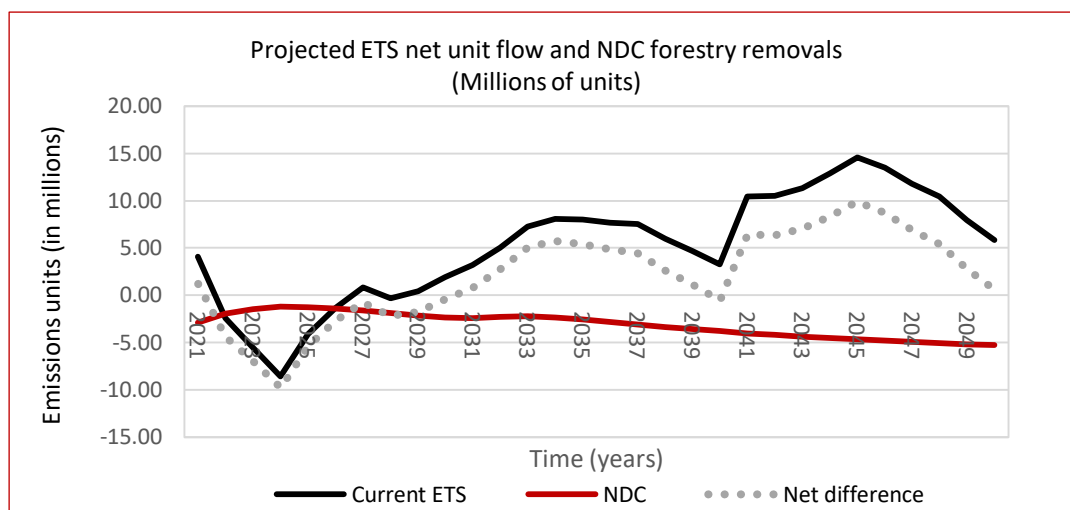
- 28 From 2021, there will be a significant misalignment between the ETS accounting approach (used for NZU allocations and surrenders) and the NDC international accounting approach (used to determine the contribution New Zealand forests make to climate change targets).
- 29 The accounting misalignment means allocations and surrenders of NZUs to participants will no longer reflect the level of effort New Zealand has to make to meet its climate change targets. It could mean that the supply of NZUs to the ETS market will be larger than the amount of carbon dioxide removed from the atmosphere by forestry as recognised in New Zealand's NDC. This could undermine the ability of the ETS to provide an appropriate price signal (through the NZU carbon price) and incentivise climate change mitigation (from New Zealand's emitting sectors) in line with climate change targets.
- 30 The Crown would also face significant fiscal risk when more NZUs are supplied in the ETS, compared to forestry carbon emissions removals that are recognised as contributing towards New Zealand's climate change targets. This is because increased supply of NZUs in the ETS will lead to increased emissions unless actively managed. This could have a direct impact on fiscal costs if the Government chose to purchase international emissions to meet climate change targets.

²⁵ CO₂e, or carbon dioxide equivalent, is a standard unit for measuring carbon footprints. The idea is to express the impact of each different greenhouse gas in terms of the amount of CO₂ that would create the same amount of warming.

²⁶ Based on national afforestation data from 1990 – 2016 by area (gross), year established and registered within the ETS. Sourced from the 2016 GHG NIR submission. Gross area includes non-forested areas and post-1989 forest that was later deforested.

²⁷ ETS registered post-1989 forest as at April 2018 from MPI administrative data.

Figure 2 below is a time series graph which shows projected forestry emissions and carbon removals under New Zealand's NDC's compared to ETS NZU flows.



Note 1: NDC - negatives (-) indicate net removals from forestry within the NDC and from 2031 - 2050. New Zealand's NDC credits afforestation and reforestation up until the long-term average carbon stock is reached.

Note 2: Current ETS - negatives (-) represent net ETS revenue to the Crown; positives represent net ETS expense to the Crown.

Note 3: Excludes forest emissions and emissions from the One Billion Trees programme.

Note 4: Includes existing post-1989 forests and projected afforestation (assume gradual afforestation increase to 15,000 ha per year by 2030).

- 31 The impacts of this misalignment will vary over time. In the short term (2021-2030), many currently registered participants will be required to surrender NZUs to the Crown under the current ETS accounting rules as their forests are coming up to harvest. Current estimates are that these surrenders would result in the Crown receiving around a 15 million net unit revenue over the 2020s.
- 32 Over the long term (2031 – 2050) the current ETS settings would continue to remain out of sync with how New Zealand forest carbon is recognised internationally and this would result in potential costs to the Crown (the Crown is projected to allocate 94.4 million more NZU's than what is recognised internationally over 2031 - 2050). Unless managed, the ongoing misalignment could undermine the ability of the ETS to reduce emissions, because the carbon price signal would not reflect the level of difficulty required for New Zealand to meet climate change targets.

Opportunities to improve ETS forestry accounting settings

Averaging

- 33 The Government has an opportunity to consider aligning the current ETS forestry accounting approach with the averaging accounting approach it is adopting to determine the contribution New Zealand forestry makes towards meeting its 2030 target.²⁸
- 34 Introducing averaging accounting into the ETS for forestry, would remove the need to account for emission liabilities at harvest. This could significantly increase incentives for people to establish new forests because:

²⁸ Note that an alternative proposal for permanent forest ETS accounting treatment, where a declaration of permanence is given is proposed in a separate regulatory impact assessment within this package ("Creating a Permanent Post-1989 forest activity in the Climate Change Response Act 2002").

- foresters would be able to sell a greater proportion of the NZUs they receive for carbon stored in their forests at a lower risk, increasing the financial return from establishing new forests; and
- it reduces ETS forestry complexity (simpler to understand the rules) and compliance (less ongoing reporting and monitoring requirements); and
- it could improve the ability of the ETS to drive mitigation in line with how New Zealand accounts for its climate change targets.

Harvested Wood Products (HWP) accounting value

- 35 From 2021, the new international averaging accounting approach will include HWP accounting. HWP accounting recognises that harvested wood products store carbon and release emissions over time (when they are converted into other uses or decay). This approach more accurately reflects the actual timing of emissions following harvest compared to the current instant oxidation approach, which assumes the majority of forest carbon is emitted upon harvest.
- 36 There is an opportunity for the Government to consider providing the value the Crown receives from HWP accounting to the domestic forestry sector. For instance, it could be allocated to participants as additional NZUs. Doing so could encourage higher participation and rates of new forest planting.
- 37 Alternatively, the Government could develop an industry good research and development fund to encourage the forestry sector to develop longer lived harvested wood products. This has the potential to increase the HWP value to the Crown (as a significant proportion of current harvested wood products are short-lived²⁹), and could assist the development of the wood processing sector.

Temporary adverse events accounting

- 38 The current ETS forestry adverse event rules reflect the large impact these events have for forestry emissions reporting under the international Kyoto Protocol accounting rules. Participants with post-1989 forests are currently liable for emissions from temporary adverse events such as wind throw (trees uprooted or broken by wind). As a result, these participants either take on the financial risk of surrendering NZUs to the Crown or pay for adverse event insurance. This financial risk can discourage participation and reduce the ability of the ETS to encourage new forest planting.
- 39 The changes to the international accounting rules (in New Zealand's NDC averaging accounting method) essentially smooths out carbon emissions and removals over the life of New Zealand's forest estate. Therefore, from 2021 onwards, temporary adverse events are likely to have a small marginal impact on New Zealand's ability to meet its climate change targets (and fiscal impact for the Crown). This accounting change provides an opportunity to also change the ETS forestry adverse event accounting rules.
- 40 Removing emission liabilities for temporary adverse events could reduce financial pressure for participants, and encourage further participation and afforestation.

²⁹ Around 60 per cent of New Zealand's harvested wood is exported overseas as logs which are converted into short-lived products. 77 per cent of New Zealand's domestic wood processing results in longer-lived wood products, the other 23 per cent is converted into short-lived products such as pulp, paper and packaging materials.

Post-1989 forest offset planting

- 41 From 2021, the emissions impact of post-1989 forest land deforestation will be able to be offset under New Zealand's international (NDC) accounting approach. There is an opportunity to consider extending the current (and potentially improved) offset planting rules for pre-1990 forests in the ETS to post-1989 forests.³⁰
- 42 Currently, post-1989 forest owners must surrender NZUs to the Crown when they deforest their ETS registered forests, even if they offset the deforestation emissions. This can act as a barrier to ETS participation as forest owners feel locked into having particular areas of land in forestry.
- 43 Introducing offset planting (planting a carbon equivalent forest that will store as much or more carbon than the forest which has been deforested) for post-1989 forests will reduce the risk attached to registering in the ETS, which is expected to encourage participation and afforestation.

ETS forestry IT system upgrade

- 44 The cost and effort to change the ETS forestry accounting rules will be lower if they are implemented soon, as Te Uru Rākau is currently planning a major upgrade to its ETS forestry operational processes and IT systems. Making changes to the ETS forestry accounting rules alongside these updates will result in significantly less cost and effort than if they were separately changed (see the Implementation section for more information and Appendix 2 for a list of operational ETS roll out actions).

Objectives

- 45 The overarching objective of New Zealand's ETS is to help the Government meet its climate change targets. The Climate Change Response Act 2002 states the purpose of the ETS is to assist New Zealand to meet its international obligations under the United Nations Framework Convention on Climate Change and the Kyoto Protocol, and to reduce greenhouse gas emissions below business-as-usual levels.

ETS review objectives

- 46 Three broad objectives guided the recent review of the ETS. They were to:
 - i. ensure the ETS helps New Zealand meet its international obligations cost effectively;
 - ii. ensure the New Zealand economy is well-prepared for a strengthening international response to climate change, and potentially higher carbon prices; and
 - iii. allow the ETS to evolve with these changing circumstances, and particularly with respect to the framework provided by the new climate change agreement.
- 47 These objectives reflect the need to update the ETS to ensure it is fit for purpose to drive climate change mitigation under the Paris agreement. They also aim to improve domestic confidence in the scheme, as participants have expressed concern around regulatory uncertainty. The proposals in this draft RIA should be consistent with these objectives.

³⁰ The draft RIA for the other forestry package operational improvements (*Emissions Trading Scheme: Permission to consult on Forestry Sector Operational Improvements*) suggests making changes to the ETS offsetting rules that apply to forests established pre-1990 to ensure they can be used more effectively.

Specific forestry package objectives and criteria

48 The table below contains specific objectives and criteria relevant for developing proposals that address the forestry package issues identified as part of the recent ETS review.

ETS forestry package objectives	Improve ETS (rotational and permanent) forestry incentives	Improve ability of the ETS to effectively meet climate change targets	Improve ETS operations	Consistent with New Zealand's broader climate change programme
Criteria – How objectives are judged	<ul style="list-style-type: none"> -Promotes afforestation of both rotational and non-harvested forests -Encourages forest preservation (discourages deforestation) -Encourages extra carbon storage in forests 	<ul style="list-style-type: none"> -Minimises fiscal cost to the Crown from meeting climate change targets -Supports alignment between ETS unit supply and how NZ will meet its climate change targets. -Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups 	<ul style="list-style-type: none"> -Improves administrative efficiency -Reduces complexity and cost for ETS participants -Reduces administrative cost to the Crown -Promotes accuracy in reporting by ETS participants -Supports ability to identify and manage non-compliance 	<ul style="list-style-type: none"> -Provides durable regulatory certainty and predictability -Reflects the Crown's responsibilities as a Treaty partner -Supports economic growth and social resilience -Supports international reputation -Maintains integrity of wider ETS -Avoids perverse incentives and unintended consequences

- 49 *Improve ETS (permanent and rotational) forestry incentives* - this aims to ensure the ETS forestry accounting proposals drive financial incentives to establish new forests and promotes increasing the amount of carbon stored in forests. Doing so will help New Zealand to be well placed to meet its current and future international climate change commitments. This includes incentivising planting of all forest species.
- 50 *Improve the ability of the ETS to effectively meet climate change targets* – this aims to ensure the Government can use the ETS to drive climate change mitigation in line with international climate change targets. It includes minimising the potential cost (fiscal risk) associated with significant misalignment between NZU allocations and surrenders and how New Zealand accounts for its international climate change targets. It also reflects the need to maintain an appropriate level of risk and burden sharing between the Crown, participants and related sectors and groups. In relation to this, we include a focus on ensuring participants do not consider the proposals to have undermined their property rights (NZUs can be considered to be a type of property).
- 51 *Improve ETS operations* – this aims to reduce or prevent participants from being subject to unnecessary compliance costs, and as a result encourage more people (particularly smaller foresters) to enter and remain in the ETS. It includes addressing concerns around the current ETS forestry operational settings being too complex and costly to comply with, and reducing or minimising administrative burden.
- 52 *Consistent with NZ's broader climate change programme* – this reflects the need to deliver on the Government's climate change agenda and wider wellbeing priorities (i.e. environmental,

economic, and cultural wellbeing)³¹ It includes ensuring the proposals will maintain regulatory certainty and market predictability and that they fit in effectively with wider changes to the ETS. It involves ensuring New Zealand is well prepared to transition to a low emissions economy, by supporting economic and Māori development (and flexible land use). The proposals also aim to encourage people to place the right trees, in the right place, for the right purpose. For instance, to prevent soil erosion and improve water quality. It also involves testing the proposals to ensure the proposals have integrity and support our international commitments.

Options and impact analysis

- 53 This section considers proposals to address the issues and opportunities outlined in this draft RIA, providing impact analysis, and recommendations on consultation for each proposal. The proposals appear in the order outlined in the tables below. The suggested proposals for consultation are outlined in the middle column. In many instances a number of choices are provided for consultation (to assist in assessing the relative impacts of the options and ensure policy coherence across the ETS forestry package). Other proposals that officials considered but discarded are contained in the column on the right. The reasons for why they were discarded can be found in Appendix 3.
- 54 An impact table is included at the end of each issue/opportunity section which compares the proposal(s) to the status quo. All relevant impacts (as per the criteria) are indicated under each forestry package objective. Detailed explanations are included above the tables for some impacts as necessary. Interlinkages and contingencies between the proposals are highlighted where relevant.
- 55 The fiscal (NZU surrender and allocation) impacts are given in millions of NZUs to ensure they remain accurate and can be used to determine cost if the carbon price changes. For instance, with a carbon price of \$21 a 10 million NZU net revenue figure would equate to \$210 million total Crown revenue. The impacts are presented as short term (2021-2030) and long term (2031-2050). These timeframes were chosen as MPI considers they will assist decision makers – relate to the 2030 target, and a potential 2050 target (still being considered).³² Netted values represent the net impact of NZU surrenders against extra carbon sequestration over the period.

³¹ Objectives and criteria have been chosen in reference to other relevant RIA and options analysis i.e. the ETS unit supply RIS for stage II of the 2015/16 review. They are identical to those used in the other two RIA in this document.

³² The ETS forestry package Cabinet paper also indicates the fiscal costs over the Treasury's 4 year forecast periods.

Averaging accounting eligibility proposals		
Issue/opportunity	Recommended/viable options	Discarded options
1. Should everyone that registers new forests in the ETS use averaging accounting?	1.1. People who register new forests in the ETS are required to use averaging accounting.	Status Quo - Anyone who registers forests in the ETS is required to use carbon stock change accounting. 1.2. Enable anyone who registers newly established forests in the ETS to use either averaging or carbon stock change accounting.
2. ETS accounting options for post-1989 existing forests (assumes all new forests use averaging accounting)	2.1. Participants are required to continue using carbon stock change accounting for their post-1989 existing forests. 2.2. Participants are required to use averaging accounting for their post-1989 existing forests. 2.3. Participants have a one-off one-way choice to use averaging or carbon stock change accounting for their post-1989 existing forests.	Status quo - all participants use carbon stock change accounting. Participants can at any time choose to use either averaging or carbon stock change accounting for their post-1989 existing forests.
3. ETS averaging accounting transition options for post-1989 existing forests	3.1. Participants with post-1989 existing forests are required to transition to averaging accounting at the MERP following legislation passing/systems being built.	3.2 Allowance to earn NZUs on the second rotation. Averaging accounting transition not at a MERP.
4. Slower emissions units (NZU) repayment options for post-1989 existing forests	4.1. People transitioning their post-1989 existing forests to averaging accounting can surrender NZUs to the Crown at the transition MERP and the next MERP (preferred if averaging accounting optional for existing forests). 4.2. Same as 4.1 but can also apply for a further NZU repayment extension (preferred if averaging accounting required for existing forests).	4.3. NZU repayment compensation. 4.4. All participants transitioning their post-1989 existing forests to averaging can surrender NZUs when harvest/clear their forests.

Averaging detailed design proposals		
Issue/opportunity	Recommended/viable options	Discarded options
5. From which date should new forests that register in the ETS use averaging accounting?	<p>5.1. All forests established after averaging accounting legislation is passed are new forests (preferred if averaging accounting is optional for existing forests).</p> <p>5.2. All new forests included in a transition MERP could use averaging accounting (preferred if can fit in with proposed mini-MERP).</p>	<p>5.3. All forests established after Cabinet makes in principle decisions are new forests.</p> <p>Any date prior to the Government making a clear signal to introduce averaging accounting.</p> <p>Providing participants with a choice of the date.</p>
Calculating the long-term average carbon stock		
6. Calculating the long-term average carbon stock in forests	6.1. Current forest carbon calculation approach and ability to make regulation changes.	6.2. Any change to the current carbon calculation approach prior to averaging accounting implementation (including only using a participant specific approach or only using default tables).
7. Converting a forest's long-term average carbon stock into a long-term average carbon stock age	<p>7.1. A participant's forest's long-term average carbon stock age is a default age based on forest type.</p> <p>7.2. A participant's forest's long-term average carbon stock age is set by age bands based on forest type and rotation length.</p>	7.3. Require participants using averaging accounting to use default tables based on an annual carbon stock increment (i.e. 10 per cent of mean annual increment).
8. How should a change to the long-term average carbon stock age in regulations apply to existing participants?	<p>8.1. Participants who have forests above the long-term average carbon stock age will not be required to surrender or able to earn more NZUs due to a change in the regulations (preferred).</p> <p>8.2. Participants using averaging accounting will repay or earn NZUs due to changes in the long-term average carbon stock age set in regulations.</p> <p>8.3. Participants will earn up to the long-term average carbon stock age set in regulations when they register.</p>	8.4. Any options where the long-term average carbon stock age is not set in regulations.
9. Ongoing reporting	<p>9.1. Participants only have reporting requirements each MERP until their forest reaches its long-term average carbon stock age and upon deforestation.</p> <p>9.2. Participants have detailed reporting requirements each MERP up until their forest reaches its long-term average carbon stock age, then lighter reporting requirements until deforestation (preferred).</p>	<p>9.3. Participants are only required to comply with detailed reporting requirements when they deforest.</p> <p>Status quo - participants are only required to comply with detailed reporting requirements every MERP.</p>
10. How far back can a participant claim emissions units on entry into averaging?	10.1. A participant can only claim emissions units from the beginning of the latest MERP.	10.2. A participant can claim emissions units back to 2008 or establishment of their forest.

Harvested Wood Products proposals		
Issue / opportunity	Recommended/viable options	Discarded options
11. Should the Government provide the international harvested wood products accounting value to the domestic forestry sector?	11.1. The HWP accounting value will be reflected as emissions units to participants using averaging accounting. 11.2. An industry good research and development fund will be established to encourage development of longer lived harvested wood products.	11.3. The HWP accounting value will be reflected as emissions units to participants using the carbon stock change accounting approach.

Temporary adverse events proposal		
Issue / opportunity	Recommended option	Not recommended options
12. Should participants with post-1989 forests be liable for temporary adverse event emissions?	12.1. No temporary adverse event liability for post-1989 participants using averaging accounting – pause and begin earning NZUs again once reach carbon stock at time of event.	12.2. No temporary adverse event liability for post-1989 participants using averaging accounting - keep earning NZUs. Status Quo - participants with post-1989 forests have temporary adverse events emissions liabilities.

Deforestation offsetting proposal		
Issue / opportunity	Recommended option	Not recommended option
13. Should post-1989 forest owners be able to use planting to offset deforestation emissions?	13.1. Enable participants with post-1989 forests that use averaging accounting to use offset planting.	Status quo - participants cannot use offset planting for post-1989 forests.

Averaging accounting proposals

- 56 Officials suggest consulting on a proposal to introduce averaging accounting in the ETS for forestry which clearly outlines who would be eligible, how those eligible would be transitioned, and provides detail on key design settings that would apply to those using averaging accounting.

Averaging accounting eligibility proposals

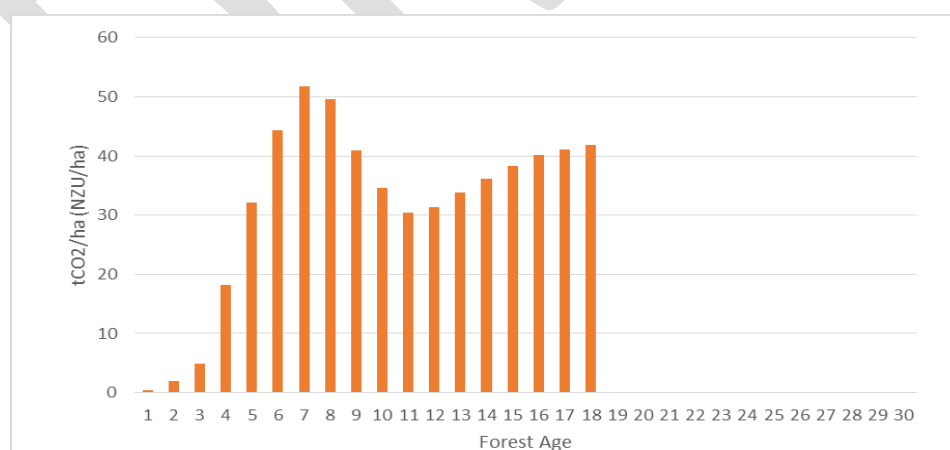
1. Should everyone that registers new forests in the ETS use averaging accounting?

- 57 Officials recommend requiring all people who register new forests in the ETS to use averaging accounting, as it would deliver on all the objectives outlined in this RIA (and not result in any significant negative implications). As indicated earlier there would also be an option to register new forests in a permanent forest category (similar to the current PFSI system).

Option 1.1. People who register new forests in the ETS are required to use averaging accounting

- 58 The averaging accounting rules could apply to people that register newly established forests in the ETS. To be considered a new forest it must be planted on bare land (land that is not forest land - for what is considered forest land refer to Appendix 4). The Crown would provide NZUs to these participants until their forest reaches its long-term average carbon stock. They would only be required to surrender NZUs to the Crown for emissions when they permanently cut down their forest (upon deforestation), or if their forest is managed in such a way that it does not retain its long-term average carbon stock over time (depends on the ongoing reporting requirement options in section 9). Participants establishing new forests would only be able to claim NZUs during their forest's first rotation.

Figure 3 below provides an example that demonstrates how NZUs could be allocated to an ETS participant until their forest reaches its long-term average carbon stock. At that point they would cease to earn NZUs.



Note 1: Shows a production pine forest harvested at age 28 years and a nationally area weighted carbon sequestration rate.

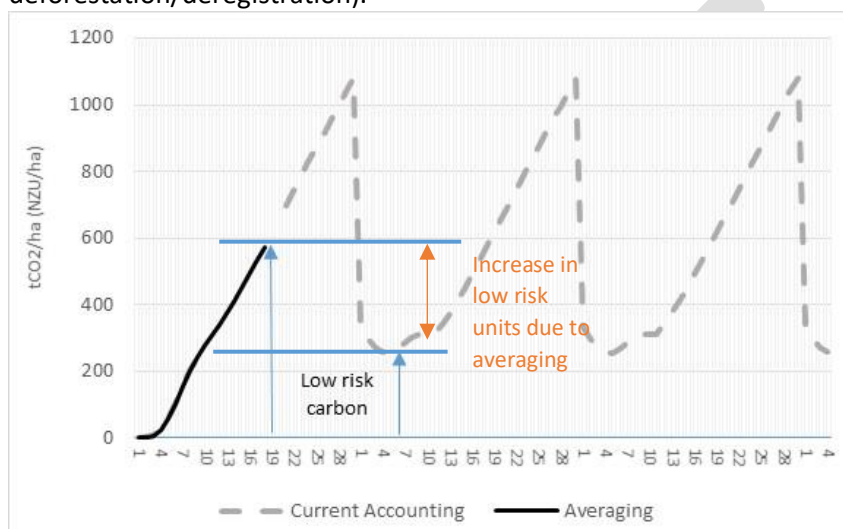
Note 2: Assumes long-term average carbon stock age of 18 (if HWP is included the long-term average carbon stock age could increase entitlement by around three years).

Impact analysis

Objective: Improve ETS (rotational and permanent) forestry incentives

- 59 Removing emissions liabilities at harvest will remove the financial risk ETS participants' face when trading NZUs. This significantly increases the incentive for people to establish and register new forests in the ETS.

Figure 4 below demonstrates that people who establish new forests and register them in the ETS under averaging accounting will have a greater proportion of NZUs which they can trade without risk of being required to surrender them to the Crown at harvest (only upon deforestation/deregistration).³³



Note 1: NZUs issued for a hectare of production pine forest under current and averaging accounting – assuming long-term average carbon stock age of 18.

Note 2: Figures are indicative only and represent a generalised production pine forest harvested at age 28 and replanted assuming similar management practices. Current and future carbon sequestration rates, and management practices are assumed to be similar.

Objective: Improve ability of ETS to effectively meet climate change targets

- 60 As forests remove carbon dioxide from the atmosphere (are a carbon sink), an increase in planting of new forests under averaging accounting will make a significant contribution toward meeting New Zealand's climate change targets. This afforestation will benefit the Crown in terms of forestry's contribution towards New Zealand's NDC.
- 61 Introducing an averaging accounting approach would mean NZU allocations and surrenders for newly established forests registered in the ETS would be much more closely aligned with how contributions from New Zealand forestry are recognised under the international accounting approach (in New Zealand's NDC). This would help ensure the ETS (through the carbon price signal) drives forestry emissions in line with climate change targets and reduce potential fiscal risks to the Crown.

Objective: Improve ETS operations

- 62 Averaging accounting has the potential to significantly reduce the complexity of the ETS for forestry. Removing harvest emission liabilities means Te Uru Rākau's ongoing monitoring and participants' reporting requirements (that exist under the current carbon stock change accounting approach) could be reduced (see proposals in section 9).

³³ A participant can earn NZUs for forest growth up to the forest average in the first rotation only. The values are indicative only. Low risk carbon means the proportion of NZUs that do not need to be repaid to ensure harvest liabilities can be met.

- 63 The transition to averaging accounting could create short term disruption and cost and confusion for Te Uru Rākau and participants. The operational implications of this option will depend on the other accounting eligibility choices and averaging accounting design proposals which are outlined later in the RIA.

Objective: Consistent with New Zealand's broader climate change programme

- 64 Averaging accounting's contribution to new forest planting, particularly in the context of potentially higher carbon unit prices³⁴ will support New Zealand to reach its one billion trees and climate change targets and help New Zealand transition to a low emissions economy.
- 65 The proposal has integrity and supports New Zealand's international commitments by encouraging new forest planting and ensuring ETS accounting reflects long-term carbon impacts accurately.
- 66 Aligning the ETS more closely with our NDC accounting approach may reduce barriers to potential international market linking opportunities (particularly for two-way access to international carbon markets). This is because providing NZUs for activities that do not represent a contribution towards our target (e.g. for second rotation forest growth under status quo approach) could be seen to lack environmental integrity.
- 67 The predicted increase to the rate of tree planting could provide employment and new industry development opportunities (through increased wood supply). It would not impact on the ability of existing forest owners to undertake sustainable harvesting when appropriate. As averaging accounting is a simple approach it could encourage small forest owners to join the ETS, investment in the regions, build economic resilience and support Māori development (by making it easier to invest in multiple revenue streams).
- 68 Averaging accounting is compatible with the accounting option for people who register permanent forests in the ETS (see RIA - Creating a Permanent Post-1989 forest activity in the Climate Change Response Act 2002 below).
- 69 Increased forest planting could improve water quality as sediment, nutrient and micro-bacterial contaminant leaching is lower under forests (both exotic and indigenous) relative to pastoral agriculture. However, planting will need to be supported by appropriate management as sediment is lost at harvest and increased planting can reduce water availability in drier parts of the country.

³⁴ In the recently published draft Productivity Commission report on transitioning to a low emissions economy, it noted that significantly higher carbon prices would be required to drive emissions to future targets.

Objectives	Status Quo – current ETS accounting	1.1 People who register new forests in the ETS are required to use averaging accounting
Improve ETS (rotational and permanent) forestry incentives	0	<p>++</p> <ul style="list-style-type: none"> Removes harvest liabilities and participants receive a greater number of NZUs that can be traded at low risk (around 310 extra NZU per ha), which is projected to significantly increase forestry participation and afforestation incentives.³⁵ Could increase afforestation (estimated increase of 73,500ha/ 102 million additional trees planted over 2021 – 2030).³⁶
Improve ability of the ETS to effectively meet climate change targets	0	<p>++</p> <ul style="list-style-type: none"> In the short and long term the additional afforestation would assist New Zealand to meet its climate change targets. It could increase the contribution forestry makes to New Zealand's international climate change targets by around 8.8 million tonnes CO₂ over 2021-2030 and 82.1 million tonnes CO₂ over 2031 – 2050.³⁷ It aligns ETS and NDC accounting approaches; lowers Crown fiscal risk and helps ensure the ETS drives mitigation in line with climate change targets. Increased afforestation rates could increase Crown fiscal cost (by around 5.7 million NZUs over 2021-2030 and 47 million NZU's over 2031 – 2050).³⁸
Improve ETS operations	0	<p>- short term ++ medium to long term (both contingent on detailed design)</p> <ul style="list-style-type: none"> Is a simpler forestry accounting approach for participants to use and Te Uru Rākau to administer, and reduces need for ongoing reporting. The cost to change to the ETS forestry accounting rules will be lower if implemented alongside planned upgrade to ETS forestry processes and IT systems. But Te Uru Rākau will need additional budget to set up new IT systems and processes and to assist ETS participants to use the new rules. The level of simplicity depends on other eligibility choices (proposals in section 2) and averaging design details proposals (in section 4).
Consistent with New Zealand's broader climate change programme	0	<p>++</p> <ul style="list-style-type: none"> Has integrity and international credibility as encourages additional carbon emissions removals and reflects long-term carbon impacts accurately Aligning the ETS more closely with our NDC accounting approach may reduce barriers to potential international market linking opportunities (particularly for two-way access to international carbon markets). It is compatible with the other ETS forestry package changes such as a new accounting treatment for permanent forests. Averaging accounting will enable the ETS to maximise incentives to sequester additional carbon from forests if the NZU price increases. This could assist the Government to achieve New Zealand's climate change targets. Could have positive economic impacts (e.g. increase employment, provide more options for Māori development and have a positive impact on GDP). Afforestation could drive environmental co-benefits such as reduced erosion and improved water quality, but soil loss at harvest and water availability will need to be carefully managed.
Overall comment	Recommended for consultation. Further analysis on wider impacts needed (i.e. economic and environmental).	

³⁵ Assuming a New Zealand area weighted post-1989 pine growth, a long-term average carbon stock age of 18 for production pine (does not include HWP accounting value –see proposal 11.1). Afforestation rates from including averaging into the ETS are based on research and analysis conducted by the University of Canterbury in 2017. Afforestation rates and the afforestation incentive are a function of the long term average.

³⁶ Estimated increase from 122,500 ha under current ETS settings to 196,000 ha under averaging accounting assuming an 18 year average. Assumes 70 per cent exotic planted at 1000 stems/ha and 30 per cent native/regeneration/reversion planted at 2300 stems/ha – see appendix 1 for more information.

³⁷ An estimated increase from 14.3 to 23.1 million tonnes CO₂ over 2021-2030 as a result of higher afforestation. Assumes the same NDC rules apply beyond 2030

³⁸ Estimated increased Crown allocation from 9.5 to 15.2 million NZU's over 2021-2030 and 78.4 to 125.4 million NZU's over 2030-2050. Assumes around 70 per cent of afforested area is registered into the NZ ETS.

2. ETS accounting options for post-1989 existing forests (assumes all new forests use averaging accounting)

- 70 The choice of accounting approach for existing forests registered in the ETS is finely balanced; requires making trade-offs between short and long term administrative effort, participant risk and burden sharing, compliance costs, and effectiveness of climate change mitigation. Therefore, officials suggest public consultation on three options for existing forests; require continued use of carbon stock change accounting; require use of averaging accounting; enable a one-off and one-way option to use either carbon stock change or averaging accounting.

Option 2.1. Participants are required to continue to use carbon stock change accounting for their post-1989 existing forests

- 71 Participants with post-1989 existing forests could be required to continue to use the current accounting approach (but newly established forests would use averaging accounting).

Option 2.2. Participants are required to use averaging accounting for their post-1989 existing forests

- 72 Participants with post-1989 existing forests could be required to transition to averaging accounting. They would surrender any NZUs they had received for forest growth above the long-term average carbon stock of their forest.³⁹

Option 2.3. Participants have a one-off one-way choice to use averaging or carbon stock change accounting for their post-1989 existing forests

- 73 Participants with post-1989 existing forests could be given a one-off, one-way choice to use either averaging or carbon stock change accounting. This would include surrendering any NZUs they have received for forest growth above the long-term average carbon stock of their forest.

Impact analysis

Objective: Improve ability of the ETS to effectively meet climate change targets

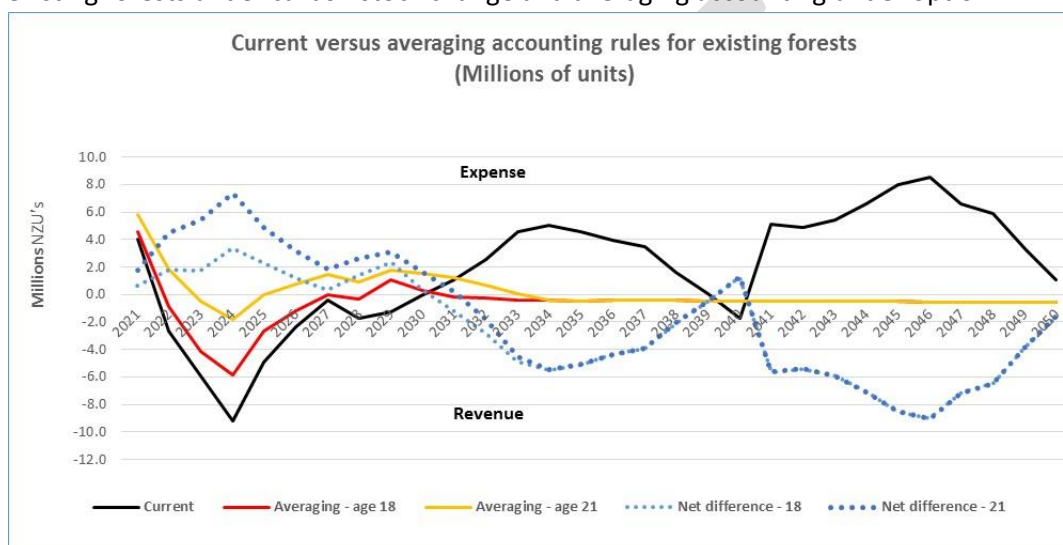
- 74 Under option 2.1 the Crown would be in a positive net fiscal position in the short term, as many existing forests are likely to be harvested (and required to surrender NZUs to the Crown). However, in the long term the Crown could face a significant fiscal cost.⁴⁰ Allocating more NZUs than New Zealand receives recognition for when meeting its international climate change targets could undermine the ability of the ETS to incentivise the right level of emissions reductions to meet New Zealand's climate change targets. This could create a significant fiscal risk, as in order to meet its targets, the Crown might need to pay for any shortfall in emissions reductions.
- 75 Options 2.2 and 2.3 would better align NZU flows with the contribution New Zealand forests make towards climate change targets in the long term. To get to this end point, these options would remove the requirement for participants to surrender NZUs to the Crown when they harvest that would have applied during the 2020s.

³⁹ Bringing forward their surrender requirement ensures the Crown has allocated and received comparable amounts of NZUs from all ETS forestry participants that become subject to the new averaging approach.

⁴⁰ Projected revenue to the Crown of 24.6 million NZUs from existing forests between 2021 and 2030 from maintaining the current approach, while a projected expense to the Crown of 80.6 million NZUs between 2031 and 2050.

- 76 Removing these harvest liabilities (under options 2.2 and 2.3) would create a significant impact on overall supply and demand in the ETS in the short term. It would free up NZUs that would have been associated with harvest liabilities for existing forests. These NZUs could be used by other participants (in all of New Zealand's different emitting sectors) and would not be associated with forestry emissions removals. The Government would need to consider this when making wider ETS decisions and it could have distributional impacts. For example, these units might impact decisions about the volume of NZUs the Government can sell to the market by auction.⁴¹

Figure 5 below demonstrates the impacts outlined above. It compares ETS unit flows for existing forests under carbon stock change and averaging accounting under option 2.2.



Note 1: Negatives (-) represent net ETS revenue to the Crown. Positives (+) represent a net ETS expense to the Crown. Expense represents an entitlement for ETS participants/NZU allocation to ETS participants.

Note 2: Only includes forests planted between 1990 and 2017 and subsequently registered in the NZ ETS.

Note 3: Assumes averaging accounting long-term average forest carbon stock age 18 or 21

Note 4: Averaging has been applied to all existing production forests in the modelling

- 77 The difference between the yellow and red lines in figure 5 shows the significant impact of the long-term average carbon stock age of forests in the ETS. A higher average age would more closely align the ETS to how carbon sequestration is recognised for New Zealand's climate change targets. Section 6 of this draft RIA outlines how the age is calculated, and section 11.1 outlines how the HWP accounting value proposals would significantly increase its size (i.e. from age 18 to 21).
- 78 Under options 2.2 and 2.3, people with existing forests registered in the ETS who transition to using averaging accounting will receive (or not be required to surrender) extra NZUs which can be traded at low risk. The amount of low risk NZUs available to existing forest owners is altered by the size of the long-term average carbon stock age. A higher age would result in more low risk NZUs being provided to existing forest owners moving to averaging accounting. This could make averaging accounting more attractive, but could exacerbate the overall ETS NZU supply impacts discussed in this section.
- 79 Some ETS participants transitioning to averaging accounting will have received NZUs for carbon sequestration from their existing forests that have passed the long-term average carbon stock. Therefore, they would need to surrender NZUs to the Crown when they

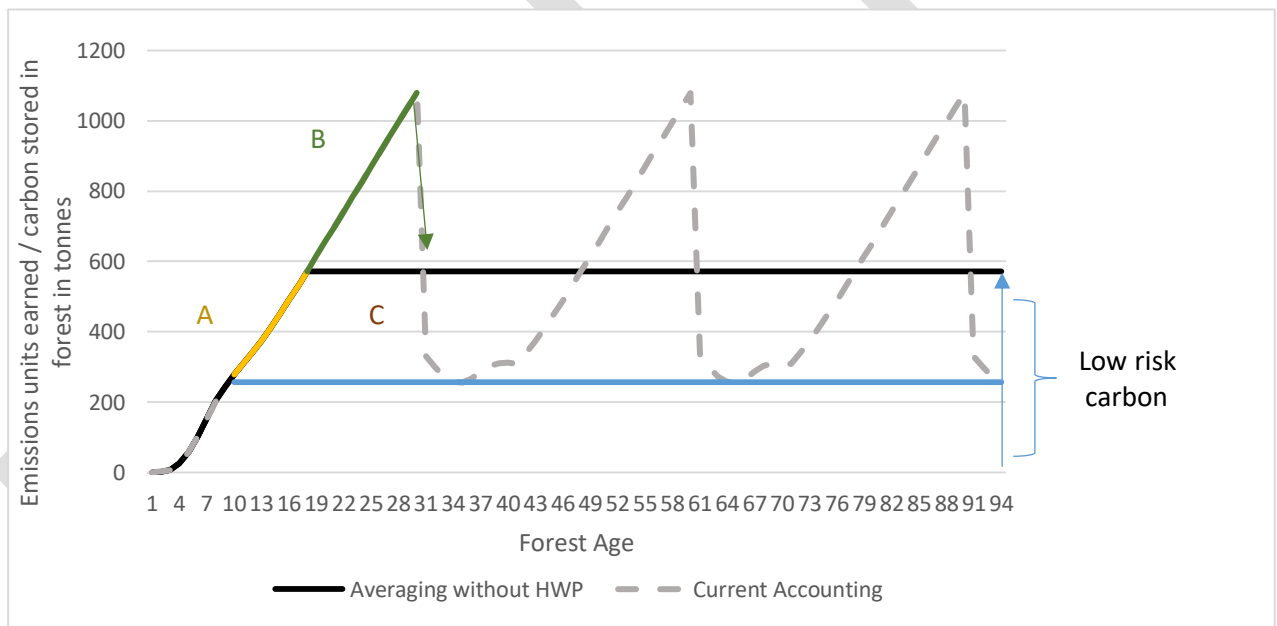
⁴¹ If the Government chose to reduce auction volumes this would have an impact on fiscal costs (as the Crown would receive less revenue from NZU sales).

transition to averaging accounting. There would be a requirement to surrender these NZUs (and more) at harvest anyway, but the transition may bring this obligation forward which could have a significant impact, for instance:

- property rights may be affected (if NZU surrenders are required quickly);
- it could alter some existing forest owners' business plans (as they may have planned on using revenue from future NZU sales or revenue from harvesting, or already sold or forward sold their NZUs); and
- it could undermine some existing forest owners' business models (a number of participants who own large areas of forest land have created hedged carbon trading portfolios by investing in a variety of forest types of differing ages).

80 All of the points above could create significant financial pressure for participants. As such, slower NZU repayment options for existing forest owners transitioning to averaging accounting are outlined in the next section.

Figure 6 below demonstrates the NZU surrender requirements for participants with existing forests moving to averaging accounting. Those at point A would continue to earn NZUs. Whereas, those at point B would be required to surrender NZUs to the Crown. They would stop earning NZUs at point C.



Note 1: Line 'C' represents the long-term average carbon stock age the participant can earn up to.

Note 2: For existing post-1989 forests in 2023 it is estimated that around 52,000ha will be at A (below the forest average at the point of transition); 122,300ha could have lower surrender NZUs obligations to the Crown depending on their unit balance at time of transition; and 88,700 ha could be harvested before the MERP transition (whether the Crown pays the participant credits to the forest average, or the participant has reduced harvest surrenders depends on the unit balance at the point of transition).

Note 3: Changes to the long-term average carbon stock age would vary the amount of existing forests within A, B, C.

Objective: Improved ETS operations

81 Once transitioned, under option 2.2 all participants in the ETS would account for carbon stored in their forests in the same way (and receive and surrender NZUs to the Crown under the same rules). Therefore, this option would reinforce the simplicity benefits of introducing averaging accounting for new forests. It would help to ensure that all people participating in the ETS and buying forest land know what rules apply to them, and that those rules are simple to understand and comply with.

- 82 In comparison, options 2.1 and 2.3 both could in effect create two new classes of forest: existing and new (alongside forests established prior to 1990 and post-1989). This would further complicate the ETS, particularly for existing forest owners who plant new forests, as they will need to use two different approaches for calculating the carbon stored in their forests. Prospective land buyers may also find it difficult to determine the value of forest land (this would add to pre-existing confusion around the pre and post-1990 forest land split, and the fact some forest land cannot be harvested as it is permanent).
- 83 The operational costs of option 2.3 and potential increased effort and confusion of running two systems would be higher than under option 2.1. This is because there would be no date from which forests are deemed to be new or using averaging, rather than the current accounting approach. This impact could be minimised if the large majority of participants move to the new approach. As such, if this option is preferred by Cabinet it may be worth considering other measures to encourage existing forest owners to move to averaging accounting.

Objective: Consistency with New Zealand's broader climate change programme

- 84 Moving existing forests to an averaging accounting approach could strengthen New Zealand's ability to participate in two-way international carbon market linking. If existing forests remain on carbon stock change accounting they would earn NZUs for activity that isn't recorded in our NDC, which could be seen as lacking international credibility. This benefit would be slightly reduced under option 2.3 (as participants are given a choice about whether to use averaging accounting).
- 85 Under option 2.3 making the transition one-off and one-way and prevents existing forestry participants from gaming or cherry-picking between use of the two accounting approaches (i.e. in response to fluctuations in the price of carbon). This maintains the integrity of the ETS.

Table 2 Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse

Friday, 10 August 2018

Objectives	Status quo – current ETS accounting	2.1. Participants are required to continue to use carbon stock change accounting for their post-1989 existing forests	2.2. Participants are required to use averaging accounting for their post-1989 existing forests	2.3. Participants have a one-off one-way choice to use averaging or carbon stock change accounting for their post-1989 existing forests
Improve NZ ETS (rotational and permanent forest) incentives	0	0 No afforestation/financial incentive impact.	0 No afforestation/financial incentive impact.	0 No afforestation/financial incentive impact.
Effectively help meet NZ's climate change targets	0	0 <ul style="list-style-type: none"> Short term net fiscal revenue of around 24.6 million NZUs over 2021-2030 (from a high number of existing forests having harvest surrender obligations over the period). Maintains long term/ongoing significant misalignment between international and ETS accounting rules (NZU allocations and surrenders do not reflect how New Zealand meets its climate change targets) which could impact sector effort to reach targets and create fiscal risk/cost (estimated net fiscal expense of 80.6 million NZU over 2031-2050)⁴² Retains accounting method existing forest owners have formed expectations under since they entered the ETS, but they could be prevented from moving to a simpler/less risky accounting method (averaging). 	– short term/transition; ++ long term <ul style="list-style-type: none"> Estimated short term fiscal cost around 15.4 million NZU's over 2021 – 2030 (decrease in revenue of 24.6 to revenue of 9.2 million from reduced surrender obligations). Existing forest owners will have additional NZUs which they could trade at low risk – the resulting increased NZU supply would need to be taken into account by the Government when making wider ETS decisions like auctioning volumes.⁴³ Over the long term the ETS would better align NZU allocations and surrenders with the level of difficulty New Zealand has to meet climate change targets. This would likely result in a significant net fiscal saving.⁴⁴ Some existing participants will no longer have harvest liabilities, others at the point of transition may need to surrender NZUs to the Crown. This could create property rights issues or business model change concerns. 	- - very short term; -/? short term; + long term <ul style="list-style-type: none"> Very short term uncertain fiscal impact (and increase of low risk NZU allocations to existing forest owners) as do not know how many ETS participants would move to averaging accounting. Once everyone elects their preferred approach the short term fiscal impact is certain and maximum possible impacts would be no larger than options 2.1 and 2.2. Additional low risk NZUs could make moving to averaging attractive, this could be increased if option 11.1 is also implemented. Long term likely reduced fiscal risk to Crown (up to but less than option 2.2 reduction). Enables forest owners to choose the accounting approach that best suits them.

⁴² This cost demonstrates the impact of enabling existing production forests in the ETS to still earn NZUs but existing forests forest growth during the 2031-2050 period is not recognised internationally.

⁴³ This impact would be larger if HWP is included in the long-term average carbon stock age (option 11.1 is implemented).

⁴⁴ Over the long term moving existing forests from the current approach to averaging could save the Crown an estimated 89.8 million NZUs over 2031 – 2050 (assumes average age of 18).

Objectives	Status quo – current accounting	2.1. Participants are required to continue to use carbon stock change accounting for their post-1989 existing forests	2.2. Participants are required to use averaging accounting for their post-1989 existing forests	2.3. Participants have a one-off one-way choice to use averaging or carbon stock change accounting for their post-1989 existing forests
Improve ETS operations	0	<p>-</p> <ul style="list-style-type: none"> Ongoing administrative effort and extra IT capability needed to run two accounting systems (carbon stock change and averaging) indefinitely. No transition, so avoids short term cost associated with options 2.2 and 2.3. Extra complexity and confusion for some participants (as will need to use two accounting methods) and future land buyers (as will need to consider two new forest classes). Prevents participants from moving to averaging accounting/simplicity benefits. 	<p>++ medium to long term; -- short term (contingent on transition)</p> <ul style="list-style-type: none"> Medium to long term much simpler forestry accounting approach for participants to use and cost effective to administer. Te Uru Rākau will need additional budget to provide assistance to participants transitioning to averaging accounting.⁴⁵ Some cost and effort would have been required in any case to roll out needed operational changes and IT rebuild. 	<p>- short term (depends on transition) + medium to long term</p> <ul style="list-style-type: none"> Te Uru Rākau will need additional budget to provide assistance to participants transitioning to averaging accounting- giving a choice adds extra complexity⁴⁶ but prevents property rights concerns and allows participants to use a simpler approach. Allowing two accounting approaches increases effort for ETS participants and Te Uru Rākau indefinitely by more than 2.1 as there would be no point in time to define forest classes.
Consistent with NZ's broader climate change programme	0	<p>+ short term; - -medium to long term</p> <ul style="list-style-type: none"> Maintaining misalignment between NDC and ETS accounting approaches could limit future two-way international market linking opportunities. Short term regulatory certainty and consistency (as would retain current rules/historic rules); medium term could be viewed as increasing uncertainty (as Government has range of reasons to transition existing forests to averaging accounting). 	<p>- - short term; ++ medium to long term</p> <ul style="list-style-type: none"> Short term regulatory disruption; medium to long term regulatory certainty (rules won't change). Aligning the ETS more closely with New Zealand's NDC accounting approach may reduce barriers to potential international market linking opportunities. 	<p>- short term; + medium to long term</p> <ul style="list-style-type: none"> One-off and one-way design prevents participants from 'gaming' or 'cherry-picking'. Short term business disruption during the transition; medium term regulatory certainty (but less than option 2.2 for participants remaining on carbon stock change accounting). Compared to option 2.2 more difficult to consider short term NZU supply and demand impacts for wider ETS settings. Similar international linking implication as option 2.2 if most people move to averaging accounting.
Overall assessment		<p>Recommend consult on all three options with no preference. Additional research and analysis required post consultation to more accurately estimate variations in existing forest owner's preferences to continue to use carbon stock change or moving to averaging accounting.</p>		

⁴⁵ It would also include building new IT systems, setting up new operational processes and policies, and communications.

⁴⁶ But requiring existing forest owners in the ETS to make a one-off, one-way decision on which accounting approach to use reduces the cost and effort required for Te Uru Rākau to deliver this option, compared to if it were an open option of when to transition.

3. ETS averaging accounting transition options for post-1989 existing forests

Option 3.1. Participants with post-1989 existing forests are required to transition to averaging accounting at the MERP following legislation passing/systems being built

- 86 Participants with existing forests would be transitioned to averaging accounting at the end of a mandatory emissions return period (MERP). Option 3.1 is considered to be the only viable proposal as it is a time that there is certainty about participants' total forest carbon stocks and entitlement to receive or surrender NZUs. It is expected to provide the highest level of certainty about entitlements and obligations that may exist, reducing confusion and cost for participants and potential forest land buyers.
- 87 Officials recommend requiring these participants to transition at the MERP immediately after averaging accounting legislation has been passed (and once the administrative system and operational processes required to support the change have been built).⁴⁷ This would minimise disruption for Te Uru Rākau and participants.⁴⁸ It also prevents participants with forests above the average long-term carbon stock from continuing to earn NZUs which they would then be required to surrender to the Crown.
- 88 After the transition participants with existing forests on their first rotation will continue to be able to earn NZUs until their forest reaches its long-term average carbon stock. But all those on the second rotation will not be able to earn NZUs or use averaging accounting (see discarded option 3.2 in Appendix 3 for the reason why).

4. Slower emissions unit (NZU) repayment options for post-1989 existing forests

- 89 Requiring participants with existing forests to surrender NZUs (received for forest growth earned above the long-term average carbon stock of their forest) at the transition MERP brings forward their harvest NZU surrender obligation to the Crown. As indicated in the previous section, this could cause financial pressure for some ETS forestry participants.⁴⁹
- 90 Officials consider the need to cater for these participants is lower if existing forest owners are given the choice to not use averaging accounting. However, that there is still a need to provide assistance in this situation as many owners of small forests, who are likely to wish to transition to averaging accounting, may find they are not in a financial position to do so at the transition MERP.
- 91 Officials suggest providing a slower NZU repayment option for all existing forest owners transitioning to averaging accounting, which is limited to two MERP if averaging accounting is optional. The slower NZU repayment options and their impacts are outlined below.

Option 4.1: People transitioning their post-1989 existing forests to averaging accounting can surrender NZUs to the Crown at the transition MERP and the next MERP (preferred if averaging accounting is optional for existing forests).

⁴⁷ On current timeframes this will likely be 2023.

⁴⁸ Likely 2023 MERP on current legislative timeframes.

⁴⁹ From EPA: currently approximately 660 ETS participants are in this position (above the long-term average carbon stock age of their forest), however many of these people will harvest within the next MERP.

- 92 Participants who have an obligation to surrender NZUs to the Crown and have not yet harvested could be given the option to repay these NZUs over two MERP (the transition MERP and the next MERP, i.e. likely over 8 years with a signal from Government when Cabinet decisions are made up to 2 years prior to that).

Option 4.2. Same as 4.1 but can also apply for a further NZU repayment extension (preferred is averaging accounting is required for existing forests)

- 93 Participants that are required to transition to averaging accounting could also be able to apply for a further NZU repayment extension if they meet extension criteria. Criteria could be set out in regulation and include that the participant owns a small area of forest and does not have access to sufficient capital (or that it would have been uneconomic for the forest owner to harvest during the repayment timeframes i.e. before 2028).

Table 4 Key: Variations from no slow repayment option: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

Objectives	No slow repay option	4.1. People transitioning post-1989 existing forests to averaging accounting can surrender NZUs to the Crown at the transition MERP and the next MERP	4.2. Same as 4.1 but can also apply for a further NZU repayment extension.
Improve ETS forestry incentives	0	0 No ETS forestry financial incentive impact	0 No ETS forestry financial incentive impact
Effectively help meet New Zealand's climate change targets	0	+ burden sharing; 0 fiscal/climate change target <ul style="list-style-type: none"> Gives participants time to adjust business plans. Some participants may still undergo financial stress if required to use averaging accounting (could alter their business model and may not have sufficient NZU/revenue to cover NZU surrenders). Similar ability to meet the 2030 climate change target compared to having no slower NZU repayment option (as the two MERP will occur before 2030). Compared to no slower NZU repayment option it increases the time period over which NZU allocations and surrenders are misaligned with international rules, which poses a fiscal risk (but by less than option 4.2) 	++ burden sharing; -fiscal/climate change target <ul style="list-style-type: none"> Gives most participants time to adjust business plans, but some may still be negatively impacted if averaging accounting is compulsory (if changes business model). Compared to no slower NZU repayment option and 4.1, reduces ability to meet the 2030 climate change target (as some ETS participants will be able to surrender NZU to the Crown after that target) Increases the time period over which NZU allocations and surrenders are misaligned with international rules (increasing Crown fiscal risk).
Improve ETS operations	0	- <ul style="list-style-type: none"> Requires extra administrative effort compared to no slower NZU repayment option. NZU surrender deadline at the end of the MERP limits length and difficulty of transition for Te Uru Rākau (to assist with repayments) and for participants (to make NZU repayments). 	- <ul style="list-style-type: none"> As per option 4.1 -requires extra administrative effort. Compared to 4.1 and no slower NZU repayment option -increases length and difficulty of transition. The exemptions process will also require additional administrative effort up until harvest).
Consistent with New Zealand's broader climate change programme	0	- <ul style="list-style-type: none"> Less certainty than no slower NZU repayment option about when NZUs surrendered -makes it more difficult to adjust to wider ETS settings if needed (such as NZUs auctioning volumes). But restricted repayment length limits this somewhat. 	- <ul style="list-style-type: none"> Less certainty than no slower NZU repayment option and 4.1 about when NZUs surrendered makes it difficult to adjust wider ETS settings if needed (such as NZUs auctioning volumes).
Overall assessment		MPI prefers this option if averaging accounting is optional for existing ETS registered forests.	MPI prefers this option if averaging accounting required for existing ETS registered forests.

Averaging accounting detailed design proposals

- 94 This section includes a set of detailed design proposals that officials consider could feasibly be implemented and would give the public a good understanding of how the averaging accounting rules could apply to them. This includes outlining when averaging accounting will apply from, how to calculate and track and determine the long-term average carbon stock age of a forest, and ongoing reporting requirements.

5. From which date should new forests that register in the ETS use averaging accounting?

- 95 If averaging accounting is compulsory for existing forests in the ETS, then there is no need to define or create a new class of forests. However, if existing forests are either required or have a one-off option to continue using the current ETS accounting method, then a date needs to be set for when forests are treated as new.⁵⁰
- 96 Officials propose consulting on the proposals below for dates from which forests in the ETS could be considered newly established (i.e. planted or natural regeneration). It is preferable for an earlier date to apply if averaging accounting is compulsory (to maximise the number of forests that will qualify as new and prevent potential forest planting delays). But officials consider that the date should not pre-date Select Committee processes. A retrospective date which is not informed by submitter views could undermine market regulatory certainty.

Option 5.1. All forests established after averaging accounting legislation is passed are new forests (preferred if averaging accounting is optional for existing forests)

- 97 Averaging accounting could apply to all ETS registered forests established after legislation including the ETS forestry accounting (and other ETS forestry package changes) is enacted (likely to be 1 January 2020).

Option 5.2. All new forests included in a transition MERP could use averaging accounting

- 98 Averaging accounting could apply to all forests registered in the ETS during a MERP. It may be possible to do so without any retrospective application if the proposal to have a mini MERP (as outlined in the below draft ETS forestry operational improvements RIA) goes ahead and aligns with the transition to averaging accounting. The Government could signal its intention that all forest planting included in this shorter transition MERP onwards can be treated as new forests once averaging accounting legislation had passed (as per option 5.1).

⁵⁰ To be considered a new forest it must be planted on bare land (land that is not forest land - for what is considered forest land refer to Appendix 5).

Table 5 Key: Variations from no need to define “new forests”: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

Objectives	No need to define new forests	5.1. All forests established after averaging accounting legislation is passed are “new forests” (i.e. 1 January 2020)	5.2. All new forests included in a transition MERP could use averaging accounting
Improve ETS (permanent and rotational) forestry incentives	0	- <ul style="list-style-type: none"> Some people might delay planting trees until after legislation is passed into law to ensure their forest is defined as new (but some forest owners may not want or be able to change their planting decisions for this date). 	- <ul style="list-style-type: none"> Depends on mini MERP decisions, but might not be any later than the date legislation is passed i.e. similar impact as option 5.1.
Effectively help meet New Zealand’s climate change targets	0	0/- <ul style="list-style-type: none"> A delay in additional new forest planting could hinder emissions reductions in the short term but the delay is unlikely to impact the climate change targets/the One Billion Trees programme. 	0/- <ul style="list-style-type: none"> Likely similar impact to option 5.1.
Improve ETS operations	0 Simple system to understand and low cost to run.	- <ul style="list-style-type: none"> Will have a minimal impact on operations as participants are required provide the date of forest establishment as part of their forest registration application under current rules. As the date is fairly arbitrary it could cause some confusion for participants and land buyers - with flow on administrative impacts. But possible to make it a 1 January date. 	0 <ul style="list-style-type: none"> Gives existing ETS registered forest owners time to adjust their business plans Reduces cost and administration for Te Uru Rākau and reduces confusion for ETS participants and land buyers relative to option 5.1.
Consistent with New Zealand’s broader climate change programme	N/A as no signal 0	+ <ul style="list-style-type: none"> Gives certainty to the sector that averaging accounting rules are unlikely to alter, and provides a lead in time to plan for the change. As planting delay at the beginning of climate change target period wider climate change agenda impact likely minimal. 	++ <ul style="list-style-type: none"> Gives more certainty to the forestry sector than option 5.1 (but less than current rules) as sends clearer signal than legislation (which can shift /be delayed). As per option 5.1 it also provides lead in time to plan for the change.
Overall assessment	Applies if all participants use averaging	Consult on as preferred option – for certainty reasons if averaging accounting is an option for existing forests. Impact on new planting delays considered to be minimal.	Useful to consult on - as could be preferred but only if can align transition with potential mini MERP.

6. Calculating the long-term average carbon stock in forests

- 99 Officials recommend consulting on an averaging accounting methodology which involves using the current carbon storage calculation approach below. There is no call from the public to change these settings and if needed they could be altered as part of Te Uru Rākau's annual regulations update.

Option 6.1. Current forest carbon calculation approach and ability to make regulation changes

- 100 Currently there are two methods for determining the amount of carbon stored in ETS registered forests:
- forests less than 100ha use carbon storage tables based on regional or national-averages for 5 forest types: Radiata Pine, Douglas fir, Exotic Hardwoods, (other) Exotic Softwoods, and Indigenous Forest; and
 - forests that are 100ha or more must complete measurements (the Field Measurement Approach – FMA) that allow carbon tables for the 5 forest types to be generated that apply specifically to the participant's forest.
- 101 Ideally Te Uru Rākau would reward everyone for forest management practices that result in increased carbon storage, however making participant specific measurements is complex and costly. The default approach for forests less than 100ha reflects the greater need to reduce complexity and compliance costs for people with small areas of forest registered forest in the ETS. The approach for forests greater than 100ha retains accuracy needed for owners of larger forests to maximise their carbon returns (maintaining the incentive to sequester carbon through forest management processes). This current split approach was generally supported by submitters during the recent ETS review.
- 102 Officials are aware there is a need to review the look-up tables (carbon yield tables) that are in regulations to ensure they are complete and have integrity. The review (and if it were needed any changes to the 100ha threshold for participant specific carbon accounting) can occur after consultation on the proposals in this draft RIA.

7. Converting a forest's long-term average carbon stock into a long-term average carbon stock age

- 103 Officials recommend consulting on an averaging accounting methodology which involves converting the current carbon storage calculation into an age at which a participant's forest will reach its long-term average carbon stock. Doing so will make it easy for participants to track how close or far away they are from reaching their forest's long-term average carbon stock (and hence cease to be allocated NZUs). This approach has integrity and supports New Zealand's international reputation as it retains a link between NZU crediting and the level of carbon sequestered by participants' forests. However, the link is less direct compared to the current carbon stock measurement approach (see discarded option 7.3 for reasons why officials consider a closer link is inappropriate).
- 104 Officials propose consulting on two potential ways to calculate and track when a forest has reached its long-term average carbon stock age: use a default forest type age or use age bands based on rotation length and forest type. The default option requires making a trade-off between having a simple approach with low compliance effort for participants and Te Uru Rākau but potentially not sufficiently driving incentives to sequester forest carbon (and exposing the Crown to risk). The rotation band option requires making a trade-off between having a more accurate approach which rewards participants for sequestering additional

carbon from extending harvest rotation lengths (and has less fiscal risk), but imposes additional compliance burden on participants and Te Uru Rākau. More detail on the options and their impacts are outlined below.

Option 7.1. A participant's forest's long-term average carbon stock age is a default age based on forest type

105 The age at which average forest carbon stocks occur could be set as a series of default ages for all participants based on the 5 forest types (with the long-term average carbon stock age based on the forest types' typical rotation lengths). The final settings for how the default ages would be set would occur through updates to the regulations prior to the implementation of averaging accounting.

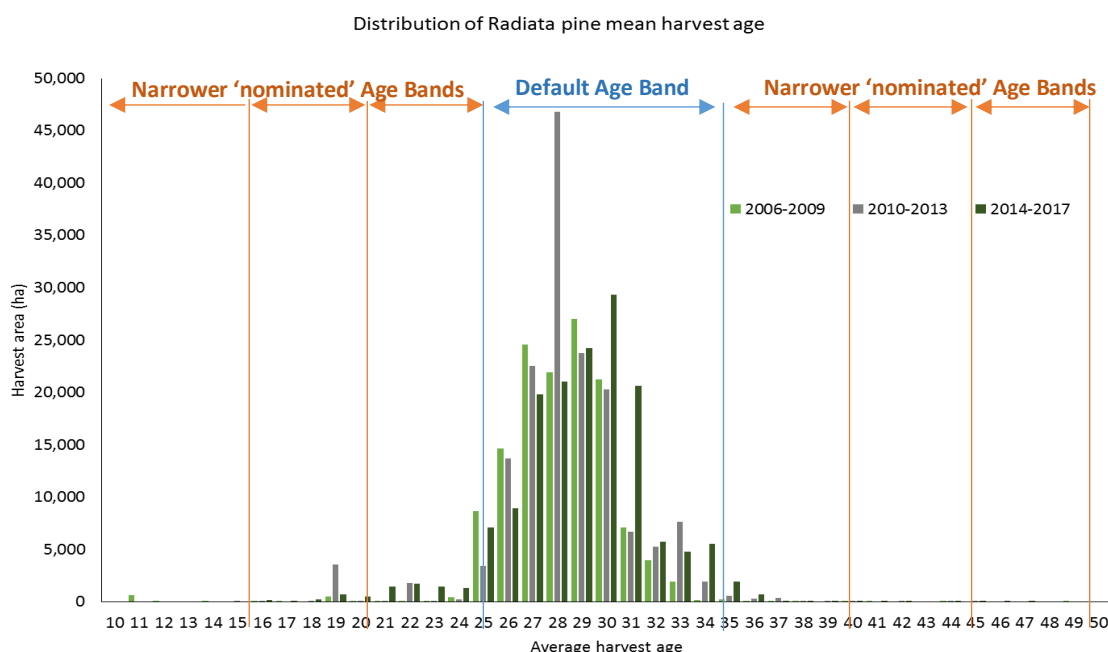
Option 7.2. A participant's forest's long-term average carbon stock age is set by age bands based on forest type and rotation length

106 The age at which long-term average forest carbon stocks occur could be set as a series of age bands based on forest type and rotation length. The final settings for how the bands would be set would occur through regulations updates prior to averaging accounting implementation.

Options include:

- a. a series of many small bands that cover a wide range of potential ages for different forest types (maximises carbon storage incentive but is complex to administer); or
- b. a series of broad bands (reduces the chance of accidentally shifting bands from one rotation to the next, but lessens the rotation length extension incentive.); or
- c. a central band which aims to cover most normal rotation ages, as well as having smaller bands on either side, set at a level which would incentivise longer than normal rotations (and dis-incentivises shorter than normal rotations).

Figure 7 below demonstrates how for some forest species, there is a fairly clear range of ages of forest (e.g. for radiata pine between 25-34 years) that can be described as normal rotation lengths, and could sit within a central age band. Appendix 5 provides a further example for how smaller age blocks could be calculated and notes on the data used.



Note: Distribution of radiata pine mean harvest age with examples of a possible age bands to be applied. The central band covers 90 per cent of all pine forest ages, a similar band could apply for Douglas fir 36-46 years.

Impact analysis

Objective: Improve ETS (rotational and permanent) forestry incentives

- 107 For a given forest species (generalised to 5 forest types in the ETS), the age at which long-term average carbon stocks are reached varies relatively little with site conditions, that is, whether the forest is growing under better or poorer conditions. The long-term average carbon stock age is however sensitive to the participant's choice of rotation length for harvestable forest (or time to maturity for permanent forests).
- 108 Most forest owners in the ETS would harvest their forests within a small range of ages to meet commercial timber supply agreements. Allocating default carbon amounts that relate to forest ages will be sufficient to reflect the carbon they could receive from their forests.
- 109 A default approach would, however, dis-incentivise foresters from sequestering extra carbon by extending the rotation length of their forests, as no financial gains could be made from this extra carbon. Apart from age, any extra carbon storage in forests would need to be gained through forest management practices.⁵¹
- 110 Given the competing commercial driver to harvest for timber returns, it is difficult to determine how many forest owners would respond to the incentive to extend their forests' rotation. Forest owners could generate significant extra returns under this option, depending on the price of carbon. For instance, a carbon price of \$21 a participant with 100 ha of radiata pine forest could earn about \$63,000 (worth of NZU) by extending the rotation length by 2 years (if extensions of this minimum length were accounted).
- 111 Option 7.2 will be more effective than having no long-term average carbon stock age as it sends a clear signal to the market about rotation length and harvest liabilities. Participants will also get to hold on to their NZUs from extending their rotation length rather than (as per the current rules) being required to pay back NZUs at harvest.

Objective: Consistent with wider climate change agenda

- 112 Option 7.2 creates a potential lock in impact as reducing rotation length for other commercial reasons will require participants to surrender NZUs to the Crown. A worst case scenario would be if someone inherits or buys a bit of forest land thinking it could be converted to a different use or shortly result in harvest returns, only to realise it is effectively locked in for a long period of time, which cannot be changed without incurring a cost.
- 113 Option 7.1 creates environmental integrity and gaming concerns as it allows for significant differences between a participant's activity and the number of NZUs they could receive. For example, eucalypt forests that have a "pulp" regime, with short rotations (<20 years), could be given the same long-term average carbon stock age and associated NZU allocation as a saw log regime, with long rotations (up to 40 years). This could significantly dis-incentivise saw log regimes.

⁵¹ This would be taken into account by the forest-specific measurement approach, presently available for forest owners with over 100ha of forests registered in the ETS. There is evidence to suggest that some firms are already using these methods i.e. through changing thinning techniques and higher stocking rates.

Table 7 Key: Variations from no long-term average carbon stock age: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

Friday, 10 August 2018

Objectives	No carbon stock age	7.1. A participant's forest's long-term average carbon stock age is a default age based on forest type	7.2. A participant's forest's average long-term carbon stock age is set by age bands based on forest type and rotation length
Improve ETS (rotational and permanent) forestry incentives	0	<ul style="list-style-type: none"> - Does not provide incentives to increase carbon storage through forest rotation length. Would be a reduction in incentive compared with the current approach. Greater simplicity and lower compliance costs compared to no age and option 7.2 - may encourage afforestation and participation. 	<ul style="list-style-type: none"> + Could incentivise foresters to sequester extra carbon by extending the rotation length of their forests (and dis-incentivise shortening rotation length). More effective than having no long-term average carbon stock age. Higher complexity and compliance costs compared with no age and 7.1 - could discourage afforestation and participation.⁵²
Effectively help meet New Zealand's climate change targets	0	<ul style="list-style-type: none"> -- fiscal Significant fiscal risk as reduces ability for the Government to allocate less (or more) NZUs for forests that store less (or more) carbon due to a shorter rotation lengths. Can manage some fiscal risk through updates to default forest ages. Climate change mitigation impact will depend on trade-off between incentives to extend rotation length with desire for a simple approach. 	<ul style="list-style-type: none"> 0 Slight increase to fiscal risk compared to having no age as less precisely measures changes to carbon stocks. Risk can be managed by applying shorter rotation age bands, but this would increase complexity of introducing bands. Uncertain fiscal impact of accounting for deviations from typical timber production rotation length.
Improve ETS operations	0	<ul style="list-style-type: none"> + Simpler for Te Uru Rākau to administer and reduces participant compliance costs compared to no age and 7.2 (as reduces need for reporting once forests' reach their long-term average carbon stock). Participants would need to learn the new methodology, but it is fairly simple to understand. 	<ul style="list-style-type: none"> - More compliance costs and administrative effort than no age (participants and Te Uru Rākau need to undertake more difficult calculations) and compared to 7.1 (as monitoring/reporting required over the life of a forest for compliance and ownership changes).⁵³ This extra capability could also be used to better support implementation of other ETS forestry rules.
Consistent with New Zealand's broader climate change programme	0	<ul style="list-style-type: none"> - Unclear impact on upcoming climate change targets. Creates concerns about integrity and reputation, as NZU allocations would not sufficiently reflect specific forest management decisions and practices. 	<ul style="list-style-type: none"> + Potential flow on impacts for the wood processing industry as wood supply may be impacted by forest owners choosing longer rotations (or choosing not to harvest at all) at time of high carbon prices.⁵⁴ Potential rotation length lock in to prevent NZU surrenders. Compared with option 7.1 and no age, may create additional non-compliance risks and compliance costs for Māori due to required reporting of ownership changes (Māori land trusts have frequent trustee changes).
Overall assessment	N/A	Recommend consulting on but with no preference - need to undertake further research/modelling on the likely climate change mitigation impact and to better understand production forests long-term average carbon stocks within the ETS.	Recommend consulting on but with no preference - need to undertake further research on the likely climate change mitigation impact and research and modelling to better understand production forests long-term average carbon stocks within the ETS.

⁵² This could be mitigated by targeted treatment of participants who would prefer a default approach compared to those what would prefer to use bands.

⁵³ However, could lower this cost by making rotation band elects through statutory declarations rather than the MERP process. Could reduce with technological improvements such as better satellite imagery

⁵⁴ The timber processing sector, which is currently geared to process smaller log sizes (i.e. from younger pine trees). But this should not impact direct supply of logs overseas.

8. How should a change to the long-term average carbon stock age in regulations be applied to existing participants?

- 114 Officials propose consulting on a range of options regarding how changes to ETS long-term average forest carbon stocks can be made in regulations. Under all the options the full range of possible long-term average carbon stock ages will be in tables set by regulations. They may need to be updated for changes to national averages (i.e. for rotation lengths and carbon yield) or to reflect changes to ETS rules (i.e. if HWP was added). More detail on the options and their impacts are outlined below.

Option 8.1. Participants who have forests above the long-term average carbon stock age will not be required to repay or able to earn more NZUs due to a change in the regulations (preferred)

- 115 Participants who have forests above the long-term average carbon stock age will not be required to repay, or able to earn more NZUs for a previous period due to a change in the long-term average carbon stock ages set in regulations. Participants will cease earning NZUs once they reach the long-term average carbon stock age for their forest.

Option 8.2. Participants using averaging accounting will repay or earn NZUs due to changes in the long-term average carbon stock age set in regulations (even after their forest reaches its long-term average carbon stock)

- 116 Participants whose forests are above the long-term average carbon stock age will be required to repay, or could be able to earn more NZUs for a previous period due to a change in the long-term average carbon stock age set in regulations.

Option 8.3. Participants will earn up to the long-term average carbon stock set in regulations when they register

- 117 Forest owners' long-term average carbon stock age will be set when they register their forest in the ETS (based on information on intentions and what was planted). Therefore, participants will not be required to repay, or able to earn more NZUs for a previous period due to a change in the long-term average carbon stock age set in regulations.

Table 8 Key: Variations from regulations change yield tables and carbon calculations: ++ much better; + better than; 0 about the same; - worse than;
- - much worse than

Friday, 10 August 2018

Objectives	Status quo - Regulations change yield tables/carbon calculations	8.1. Participants with forests above the long-term average carbon stock age are not required to surrender or able to earn NZUs due to a change in the regulations (preferred)	8.2 Participants using averaging will repay or earn NZUs due to changes in the long-term average carbon stock age set in regulations (even after their forest reaches its long-term average carbon stock)	8.3 Participants will earn up to the long-term average carbon stock age set in regulations when they register
Improve ETS (rotational and permanent) forestry incentives	0	0 <ul style="list-style-type: none"> Unlikely to have impact on incentives as participants still required to report significant variations in forest carbon storage (see section 9). 	- <ul style="list-style-type: none"> Will create incentive to bank NZUs to reduce fiscal risk, reducing ETS forestry returns. Could lower afforestation incentives. 	+ <ul style="list-style-type: none"> Investment certainty could increase participation, but some investors may prefer changes to national conditions to be reflected.
Effectively help meet New Zealand's climate change targets	0	0 <ul style="list-style-type: none"> The Crown bears some downside fiscal risk (could allocate NZUs based on overstated national average but could also under allocate NZUs). Long-term average carbon stock ages could be set slightly conservatively if needed. 	+ <ul style="list-style-type: none"> The Crown downside risk of allocating NZUs based on an overly generous national average is covered by the ability to claw-back units off participants 	-- <ul style="list-style-type: none"> The Crown would take on significant fiscal risk, as changes to the long-term average carbon stock age will only apply to forests planted after the regulatory change - creating an at least 18-20 year lag between changes to national trends and fiscal impact.
Improve ETS operations	0	+ <ul style="list-style-type: none"> Upholds approach for forests that have passed the long-term average carbon stock age (lower reporting and compliance requirements). 	- <ul style="list-style-type: none"> Higher administrative cost—to track owners/unit balances for all participants. Increases complexity of annual regulations update and accounting calculations. 	- <ul style="list-style-type: none"> Different participants will have different allocations of NZUs based on planting year which will need to be tracked indefinitely. Could undermine ability to provide reporting process improvements.
Consistent with New Zealand's broader climate change programme	0	0 <ul style="list-style-type: none"> Maintains market confidence and certainty about what NZU obligation or entitlement participants are likely to have. 	- regulatory certainty + environmental integrity <ul style="list-style-type: none"> Significantly increases complexity of the annual regulations update (need to deal with retrospective aspects) and carbon measurement calculations Participants cannot be fully confident that they will retain all NZUs earned. Participants on average are allocated NZUs for the actual contribution they made to climate change targets. Risks non-compliance (could deter reporting) 	+ regulatory certainty – environmental integrity <ul style="list-style-type: none"> Will increase investment certainty (volume of NZUs provided to participants will remain unchanged) Reduced accuracy/link to carbon storage and emissions would undermine environmental integrity.
Overall assessment		Preferred- provides market certainty without creating any significant negative impacts.	Recommend consulting on - to better understand participant appetite for risk	Recommend consulting on - to better understand participant appetite for risk.

9. Ongoing reporting

- 118 Officials recommend making it clear during consultation that participants would be required to comply with the current detailed MERP reporting and calculation requirements to reflect changes which impact the long-term average forest carbon stock age up until they reach that age, but thereafter detailed reporting is only required upon deforestation. To ensure this process has integrity participants could also be required to periodically provide a declaration notice confirming that their originally elected first rotation conditions remain. More detail about these options and their impacts are outlined below.

Option 9.1. Participants only have reporting requirements each MERP until their forest reaches its long-term average carbon stock age and upon deforestation

- 119 Once a participant's forest reaches its long-term average carbon stock age, no further reporting is required unless deforestation occurs. This is consistent with the treatment of forests established prior to 1990, for which the international accounting will be very similar to post 1989 forests that have passed their long-term average carbon stock age.

Option 9.2. Participants have detailed reporting requirements each MERP up until their forest reaches its long-term average carbon stock age, then lighter reporting requirements until deforestation (preferred)

- 120 Detailed reporting would initially only be required every MERP, with forest-specific monitoring of larger forests⁵⁵ – similar to the present accounting approach. This reporting requirement could be reduced over present ETS requirements once a forest reaches its long-term average carbon stock age. For instance, participants may only be required to provide a statutory declaration every MERP to confirm no significant change to their forest's carbon stock has occurred and inform Te Uru Rākau of any changes in forest ownership.⁵⁶ If these conditions have changed then a participant would be required to account for the impact the new conditions have on the long-term average carbon stock age of their forest.
- 121 Any forest-specific monitoring (such as the Field Measurement Approach) would also cease once a forest reaches its long-term average carbon stock age, and would only resume if the participant significantly changes their forest species on replanting, or takes some action that results in their forest moving to a different long-term average carbon stock age (or to a different age band as applicable). Participants would be required to report any changes of this nature, so that forest specific monitoring could resume if required.

⁵⁵ At present, forests of 100 ha or more are required to complete a set of forest-specific measurements once per MERP. Future public consultation may seek to confirm this threshold. It is also expected less frequent measurements may be able to be used in the future.

⁵⁶ Penalties would be applied for failure to make a declaration or making a false declaration.

Table 9 Key: Variations from reporting required at each MERP: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

Friday, 10 August 2018

Objectives	Status quo - reporting required each MERP	9.1. Participants only have reporting requirements each MERP until their forest reaches its long-term average carbon stock age and upon deforestation	9.2. Participants have detailed reporting requirements each MERP up until their forest reaches its long-term average carbon stock age, then lighter reporting requirements until deforestation
Improve ETS (rotational and permanent) forestry incentives	0	- <ul style="list-style-type: none"> Does not provide ongoing incentive for improved forest management to sequester extra carbon from the atmosphere. 	0 <ul style="list-style-type: none"> Will not directly impact afforestation and unlikely to significantly alter forest management decisions as required to report major changes and have detailed reporting up until reach long-term average carbon stock age of forest. Retains an incentive to continue with stated forest management practices.
Effectively help meet New Zealand's climate change targets	0	- <ul style="list-style-type: none"> Reduces the Crown's ability to influence forest management decisions which exposes it to fiscal risks (and potential fiscal gains). Significant fiscal risk in the case of a large number of participants changing forest species to those with lower average carbon stocks. If participants change any aspect of their forest once it reaches its average long-term carbon stock age such as rotation length, it could result in a significant reduction (or increase) in the average carbon stored in the forest but no ability for the Crown to recoup the NZUs paid (or allocate additional units) to the participant. 	0 <ul style="list-style-type: none"> Do not expect large change in fiscal risk to the Crown compared to the status quo as only allocate NZUs for forest growth and still require major changes to the long-term average carbon stock age to be reported. Marginally increased risk as participants will be able to change behaviour within thresholds without triggering an obligation/ NZU payment.
Improve ETS operations	0	++ <ul style="list-style-type: none"> Is a simple approach that removes on-going compliance costs for participants and administrative cost for the Government. Would not require ownership changes to be reported after participants reach the long-term average carbon stock age.⁵⁷ This would create a risk of having to track down new owners to surrender NZUs if it were subsequently deforested and the change of ownership was not notified. With sales of ETS forest land, new owners would not be known, making it difficult to assist forest owners to avoid the very high costs of uninformed deforestation. 	+ <ul style="list-style-type: none"> Places some degree of ongoing reporting burden on participants (and Te Uru Rākau monitoring) in perpetuity, but less than the status quo. The burden for Te Uru Rākau and participants could reduce significantly once a forest reaches its long-term average carbon stock, particularly if all future owners of that forest adhere to their original intentions (species and rotation lengths). Present low compliance with reporting changes in some types of ETS forest ownership would need to be addressed for the declaration process to be effective.
Consistent with New Zealand's broader climate change programme	0	0 <ul style="list-style-type: none"> Less likely to have Māori land ownership change issue than 9.2. 	0 <ul style="list-style-type: none"> Reporting ownership changes in a timely manner can be difficult for some registered Māori land, as can be frequent changes to trust structure. TPK is leading a current project to improve Māori land ownership rules.
Overall assessment	0	<ul style="list-style-type: none"> Recommend consulting on as alternative option. 	<ul style="list-style-type: none"> Recommend consulting on as preferred option.

⁵⁷ There is currently a high level of high non-compliance in the ETS for reporting ownership changes which are also known as transmissions of interest (compliance rates less than 5 per cent).

10. How far back can a participant claim emissions units (NZUs) on entry into averaging?

- 122 Officials intend to make it clear through consultation that NZU allocations are restricted to the first rotation under averaging accounting, and that a participant who does not claim NZUs in the MERP in which their forest is planted, will not be able to claim them again. Doing so limits the fiscal risk to the Crown, maintains the currently well understood backdating MERP rules, and prevents creating a precedent of rewarding forest owners for registering their forests in the ETS after they have been established.

Option 10.1. Participant can only claim emissions units from the beginning of the latest MERP (and cannot claim NZUs on the second rotation)

Table 10 Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

Objectives	Status quo: A participant can only claim emissions units from the beginning of the latest MERP	10.1. A participant can only claim emissions units from the beginning of the latest MERP (and cannot claim NZUs on the second rotation)
Improve ETS (permanent and rotational) forestry incentives	0	0
Effectively help meet New Zealand's climate change targets	0	0 <ul style="list-style-type: none"> Limits fiscal risk to the Crown as a result of previous participant decisions about when to enter the ETS. Existing forest owners who have established forests after 1989 that are on their second harvest would receive less NZUs if they are required to move to averaging accounting (as they would lose the ability to earn NZUs on their second rotation).
Improve ETS operations	0	0 <ul style="list-style-type: none"> Retains the current relatively simple and well understood MERP NZU crediting rules.
Consistent with New Zealand's broader climate change programme	0	0 <ul style="list-style-type: none"> Prevents creating a precedent of rewarding participants for registering their forests in the ETS after they have been planted.
Overall assessment		Recommend consulting on - as reasons for retaining status quo remain under averaging accounting. Need to highlight to submitters the implications for second rotation forests.

11. Should the Government provide the international harvested wood products accounting value to the domestic forestry sector?

- 123 Officials propose consulting on two options to provide the HWP accounting value to the forestry sector to promote carbon sequestration incentives. One option is for the HWP accounting value to be passed on to participants who use averaging accounting. This would help to drive mitigation in line with climate change targets, reduce ongoing fiscal risk, and significantly increase the incentive to register and establish new forests in the ETS.
- 124 The alternative option is to establish an industry good research and development fund to encourage the development of longer lived wood products. This would increase the HWP value to the Crown and potentially increase afforestation rates. It is possible to introduce both options, this would mean each sector receives a proportion of the recognition we receive internationally. More detail the options and their impacts are below.
- 125 Note that during the recent ETS review some submitters expressed interest in providing the HWP accounting value to participants using the carbon stock change accounting approach. Option 11.3 in Appendix 3 outlines why this option was discarded.

Option 11.1: The HWP accounting value will reflected in averaging accounting as emissions units to participants

- 126 The contribution HWP accounting makes to the international long-term average carbon stock (LTA) could be added to the long-term average carbon stock age of all forests using averaging accounting in the ETS. The LTA is based on past export and domestic data.
- 127 Adding HWP to the long-term average carbon stock age will increase the total number of NZUs an ETS participant earns. As NZU are credited for forest growth until the forest reaches this age, the additional HWP value will extend the length of time that a forest earns NZUs for. Officials currently assume the long-term average carbon stock for a radiata pine forest would be reached at age 18 without HWP, and 21 with HWP.

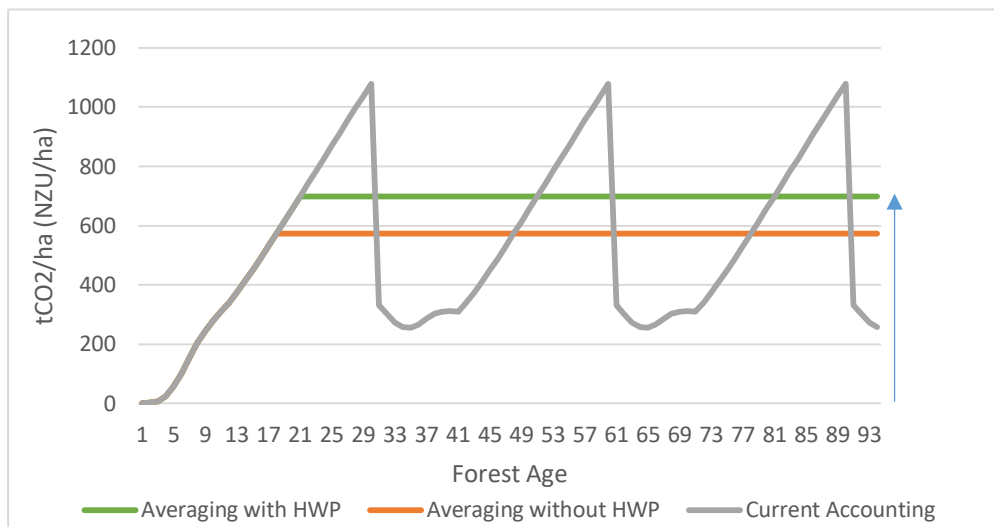
Impact analysis

Improve ETS (rotational and permanent) forestry incentives

- 128 The additional HWP value would be an industry-wide average, as it would be too difficult to collect information on individual participants' harvested wood products. This means this option will provide little incentive for the forestry sector to increase the proportion of longer-lived harvested wood products it produces (because the HWP value will alter very little for changes in individual participant behaviour). This limits opportunities to further increase the international HWP value to the Crown or allow carbon prices to incentivise changes to product mix.
- 129 Introducing averaging accounting with an additional average HWP value into the ETS would significantly increase the number of NZUs owners of new forests can earn on their first rotation (thus encouraging afforestation). This, would increase the level of low risk NZUs available for existing forest owners to trade which is expected to significantly increase participation and afforestation.⁵⁸

⁵⁸ Options for calculating the long-term average carbon stock in forests first established after 1989, S.J. Wakelin, B.R. Manley and L.J. Dowling, figures 5 and 7; Potential impacts of NZ ETS accounting rule changes for forestry – averaging and harvested wood products. April 2017. Analysis completed by Scion and University of Canterbury, June 2017

Figure 8 below demonstrates how adding the HWP value to the long-term carbon stock average age under averaging accounting would increase the amount of carbon which can be traded at low risk.



Note 1: Indicative low risk NZU increase impact of adding HWP NDC value to the long-term average carbon stock age

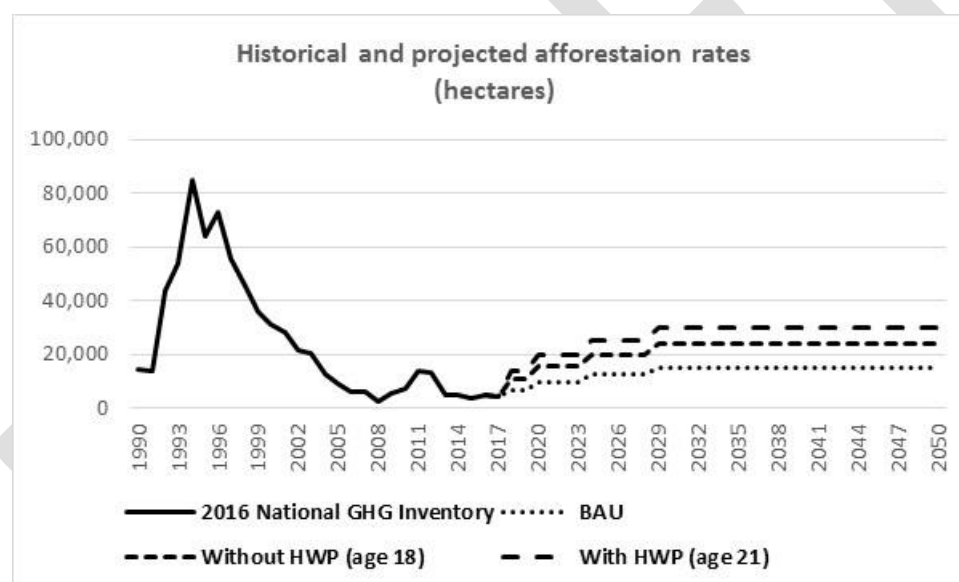


Figure 9: Time series of the projected increase in afforestation under various incentive scenarios – under current settings and including averaging in the ETS.

Improve ability of the ETS to effectively meet climate change targets

- 130 Adding HWP to the ETS forestry long-term carbon stock average age could reduce the number of existing participants at the point of transitioning to averaging (i.e. the 2023 and 2028 MERPs) who have earned NZUs above the long-term average carbon stock of their forest. This could increase the incentive for existing forests to transition to averaging accounting as they will be required to surrender less NZUs to the Crown.
- 131 New Zealand is likely to adjust the reference level accounting based on any change to projections and account for the actual use of HWP. This poses a fiscal risk to the Crown of over

allocating HWP value to participants. This risk could be mitigated by devolving a conservative HWP value amount that could be adjusted overtime.⁵⁹

- 132 Te Uru Rākau could use the data it collects on exports and domestic production to predict an overall HWP value for the forestry industry which it could add to the long-term average forestry carbon stocks in the ETS under averaging accounting.⁶⁰ The Ministry for the Environment (MfE) already uses this process to determine the NDC HWP value. This would be fairly inexpensive and would not add any compliance effort for ETS participants.

Option 11.2. An industry good research and development fund will be established to encourage development of longer lived harvested wood products

- 133 The Government would set aside a pool of funding that is roughly equal to an estimate of the future contribution HWP accounting will make to the international long-term average carbon stock of New Zealand's forests. The fund could be used in a research and development industry good scheme aiming to support the forestry sector to develop longer-lived harvested wood products. This option could occur alongside Option 11.1 if the fund only relates to the HWP value generated by forests outside the ETS.

Improve ETS (rotational and permanent) forestry incentives

- 134 Providing funding to the domestic harvested wood processing sector could provide the forestry sector with greater incentive (on top of current commercial drivers) to develop longer-lived wood products. This would drive demand for more plantations, and reduce New Zealand emissions associated with decay of shorter-lived harvested wood products. The combined impact of these two incentives is unclear and would require further analysis.
- 135 If this option involved assigning the full HWP value, it would not directly reward ETS participants who have established forests after 1989 for their contribution to the international LTA.

Improve ability of NZ ETS to effectively meet climate change targets

- 136 If the fund occurs alongside Option 11.1 it could also result in forest owners entering the ETS after their HWP value has been attributed to the funding pool. This poses a fiscal risk to the Crown, and creates appropriateness concerns around amounts devolved not being closely linked to individuals contributing to the HWP value. Conversely, sharing the benefits which are derived across the forestry industry across the value chain could be seen as more equitable.

Consistent with New Zealand's broader climate change programme

- 137 There is a chance that using a non-market intervention such as a fund, to drive changes in behaviour, could result in unintended consequences for the domestic carbon market. This could result in an imperfect product mix, or inefficient use of energy to reduce emissions. It may be possible to carefully target the fund to manage this.

⁵⁹ The full HWP value to the Crown is unlikely to be passed on in any case – as ETS participation is unlikely to be 100per cent

⁶⁰ It would be too expensive and difficult for Te Uru Rākau and participants to track all wood use from forest, to processor and end user (some wood is also on sold). This level of tracking is not expected to contribute to our NDC (so doing so would also not align with the international HWP accounting approach).

Objectives	Status Quo	11.1. The HWP accounting value will be reflected as emissions units to participants using averaging accounting	11.2. An industry good research and development fund will be established to encourage development of longer lived harvested wood products
Improve ETS (rotational and permanent) forestry incentives	0	<p>+</p> <ul style="list-style-type: none"> ETS forestry participants that establish new forests would receive additional low risk NZUs compared to option 11.1 (estimated increase of around 110 NZU per ha)⁶¹ Could significantly incentivise participation and afforestation compared to option 11.1 (estimated additional afforestation of 49,000 ha/68 million trees over 2021 – 2030)⁶² No incentive for the forestry sector to produce more long-lived harvested wood products. 	<p>+</p> <ul style="list-style-type: none"> Could increase development of longer lived harvested wood products which could increase New Zealand's forestry emission removals from the atmosphere Would not achieve the additional returns for participants as per Option 11.1, however an unclear level of new planting could occur in response to increased demand for logs from the processing sector.
Effectively help meet New Zealand's climate change targets	0	<p>- Short term + long term fiscal impact + climate change mitigation</p> <ul style="list-style-type: none"> Additional afforestation would increase forestry's contribution towards New Zealand meeting its 2030 climate change target (estimated to remove an additional 4.6 million tonnes of CO₂ over 2021 to 2030 and an estimated additional 45.7 million tonnes of CO₂ over 2031 – 2050).⁶³ The Crown's ETS unit allocation expense could increase for new forests (by around 3.8 million NZUs over 2021-2030 and could increase by around 47 million NZU's over 2031-2050).⁶⁴ Short term fiscal cost from transitioning existing forests to averaging accounting under this option (estimated to be 36.3 million NZUs over the 2021-2030 period)⁶⁵. This is an estimated increase in cost of 20.9 million NZU compared to option 2.2 (moving existing forests to averaging accounting, but not adding the HWP value to the long-term average carbon stock age). The wider ETS unit supply implications of further reducing surrender obligations would be higher under this option compared to option 2.2.⁶⁶ Long term/ongoing better alignment between the ETS and the NDC accounting approaches will help to drive the right level of emissions reductions needed to meet New Zealand's climate change targets. The NZUs devolved in the ETS would have a deforestation liability attached to them, so reduces the Crown's exposure to deforestation liabilities. Compared to the status quo it will reduce the fiscal surplus available to the Crown to mitigate against unexpected drops in carbon sequestration. But a conservative, adjustable approach could be taken. 	<p>+</p> <ul style="list-style-type: none"> The fund could be as large as \$168 million/8 million NZUs (this is additional sequestration included in New Zealand's NDC from including HWP in the international long-term average carbon stock over 2021 - 2030).⁶⁷ If the fund does incentivise additional development of longer lived harvested wood products this would increase the international HWP value available to the Crown. If the fund occurs alongside option 11.1 it could result in forest owners entering the ETS after their HWP value has been attributed to the finding pool (poses fiscal risk and appropriateness concerns). But having options 11.1 and 11.2 occur side by side would share the benefits derived across the forestry industry across the value chain which could be seen as more equitable.

⁶¹ Assuming the long-term average carbon stock age including HWP for production radiata pine is 21, compare to 18 years without HWP.

⁶² Total estimated afforestation of 245,000ha over 2021 – 2030 with HWP included in the average age: 18 year long-term average carbon stock age without HWP 196,000ha; without averaging included in the NZ ETS 122,500ha. In total an additional 170 million trees assuming HWP is including in the average). Assumes 70 per cent exotic planted at 1000 stems/ha and 30 per cent native/regeneration/reversion planted at 2300 stems/ha.

⁶³ Increased CO₂ removals from an estimated 23.1 to 27.7 million tonnes over 2021-2030 and from 157.7 to 203 million tonnes over 2031-2050 (assuming the same NDC rules apply from 2031).

⁶⁴ Estimated increased Crown allocation from 15.2 to 19 million NZU's over 2021-2030 and from 125.4 to 176.2 million NZU's over 2031-2050.

⁶⁵ This is the estimated cost over 2021- 2030 from moving existing forests from the saw tooth approach, where estimated revenue from harvest surrenders is around 24.6 million NZU's, compared to an estimated expense of 11.7 million units allocated under averaging.

⁶⁶ An estimated 21 million additional low risk NZUs: This is the difference between the 18 and 21 year long-term average carbon stock age for an existing pine plantation forest. Assumes mandatory averaging accounting.

⁶⁷ \$168 million (@\$21/NZU) assuming the difference between a 21 and 18 year long-term average carbon stock age is 8 million tonnes. Additional research and analysis is required to further understand the value of HWP in average and how this could be translate into a fund.

Objectives	Status Quo	11.1. The HWP accounting value will be reflected in averaging accounting as emissions units to participants	11.2. An industry good research and development fund will be established to encourage development of longer lived harvested wood products
Improve ETS operations	0	0 <ul style="list-style-type: none"> • Would be easy for Te Uru Rākau to administer as have national data on national wood product mix and associated lifetimes. • No impact for participants (as would be built into the long-term average carbon stock age). 	? <ul style="list-style-type: none"> • The participant and administrative impacts of this option are unclear at present as it will depend on how the fund is set up and who administers it which would need to be determined post consultation.
Consistent with New Zealand's broader climate change programme	0	+ <ul style="list-style-type: none"> • Provides regulatory certainty as can be relied upon to be passed on through the ETS until at least 2030 (if not longer). • Will help to achieve the 1 billion trees target and could deliver employment, development, GDP and environmental co-benefits (as per option 1.1 - the new forests averaging accounting proposal). 	+ <ul style="list-style-type: none"> • Could boost employment, exports and GDP. • Could increase the productive capacity of New Zealand's plantation estate. • Using a non-market intervention, such as a fund, to drive changes in behaviour could result in unintended market consequences for the timber industry and other emitting sectors or environmental impacts (i.e. increase energy use from timber processing plants).
Overall assessment		Recommend consulting on - to gauge level of support. Further research and modelling is also needed to better understand production forests long-term average carbon stocks and ages within the ETS.	Recommend consulting on - to gauge likely behavioural impacts. Need to undertake further research on flow on timber industry, economic and environmental impacts and the impact of different ETS long-term average carbon stocks and ages.

12. Should participants with post-1989 forests be liable for temporary adverse event emissions?

- 138 Officials recommend consulting on a proposal to no longer require participants using averaging accounting to surrender NZUs to the Crown to account for emissions released to the atmosphere from a temporary adverse event. Doing so will better reflect the impact on the Crown's accounts under the NDC (where temporary adverse events only result in a marginal change to the long term average forest carbon stock). It is also expected to help increase participation and afforestation rates.

Option 12.1. No temporary adverse event liability for post-1989 participants with using averaging, pause and begin earning NZUs again once reach carbon stock at time of event⁶⁸

- 139 Under this option, when an adverse event temporarily impacts carbon stored in forest land, participants using averaging accounting will not be required to surrender their NZUs to account for emissions released (i.e. as though it were a deforestation liability). Instead, if the adverse event occurred when the participant's forest was under its long-term average carbon stock age, they would stop earning NZUs until their forest regenerates to its level of carbon stock at the time of the adverse event, then continue to earn NZUs until their forest reaches its long-term average carbon age. If the forest is not replanted within 4 years the deforestation liability rules will apply.
- 140 If a participant's forest has already passed its long-term average carbon stock age, then they will not be required to repay any NZUs so long as they replant the forest within 4 years of the adverse event.

Impact analysis

Improve ETS (rotational and permanent) forestry incentives

- 141 Participants may be able to reduce insurance premiums over adverse events, which will de-risk and make entry into the ETS under averaging accounting, particularly for permanent forests, more attractive. This is expected to help increase participation and as a result afforestation.

Improve ability of the ETS to effectively meet climate change targets

- 142 Under averaging accounting, participants would not face harvest liabilities and are therefore more likely to have traded or sold their NZUs. Requiring them to repay NZUs because of an adverse event could create a liability that they are unlikely to have planned for.

Improve ETS operations

- 143 It would add additional complexity to the ETS, as areas of a participant's forest subject to adverse events would have to be identified, reported to Te Uru Rākau and assigned to a special forest land category for administrative and compliance purposes. Administration as a special land category would need to continue until the forest area regained the former age at which the adverse event had occurred.

⁶⁸An adverse event which causes permanent destruction of the forest and prevents re-establishment will still be treated as deforestation. There are, however, existing exemptions to deforestation liabilities for forests that cannot be re-established, and these would apply.

Table 12 Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

Objectives	Status quo: participants with post-1989 forests have adverse events emissions liabilities.	12.1. No temporary adverse event liability for participants using averaging accounting; pause and begin earning NZUs again once reach carbon stock at time of event
Improve ETS (rotational and permanent) forestry incentives	0	+ <ul style="list-style-type: none"> Reduced forestry costs/de-risks entry into ETS forestry - expected to significantly increase participation and afforestation. The pause and re-earn element to this option will incentivise forest owners to quickly re-plant their forests to regrow to the same state as when the temporary adverse event occurred.
Effectively help meet New Zealand's climate change targets	0	0 <ul style="list-style-type: none"> Could prevent participants from being subject to significant financial distress. Small increase to potential Crown fiscal risk. In the case of an adverse event the Crown will see a minor temporary decrease in the international reference level accounting for the national forest estate. Small scale temporary adverse events are relatively uncommon.⁶⁹
Improve ETS operations	0	- <ul style="list-style-type: none"> This rule would add additional complexity to carbon accounting and administrative effort for Te Uru Rākau.
Consistent with New Zealand's broader climate change programme	0	+ <ul style="list-style-type: none"> The Crown would be allocating NZUs to ETS participants which are able to be backed by international accounting sequestration (provided the adverse event is also captured in New Zealand's international target accounting) Reduces barriers to enter forestry, which could encourage economic development.
Overall assessment	N/A	Recommended consulting on - to gauge likely participant behaviour in an adverse event, further analysis required to determine size of potential benefit to participants and impact on the Crown (based on size/likelihood of events occurring).

⁶⁹ The Crown has an option to account differently for major adverse events that would have a significant impact on the NDC.

13. Should post-1989 forest owners be able to use planting to offset deforestation emissions?

- 144 Officials recommend consulting on a proposal to introduce offset planting for post-1989 forests in the ETS. It would increase land use flexibility which could assist the Government to achieve its wider climate change agenda goals. It could also increase participation and afforestation rates.

Option 13.1. Enable ETS participants with post-1989 forests that use averaging accounting to use offset planting

- 145 Offset planting for forests first established after 1989 would enable foresters to avoid deforestation liabilities if they establish a forest elsewhere of equal or greater size within 4 years. The changes to improve the offset planting rules for pre-1990 forests (to ensure they can be used more effectively) would also apply to post-1989 forests in the ETS.

Impact analysis

Improve ETS (rotational and permanent) forestry incentives

- 146 This option makes it easier to retain forest cover and change in land use. It could also increase forestry participation and incentivise afforestation by de-risking forestry as an investment opportunity. In many cases it is more economically efficient for participants to offset rather than pay deforestation liabilities (depending on other factors such as the carbon price and higher returns other activities such as permanent forest replanting).
- 147 This has been demonstrated by changing land values of forests established prior to 1990 relative to forest land established after 1989. Offset planting for post-1989 forests in the ETS is likely to reduce the cost of land conversion, and so will increase the land expectation value (LEV). As there is evidence to suggest foresters make afforestation decisions based on forest LEV we expect an increased afforestation incentive⁷⁰.

Improve ability of the ETS to effectively meet climate change targets.

- 148 The attractiveness of offsetting for post-1989 forests depends on many variables.

Table 1 below provides some of the considerations a forest owner may face in choosing whether to offset planting.

Considerations	Forests first established after 1989 averaging	Forests first established after 1989 saw-tooth
Unit potential	600 tC/ha	1000 tC/ha
Units surrendered at harvest	0	800 tC/ha
Low risk units	600	200
Units at deforestation	600	1000
Cost of deforestation relative to harvest (\$21/NZU)	\$12600	\$4200
Cost of offsetting planting (low value on land already owned, high on land)	\$1500-\$6500/ha	

Note 1: Participant costs for the viability of post 1989 offset planting- assumes a production pine forest and uses tonnes of carbon in the example (tC).

⁷⁰ The land expectation value (LEV) of forest land established after 1989 that has been registered in the ETS will depend on the cost of deforestation liabilities.

- 149 Allowing forests first established post-1989 to use offset planting will significantly reduce the Crown's fiscal risk (from deforestation emissions recognised under New Zealand's NDC). If a forestry participant chooses to offset their forests' deforestation emissions, the Crown will face no liability in the NDC. It will also reduce fiscal income to the Crown, as less NZUs would be surrendered for deforestation emissions.

Improve ETS operations

- 150 The level of initial uptake for this change is unclear. However, this is unlikely to result in unreasonable administrative costs as a very similar administrative process already exists for pre-1990 forests (and the costs are scalable).

Consistent with New Zealand's broader climate change programme

- 151 Diversified land use and reduced barriers to optimised land use are important drivers of regional development and Māori development. Land use flexibility will also be important to ensure New Zealand is well prepared to transition to a low emissions economy at low cost and in an inclusive manner (i.e. support Māori goals and aspirations).
- 152 Offset planting could assist people to make good sustainable land use decisions. For instance, if a forest is established on land that has a higher value in another land use (e.g. pastoral grazing), then it is better overall that the landowner has the option to establish an offset for the forest on a more suitable location on their land than deforest altogether. Likewise if some soil on a patch of land without forest becomes vulnerable due to a natural disaster, under offset planting it may be more economically viable for a forest owner to shift their forest to the vulnerable land to prevent soil erosion (and improve water quality).

Objectives	Status quo – Participants cannot use offset planting for post-1989 forests.	13.1. Enable participants with post-1989 forests that use averaging accounting to use offset planting
Improve ETS (rotational and permanent) forestry incentives	0	++ <ul style="list-style-type: none"> Makes it easier to retain forest cover when changing land use (could potentially halve current deforestation rates– if similar outcome to forest land established prior to 1990). Although there will likely be a lag in uptake at first to reflect past management decisions. Could contribute as much as 125,000 additional trees per year (and decrease total deforestation emissions). Could increase participation and afforestation rates by de-risking forestry as an investment opportunity, particularly under averaging accounting.
Effectively help meet New Zealand's climate change targets	0	+ <ul style="list-style-type: none"> In many cases it is more economically efficient for participants to offset than deforest and pay deforestation liabilities (depending on other factors such as the carbon price and other investment opportunities). Will reduce fiscal income to the Crown (no NZUs surrendered upon deforestation), but decrease the fiscal risk caused by deforestation emissions under New Zealand's NDC for situations where the Crown's exposure to deforestation is greater than the participant's.
Improve ETS operations	0	0 <ul style="list-style-type: none"> Unlikely to result in unreasonable administrative costs as a very similar administrative process/system already exists for offsetting the deforestation of 1990 forest land established prior to 1990.
Consistent with New Zealand's broader climate change programme	0	+ <ul style="list-style-type: none"> Reduced deforestation emissions will assist the New Zealand to meet the one billion trees target. Offset planting could create flow on impacts for the New Zealand economy. It could increase demand for forest land and increase forest land prices, and potentially increase competition for land with new planting. Continuation of offset planting under the ETS could be subject to fiscal risk and environmental integrity concerns if extended to forests which are not plantations, or which are below their long-term average carbon stock age, as these categories of forest are not covered by the corresponding international accounting rule. There is also some uncertainty about whether New Zealand will be able to apply this rule beyond 2030. Diversified land use, and reduced barriers to optimised land use, are important drivers of regional and Māori development. Land use flexibility will also be important to ensure New Zealand is well prepared to transition to a low emissions economy at low cost and in an inclusive manner. Could assist people to make good environmental decisions (i.e. give more flexibility to plant the right tree in the right place for the right purpose). Could reduce the level of eligible land (established after 1989) for afforestation, increase demand and land prices.
Overall assessment		Recommended consulting on - with a view to gauge likely behaviour change, requires additional economic and environmental impact analysis before implementation (i.e. on uptake and costs). May be a need to limit the rule e.g. to plantation forests only.

Consultation (see consultation table in appendix 6 for stakeholder views)

2018 planned consultation

153 MPI and Te Uru Rākau has been preparing for consultation with the wider public to discuss the proposals in this draft RIA once they have been submitted to Cabinet. This consultation is planned to occur alongside consultation for wider ETS changes run by MfE.

2018 Forestry Package stakeholder engagement plan

- a. Pre Consultation (early-mid August): MPI will undertake targeted communication with key stakeholders to ensure information reaches them in an appropriate and timely manner during the consultation period.
- b. Consultation Period (mid-August to mid-September): Consultation will be for six weeks and commence when the consultation document is publicly released on the MPI/Te Uru Rākau website.
- c. National roadshow (September): The roadshow will consist of 2-3 hour workshops, MPI staff will outline the proposed changes and stakeholders will have opportunities to ask questions. Locations are still to be finalised but will target those regions with forestry and other appropriate rural operations as well as main centres.
- d. Communications (mid-August to late September): MPI/Te Uru Rākau will use their social media channels to promote the launch of consultation as well as helping to develop and host a consultation page on the MPI/ Te Uru Rākau website. This page will include fact sheets, Q&A's, and links to other relevant pages (such as the ETS Review pages on the MfE website).
- e. Targeted consultation mid-August to mid-September with Māori/Iwi and key stakeholders including investors and forestry experts.
- f. Post consultation period: Notify key stakeholders of Cabinet/Environmental Committee decision; confirm the timing and process for implementation design and delivery; and timing for process through to legislation and gazettal.
- g. As per the new Māori engagement guidelines MPI will engage with the following Māori groups at key points during the consultation process: all mandated organisations; post settlement governance entities (PSGEs) that have a relationship accord with MPI/ Te Uru Rākau; and previous Māori submitters on the recent ETS Review.

2015/16 review consultation

154 Stage two of the ETS review included the release of two technical notes on operational and forestry matters (in March 2016). These notes were intended to support consultation and seek additional feedback on specific issues. This RIA includes relevant feedback on the forestry technical note⁷¹

⁷¹ www.mfe.govt.nz/publications/climate-change/forestry-technical-note

Climate Change Forestry Reference Group

- 155 Following the release of the stage two ETS review summary of submissions, the Climate Change Forestry Reference Group (CCFRG) was formed to assist officials to develop proposals that would encourage significant new planting and increase ETS participation in the scheme.
- 156 The CCFRG includes individuals with strong experience and expertise in the forestry sector, carbon forestry, post-1989 forestry participation in the ETS, permanent carbon forestry, farm-forestry, and Māori forestry. These members are: Peter Clark, Peter Weir, Howard Moore, Murray Parrish, Ollie Belton, Dr. Murray McClintock, Edwin Jansen and Harvey Bell.
- 157 The CCFRG has been used by MPI, Te Uru Rākau, and MfE officials to test the ETS forestry accounting proposals (including for permanent forests) and operational improvements, and test their interaction and coherence with other climate change policy and programmes. Their views are indicated in Appendix 6.

Internal and external consultation

- 158 Initial drafts for feedback and input have been provided to key internal experts (i.e. for views on operational, fiscal, environmental and regional development impacts). We have also obtained input and feedback from the MfE, Te Puni Kōkiri, the Office of Treaty Settlements, the Ministry of Justice, the Ministry for Business, Innovation and Employment, the Ministry of Foreign Affairs and Trade, the Department of Conservation, the Department of the Prime Minister and Cabinet, and the Environmental Protection Authority.

Implementation

Legislation, regulations, and other processes

- Cabinet intends to make decisions to introduce legislation during 2019 (MPI will assist in the drafting of the legislation)
- Regulations need to be set after the legislative process (regulations cannot be introduced before legislation is passed)
- During the legislative process we will complete the following;
 - The policy process to decide what should be set in regulations (i.e. age bands, yield tables, long-term average carbon stock ages)
 - Community and further cross agency outreach
 - Websites updated – information provided to public; and
 - Discussion with public on transition issues.

IT and operational

- 159 Te Uru Rākau, under delegation from the EPA, will be responsible for the implementation and ongoing operation and enforcement of the new ETS forestry arrangements (reflecting all the ETS forestry package changes – operational and accounting related). Te Uru Rākau is currently planning a major IT and system upgrade. Making the ETS forestry package changes alongside the redevelopment is cost-effective as many processes can be updated and communications can be altered together. But some of the ETS forestry package changes could alter the IT development pathway. For instance, having two accounting approaches (current and averaging) will increase the complexity of the redevelopment and increase the timeframes before a new system can go live.
- 160 The full list of activities required for the ETS forestry package changes and IT rebuild are in Appendix 2. The IT changes will be significant and complex, and are likely to take 3-4 years (before the new system can go live). Funding for this redevelopment will need to be secured.

Implementation risks and mitigations

Legislation

- 161 There is a risk that the legislation process is held up due to other priorities and business in the House. There is also a risk that significant changes are made to policy positions during the Parliamentary process or that the complexity of changes and interactions means more regulations are needed. The impact of those changes, including on IT systems, would need to be considered at that time.
- 162 MPI will work closely with Te Uru Rākau on the policy and supporting evidence for any regulations, to ensure we can move as quickly as possible once the ETS forestry package changes are introduced in legislation.

IT systems and operations

- 163 The greater the number of dimensions to eligibility for averaging accounting and the greater the complexity of the rules, the more risk of extra administrative cost, participant non-compliance, or reluctance to enter the ETS (which could impact afforestation rates). To mitigate these risks it is possible to develop a more sophisticated IT system and provide greater assistance to forestry participants. This additional support would impact the time needed and cost of developing the IT system.
- 164 Noting the historically low compliance and levels of understanding of technical ETS requirements, especially for small scale foresters, it is possible that participants may not fully appreciate the implications of certain options. This could create implementation issues as participants may regret choices they have made as part of the transition to the new ETS forestry package rules (i.e. for the one-off one-way option). This could be mitigated through education and communication throughout the consultation period as well as prior to go live.

Summary of conclusions and recommendations

- 165 Officials recommend consulting on the recommended ETS forestry accounting proposals outlined in this RIA (refer to options tables on pages 34 to 36 of this document). Below are a number of key points that officials consider would be useful to test with the public through the consultation process:

Averaging

- That the case for averaging accounting for new forests is strong and why;
- The relative importance of the averaging accounting existing forest option impacts (long and short term fiscal risk, administrative cost, participant effort and burden sharing, level of disruption to business activity); and
- Would participants prefer averaging detailed design proposals that are simple (to understand and comply with) or prefer more complex proposals that enable them to maximise carbon returns from their forests (i.e. by having rotation bands).

HWP accounting proposals

- Is it more appropriate to reflect the international HWP accounting value to the domestic forestry sector through the ETS or a fund?
- Could the HWP fund be adequately targeted (to encourage development of longer lived products and not create unintended impacts)?
- Should the full HWP value be reflected in the HWP fund?

Adverse events and deforestation offsetting proposals

- Would removing temporary adverse event emissions liabilities significantly reduce insurance premiums and incentivise people to register more forests in the ETS?
- Are people likely to use an ability to offset deforestation emissions to make more economically efficient and environmentally appropriate decisions about where to place forest cover?

166 Officials consider that feedback during the August/September consultation, complemented by additional analysis signalled earlier in the document will provide the remaining impact analysis required to finalise this draft RIA. It is intended that the ETS forestry package RIAs will be updated to support final policy decisions. They will be ready for release ahead of the introduction of the Climate Change Response Act 2002 legislative amendments Bill.

Monitoring, evaluation and review

- 167 Below are the metrics Te Uru Rākau will use to know whether the anticipated impacts occur:
- Number of existing participants, and area of existing ETS forest, electing to swap to averaging accounting from the carbon stock change approach
 - Increase in the rate at which new forest land is registered in the ETS
 - Increase in the number of emissions returns submitted on time
 - Decrease in the number of incorrect emissions returns submitted
 - Decrease in the number of prosecutions and cases where penalties are applied
 - Increase in the number of changes in forest ownership notified on time
 - Changes in the number of enquiries to Te Uru Rākau's call centre about ETS matters.

System-level monitoring and evaluation

168 For forests subject to forest-specific monitoring, a wide range of information specified in Standards made under the Legislation/Regulations is collected to enable calculation of forest carbon stocks. In meeting legal obligations, Te Uru Rākau also collects a broad range of activity statistics that can be related to the effectiveness of the Legislation, Regulations and Standards.

New data collection

169 Te Uru Rākau will need to collect extra data, particularly if the Government chooses to implement the more complex detailed design and eligibility proposals. The new data would be used to pre-populate correctly calculated emissions returns which would reduce participant costs, compliance effort, and the likely number of penalties imposed (for incorrect returns). Data collection would be mandatory rather than voluntary for specification of forest establishment dates, improved specification of forest area (already mandatory), and extent and timing of adverse events and replanting.

Appendices

Appendix 1: Model description, data, assumptions and limitations

ETS NZU flow model

1. The forest carbon calculation methodology used to determine ETS unit flows is based on a forest growth simulation method. Growth simulation for post-1989 forests registered in the ETS starts at 1990 and uses species specific yields that provide carbon stock and change estimates by age on a per hectare basis. The growth simulation model tracks the post-1989 forest area planted, harvested and deforested through time and generates annual estimates of carbon stock and change by multiplying the area at a given age by the carbon yields per hectare for that forests age and species. Post-1989 forest entitlement is then calculated based on the year registered into the ETS and within the Emission Reporting Period.
2. Post-1989 harvest and deforestation surrenders to the Crown are modelled based on the age/species and carbon loss at the time the activity occurred. Post-1989 forest surrenders are subject to section 190 of the Climate Change Response Act 2002 (post-1989 forest participants cannot be liable to surrender more NZU's than their current entitlement balance). Post-1989 forest harvest surrenders are modelled based on each forests entitlement (unit balance) and the carbon loss due to harvest in consideration of S190 of the Climate Change Response Act 2002.
3. Depending on when the post-1989 forest was established, the species and year registered, the forest owner may, or may not surrender less units than received upon harvest. Harvesting projections/surrenders are also based on when the activity is projected to occur and this may differ from when the forest owner reports a carbon change decrease due to harvesting.⁷² Second rotation entitlement assumes the area is replanted within a year, similar management practices consistent with the first rotation, and forest entitlement starts when net increases from replanting exceed net losses from residual decay.
4. Pre-1990 planted forest deforestation surrenders are modelled based on annual Deforestation Intentions Surveys⁷³ and adjusted for ETS pre-1990 planted forest deforestation exemptions and the uptake in pre-1990 planted forest offsetting. Deforestation age is assumed to occur at the point of clear-fell and ETS pre-1990 forest default lookup tables are used to determine NZU surrenders.
5. Averaging accounting for existing forest owners is based on forest owners retaining units up to forests' long-term average. The amount of units claimed for existing forest owners is a function of when the forest was registered in the ETS, the year planted, species and the forests long-term average carbon stock age. Forest owners can keep credits up to the forest average, or if earned more credits pay back to the average. If the forest average is reached before 2020 then the credits received up to the forest average are deducted from the forest owners harvest liabilities.

ETS unit flow data and assumptions

6. The ETS unit flow model includes around 326,000 hectares (or around 50 per cent) of post-1989 forest registered in the ETS. All data for these forests is recorded by the year planted, year registered into the ETS and forest species.

⁷² Forest owners with post-1989 forest registered in the ETS have the option to report during Voluntary Emissions Returns, but are required to report at Mandatory Emissions Reporting Periods (MERP).

⁷³ <http://www.mpi.govt.nz/dmsdocument/11776-deforestation-intentions-survey-2015-final-report>

7. Future afforestation rates⁷⁴ are based on research conducted by the University of Canterbury⁷⁵, and take into account carbon prices, product returns, recent trends and government policy. The scenario used for the current BAU forecasts assumes a gradual increase to 15,000 hectares of new forest planting per year by 2030. Based on the recent historical uptake of post-1989 forest into the ETS, the forecast assumes that the majority (70 per cent) of new afforestation from 2018 onwards⁷⁶ is registered into the ETS.
8. Afforestation rates assuming averaging is introduced in the NZ ETS are based on research conducted by the University of Canterbury, School of Forestry in 2017.⁷⁷
9. ETS unit flow forecasts reflect the ETS species composition, with pine and other mixed species comprising 80 per cent, Douglas fir 11 per cent and regenerating post-1989 natural forest 9 per cent. Future species compositions are based on recent trends and assume 70 per cent exotic and 30 per cent native planting/regenerating and revision. A national area weighted Field Management Approach (FMA) yield table by species grouping is used calculate post-1989 forest carbon stock and change.
10. Pre-1990 planted and post -1989 forest deforestation forecasts from 2018 are based on the annual Deforestation Intentions Surveys conducted by the University of Canterbury. Projections of Pre-1990 planted deforestation take into account exemptions and pre-1990 planted forest offsetting, and range between 200 and 600 hectares per year depending on the carbon price and offsetting take-up.
11. Based on the results on the annual Deforestation Intentions Survey, offsetting could have a significant impact on reducing the level of pre-1990 planted deforestation with increasing carbon prices. Based on current carbon prices, land prices, and product returns offsetting in the ETS could reduce pre-1990 planted forest deforestation between 50 - 80 per cent.
12. Projecting the amount of post-1989 deforestation over the next decade within the ETS is challenging. It is assumed that the majority of future post-1989 deforestation will be from small to medium single age forest holdings, and where the initial intention was for a one rotation investment. Current projections assume only a small proportion (10 per cent) of the total post-1989 forest deforested is registered within the ETS. This assumption assumes that forest owners are unlikely to have registered if intending to deforest later. Research is underway that will help inform future rates of post-1989 forest deforestation registered in the ETS.
13. Post-1989 harvesting rates are based on the forest age class (projections of changes to demand over time), while factoring in carbon price variations and wood returns. Current forecasts assume rotation for pine between 26 and 30 years, around a 45 year rotation for Douglas fir and growth until steady state for post-1989 natural forest. The model can also include extended rotation ages with higher carbon prices. Average rotation lengths could vary as forest owner's

74 Future afforestation rates are subject to a range of factors such as: wood product returns, differing rates of return between forestry and other land uses, nursery capacity, forest/land owners future intentions, future international and domestic carbon accounting rules, land availability, health and safety issues related to topography, government planting schemes and current private sector interest in participating in forestry schemes administered by the government, forest owner's carbon price predictions.

75 <http://www.mfe.govt.nz/publications/climate-change/afforestation-responses-carbon-price-changes-and-market-certainties>

76 A proportion of this afforestation is funded by government afforestation schemes. Depending on the scheme carbon credits are not able to be earned until after 10 years of establishment.

77 Potential impacts of NZ ETS accounting rule changes for forestry – averaging and harvested wood products, Professor Bruce Manley, NZ School of Forestry, University of Canterbury

factor in wood returns, harvesting costs and the carbon balance in the forest (e.g. whether it is better to continue to accrue units, or harvest and meet liabilities).

14. Based on research completed by Scion in 2016 a small proportion (around 5 per cent) of forest registered in the NZ ETS are assumed not to be harvested in the future due to this being uneconomic or the forest is managed for other purposes.
15. Projections are estimated at the time that the activity is estimated to occur. This may differ as to when the forest owner/manager submits an actual emissions return.
16. The long-term average carbon stock age assumed in these ETS unit flow projections is based on research and analysis conducted by the University of Canterbury and Scion in late 2017.⁷⁸ Transition ages of 21 for radiate pine (with HWP) and 18 (without HWP), 29 for Douglas fir, and the continued crediting for permanent forests until steady state carbon is reached. The long-term average carbon stock has a significant impact on the fiscal cost to the Crown (and resulting participant's forest entitlement). For example the difference between a long-term average carbon stock at age 21 compared to 18 (for a new post-1989 radiata pine forest) would lower the Crown's total ETS allocation by around 120-110 NZU's per hectare.

Uncertainty and limits

17. The accuracy of ETS unit flow forecasts is limited to research, analysis and modelling completed to date. Some of the main limitations and areas for future research and analysis, that will increase the accuracy of the projections, are provided below:
 - Currently ETS averaging accounting is assumed for all production forests registered in the ETS. Additional research, analysis and modelling will be required to further assist our understanding on the likely uptake of averaging versus those existing forest participants who chose to remain on the current approach. Other research is also needed to further inform the impacts on the New Zealand economy and the environment, what the production forest long-term average carbon stocks and transition ages within the ETS are, post-1989 offsetting uptake and costs, temporary adverse events, the value of harvested wood products and how a fund could be costed, and post-1989 deforestation and withdrawals.
 - The value of harvested wood products is assumed to be the difference between a 21 year and an 18 year long-term average carbon stock age for pine.⁷⁹ This is based on the additional carbon in the long term average by including or excluding HWP.⁸⁰ This value should be treated as a proxy at this stage; further research is required to understand the true value of HWP within a commitment period, within the ETS average, or as a fund.
 - The modelling of future surrenders assumes a 100 per cent emissions return compliance for any post-1989 carbon stock decrease. Forecasts exclude any reduction in surrenders due to non-compliance or non-notification which can have a significant impact on actual surrenders to the Government versus forecast.
 - Projections of post-1989 forest de-registrations/withdrawals from the ETS are not included in the forecasts. This could impact on the forecast surrenders and in particular the level of post-1989 deforestation recorded within the NZ ETS. Forecasts are estimated at the time

⁷⁸ Options for calculating the long-term average carbon stock in post-1989 forests. S.J. Wakelin, B.R. Manley and L.J. Dowling

⁷⁹ The full international HWP value to the Crown for HWP assuming the difference between a 21 and 18 year average is 8 million tonnes over 2021 – 203079. If the full ETS value of HWP is devolved the difference between the 21 and 18 year long-term average carbon stock age for existing forests would be 21 million low risk NZUs. The reason why the ETS value is larger than the international value is because: 1. increasing the ETS long-term average carbon stock age means more ETS existing forest participants receive a greater number of low risk carbon credits when moving to averaging, and; 2. only forest planted since the year 2000 are included in the international NDC under post-1989 averaging (all forest planted from 1990 to 1999 have already met their forest average by 2021).

⁸⁰ Options for calculating the long-term average carbon stock in post-1989 forests. S.J. Wakelin, B.R. Manley and L.J. Dowling

that the activity is predicted to occur. This may differ to when the forest owner/manager submits an emissions return.

One Billion Trees programme

18. The impact of ETS averaging accounting on the One Billion Trees programme is based on the estimated additional afforestation incentive that averaging accounting provides, species composition, and the stocking rate. Actual trees planted is based on the sale and distribution of exotic and native tree seedlings throughout the year. Te Uru Rākau use sale and distribution data to estimate the number of trees being planted and update their web page regularly.⁸¹

NDC model data and assumptions

19. The model used to determine NDC forest emissions and removals is based on a forest growth simulation method. Growth simulation for post-1989 forests starts at 1990 and uses species specific yields that provide carbon stock and change estimates by age on a per hectare basis.
20. The principle behind the NDC model is to credit afforestation and reforestation up until the long-term average carbon stock is reached. It does this by introducing an accounting distinction between new and existing activities. The modified approach credits new activities (afforestation) up until the long-term average carbon stock, and then transfers this land to the existing category, where all sustainable harvest emissions (i.e. followed by replanting) would be accounted for under a business-as-usual Reference Level.
21. Post-1989 production forest averages are based on the long-term average carbon stock over a number of rotations (or perpetual rotations) and include the impact of HWP. The long-term average carbon stock ages are based on research completed by Scion and the University of Canterbury in 2017.⁸² Radiata pine is assumed to transition at age 21 (assuming harvesting at 28 years) Douglas-fir is assumed to transition at age 29, post-1989 natural forests are assumed to transition at steady state (100 years).
22. Species yield tables are sourced from Scion under contract and are based on the LUCAS post-1989 inventory. Based on research completed by Scion in 2016 a small proportion (around 5 per cent) of the post-1989 forest estate is assumed not be harvested in the future due to this being uneconomic or the forest is managed for other purposes.
23. Emissions from deforestation have a significant impact. All forest deforestation is included, and varies depending on carbon price, level of offsetting and other land use change drivers. Emissions from deforestation are instant and assume the activity occurs at the optimal harvest age. Planted forest deforestation projections are sourced from the annual Deforestation Intentions Survey, with the latest results showing post-1989 forest owners annual deforestation rate of around 2,250 hectares per year over the 2020's. Natural forest deforestation is projected to occur based on the average of the last six years reported in the 2017 GHG NIR submission.
24. 2016 Greenhouse Gas National Inventory data on afforestation and deforestation is used from 1990 – 2016 as the basis for the historical time series. Soil emissions from the conversion of non-forest to forest are assumed to be 0.35 tC/ha and occur over 20 years (IPCC default).

⁸¹ http://www.mpi.govt.nz/funding-and-programmes/forestry/planting-one-billion-trees/tracking-progress-of-the-one-billion-trees-programme/?_sm_aui=isVqtsJ02FMnMVMq

⁸² Options for calculating the long-term average carbon stock in post-1989 forests. S.J. Wakelin, B.R. Manley and L.J. Dowling

25. Business as usual afforestation projections are based on research conducted by the University of Canterbury⁸³ and are assumed to ramp up gradually to 15,000 hectares from 2018 to 2030, then remain around 15,000 hectares thereafter. New planting projections are based on variations in carbon price, wood products returns, land availability and relative land use economics.

DRAFT

83 <http://www.mfe.govt.nz/publications/climate-change/afforestation-responses-carbon-price-changes-and-market-certainties>

Appendix 2: Implementation operational activities

1. Subject to policy decisions various operational implementation activities will be required to implement the ETS forestry package. Some activities are preparatory in order to get ready for go live, others activities are transitional and are related to moving away from the current state, while others will be permanent ongoing operational activities. The exact mix of activities to get ready, transition or permanently change, will be dependent on the final policy decisions. Indications of operational impacts that are specific to ETS forestry accounting changes are outlined earlier in this RIA. A list of all the likely implementation operational activities is outlined below:

- IT system redevelopment
- Education for participants/landowners (i.e. on the new accounting rules). Including workshops, development of calculators and tools to help participants make choices/decisions, revisions of guides/factsheets, website revisions, tutorial videos
- Update of ETS guides and websites
- Update of Te Uru Rākau internal operational policies and procedures
- Staff training
- Application processing centre/call centre training
- Recruitment of additional operations staff/processing centre staff. For the ETS forestry accounting changes this would be needed to manage:
 - increased number of phone and email enquiries regarding the new accounting rules
 - transition arrangement (i.e. if existing forests can switch to averaging)
 - transitional arrangements (i.e. for swapping existing participants from saw-tooth to averaging accounting method)
 - increase in data processing (i.e. if an expanded area will be subject to forest-specific monitoring under the rotation length band option)
- Recruitment of additional GIS Analysts for ETS forestry accounting proposals to:
 - remove second rotation forests from transactions
 - process ETS registration applications due to the additional checks required (i.e. to identify if the land is newly established forest or not)
 - review all emissions returns to check for harvesting to ensure those on a delayed surrender timeframe comply
- Additional ETS compliance staff to monitor, assist and enforce compliance with the new obligations
- Updating of database queries and reports
- Legal advice (including potentially Crown Law advice) to clarify interpretation of the new legislation and regulations to inform operational process and decision-making
- Development/Update of Standards under the Act.

Appendix 3: Discarded Options

Issue/opportunity	Discarded options	Impact analysis – why discarded
1. Should everyone that registers new forests in the ETS use averaging accounting?	1.2: Enable anyone who registers newly established forests in the ETS to use either averaging or carbon stock change accounting	<ul style="list-style-type: none"> Participants planting new forests have not yet signed up to the accounting approach that applies to their forest, therefore changes to the rules for new forests would not undermine their property rights or cause significant financial distress or disruption. <p>It would not adequately address issues with the status quo – harvest liability financial risk and complexity, and misalignment between international and ETS accounting rules:</p> <ul style="list-style-type: none"> Completely optional averaging for new forests would mean there is no point in time from which land buyers could determine what accounting approach has been applied to forest land causing possible uncertainties and confusion. This could also lead to gaming opportunities as participants could cherry pick between approaches. Optional averaging for a subset of participants that plant new forests would be less costly and complex for land buyers and Te Uru Rākau (administrative effort rises with the number of participants using a particular accounting approach). But it would still require management of two new classes of forest. This complexity would be compounded if not all existing forests were required to use averaging. Would fail to address the issue of long term fiscal risk to the Crown and reduced ability for NZ to meet climate change targets (as a result of misalignment between internal and ETS accounting approaches). Participants planting new forests have not yet signed up to the accounting approach that applies to their forest, therefore changes to the rules for new forests would not undermine their property rights or cause significant financial distress or disruption.
3. ETS averaging accounting transition options for post-1989 existing forests	3.2. Allowance to earn NZUs on the second rotation	<ul style="list-style-type: none"> If ETS participants could earn NZUs on the second rotation up to the forest average it would result in a large fiscal cost for no expected increased incentive for participants to store carbon. It would result in payments falling across different target periods, potentially affecting accounting towards targets for multiple commitment periods Allowing existing forests to earn credits up to the forest average on their second rotation would significantly increase the cost the Crown in the short and long term. In the short term the Crown could allocate an estimated additional 49 million NZU's over 2021 – 2030 (from estimated revenue of 9.2 to an expense of 39.8) and in the long term allocate an estimated additional of 30.7 million NZU's over 2031 – 2050 (from revenue of 9.2 to an expense of 21.5 million NZU's).⁸⁴

⁸⁴ Assuming an 18 year average for pine. Second rotation forest owners would be able to earn credits when removals from growth exceed the emissions from harvest and residual decay.

		<ul style="list-style-type: none"> • The option of earning NZUs to the long-term average carbon stock age could be attractive to owners with existing forests not currently registered in the NZ ETS. If 50 per cent of currently non-registered existing forest area was registered in the ETS, and was then able to earn credits on the second rotation the cost to the Crown would increase significantly in the short and long term.⁸⁵ • This option would reduce the gap in total units that could be earned between existing forests planted prior to 2008 (when they could first enter into the ETS) and new forests that can earn units from the point of planting. • It would result in a long drawn out, administratively costly transition.
4. Slower emissions units repayment options for post-1989 existing forests	4.3. NZU repayment compensation	<ul style="list-style-type: none"> • Providing compensation would come at large fiscal cost to the Crown and would mean participants receive a windfall gain that other comparable participants have not had access to. In effect it would be a transfer of cost and risk from participants to the Crown for no additional carbon sequestration/climate change mitigation benefit. • It is difficult to give people an amount which reflects the NZU value
	4.4. All participants transitioning their post-1989 existing forests to averaging can surrender NZUs when harvest/clear their forests	<ul style="list-style-type: none"> • This option would lower the risk of impacts to property rights and enable participants with existing forests above the long-term average carbon stock age of their forest to use earnings from timber sales to cover purchase of NZUs and subsequent surrenders to the Crown. • This option is not recommended because it would extend the length of time when there is misalignment between international and ETS accounting approaches which means the Crown would not have access to all of those NZUs before 2030 (to assist with the 2030 climate change target). This could have implications for the wider ETS settings, as NZUs would be surrendered to the Crown over a longer time period, including after 2030 (the next climate change target period). This could make it more difficult to determine wider settings such as suitable levels of NZUs to be auctioned. • It would also require significant operational effort for Te Uru Rākau and ongoing compliance costs for participants.

⁸⁵ The short term cost could increase by an estimated 57.3 million NZU's over 2021 to 2030 (revenue of 9.2 to an expense of 48.1). Costs to the Crown in the long term could also increase by an estimated 66.6 million NZU's over 2031 to 2050 (from estimated revenue of 9.2 to an expense of 57.4).

<p>5. From which date should new forests that register in the ETS use averaging accounting?</p>	<p>5.3. All forests established just after Cabinet makes in principal decisions are new forests</p>	<ul style="list-style-type: none"> • Prevents potential delay in planting as per Option 5.1 and ensures BAU forestry emission removals. But was discarded for the reasons below. • People may not increase planting to take advantage of this rule as it takes at least a year to secure seedlings for planting/they are driven by timber returns. • Could create constitutional concerns as suggests Select Committee processes unable or unlikely to make any real change. • Could disrupt a small number of participants' business plans if they wish to have all their forests on current accounting and have planned to afforest in 2019. • As the date is fairly arbitrary it could cause some confusion for participants/land buyers and have an administrative impact as per Option 5.1. • Creates short term disruption and regulatory uncertainty as participants are required to comply with the new rules once they are established, but they will not have the certainty of the new rules being in legislation or finalised when they plant.
<p>6. Calculating the long-term average carbon stock in forests</p>	<p>6.2 Any change to the current carbon calculation approach prior to averaging accounting implementation (including only using a participant specific approach or only using default tables)</p>	<p>Changes to the status quo are not required as the current approach has submitter support and effectively balances administrative cost, participant effort and accuracy/ETS forestry incentives. Two options to change the status quo were considered, but discarded:</p> <ol style="list-style-type: none"> 1. Allow all forestry participants to use either default carbon storage tables or the FMA approach. This option presents a significant fiscal risk to the Crown, as forest owners with poorer quality forests will use the default tables and over-claim NZU entitlements. It may also result in some small forest owners using the FMA approach when it is economically inefficient (carbon profits do not cover measurement costs). 2. Require all forestry participants to use default carbon storage look up tables. This approach is a significant simplification to the status quo and would reduce compliance costs for larger forest owners and administration costs for Te Uru Rākau. As default carbon tables allocate NZUs at regionally (or nationally) averaged values it can undermine the incentive for participants to better manage their forests to sequester additional carbon. A completely default approach could pose international integrity international integrity concerns. It would also introduce fiscal uncertainty, i.e. if the default table is set higher/lower than the actual average yield for the region.
<p>7. Converting a forest's long-term average carbon stock into a long term average carbon stock age</p>	<p>7.3. Require forestry participants using averaging accounting to use default tables based on an annual carbon stock increment (i.e. 10 per cent of mean annual increment)</p>	<ul style="list-style-type: none"> • This would essentially be an approach that bases the average on the carbon stock, rather than the age. But it would create significant complexity - having different long-term average carbon stock ages for different forests, but still not allowing an increase to rotation lengths. It would also undermine the use of carbon sequestration calculation, -as it is essentially capped at an upper and lower bound.

8. How should a change to the long-term average carbon stock age in regulations be applied to existing participants?	8.4. Any options where the long-term average carbon stock age is not set in regulations	<ul style="list-style-type: none"> The Crown will need the ability to respond to changes in ETS forestry participant behaviour in a timely manner (cannot wait 20 years for adjustments to transition age to take affect). Any change to the long-term average forest carbon stock age would not be applied retrospectively (to avoid participants having to pay back any units if the long-term average carbon stock age changed).
9. Ongoing reporting requirements	9.3. Participants are only required to comply with detailed reporting requirements when they deforest	<ul style="list-style-type: none"> While this is a simple approach that removes any on-going compliance and administration costs for participants and Te Uru Rākau .It would be very financially risky for the Crown - as it cannot track changing in carbon stock over the life of the forest. It will also encourage game playing behaviour (extend first rotation length to gain maximum NZUs then reduce thereafter).
10. How far back can a participant claim emissions units on entry into averaging?	10.2. An ETS participant can claim emissions units back to 2008 or establishment of their forest	<ul style="list-style-type: none"> Will significantly increase fiscal risk for the Crown and administrative effort for Te Uru Rākau for no gain in carbon storage activity. Would in effect reward ETS participants for registering their forests in the ETS after they have been planted. Under both accounting methods this undermines the financial returns that can be gained through the ETS mechanism. Under both accounting methods, this undermines the financial returns that can be gained through the ETS mechanism and provides windfall gains for already planted forests. Moving existing forests to averaging accounting and then allowing the participant to claim credits back to 2008 (instead of when they actually registered) is estimated to cost the crown an estimated additional 13.2 million NZU's over 2021-2030 compared to option 2.2 (from estimated revenue of 9.2 to a cost of 4.0 million units over 2021 – 2030).⁸⁶
11. Should the Government reflect the international harvested wood products accounting value to the domestic forestry sector?	11.3. The HWP accounting value will be reflected as emissions units to participants using the carbon stock change accounting approach	<ul style="list-style-type: none"> It would create a significant misalignment between what the Crown will face internationally and how carbon is accounted for in the ETS which could increase New Zealand's costs of meeting its international climate change targets and discourage ETS participants from using the more closely aligned 'averaging' accounting approach. ETS projections show that adding the delayed decay of HWP to existing forests would increase the fiscal cost of accounting for existing forests by 56 million units between 2021 and 2030 (this compares to a cost of moving all existing forests to averaging of 37 million units), while providing no additional sequestration from forests. Currently emissions returns are very difficult to get right, and adding delayed decay from HWP would severely complicate this. This means that none of the reduced complexity benefits of averaging could be applied to current forests.

⁸⁶ Assuming an 18 year average and existing forests registered from 2013 to 2017 are able to claim units up to the forest average from 2008. If the average age is 21 then the additional cost to the Crown is estimated to increase to 14.2 million NZU's over 2021 – 2030 (from an estimated cost of 11.7 to 25.9 million NZU's over 2021 to 2030).

<p>12. Should participants with post-1989 forests be liable for temporary adverse event emissions?</p>	<p>12.2. No temporary adverse event emissions liability for participants with post-1989 forests - keep earning NZUs</p>	<ul style="list-style-type: none"> • Officials considered this option as it provides additional financial support to participants they can use the NZUs received to help cover the cost of replanting/re-establishing. But: • Not pausing the provision of NZUs could undermine the replanting incentive for participants, as they receive NZUs regardless of whether or not they replant/ re-establish their forest quickly or to the required age. • The Crown would be allocating NZUs to participants which are not backed by international accounting sequestration. • The fiscal risk is slightly elevated over option 12.1, as payments of NZUs continue, which leaves the Crown more exposed to adverse events.
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Appendix 4: Definition of forest land

Section 4 of the Climate Change Response Act 2002 defines forest land to be:

- a) any land of at least 1 hectare that has, or is likely to have, tree crown cover from forest species of more than 30 per cent in each hectare; and
- b) Includes an area of land that temporarily does not meet the above requirements (e.g. through harvesting) but is likely to revert to forest species.
 - This means that temporarily harvested forest does not meet the requirement to be bare land.
 - For an existing forest to be considered bare land again, it must be cleared, and remain as non-forest land for four years before it can be re-planted and considered “new”.
- c) This does not include:
 - A shelter belt (or most riparian plantings) where the average Crown width is less than 30 m and isn’t contiguous with another area that meets the above requirements.

Appendix 5: Percentage of harvest area captured within average harvest age blocks

Radiata pine: ten year block

	25-34 % of area
2006-09	98%
2010-13	95%
2014-17	93%

Radiata pine: two five year blocks

	25-29 % of area	30-34 % of area
2006-09	72%	26%
2010-13	69%	26%
2014-17	51%	42%

Radiata pine: three 5 year blocks

	22-26 % of area	27-31 % of area	32-36 % of area
2006-09	18%p	76%	5%
2010-13	12%	75%	10%
2014-17	13%	73%	12%

Douglas-fir: ten year block

	36-45 % of area
2006-09	91%
2010-13	80%
2014-17	93%

Notes:

- Area harvest data has randomly rounded to base 3.
- Harvest age data is provided by respondents as the long-term average carbon stock age of harvest for a specific species in a Territorial Authority (TA).
 - Information about the range of ages harvested by species and TA is not provided, meaning some variability is missing.
- The data has been grouped into four-year blocks to reduce between-year variability in harvest ages.
- Each block consists of 2 census years, where all forest owners with 40 or more hectares are surveyed, and 2 sample years where only owners with 1000 or more hectares are surveyed.
- No harvest data is collected for forests smaller than 40 hectares. The result is averages biased towards the behaviour of larger forests if the average harvest age for these forests is significantly different than for the under-40 hectare forests.
- Extreme long-term average carbon stock ages have been trimmed, such as forests harvested at under 10 years or over 80 years.
 - These extremes either represent unusual behaviour or possible data errors, but only represented a small percentage of total area harvested.

Age blocks have not been provided for eucalypts due to the skew and variability in harvest ages.

Appendix 6: Summary of stakeholder views from consultation

Averaging eligibility proposals	
Option	Stakeholder views
1.1 People who register new forests in the ETS are required to use averaging accounting	2015/16 review: many submitters that supported averaging accounting specified that it should only be introduced if it were optional. These submitters pointed to increased complexity and reduced flexibility (i.e. for larger forest owners to gain carbon returns) for all as a result of implementing such limits. CCFRG: members were comfortable with the proposal for all “new forests” to use averaging accounting.
2.1. Participants are required to continue using the carbon stock change accounting for their post-1989 existing forests	2015/16 review: was not consulted on. CCFRG: members had mixed views on this option. Some thought the forestry sector may be comfortable with this option as it maintains the rules existing forest owners had signed up to when they entered the ETS. Others thought existing forest owners may consider it unfair new participants can use a simpler and less risky accounting system.
2.2 Participants are required to use averaging accounting for their post-1989 existing forests	2015/16 review: A compulsory move to averaging of any kind was not viewed favourably by many submitters. CCFRG: had a mixture of views. One member was extremely concerned compulsory averaging accounting would undermine their employer’s business model. Another supported compulsory averaging accounting to achieve the ETS simplicity benefits. However, this was on the condition that “no-one should be required to transition forests to averaging before they have harvested”.
2.3 Participants have a one-off one-way choice to use averaging or carbon stock change accounting for their post-1989 existing forests	2015/16 review: most submitters supported optional averaging accounting. CCFRG: most members supported this option. Some members were concerned about the complexity impacts of running 2 accounting systems indefinitely. Members also noted this option could raise potential Māori/land arrangement equity issues (due to treaty settlements).
Averaging accounting transition options for existing forests in the ETS (including slower emissions units repayment options)	
4.4 All participants transitioning their post-1989 existing forests to averaging can surrender NZUs when harvest/clear their forests	2015/16 review: the review did not go into this level of detail. CCFRG: most members were in favour of this option as it would mean participants could use earnings from timber sales to cover the purchase of NZUs and subsequent surrenders to the Crown. Officials do not support this option as it would result in a long complex transition. Potential land buyers and administrators may not be able to determine which accounting approach applied to which piece of land for as long as 40 years.
4.1 and 4.2. Slower emissions units repayment options (over several MERP)	2015/16 review: the review did not go into this level of detail. CCFRG: this option has not yet been presented to CCFRG members.

Averaging detailed design proposals	
Option	Stakeholder views
5. From which date should new forests that register in the ETS use averaging accounting?	This set of options was not part of the 2015/16 review. CCFRG: members were generally comfortable with officials' preferred options.
6 and 7. Calculating the long-term average carbon stock in forests and converting it into a long term average carbon stock age	This option was not part of the 2015/16 review, CCFRG: members were generally comfortable with having forest type age bands. They wanted enough incentive to want to extend rotation length, but still keep things simple.
8. How should a change to the long-term average carbon stock age in the regulations apply to existing ETS participants?	CCFRG: members were generally comfortable with officials' preferred option (participants who have forests above the long-term average carbon stock age will not be required to repay, or able to earn more NZUs, due to a change in the long-term average carbon stock age set in the regulations).
9. Ongoing reporting	CCFRG: members were generally comfortable with MPI's preferred option.
10. How far back can a participant claim emissions units on entry into averaging?	CCFRG were comfortable with officials' preferred option (a participant can only claim NZUs from the beginning of the latest MERP). However, they noted that this decision is what gives effect to no earning on second rotation. For this reason it could attract comment at consultation.
Harvested wood products proposals	
HWP options	Stakeholder views
11.1. Should the Government provide the international harvested wood products accounting value to the domestic forestry sector?	2015/16 review: There was significant support for this proposal during the 2015/16 review. ⁸⁷ Deferral of harvested liability was seen to achieve similar outcomes to averaging accounting by reducing harvest liabilities and improving market liquidity – that it would create incentives for increased afforestation. Most submitters thought a HWP accounting approach should use a national average which assumes the HWP product mix. CCFRG: Some members supported this option.

⁸⁷ More people submitted on the question around whether the HWP value should be devolved through the ETS than any other area in the forestry technical note

<p>11.2. A research and development fund will be established to encourage development of longer lived harvested wood products</p> <p>11.3 Reflect HWP value by establishing a research and development fund to encourage development of longer lived harvested wood products and by passing on NZU to participants</p>	<p>2015/16 review: A small number of submitters thought that any benefit of deferring liabilities from HWPs should only be devolved outside the ETS and suggested this could be done through a fund/wood processing industry good initiatives. The Wood Council of NZ and a number of other submitters supported passing on the benefit the Crown receives from people outside the ETS to the wood processing sector in a similar way. They thought that because deferred HWP liabilities are associated with the whole forestry industry their benefits should be shared across the value chain. Industry are also concerned NZ's wood processing sector is not sufficiently set up to create value-added wood products.</p> <p>CCFRG: members had mixed views. Members that put forward the NZ Wood Council proposal continue to support it.</p>
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Offsetting and adverse events proposals	
Option	Stakeholder views
<p>12.1 and 13.1 post-1989 forests can offset deforestation emissions and are not liable for temporary adverse event emissions</p>	<p>These options were not part of the 2015/16 consultation.</p> <p>CCFRG: members supported officials' preferred approaches - they thought they would help to de-risk participation in averaging accounting, making it more attractive, particularly for permanent forests.</p>

General Comments:

Forestry ETS problems identified through the review submissions included financial risk and compliance effort associated with accounting for harvest liabilities (for forests first established post- 1989), the complexity and costs of complying with the current settings - and a lack of alignment between the ETS and other forestry policies or desired outcomes. Most submitters (approximately 60 per cent) did not think the ETS provides effective incentives for smaller foresters to participate in the scheme. A number of submitters also thought that there should be more support and recognition for the PFSI. Alongside this feedback, an overarching theme was that policy and regulatory uncertainty in the New Zealand ETS adversely affects long-term investment in low emissions technologies and forestry.

Regulatory Impact Assessment: Creating a permanent post-1989 forest activity in the Climate Change Response Act 2002

Contents

Purpose.....	91
Limitations	91
Problem definition, status quo and objectives	92
What is the context within which action is proposed?.....	92
What regulatory system, or system already in place?.....	92
What is the policy problem or opportunity?.....	93
Specific forestry package objectives and criteria	95
Are there any constraints on the scope for decision making?.....	96
What do stakeholders think?	96
Options identification.....	97
What is the preferred policy approach to permanent forests and recognising their carbon sequestration?.....	97
What are the less preferred options?.....	100
Design considerations.....	103
(A) Use of Covenant under Climate Change Regulations Act 2002 (CCRA) and its regulations .	103
(B) Transferring current PFSI participants into permanent post-1989 activities	107
(C) What forest owners can do after completion of 50 year non-clear fell conditions?	109
(D) Conditions of early exit while harvest restrictions are in place.....	112
(E) Transferring from Post-1989 to permanent post-1989 forestry on the first rotation, well above the average age.....	115
(F) Transferring from Post-1989 to permanent post-1989 forestry on the second rotation.....	117
(G): Start date of harvesting restrictions upon transfer from Post-1989 to permanent post-1989	119
Conclusions	122
Is the preferred option compatible with the Government's 'Expectations for the design of regulatory systems'?.....	125
Implementation and operation.....	125
How will the new arrangements work in practice?	125
What are the implementation risks?.....	126
Monitoring, evaluation and review.....	126
How will the impact of the new arrangements be monitored?	126
When and how will the new arrangements be reviewed?	127

Purpose

- 1 MPI/ Te Uru Rākau are solely responsible for the analysis and advice set out in this Regulatory Impact Assessment, except as otherwise explicitly indicated.
- 2 This analysis and advice has been produced as part of three RIA to support:
 - i. Cabinet in their discussions around the release the discussion document *A Better ETS for Forestry: Proposed amendments to the Climate Change Response Act 2002*; and
 - ii. stakeholders as they provide responses for to the questions posed in the discussion document.
- 3 This impact analysis is intended to provide the technical background to the discussion document's presentation of the options.

Limitations

- 4 In late-2013 and mid-2015 two formal reviews (through consultation) of the PFSI were carried out. Those consultations focused on improving the administration of the scheme, attracting more participants and gathering ideas about how more marginal land could convert into permanent forests. Integrating the PFSI into the ETS was the clear conclusion of these reviews and meetings. This has formed the basis for the analysis in this paper, as there was little support for enhancing the PFSI in the Forests Act.
- 5 In parallel to this work on the permanent forest option, there are two work streams being undertaken on other aspects of forestry in the ETS:
 - i. proposed changes to how non-permanent, production post-1989 forests are accounted for in the ETS (refer Impact Statement: ETS forestry accounting improvements).
 - ii. proposed operational improvements for forestry in the ETS (refer Emissions Trading Scheme: Permission to consult on Forestry Sector Operational Improvements).
- 6 The timing of the delivery of these work streams to Cabinet, and decisions on future policy directions, align with delivery of the permanent forests options. This has made the assessment of the counterfactual in this RIA more complicated: not only do we need to consider the status quo of the PFSI, and the post-1989 forest activity in the ETS, we also need to consider the possible future direction from those papers. We have managed this by focusing on how the preferred option (new permanent post-1989 forests) and the existing ETS activity (post-1989 forests) contrast and complement each other for different types of forest.
- 7 There is also some challenge in assessing the magnitude of the impact at a national level. Permanent forests in the ETS will be a voluntary activity, so the rate of uptake will be critical to achieving the benefits. There is good evidence around the potential for landowners to earn additional income from carbon, and how this could promote land use change. By applying economic and geospatial analysis we can assess the national potential to establish permanent forests. However, unlike our understanding of the rotational forestry sector, we have little evidence on the rate that landowners will change land use to permanent forests. We effectively know the start point (status quo) and the end point(s) but not the path in between.

Problem definition, status quo and objectives

What is the context within which action is proposed?

Status quo

- 8 The PFSI was introduced to allow landowners with permanent forests to realise the value of carbon stored in those forests from 1 January 2008 onwards. It pre-dates the ETS, and its governing legislation is the Forests Act 1949. The PFSI uses covenants with the land owner to define the land being registered, what can be done with the land (e.g. harvesting), and how the emissions units (NZUs) will be earned.
- 9 The PFSI is not an effective incentive to establish new permanent forest. This is primarily due to its complexity and the introduction of the more flexible ETS in late 2008. To date, uptake of the PFSI has been low, at around 15,500 hectares (around 2 per cent of the post-1989 estate), representing only 60 participants. There are around twice as many hectares of indigenous forest registered in the NZ ETS compared with the PFSI.
- 10 Feedback from consultation during reviews in 2013 and 2015 indicated that participants found the PFSI complex, costly and administratively time consuming, factors which also deter new entrants. Without simplifying the registration process for permanent forests, New Zealand will underperform in its efforts to sequester carbon in the medium to long term and meet its Paris Agreement targets.

Permanent forests and changes to forest accounting in the ETS

- 11 Currently, a suite of changes to the ETS are being developed to ensure it is fit for purpose. As part of this, a package of forestry improvements is being proposed, which is intended to enhance how forestry can contribute to the wider purpose of the ETS. This package includes accounting changes, operational improvements and the introduction of a permanent forest activity (this paper).
- 12 This creates the opportunity to better target the accounting for forests in the ETS so that:
 - i. the post-1989 forest activity is targeted at those forests where the intention is to harvest, or where the land owner wants the ability to exit the ETS at any point; and
 - ii. the (new) permanent post-1989 forest activity would be targeted at those who are not intending to harvest their forests and are willing to commit to the ETS for 50 years.
- 13 We have considered including permanent forest as part of the post-1989 forest activity, rather than as a separate activity. However, we believe this would significantly complicate the introduction of the proposed averaging approach (more information is provided in section 3), and require a more burdensome administration for all parties.

What regulatory system, or system already in place?

- 14 The ETS, established under the CCRA, is the government's main policy tool to reduce emissions. The ETS creates the New Zealand carbon market. The CCRA, and its supporting Regulations and Standards, govern how the sectors within the ETS are managed. Post-1989 forests are one of these sectors and account for around 90 per cent of the number of participants.

- 15 The purposes of the CCRA and Part 3B of the Forest Act (the 'PFSI sections') specify the same objectives for land owners despite different framing. The broad purpose is to encourage activities that assist New Zealand in meeting international targets and reduce net emissions.

What is the policy problem or opportunity?

- 16 The key opportunity this RIA addresses is how we develop an effective way to allow permanent forests to earn NZUs while providing the owners of these forests the ability to differentiate their NZUs in the carbon market.
- 17 Should we achieve this, two outcomes will result
- i. More permanent forests will be registered in the ETS (or carbon forestry) as the increase in financial rewards (cash flow from NZU sales of between \$180 and \$500 per hectare per year⁸⁸) will be more accessible to forest owners and land owners who may wish to establish forests; and .
 - ii. This increase in the area of permanent forest will drive a range of positive outcomes.

The opportunity and wider context

- 18 Enhancing the financial rewards from permanent forests will assist New Zealand in achieving four key objectives:
- i. Assisting New Zealand to meet long term climate goals.
 - ii. Supporting the One Billion Trees programme
 - iii. Erosion prevention
 - iv. Enhancing other ecosystem services.

Long term climate change goals

- 19 Establishing permanent forests provides the opportunity to store more carbon in the long-term, well beyond the crediting period offered by rotational forests (i.e. forests intended for clear-fell harvesting and replanting). Permanent forests may be of native or exotic species or a mix of both.
- 20 Native forests sequester carbon at a slower rate than most exotics, but are likely to store a similar level of carbon over decades. Native forests will therefore receive fewer NZUs per year (so less potential income from unit sales), but will receive carbon credits for their full growth, so they offer a good option for long term cash flow.
- 21 Permanent exotic species also have the potential to sequester carbon over the long term (well above the long-term average carbon stock for that species), and forest owners should be able to earn NZUs for this storage.
- 22 Under the forestry rules that will apply to New Zealand's 2030 target under the Paris Agreement, New Zealand will receive recognition for the full carbon stock of permanent forests, as the forests grow. This means New Zealand will be recognised for a larger amount of carbon sequestration over a longer period of time for permanent forests when compared with rotational forests. This means that forests planted in the 2020s will contribute to meeting targets into the 2050s and beyond.

⁸⁸ Based on a carbon price of \$20 per unit. The \$160 is based on the 9 NZUs per hectare per year for indigenous forests (the annual average sequestration unit the forest reaches age 30), the \$500 is based on the 25 NZUs per hectare per year permanent radiata pine

- 23 Establishing 100,000 hectares of permanent forests in the 2020s would sequester between 1 and 3 million tonnes of carbon dioxide by the 2050s. The lower estimate is based on native forest, while the upper estimate would be permanent pine forest (e.g. retired production forest on erosion prone land). In contrast, rotational pine forests established in the 2020s would be a negligible sink in the 2050s because they would have reached their average stock in the 2040s.

One Billion Trees

- 24 The Government has set a target to plant one billion trees over the next 10 years. This will require significant additional afforestation, in addition to the continued replanting of plantation forests as they are harvested.
- 25 A significant contribution to afforestation will be through the planting of native forests and we estimate over 230 million native trees will be established through the One Billion Trees programme.
- 26 Native forests are more costly to establish and maintain than exotic forests. The One Billion Trees programme has identified options to provide differential grant rates to overcome these additional costs, and promote the establishment of native forests and is developing proposals on these to take to Cabinet. A permanent forest option in the ETS could complement this funding: the grant overcomes the high establishment cost of natives, while the carbon income would provide cash flow to assist in maintaining the forest, and an incentive to keep doing so.

Erosion controls

- 27 There are an estimated 1.02 million hectares of grassland, and around 143,000ha of current forest land which is classified in the red zone under the Erosion Susceptibility Classification. Under the National Environmental Standards for Plantation Forestry (NES-PF), red zone land requires a resource consent for many production forestry activities to reflect the need for specific, local, oversight.
- 28 Establishing permanent forests under the ETS on red zone land is likely to reduce negative environmental outcomes (e.g. erosion) while also providing a carbon income stream for the land owner.
- 29 On highly erodible land, newly planted radiata pine is likely to be effective in stabilising the land. In the short term, it has advantages over natives in being low cost, fast and easy to establish and tolerant of many conditions. Allowing these forests into a permanent post-1989 activity will provide cash flow to the land owner in lieu of harvest income, and allow the land owners to consider eventual replacement of the old pines with native forests.

Permanent forests provide a range of benefits beyond those above.

- 30 Forests offer a range of ecosystem services. Properly sited forests contribute to the environmental (e.g. biodiversity), economic (e.g. honey), social (e.g. recreation opportunities) and cultural (e.g. Mātauranga Māori) wellbeing of the land owners, local communities and New Zealand.
- 31 Estimating the value of all the environmental, social and cultural benefits permanent forest offer to New Zealand is challenging as many of these are difficult to value (e.g. biodiversity services), offer different benefits to local communities to those provided to land owners (e.g. reduced sedimentation) and/or are influenced by other income provided by the forest (e.g. honey, eco-tourism).

- 32 Te Uru Rākau commissioned Landcare Research to undertake an economic analysis of planting marginal land in the Manawatū into different forest types. This analysis modelled three scenarios, ranging from production forestry on suitable land, to permanent forest with no income other than from carbon. Even when only including the benefits with a monetary value, all scenarios had a positive benefit to cost ratio (as high as 9.2) if forgone income from the land is not considered (bearing in mind the land is not suitable for other productive purposes or must change to forestry for other reasons, such as improving water quality). Even accounting for forgone production two of the three scenarios had a positive benefit to cost ratio.

Specific forestry package objectives and criteria

- 33 Below are the specific objectives and criteria relevant for developing proposals that address the forestry package issues identified as part of the 2015/16 review. These criteria are used across the forestry package and are common to all three RIA being prepared.
- 34 Improve ETS (permanent and rotational) forestry incentives - This aims to ensure the ETS forestry accounting proposals drive financial incentives to establish new forests and promote increases to the amount of carbon stored in forests. Doing so will help to ensure New Zealand is well placed to meet its current and future international climate change commitments. This includes incentivising planting of all forest species.
- 35 Improve the ability of the ETS to effectively meet climate change targets – This aims to ensure the Government can use the ETS to cost-effectively drive climate change mitigation in line with international targets. This includes minimising the potential fiscal cost by ensuring the Crown allocates less NZUs to ETS participants when NZ has challenging targets. It also reflects the need to maintain an appropriate level of risk and burden sharing between the Crown, ETS participants and related sectors and groups. We have a particular focus on ensuring participants do not consider the proposals to have undermined their property rights (NZUs can be considered to be a type of property).
- 36 Improve ETS operations – this aims to reduce or prevent Te Uru Rākau and ETS participants from being subject to unnecessary administrative and compliance burden, and as a result encourage more people (particularly smaller foresters) to enter and remain in the ETS. It aims to address concerns around the current ETS forestry operational settings being too complex and costly to comply with.
- 37 Consistent with NZ's broader climate change programme – this reflects the need to deliver on the Government's climate change agenda and wider wellbeing priorities (i.e. environmental, economic, and cultural wellbeing).⁸⁹ It includes ensuring these proposals will maintain market regulatory certainty and predictability and that they fit in effectively with wider changes to the ETS. It also involves ensuring New Zealand is well prepared to transition to a low emissions economy, by supporting economic and Māori development and flexibility of land use. The proposals also need to encourage people to place the right trees, in the right place, for the right purpose. For instance, to prevent erosion and improve water quality.

⁸⁹ Objectives and criteria have been chosen in reference to other relevant RIS and options analysis i.e. the ETS unit supply RIS for stage II of the 2015/16 review. The ETS operations criteria are identical to those used for the ETS forestry package operational improvements.

ETS Forestry package objectives	Improve ETS (permanent and rotational) forestry incentives	Improve ability of the ETS to effectively meet climate change targets	Improve ETS operations	Consistent with New Zealand's broader climate change programme
Criteria – How objectives are judged	<ul style="list-style-type: none"> -Promotes afforestation of both rotational and non-harvested forests -Encourages forest preservation (discourages deforestation) -Encourages extra carbon storage in forests 	<ul style="list-style-type: none"> -Minimises fiscal cost to the Crown from meeting climate change targets -Supports alignment between ETS unit supply and how NZ will meet its climate change targets -Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups 	<ul style="list-style-type: none"> -Improves administrative efficiency -Reduces complexity and cost for ETS participants -Reduces administrative cost to the Crown -Promotes accuracy in reporting by ETS participants -Supports ability to identify and manage non-compliance 	<ul style="list-style-type: none"> -Provides durable regulatory certainty and predictability -Reflects the Crown's responsibilities as a Treaty partner -Supports economic growth and social resilience -Supports international reputation -Maintains integrity of wider ETS settings -Avoids perverse incentives and unintended consequences

Are there any constraints on the scope for decision making?

- 38 In developing these policy proposals we considered alternative options to enhance permanent forests. The two reviews of the PFSI⁹⁰, provided strong support for the permanent forest option in the ETS, and our own analysis confirmed the value of this option so we have focused our attention on how these proposals will work best.
- 39 While there are some interdependencies with the 'Accounting' work stream (which will propose changes to post-1989 forest accounting), we are developing the post-1989 and permanent post-1989 forestry options to complement each other.
- 40 There are interdependencies with other government work programmes and objectives. These are discussed more fully in section 2.3.

What do stakeholders think?

- 41 In late-2013 and mid-2015 two formal reviews (through consultation) of the PFSI were carried out. The proposals focused on how:
- the scheme can be better administered;
 - it can attract more participants; and
 - more marginal land can be put under long-term forest cover
- This included the proposal to establish a permanent forest activity in the CCRA, rather than the Forests Act.
- 42 Feedback from these consultations provided officials with a strong indication of stakeholder preferences and priorities:

⁹⁰ Background on the two reviews can be found on the PFSI portion of the MPI webpage: <http://mpi.govt.nz/funding-and-programmes/forestry/permanent-forest-sink-initiative/>

- iv. There was strong support, especially from current participants, for a carbon scheme relating to permanent forests being included in the CCRA.
 - v. Conversely, feedback was not as supportive of the proposal to remove covenants as the mechanism to protect the forest. Some participants felt that the covenant, as a contract between the Crown and the landowner, was an important aspect of the permanency of the scheme.
- 43 However, as this feedback was largely from existing PFSI participants (who already have a covenant) it must be considered in light of the fact that PFSI participation rates have remained relatively static: if you like a covenant you are willing to go to the effort of getting one, however the covenant acts a barrier to participation overall⁹¹.
- 44 We have tested the approach we propose here with the Climate Change Forestry Reference Group (CCFRG) and key stakeholders. Generally they are supportive of the proposal to create a permanent forest activity, but are interested in the details.
- 45 We intend to consult on the use of a Permanent Forest option in the ETS and also some design considerations, where there is strong public interest (based on previous engagement), or no clear Crown preference.
- 46 Subject to Cabinet confirmation this consultation is expected to take place from early August 2018. It will consist of a consultation document being made publically available, notification of the consultation to stakeholders (e.g. email participants and through sector bulletins), and a series of meetings and hui.

Options identification

- 47 This options identification is framed as a two part process:
1. Identify the preferred policy approach to permanent forests and recognising their carbon sequestration.
 2. Identifying the design considerations which result from that preferred option, and are largely unique to a permanent post-1989 forest activity.

[What is the preferred policy approach to permanent forests and recognising their carbon sequestration?](#)

[What options are available to address the problem?](#)

- 48 We have considered 4 high level options around how to increase the areas of permanent forest and promote long term carbon sequestration:
1. **Keep the PFSI as is (Status Quo);**
 2. **Look at options on how the PFSI could be made better;**
 3. **Discontinue the PFSI, meaning any forests owners wishing to access carbon credits from their forest will be required to use the post-1989 forest activity within the ETS;**
or
 4. **Create a new permanent forest activity in the ETS, and discontinue the PFSI. The permanent post-1989 forest activity would be a separate category to rotational**

⁹¹ Recall that the ETS has 33,000ha of native forest registered vs. the PFSI's 12,000ha.

forest. The permanent post-1989 forest activity would have conditions on clear-fell harvest and how long it must remain registered in the ETS

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

- 49 Potential to encourage extra carbon storage in forests, particularly long term storage: The revenue stream over the long term is intended to encourage the planting of more permanent forest. The 50 year harvesting limit will ensure forests will grow for a considerable time, storing more carbon over time.
- 50 Minimises fiscal cost to the Crown: The preferred accounting option (stock change) is designed to balance the costs to the Crown with the incentive to maintain permanent forest. Crediting permanent forests up to the average would be cheaper for the Crown in terms of units paid, but as it would be less likely to incentivise additional long term carbon storage which would be at the expense of greater international liabilities in the long run.
- 51 Improves administrative efficiency: The inclusion of the PFSI in the CCRA will ensure that all carbon forestry is managed from a single point of legislation. This will vastly improve the administrative efficiency in managing carbon forestry.
- 52 Reduces complexity and cost for participants: Removing the requirement for a covenant will remove a significant cost and barrier to entry for participants.
- 53 Encourages forest preservation (discourages deforestation): Creating a more simple, aligned permanent forestry option in the ETS will provide an attractive carbon income stream for participants who wish to retain permanent post-1989 forest.
- 54 Encourages other benefits of forests: Forests offer a range of ecosystem services. Properly sited forests contribute to the environmental (e.g. erosion control, biodiversity), economic (e.g. honey), social (e.g. recreation opportunities) and cultural (e.g. Mātauranga Māori) wellbeing of the land owners, local communities and New Zealand.

Which is the proposed approach?

Option 4: create a new permanent post-1989 forest activity (preferred approach)

- 55 The proposed approach is option 4: create a new permanent post-1989 forest activity within the ETS and discontinue the PFSI. This is the preferred approach as it would be administratively simpler for both permanent forest owners and government and make it simpler to credit the forests for the full carbon stock change.
- 56 Using a stock change accounting process is the preferred option because crediting permanent forest units up to an average does not fully reward the carbon sink in permanent forests. Averaging would not provide the ongoing financial incentive to establish and maintain more permanent forests that is required to increase long term carbon storage (refer discussion of option 3).
- 57 Under this preferred approach the administration and operational process for both permanent post-1989 and post-1989 forests in the ETS would be very similar, offering increased simplicity for land owners and Te Uru Rākau. We would anticipate that both approaches would share:
 - i. The process of registration into the ETS;

- ii. The reporting and unit claim process for carbon change in the forests (including the use of the Field Measurement Approach);
- iii. The monitoring of the forests;
- iv. The exclusion of tree weed species from registration in the ETS.
- v. Any treatment for natural or adverse events

- 58 With the development of the new option within the ETS for permanent post-1989 forest, we are able to consider the future of the PFSI as a policy tool. We propose to close the PFSI to any new forests, and disestablish the PFSI. However, we intend to consult on how the 60 existing PFSI participants could transition to the new permanent post-1989 forest activity. For completeness, keeping the PFSI is included as an option in design consideration B, Transferring current PFSI participants into permanent post-1989 activities, but should it remain an option, would only be available to those current PFSI participants who do not transition.
- 59 Allowing both exotics and native forests to register as permanent post-1989 forest will provide a greater degree of flexibility to land owners to move to a permanent forest land use.
- 60 Exotic forests have the ability to act as a 'nursery crop' which aids the establishment for both planted and regenerating natives. Over time these forests may potentially convert naturally to native forest, or this transition to natives can be encouraged through a range of interventions (e.g. selective harvest of exotics and the replacement with natives). This option was identified by the Productivity Commission (in their low-emissions economy draft report) as a useful option for future work, which MPI is undertaking.
- 61 On highly erodible land, new planted radiata pine is likely to be effective in stabilising the land. In the short term, it has advantages over natives as pines low cost, ease of establishment, tolerance of various conditions, and grow twice as fast as natives. Allowing these forests into Permanent the permeant post-1989 activity will provide cash flow to the land owner and encourage their eventual replacement with native forests. With forest owner the ability to trace their NZUs back to a particular permanent forest, price premiums will be retained and more finely differentiate over time.
- 62 Additionally, allowing exotics also provides the option for landowners to plant alternative long-lived species, such as redwoods, which are expected to offer alternatives to pine as high value timber forests.

How long should the non-clear fell harvest period be?

- 63 We are proposing a 50 year non-clear fell harvest period for the permanent forest post-1989 activity as this is the current minimum length of the PFSI covenants. Under this approach, a participant who enters the permanent forest activity would: 1) be signing into the ETS for 50 years, and 2) not be able to clear fell for that 50 year period.
- 64 The first PFSI covenants could be reassessed after 99 years, but feedback for land owners as part of the PFSI consultations was that this made the PFSI an unattractive option as land use was locked in for too long, particularly for Māori land.
- 65 The 2015 PFSI consultation concluded a 50 year period as the most suitable option to define permanence. This was arrived at as the preferred position based on striking a balance between permanence of the forest, and land owner flexibility to reconsider their land management options. This will be consulted on.

What are the less preferred options?

66 We do not favour options 1, 2, or 3 due to:

Option 1: The status quo, which would keep the PFSI within the Forests Act.

67 Numbers participating in the PFSI have remained static for some time so this option is not encouraging additional long term carbon storage, and is discarded.

Option 2: Improve the PFSI.

68 We identified two types of change that could be made, but neither achieves the objective of simplifying the PFSI (and encouraging participation);

- **Examine what the covenant includes:** There is little scope to simplify the covenant option as it is necessary for the PFSI to operate through the Forests Act. However, one of the key operational difficulties with the existing scheme, is the use of the covenants, and the variation across the 60 that exist. The cost of entering into a covenant has also been identified as a barrier to entering the scheme.
- **Duplicate the CCRA in the PFSI.** An option to simplify the covenants would be to attempt to duplicate the operational parts of the CCRA for forestry into the Forests Act. This option would be highly risky as there would be two sets of very similar legislation in place, and any changes would need to be reflected in both places to ensure consistence. We would also need to develop a shared legislative framework to address how 'PFSI' forests would interact with post-1989 forests in the ETS⁹², administered under a different Act.

Option 3: Discontinue the PFSI

69 Discontinuing the PFSI would mean the only option for forests to receive NZUs would be the current post-1989 forest activity in the ETS. This would present a number of challenges for both incentivising permanent forests, and the options in the Accounting work stream:

- i. If post-1989 forest needs to incorporate permanent forests some of the design questions in the averaging RIA would more challenging to address. For example, the new and existing forest discussion (refer to pages 37 - 46 of the ETS forestry accounting RIA) is made significantly more complex if it must address both rotational and permanent forests;⁹³
- ii. Crediting permanent forests units up to the average (as is proposed for rotational forest) does not fully reward the carbon sink in permanent forests. This reduces the financial incentive to establish them; and is unlikely to result in increased long term carbon storage because maintaining a forest over time requires a steady cash flow from carbon credit sales;

⁹² An example of this would be developing a solution to allow a PFSI forest at the end of its 50 year period that the owner wishes to register as post-1989 forest in the ETS (e.g. averaging to enable harvest). This forest would need to surrender its unit balance (the number of units received). Upon joining the ETS this area of forest would have its eligibility reassessed and could only claim units back to the start of the five year period (the Mandatory Emissions Returns Period).

⁹³ For example, a regenerating native forest will become forest land when there are enough young trees (including regeneration) that Te Uru Rākau is satisfied it will meet the forest land definition, when the trees are mature. This means it is likely that areas where stock have been excluded are quite likely to be existing forest.

- iii. Developing an option to differentiate permanent forests from rotational forests within the post-1989 forest option would add significantly to the complexity⁹⁴ of post-1989 forests, undermining the benefits of introducing averaging;
- iv. Ability to define 'permanent' in a binding way, which would be very challenging if permanent forests are mixed in with averaged forests; and
- v. It will be more challenging to differentiate NZUs from the permanent forest from NZUs from rotational forests. This differentiation is important as permanent forest NZUs tend to sell at a premium increasing the income of the permanent forest owner.

What other impacts is the preferred approach likely to have?

- 70 If the preferred option is followed through we will need to determine the approach for the treatment of existing PFSI participants. This is discussed in the design consideration section 'Transferring current PFSI participants into permanent post-1989 activities'.

⁹⁴ This complexity is both operational (e.g. differentiating non-harvest from harvest forest) but also related to the policy options being considered around the introduction of averaging, e.g. if permanent forest were included in post-1989 forests the definitions of 'new' and 'existing' forests under averaging become significantly complex.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

Options for the policy approach to permanent forests and recognising their carbon sequestration				
Objective	Option 1 keep the PFSI as is.	Option 2 Improve the PFSI	Option 3 Use the post-1989 forest activity	Option 4 (Preferred) Establish a new permanent post-1989 forest activity in the ETS
Improve ETS (rotational and permanent) forestry incentives	0	0	- to + This is dependent on the design decisions made around averaging. If averaging is mandatory, this option is -. If we can credit the forests differently this option is +	++ A simpler approach will encourage participants to register permanent forests into the ETS. Through the financial incentive offered, this will encourage more permanent forests to be established. For the land owner this will provide additional options to earn income from their land
Improve ability of the ETS to effectively meet climate change targets	0	0	0 Fewer units being transferred to permanent forests is a fiscal saving, but comes at a cost of reduced incentive for forest sequestration	+ The increase in the incentive for permanent forests promote their establishment. This will increase NZUs being issued, and increased sink will be recorded against the target.
Improve ETS operations	0	0	-- The need to differentiate permanent forests within the post-1989 activity would significantly add to the complexity of administration.	++ A single point of administration for carbon forestry would significantly improve administrative efficiency. Removing the requirement to covenant land will reduce the level of complexity and cost for participants as this has been identified as the most costly aspect of the PFSI.
Consistent with New Zealand's broader climate change programme	0	0	- short term 0 over the long term There will be short term uncertainty that will continue until the post-1989 accounting decisions are made. Once those decisions are made the policy should stabilise.	+ The creation of a permanent forest category will increase the certainty that these forests will receive unique recognition for their higher long term carbon storage within the ETS. By being in the ETS they will gain certainty that they will be considered as part of the primary policy response to climate change.
Overall assessment	0	0	--	++
comment	Much on the analysis that supported option 3 will be closely linked to the decisions in the Accounting RIA. The analysis presented here is likely optimistic.			

Design considerations

- 71 Should the preferred option described in the section on policy approach to permanent forests and recognising their carbon sequestration be selected Te Uru Rākau has identified seven design considerations which will form part of the final policy package for permanent forests. These are:
- A. Use of covenant under Climate Change Regulations Act 2002 (CCRA) and its regulations
 - B. Transferring current PFSI participants into permanent post-1989 activities.
 - C. What forest owners can do after completion of 50 year non-clear fell conditions.
 - D. Conditions for early exit while harvest restrictions are in place.
 - E. Transferring from Post-1989 to permanent post-1989 forestry on the first rotation, well above the average age.
 - F. Transferring from Post-1989 to permanent post-1989 forestry on the second rotation.
 - G. Start date of harvesting restrictions upon transfer from Post-1989 to permanent post-1989.

(A) Use of Covenant under Climate Change Regulations Act 2002 (CCRA) and its regulations

What is the policy problem or opportunity?

- 72 At present, participants registered in the PFSI are regulated by the use of a PFSI covenant which is a legally binding agreement that is registered on the title of the land and details the area of forest being included, the conditions on management and how the forest receives carbon credits. Under the CCRA legislation, covenants are not required to regulate the ETS.
- 73 The covenant is not needed for the Permanent Forest activity in the CCRA. This is because the types of provisions currently covered in the covenant will be covered by primary legislation which provides greater weight of permanence. However, previous consultation demonstrates that some stakeholders view the covenant as an integral part of the agreement between the land owner and the Crown for carbon forestry.
- 74 Dispensing with a covenant will save land owners between \$1900 and \$5400 per covenant (refer below) and simplify the long term administration of the land and of the ETS by ensuring that all 'carbon forests' are managed under one regime.

What options have been considered?

Option A1: (preferred) Dispense with the covenant and rely on CCRA legislation to prescribe the arrangements for the scheme.

Option A2: Allow participants to enter into covenants (modelled on option 3) on a voluntary basis.

Option A3: Retain the covenant as a regulatory device, but in a simplified form that is easier to understand.

- 75 These covenants would be very simple and likely state the date of registration into the ETS, the areas of forest covered and refer to the CCRA (and its regulations) as the governing the future operation of the forest covered.

Which is the proposed approach?

- 76 The proposed approach is to not include the covenant and instead rely on the CCRA system to regulate permanent post-1989 activities.
- 77 Covenants add significantly to the administrative burden for the land owners, as they need to be negotiated individually, increasing cost.
- 78 Not requiring a covenant will provide the opportunity to simplify the administrative processes for registration by adopting standard ETS processes and registration requirements. Relying on existing standard ETS arrangements may encourage entry into permanent post-1989 by minimising transactions costs for potential participants.
- 79 The covenant relates to a specific area of forest at the time of registration which will have a number of impacts including:
 - i. adding land to existing registered forests would become more challenging and costly for the land owner. A new covenant, or a re-negotiation of the existing covenant, would be required for each additional area of forest, increasing the costs and time of registration. This will undermine the land owner's ability to earn NZUs as the cost of altering the covenant would likely exceed the number of units received⁹⁵.
 - ii. Requiring additional consideration of how the legislation and regulations around reporting the carbon stock changes are accounted for when an ETS participant has multiple covenants. The PFSI treats each covenant separately, which increases the cost of compliance (e.g. each covenant requires a separate return), measuring carbon stock⁹⁶ and the risk of gaming⁹⁷.
- 80 Any covenants would result in a 'long tail' of administrative complexity for the land owner and Te Uru Rākau, for example:
 - i. As the Crown has an interest in the land (through the covenant) it would need to consent to any new interest being granted over the land, including mortgages and other new interests (e.g. easements).
 - ii. Any changes to climate policy not anticipated by the covenant would require a covenant by covenant agreement from all parties with an interest in the land to accommodate them.
- 81 The need for agreement has caused significant problems with the PFSI: due to a lack of agreement to implement changes into existing covenants amongst the 60 PFSI covenant holders. There are at least 6 broad 'classes' of PFSI covenant to date within the PFSI and little agreement on even the most basic operational aspects: for example there are different deadlines for when PFSI participants need to report their carbon stock changes (some 31 March, some 30 June). This adds substantively to the administrative burden and complexity.

⁹⁵ For example: Native forest earns 7.8 NZUs per hectare over the first 5 years of growth. At \$20 per unit, 12 hectares of new forest would need to be registered to offset the cost of modifying the covenant (refer below)

⁹⁶ Currently, covenants over 100 hectares are required to use the Field Measurement Approach (FMA). The FMA requires forest information to be recorded in a number of plot across the forest which is costly for land owners (between \$350 and \$600 per plot). The number of plots is linked to the size of the forest, and the need to have statistically accurate measurement: larger forests require fewer plots per hectare. For example 500hectares of indigenous forest would require a minimum of 25 plots if it was 'one forest' but a minimum of 75 plots if it was treated 5 forests of 100ha.

⁹⁷ If each covenant is treated a separate forest, land owners could register forests with low carbon stock in areas less than 100hectares (using the default yield tables to claim more units than otherwise they are entitled to) and areas of high carbon stock in areas over 100ha to claim these units when they use the FMA approach/

82 Those wishing to use a covenant on their land for the protection of the forest can use other covenant options including:

- Nature Heritage Fund
- Queen Elizabeth II National Trust
- Local authorities
- Nga Whenua Rahui (for Māori land)
- Private legal arrangements

83 It is expected that these bodies would only accept covenants that meets their objectives, so while there may be a slight administrative burden, the overall benefits will be greater. Non-carbon covenants have already proven attractive for PFSI participants with around 50 per cent of the area in the PFSI having a second covenant over the land. We intend to consult on options 1 and 2.

Why are we considering a simple covenant and not the full PFSI style one?

84 It is estimated that the land owner entering into a covenant increases their cost by between \$1900 and \$5400 per covenant relative to that land being registered in the ETS. In terms of hours, a PFSI application can take between 10 and 48 hours for a forest land owner or farm consultant to complete depending on the complexity of the application. This is broken down in table one.

Table one: Additional costs of registering a covenant, compared to ETS participation.

Step in the application process	Total minimum cost (\$)	Total maximum cost (\$)	Additional costs (\$) (GST inclusive)
Filling out the PFSI application form	828	828	includes \$575 in advice and \$253 for the time
Costs involved in mapping the proposed forest sink area	126.5	2024	This cost is largely driven by who undertakes the mapping. The higher range uses a consultant with 'on the ground' inspections.
Developing the forest sink plan	126.5	253	
Additional information requested from Te Uru Rākau before the application could be completed. (Affects 25per cent of applications).	31.63	506	
Reaching an agreement with Te Uru Rākau	253	506	
Time spent registering the covenant on the land title with LINZ including solicitor costs and LINZ lodgement charges.	483	1283	\$156.50 to lodge with LINZ; \$200 to \$1000 in solicitor costs
Notifying Te Uru Rākau in writing that the covenant is registered	63.25	63.25	
TOTAL	1911.88	5463.25	

- 85 Responses as part of the 2013 and 2015 review indicate that the main issue arises around the covenant being overly long, requiring consent of all registered interest holders, and the difficulty of amending the covenant once it is registered. Mapping can also add considerable costs for some applicants, for example, if the land area has valleys with quite narrow strips of vegetation along the streams.
- 86 If there is a standard covenant on offer, the difference in cost of registering land into the ETS for Te Uru Rākau is estimate to be relatively negligible (around one hour of staff time per application). The most significant administrative and cost savings from not having a covenant will be over the long term, as there will be no need to engage covenant holders on a case-by-case basis if anything changes.
- 87 The covenant is seen as a substantial barrier to participation for Māori land owners. For the purposes of the Te Ture Whenua Māori Act 1993, a covenant is regarded as a form of land alienation as it encumbers the rights of subsequent land owners to deal with property.
- 88 Dispensing with the covenant removes this barrier to participation in permanent forests in the ETS by Māori. The 50 year period proposed also has the advantage of being shorter than the definition of a long-term lease under Te Ture Whenua Māori Act 1993 (which is 52years).
- 89 Through consultation we will receive feedback on the implications on land under different Māori governance structures.
- 90 The proposal under design consideration C: What forest owners can do after completion of 50 year non clear fell conditions would also assist in preventing alienation, as it allows the reconsideration of the ETS permanent forest participation.
- 91 There is a risk that dispensing with the covenant may result in some of the existing 60 participants exiting from carbon forestry. However, with around 50 per cent of the PFSI land area also covered by a non-PFSI covenant, this is a low risk.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

A: Analysis: Optional covenants			
Objective	Option A1 Preferred CCRA and no covenants	Option A2 Optional covenants	Option A3 Simplified covenants
Improve ETS (rotational and permanent) forestry incentives	0	- to 0	- The cost and administrative burden of needing a covenant will act as a barrier to uptake.
Improve ability of the ETS to effectively meet climate change targets	0	0	- The cost and administrative burden of needing a covenant will act as a barrier to uptake.

Improve ETS operations	++ Ensures that the CCRA is the sole source of reference for climate policy, and reduced need to negotiate a covenant	-	0
Consistent with New Zealand's broader climate change programme	0	-- As covenants are with the individual land owners there is a risk that differences will result between covenants being granted. This will reduce the certainty of the regulatory environment.	-- As covenants are with the individual land owners there is a risk that differences will result between covenants being granted. This will reduce the certainty of the regulatory environment.
Overall assessment	++	-	-
comment	The analysis of option 2 is limited by uncertainty around participant uptake and the optional nature of these costs should the participant take them up. The administrative cost and complexity to the Crown remains if there is any covenanting. We hope consultation will inform us of the likely demand for this option.		

(B) Transferring current PFSI participants into permanent post-1989 activities

What is the policy problem or opportunity?

92 There are currently 60 landowners who have a PFSI covenant registered against the title of their land. If the preferred policy approach to permanent forests and recognising their carbon sequestration is followed (introduce a permanent post-1989 forest land activity and disestablish the PFSI), what happens with these 60 landowners needs consideration.

What options have been considered?

93 There are three options around how to transition PFSI participants into the NZ ETS.

Option B1: Require all current participants to either transfer to permanent post-1989 forest under the CCRA or terminate participation in carbon forestry (surrendering any units required).

Option B2: Allow current participant landowners to retain their covenant in its existing form and maintain their participation in the PFSI subject to the terms of the covenant and the provisions of the Forests Act and Forests (Permanent Forest Sink) Regulations.

Option B3: As with option 2, but participants are also subject to CCRA and relevant regulations where Forests Act, Forests (Permanent Forest sink) Regulations, and covenant are silent.

Which is the proposed approach?

Option B1 (preferred): requiring a transfer to the permanent post-1989 forest activity or discontinuing participation in carbon forestry

- 94 The transition of existing participants would result in zero compliance costs for transferring, no reassessment of PFSI land and the use of a transfer document to gather the relevant information.
- 95 It is expected that those PFSI landowners who place a high value on the covenant will submit on the design consideration Use of Covenant under Climate Change Regulations Act 2002 (CCRA) and regulations.
- 96 Continuing the PFSI in its current form, as would be required in options 2 and 3, for only a few participants (who desire to remain) would create misalignment and unnecessary complexities in compliance for the land owners and the Crown. We intend to consult on only the preferred option.
- 97 Option 3 would likely require existing PFSI participants to have their covenants renegotiated to insert the references to the CCRA. This would be administratively burdensome for both the Crown and the land owner.
- 98 Options 2 and 3 also will mean the land owner faces many of the barriers relating to covenants discussed in section A.3 of design consideration (A) Use of Covenant under Climate Change Regulations Act 2002 (CCRA) and regulations.
- 99 We intend to consult only on option one.

What other impacts is the approach likely to have?

- 100 Although mandatory transfer would create simplicity and alignment, it may result in the loss of current land owners as a proportion of these could choose to exit instead of transferring.
- 101 However, we consider this a low risk as:
 - i. Around 50 per cent of the forest is protected through other means (so will remain forest);
 - ii. The majority of PFSI participants are required to repay the units received if they exit carbon forestry, which would be a significant cost: the 2.2 million NZUs on issue are worth around \$44 million at current prices. This cost can be avoided if they move to the ETS⁹⁸;
 - iii. The permanent forest activity offers similar financial incentives to remain in carbon forestry to the PFSI, but reduced administration costs; and
 - iv. Te Uru Rākau is looking to simplify this process as far as possible for the land owner.

⁹⁸ The impact of any move will be further mitigated by starting the non-harvest period of these forests at the time they joined the PFSI.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

(B) Transferring current PFSI participants into permanent post-1989 activities			
Objective	Option B1 (Preferred) Move to the CCRA	Option B2 Keep the PFSI for existing PFSI land owners	Option B3 Hybrid PFSI and CCRA participation for existing PFSI land owners
Improve ETS (rotational and permanent) forestry incentives	+	0	0
Improve ability of the ETS to effectively meet climate change targets	+	--	--
Improve ETS operations	+	--	--
Consistent with New Zealand's broader climate change programme	+	--	--
Overall assessment	+	-	--
comment	Note the analysis in this table varies from that in the table <i>Options for the policy approach to permanent forests and recognising their carbon sequestration</i> . The table above analyses the impacts based on current PFSI participants, and assumes that any new permanent forest participants will use the permanent post-1989 activity in the ETS.		

(C) What forest owners can do after completion of 50 year non-clear fell conditions?

What is the policy problem or opportunity?

- 102 Currently in the PFSI, after 50 years participants are able to remove any part of their forest area from the covenant. If any area is withdrawn, the landowner must repay units for that area. Any forest sink area which has not been removed will simply continue under the covenant with harvesting restrictions of 99 years.
- 103 The establishment of the permanent post-1989 activity will enable the creation of a 50 year non-clear fell condition. At the end of the 50 year non-clear fell condition, it is anticipated that permanent post-1989 will continue in a stock change accounting approach to continue earning NZUs.
- 104 Any options available to permanent post-1989 participants will need to uphold 'permanence' for the net carbon sink or make it clear that the forest no longer has the permanence conditions on it. A lack of options after the 50 year non-clear fell term may result in a negative perception of the scheme and become a barrier to participation.

What options have been considered?

105 We consider one option as viable at the end of the non-harvest period: **Option C1 - providing the land owner with three choices around what to do at the end of the non-harvest period.**

106 We intend to consult on this one option to confirm that the three choices provide enough flexibility for land owners. We also propose to test a couple of the 'sub-settings': i) the length of the renewed non-harvest period and ii) the accounting option for harvested forest.

Three choices at the end of the non-harvest period.

107 During the non-harvest period, the forest must remain as forest land in the ETS for the full time (50 years under the Crown's preferred option), and cannot be clear-fell harvested within this timeframe. However, once the 50 year non-harvest period expires we view it as appropriate to allow the forest owners to have three choices:

- i. *Remain in the permanent post-1989 forest category:* by signing up for another non-harvest period (e.g. 25 or 50 years), and continuing with the stock change accounting approach they have used to date;
- ii. *Switch to the post-1989 forest category:* allowing them to harvest, but changing to an averaging accounting approach if this proposal is adopted. They would need to repay units for the difference between the current carbon stock for the forest and the long-term average carbon stock for that forest type as a post-1989 forest; or
- iii. *Exit the ETS* (and either keep the forest or deforest) and repay all units received.

Sub option if harvest is allowed

108 If a participant was to elect ii (switch to the post-1989 activity) to allow harvest, we propose that they are required to use the averaging approach (if that option is decided), regardless of when the forest was established⁹⁹. This will simplify the administration of the ETS for permanent forests and not come at a fiscal cost to the Crown.

109 An alternative would be to allow the area to remain on the stock change approach. Any harvesting would result in full emissions liability for the timber removed (this is similar to the current approach in ETS: the saw tooth). This is not our preferred option as it will be more administratively complex (as we would need to support participants to undertake harvest calculations), come at a fiscal cost to the Crown (as units are paid to the forest when it regrows), and the participant would need to repay a greater number of units at the time of harvest than if the forest was averaged¹⁰⁰.

Discarded options

110 While we explored offering other outcomes as part of the three options, this would simply re-frame other design considerations in this document e.g. an automatic roll-over into another non-harvest period is practically the same as a longer non-harvest period in the initial registration.

111 We looked at offering fewer options but this would either:

- i. make permanent forest less attractive e.g. if choice ii or iii were not offered land values of permanent forests would be reduced as they will be locked into forestry; or
- ii. provide a less transparent approach to permanent forest, which is more complex for land owners and the Crown e.g. if ii was not offered we would need to find a way to

⁹⁹ The Accounting part of this RIA discusses different options around how new and existing forests are treated.

¹⁰⁰ The bottom of the saw tooth is lower than the average for any tree species.

allow clear fell harvest in the permanent post-1989 forest activity, but only after 50 years, and develop methodologies to allow the land owner to report their emissions.

Which is the proposed approach?

112 It is recommended that when 50 year non-clear fell conditions are completed, participants' are given a choice of which of three outcomes they wish to choose from for their (current) permanent post-1989 land:

- Renewal of non-clear fell condition for 25 or 50 years.
- Movement into post-1989 accounting (averaging, if eligible).
- Deregistration from the ETS

113 We intend to consult on whether these choices are the preferred by land owners, if the three choices provide sufficient options, and the length of the new 'non harvest period' (choice i). We intend to consult on this approach, and test the views around this.

What other impacts is the approach likely to have?

114 Creating various options around lengths of non-clear fell conditions and harvesting restrictions would enable flexibility and increase uptake within permanent post-1989 and differentiate forests based on how they are managed (so non-clear fell forests can retain this distinction and earn unit premiums).

115 Providing the choice and the three options in the legislation will improve regulatory certainty for land owners and allow them to incorporate these options into how they consider the value and returns from permanent forests.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

(C): What happens after the 50 year non clear fell conditions		
Objective	PFSI Status Quo Optional withdraw from covenant and carbon scheme	Option C1 A choice to stay permanent, move to a harvesting approach, or deregister
Improve ETS (rotational and permanent) forestry incentives	0	+
		After 50 years participants will be incentivised to continue as a permanent forest.
Improve ability of the ETS to effectively meet climate change targets	0	+
Improve ETS operations	0	++
		The decision at 50 years will simplify long term operations.
Consistent with New Zealand's broader climate change programme	0	++
		After 50 years participants will be incentivised to continue as a permanent forest.
Overall assessment	0	++

(D) Conditions of early exit while harvest restrictions are in place

What is the policy problem or opportunity?

- 116 With the establishment of a permanent post-1989 forest land activity, clear conditions on early exit from the ETS must be outlined in the CCRA.
- 117 Permitting early exit will likely increase uptake of permanent forests (as the forest is not locked into the activity if there is an unexpected, and anticipatable event) but must be balanced against the consideration that too easy (early) exit will undermine the permanence of the permanent post-1989 forest activity and impact other permanent post-1989 forest participants.

What options have been considered?

- 118 Under all options the participant would be required to repay all units earned for that area of forest.
- 119 Participants who deregister forests from the permanent forest activity will be required to surrender the emissions units earned on that forest. This is the case for all post-1989 forests in the ETS, and the majority of FPSI forests now.¹⁰¹

¹⁰¹ This repayment process is determined by the individual covenant the land owner signed.

- 120 While repaying units would act as a barrier to leaving the permanent post-1989 forest activity, this may not act as a deterrence to early exit and uphold the integrity of permanence.

Option D1: Unit multiplier (not preferred)

- 121 Participant cancellation would require not only the repayment of units earned but also additional units calculated at a compounding rate of 10 per cent applied to each year's increase in carbon stock from the beginning of the covenant (e.g. after 7 years the unit multiplier would be 2, so they would need to surrender twice the carbon earned in the 7th year). This would act as a significant disincentive to exit, particularly late in the non-harvest period.

Option D2: Cancellation only under certain conditions

- 122 Cancellation can only take place under circumstances which could not have reasonably been foreseen at the time of registration, and where the participant's ability to access the value of carbon sequestration in their permanent post-1989 forests are significantly affected.
- 123 This option is consistent with the intention of limiting rights of participants exiting unless it would be unfair to require the participant to remain registered. The success of this approach is largely driven by the ability to anticipate the conditions.

Option D3: A two-step test

- 124 An alternative to option 2 is the requirement for the Minister of Climate Change to apply a two-step test, as defined in legislation. The first step seeks to provide some flexibility and the second stage of this test seeks to limit the application of the discretion in favour of the applicant.
- i. Would it be unreasonable in the circumstances to require the participant to maintain their registration in the scheme?
 - ii. If answer to step 1 is "yes" considerations should include
 - a. Is a decision to remove the land from the ETS in these circumstances likely to result in a loss of public confidence in the integrity of the scheme?
 - b. What are the cost to remove the land from the ETS, and where does this fall?
 - c. What are the benefits and costs of this land not being in permanent forests, and who benefits?
- 125 The two-step test is modelled on the existing section 60 of the CCRA, which allows the Minister of Climate Change to grant exemptions under certain circumstances. However, this section only applies to the mandatory ETS activities, and the considerations require some refinement to be applicable to forestry.

Which is the proposed approach?

- 126 We do not intend to consult on a preferred option, but rather present all three options in the consultation document.
- 127 While option three (the two tier approach) measures up most effectively against the criteria (based on our current knowledge, and our operational experience) stakeholder views will be important in arriving at an option for early withdraw that works for participants and the Crown.

What other impacts is the approach likely to have?

- 128 This could allow applicants to apply to cancel registration in a range of circumstances, including for reasons unrelated to the forest or carbon sequestration (e.g. personal circumstances which means remaining in the scheme would result in significant hardship).

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

D: Conditions under which an early exit will be allowed			
Objective	Option D1 Unit multiplier	Option D2 Cancellation under certain conditions	Option D3 Two tier test
Improve ETS (rotational and permanent) forestry incentives	- Higher cost of needing to withdraw early will undermine participation.	0	0
Improve ability of the ETS to effectively meet climate change targets	-- Places the risk solely with participants, and places additional costs on participants when the withdraw happens late in the period	0 Will require an exact definition of when early withdraw will be allowed. This may not be appropriate in all situations.	++ Allows a case-by-case consideration of the balance, and places this into the context of the overall ETS
Improve ETS operations	- Add administrative complexity as surrender obligations will need to be calculated at a fine scale.	-	- The Crown will be required to put advice up to Ministers.
Consistent with New Zealand 's broader climate change programme	++ The policy will be stable, with clear conditions.	+ While provisions are likely to be clear, operational policy will be needed to ensure consistency	++ The policy will be stable, with clear conditions. Will enable consideration of a wider range of circumstance.
Overall assessment	-	-	+

(E) Transferring from Post-1989 to permanent post-1989 forestry on the first rotation, well above the average age

What is the policy problem or opportunity?

- 129 If post-1989 forestry will use averaging (as proposed) and permanent post-1989 will remain in a stock change approach (as proposed), there may be complexities moving between accounting approaches.
- 130 This transfer will be relatively simple if the forest is below the average age (20 years) as the number of units are directly transferred. However, if post-1989 land is transferred well after the average age then participants lose units between the average age and the forests current age.

What options have been considered?

Option E1: Earn units back to the start of the latest Mandatory Emissions Regulatory Period (MERP)

Option E2: Earn full amount of units back to the average

Which is the proposed approach?

- 131 Option E1 is the preferred approach.
- 132 It is recommended that participants who transfer to permanent post-1989 activity are only able to gain units back from the start of the latest MERP.
- 133 While earning units back to the start of the MERP means that participants would 'lose' units between the average age and current age of the forest (only when well above the average age). This same condition currently applies to new registrations into the ETS.
- 134 This aligns with the registration conditions and prevents the risks in decreasing timber supplies, and undermining the unit supply work and imposing fiscal costs to the Crown.
- 135 If option E2 was used there could potentially be considerable increases in movement from post-1989 forest to permanent post-1989 to gain substantial one-off payments (if the shift happens at age 28 this could be over \$5,000 per hectare at current prices).
- 136 If there are significant increases in carbon prices, it is expected that this additional income would be greater than the return from timber sales creating an incentive for forest owners not to harvest, reducing timber supply.
- 137 A substantial area transitioning between activities would result in a one-off issue of large numbers of units, undermining the unit supply work and increasing likely fiscal costs to the Crown.

What other impacts is the approach likely to have?

- 138 We do not anticipate impacts from the preferred approach that are not addressed in the optional analysis.
- 139 There is a slight risk that the relatively easy movement from rotational post-1989 forest to permanent post-1989 forests will create the expectation that a similar movement the other way will be possible. This is manageable by defining up front what the options are when the non-harvest period expires (design consideration C, What forest owners can do after completion of

50 year non clear fell conditions) and when early exit would be allowed (design consideration D, Conditions of early exit while harvest restrictions are in place).

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

E: Analysis: Transferring from Post-1989 to permanent post-1989 forestry on the first rotation, well above the average age		
Objective	Option E1 (preferred) Earn units from the start of the MERP	Option E2 Earn units back to the average
Improve ETS (rotational and permanent) forestry incentives	<p>+</p> <p>Provides incentive to move to permanent forest. Potential to be ++ if decision to move is made early in the rotation.</p>	<p>++</p> <p>Provides a greater incentive to retain existing forest on land where it may not be economic for a harvestable forest, and greater incentive to move to permanent forests, which have higher carbon stocks per hectare.</p>
Improve ability of the ETS to effectively meet climate change targets	<p>+</p> <p>Better aligns ETS units closest to international targets, and manages fiscal risk.</p>	<p>--</p> <p>The additional units paid (vs. option one) would misaligns unit transfers with both the international target, and also when previous unit supply decisions have been made.</p>
Improve ETS operations	<p>+</p>	<p>--</p>
Consistent with New Zealand's broader climate change programme	<p>0</p> <p>Provides certainty on what happens in the event of the forest owner changing activity</p>	<p>-</p> <p>A significant shift to permanent forests would reduce timber harvest. Provides certainty on what happens in the event of the forest owner changing activity. However, with the fiscal cost, and misalignment issues above, should a large area of forest move over there is a risk these become too great to bear meaning a policy change is needed.</p>
Overall assessment	<p>+</p>	<p>--</p>
comment	<p>Option 1 can provide significant units to participants if the decision to transition is made before the average age is reached.</p>	

(F) Transferring from Post-1989 to permanent post-1989 forestry on the second rotation

What is the policy problem or opportunity?

- 140 How an existing forest on the second (or subsequent) rotation is registered into permanent post-1989 would have implications for both forests inside and outside the ETS.
- 141 Current proposals on averaging could effectively exclude second rotation forests from the post-1989 forest activity, so a decision on these forests would have a significant impact on the attractiveness of permanent post-1989.
- 142 Allowing second rotation forest to earn units would provide an incentive to retain these areas as forest.
- 143 Crediting from the minimum carbon stock would be particularly important in those areas where production forestry is no longer viable as it would provide cash flow to the land owner as the replacement forest grows.
- 144 For second rotation forests, we have four different types of forest that need to be considered:
- i. Forests outside the ETS
 - ii. Forests already in the ETS, but on a saw tooth accounting¹⁰² approach
 - iii. Forests already in the ETS and subject to averaging, and the carbon stock is above the average.
 - iv. Forests already in the ETS and subject to averaging, and the carbon stock is below the average.
- 145 Of these, only forests subject to averaging, and the current carbon stock is below the average, requires a unique approach.

What options have been considered?

- 146 Some forests do not require unique treatment:
- **Forests outside the ETS:** Forests outside the ETS will earn units for the carbon stock change back to the start of the MERP when they register into the permanent post-1989 activity.
 - **Forests already in the ETS, but on a saw tooth accounting approach:** Forests already registered in the ETS, and subject to the saw tooth, will earn units for the carbon stock change back to the start of the MERP when they register into the permanent post-1989 activity. These forest will have earned units as post-1989 forests up to the carbon stock at the time of change.
 - **Forests already in the ETS and subject to averaging and the carbon stock is above the average:** These forests would be treated in line with the first rotation forests in transferring from Post-1989 to permanent post-1989 forestry on the first rotation, well above the average age
- 147 Some forests require unique consideration:

¹⁰² This is the current approach for post-1989 forest, and may remain an option under some of the options in averaging paper.

- **Forests already in the ETS and subject to averaging, and the carbon stock is below the average.** To ensure that the carbon sequestration in these forests is credited only once, we see two options as requiring consideration.

Option F1: Repay the units between the current carbon stock and the average.

- 148 The more costly option for the participant would require they surrender units equal to the difference between the current carbon stock and average when it transitions from the post-1989 forestry activity to the permanent post-1989 forestry activity. This would apply if the current carbon stock is below the average.

Option F2: Don't earn units until the carbon stock reaches the average.

- 149 A more administratively complex option would be for the land to not earn units until the carbon stock reaches the average that applies for that area of forest. Once that point is reached, the forest earns units.

Which is the proposed approach?

- 150 For forest within the ETS and subject to averaging - option F1 is seen as the preferred approach where a participant would need to repay the units earned above the minimum, when it transitions from the post-1989 activity to the permanent post-1989 activity. The participant can avoid this cost by waiting until the forest is at the long-term average carbon stock then moving to the permanent post-1989 activity at this point.

What other impacts is the approach likely to have?

- 151 This approach would be more costly to the participant which may become a barrier to transition to permanent post-1989 and result in clear-fell rotational forests continuing in such a form.
- 152 There may be a fiscal impact from issuing these units, but the area that transitions is likely to be small. We expect only a small number of forests would transfer from production to permanent forest in their second rotation as the costs of establishing harvesting infrastructure (roads etc.) means that areas with production forests will likely be replanted in a production forest for the second rotation, or will not be harvested in the first rotation at all (so are subject to the first rotation approach above).

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

(F) Transferring from Post-1989 to permanent post-1989 forestry on the second rotation		
Objective	Option F1 Preferred Repay units down to the minimum	Option F2 Not earn units until the average is reached
Improve ETS (rotational and permanent) forestry incentives	0	0
Improve ability of the ETS to effectively meet climate change targets	+	0
Improve ETS operations	0 Near term cost, but earn units for growth	0 No near term cost, but the ability to earn units suspended. Slightly more complex to administer
Consistent with New Zealand's broader climate change programme	0	0
Overall assessment	+	0

(G): Start date of harvesting restrictions upon transfer from Post-1989 to permanent post-1989

What is the policy problem or opportunity?

153 The 50 year harvesting restrictions that could be implemented by permanent post-1989 activities does not apply to post-1989 activities. When transferring from post-1989 to permanent post-1989, participants may argue that their forest has not been harvested and therefore has been 'permanent' since their registration in post-1989. In this case, harvesting restrictions would be applied from the date of registration of that particular forest.

154 However, participants registering straight into permanent post-1989 may view this as unfair and that applying harvesting restrictions from the date of transfer into permanent post-1989 is fairer. This signifies when the participant committed their forest to 'permanence'.

What options have been considered?

155 There are two options for the date of applying harvesting restrictions.

Option G1: From the first date that forest was registered in the ETS

156 The application of harvesting restrictions from the date of registration in post-1989 (ETS) would enable participants to earn extra units from forests that were not fully committed to permanence. This would undermine the integrity of permanence and other permanent post-

1989 participants' commitment to permanence but may increase transfers into permanent post-1989 activities.

Option G2: From when the forest transferred to permanent post-1989

- 157 Applying harvesting restrictions from the date of transfer into permanent post-1989 would signify the participants' commitment to permanence rather than risking the perception that participants are moving between activities to maximise advantage in the short term. This would potentially mean that participants would be under the 50 year non-clear fell restriction for a longer period than option 1.

Which is the proposed approach?

- 158 The proposed option here is that harvesting restrictions will be applied from the date of transfer into permanent post-1989 (Option 2). Application of harvesting restrictions from the date of transfer signifies the participant's commitment to permanence as a new activity in their forests.

What other impacts is the approach likely to have?

- 159 This approach would likely have a slight negative impact on the movement of participants from post-1989 to permanent post-1989.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

(G) Start date of harvesting restrictions upon transfer from Post-1989 to permanent post-1989		
Objective	Option G1 From the first date that forest was registered in the ETS	Option G2 (Preferred) From when the forest transferred to permanent post-1989
Improve ETS (rotational and permanent) forestry incentives	-	+
Improve ability of the ETS to effectively meet climate change targets	0	+
Improve ETS operations	- Each forest that transitions would require a unique 'permanent period'	+
Consistent with New Zealand's broader climate change programme	- Would encourage gaming (move to permanent for a short period of time) if timber price is poor and carbon price is high. This would be a particular risk for alternative (non radiata pine) species.	+
Overall assessment	-	+

What other options have been ruled out of scope, or not considered, and why

160 Certain design features of a permanent post-1989 activity were not considered in this RIA as they relate to the wider ETS setting for all forests. For example,

- we have not proposed to consider an alternative definition of 'Forest Land' which could apply to permanent post-1989 forests. As the ETS forest definition is closely linked to the forest definition used in international reporting and accounting, any departure would either reduce the establishment of permanent forests (e.g. requiring a greater canopy cover) or put the ETS out of alignment with our target (if the definition was loosened)
- we have not proposed to change the regulations that relate to how forest carbon stock changes are reported. The current methodology is appropriate, and there is a longer term need to consider these regulations once the forestry package is decided and the accounting decisions (averaging) are made.

161 Should decisions be made to alter these settings for forests, the preferred approach would incorporate these by default.

Conclusions

What option, or combination of options, is likely best to address the problem, meet the policy objectives and deliver the highest net benefits?

- 162 Overall the Ministry recommends that a permanent forest activity is included in the CCRA, rather than the Forests Act. This is based on previous consultation feedback.
- 163 The recommendation is for the covenant to be omitted creating simplified regulation whilst also highlighting that there are still options for permanent cover protection through other covenants including:
- Nature Heritage Fund
 - Queen Elizabeth II National Trust
 - Local authorities
 - Nga Whenua Rahui (for Māori land)
- 164 It is recommended that when 50 year non-clear fell conditions are completed, participants' are presented with three options:
- a) Re-commit to another non-harvest period.
 - b) Move to averaging
 - c) Exit the ETS
- 165 Other design details will be resolved once consultation is concluded.

Summary table of costs and benefits of the preferred approach

Affected parties (identify)	Comment: nature of cost or benefit (e.g. ongoing, one-off), evidence and assumption (e.g. compliance rates), risks	Impact \$m present value, for monetised impacts; high, medium or low for non-monetised impacts	Evidence certainty (High, medium or low)
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Additional costs of proposed approach, compared to taking no action			
Regulated parties – current PFSI participants	<p>There would be minimal cost for current PFSI participants. The purposes of the CCRA and Part 3B of the Forests Act (the 'PFSI sections') have similar outcomes for land owners despite different framing so the activities they must undertake will not change.</p> <p>If the preferred option goes ahead Te Uru Rākau would transfer PFSI participants on an 'opt out' basis so that those who wish to stay in the permanent forest scheme would not have to do anything. We would design an 'opt out' process that</p>	Low cost	Medium

	<p>minimised costs to participants. If covenants are no longer required legislative changes to the Forest Act would null and void these covenants at no cost to participants.</p> <p>Participants would have the option under the ETS to reconfigure forest areas to better optimise returns, which could entail costs, but this is at their discretion for improving returns and would not be required.</p> <p>There is an additional cost of \$100 every 5 years to register for an emissions return. This cost is not incurred under the PFSI.</p>		
Regulated parties – potential participants	<p>The costs for new participants to enter the proposed ETS permanent forest activity would be the same as those for current ETS participants. The costs would be less than those of entering the PFSI as they would not need to establish covenants, though ETS participants must submit an emissions return every 5 years at a cost of around \$100, which is not required under the PFSI.</p>	Low cost	Medium
Regulators (Te Uru Rākau/MPI, EPA)	<p>There would be an initial administrative cost of moving PFSI participants into the CCRA (see above) In the medium to long term there would be increased administrative efficiency through administering all carbon forestry activities from the same scheme.</p>	Low cost	High
Wider government	<p>Greater numbers of participants in the ETS will improve the alignment of New Zealand’s forests with our international reporting requirement through LUCAS, and reduce our international liabilities in the long term.</p>	Low cost	Medium
Other parties	<p>Those parties offering alternative covenants may experience higher costs (due to more demand), however as these covenants will only be accepted for areas that meet their objectives, and Te Uru Rākau will look to reduce the cost of this registration, the impact will be minor.</p>	Low cost	Medium

Total Monetised Cost	n/a	n/a	n/a
Non-monetised costs	n/a.	Low cost	

Expected benefits of proposed approach, compared to taking no action			
Regulated parties	<p>Very similar outcomes for regulated parties except the PFSI has underachieved since it came into force in 2008. Explanations for this principally relate to the complexity of the PFSI, the conditions around forest management, and the introduction of the more flexible ETS. The CCRA would provide more efficient and simplified outcomes for permanent forests, incentivising further planting.</p> <p>We would expect more land owners to move into permanent forest, increasing the amount of forest included and therefore aggregate benefits.</p> <p>The participants will have access to income from non-timber forest products and also an income stream if they chose to stop harvesting.</p>	Medium benefit, due to a more simplified scheme for participants.	Medium
Regulators	There would be significant benefits for regulators, as efficiency will be improved by administering all carbon forestry activities from the same scheme.	Medium benefit, due to efficiency improvements.	High
Wider government	For the Crown: increased forest area will assist New Zealand in meeting international targets and reducing net emissions.	Medium benefit, due to expected increase in permanent forest.	Medium
Other parties	<p>It is not known who would participate in this new activity, but we would expect the activity to be of particular interest to iwi/Māori who have had land returned through Treaty of Waitangi settlements and are looking for sustainable land management options with a range of environmental benefits. .</p> <p>Where marginal land gains permanent forest cover there will be</p>	n/a.	

	<p>environmental benefits, some of which can be quantified (e.g. reduced erosion and sedimentation) and some of which cannot (increased habitat for biodiversity) which will be enjoyed by other landowners in the catchment as well as the wider community. Permanent forest does not require as much monitoring effort by councils as other land uses.</p> <p>While the Landcare modelling indicated the value of benefit cost ratios as high as 9.2 times at regional and national level, we do not propose to undertake additional modelling specific to permanent forests. If the preferred option is implemented, land owners will have an additional option to generate revenue from forests. This option will be incorporated into other modelling (e.g. land use optimisation modelling, One Billion Trees programme estimates) to understand the potential uptake of these options.</p>		
Total Monetised Benefit	n/a.	Medium.	
Non-monetised benefits	Medium.	Medium.	

Is the preferred option compatible with the Government's 'Expectations for the design of regulatory systems'?

166 The preferred option is compatible with the Government's 'Expectations for the design of regulatory systems'.

Implementation and operation

How will the new arrangements work in practice?

167 Following consultation and final policy decisions incorporating feedback received, the proposals would be given effect by amendments to the Act, as well as some subsequent amendments to the Regulations.

168 There are a few operational details which will be addressed as part of the wider regulations review once the legislation is updated. For example, we will address how the Field Measurement Approach (FMA)¹⁰³ applies to participants with both post-1989 and permanent post-1989 forest,

¹⁰³ The Field Measurement Approach (FMA) is the compulsory approach for post-1989 forest participants with 100 hectares or more of post-1989 forest in the ETS. The FMA uses information gathered from the participant's forest to determine a participant specific yield table (a unique carbon stock table): while it is more accurate if comes at operational cost and complexity.

as part of the wider piece of work on the FMA. We are required to consult the public when we update the regulations.

- 169 Overall, the proposal for a new activity within the ETS will be relatively simple to implement. The proposed approach will share much of the ‘public facing’ implementation with the current post-1989 forest land activity, and this operational detail is already in existence. For example, both permanent post-1989 and post-1989 will use the existing mapping standard for describing the land they will register into the ETS.
- 170 The options presented by the permanent post-1989 activity will be communicated to stakeholders through existing channels (website, email distribution lists, forestry periodicals), workshops as required and the updating of existing guides as part of the post-legislative change process for the whole forestry ETS package.
- 171 Through the consultation we intend to gain information on the options for transitioning existing PFSI participants to the new activity. This will be used to develop a dedicated process for transferring these land owners.

What are the implementation risks?

- 172 The key risk discovered through consultation is the varying stances on whether a covenant should be included in the permanency provisions in the CCRA or not.
- 173 There are currently 60 landowners who have a PFSI covenant registered against the title of their land. Current PFSI participants and their specific PFSI land should automatically be registered in the CCRA as permanent post-1989 forest.
- 174 The appetite to transfer across to permanent post-1989 forest may vary, with some landowners being reluctant to transfer and others highly unlikely. It is assumed that a proportion of these landowners would wish to retain their current covenants in the establishment of permanent post-1989 forest. The balance of landowners may be open to transferring into the new scheme, depending on the design. The exact proportions are not known at this stage, but with only 15,500 hectares the risk to the integrity of carbon forestry is relatively low, especially as nearly all these forest owners have the obligation to repay units if the scheme is cancelled.

Monitoring, evaluation and review

How will the impact of the new arrangements be monitored?

- 175 The impacts of the changes would be monitored through current reporting lines and processes – that is, by analysing the reaction of stakeholders, rates of non-compliance, new registrations, withdrawal rates, uptake of applications for transfer to permanent post-1989 and through forestry stakeholder reference groups.
- 176 Monitoring and evaluation of the specific provisions in place will be ongoing. If there is a significant shift in the data gathered through the BAU monitoring (above) Te Uru Rākau will explore the reasons for this and determine if the result of a change in the wider ETS¹⁰⁴, New

¹⁰⁴ For example, a decline in the carbon price would result in reduced registration rates.

Zealand's primary sectors¹⁰⁵, an issue with how the forestry parts of the ETS are perceived (a communication issue), or an issue with the legislation/regulation.

- 177 We will also be linking to the international greenhouse gas reporting system (LUCAS, run by MfE), which we will use to assess the impact of the permanent forest activity on New Zealand's international accounting.

When and how will the new arrangements be reviewed?

- 178 Information on the success of the changes, and any new issues with ETS implementation are collected on an on-going basis. While no formal review is planned, we would expect any changes be made when the next opportunity to amend the Act arises. Should the Minister of Climate Change initiate a review under s160 of the CCRA we would include the permanent forest option in that.

¹⁰⁵ For example, if the dairy pay out increases we would expect lower rates of new forest establishment on dairy support land.

Regulatory Impact Assessment: Forestry Sector Operational Amendments to the ETS

Contents

Purpose.....	129
Key Limitations.....	129
General problem definition and objectives as it relates to forestry operational improvements.	130
What is the context within which action is proposed?.....	130
What is the policy problem or opportunity?.....	130
Are there any constraints on the scope for decision making?.....	132
What do stakeholders think?	132
Issues and Options	132
(A) Significant changes	132
A1. More certainty on land classification.....	133
A2. Improved process for pre-1990 forest deforestation offsetting	136
A3.Improved process for tree weed deforestation exemptions	140
A4. Improved access to existing exemptions for land in multiple ownership.....	143
A5.Simpler process to implement section 60 applications	146
(B) Decisions linked to the accounting decisions	147
B1. Aligning mandatory emissions return periods to match our international targets and the proposed introduction of averaging.	147
B2. Offer deforestation offsetting to post-1989 forests	149
B3.Extend section 60 to post-1989 forests.	150
B4. Better clarity on cost recovery	152
Conclusions	154
Implementation and operation.....	156
Monitoring, evaluation and review	157
Appendices	159
Appendix One: (C) Minor and Technical Improvements.....	159

Purpose

- 1 Te Uru Rākau is solely responsible for the analysis and advice set out in this Regulatory Impact Assessment (RIA), except as otherwise explicitly indicated. This analysis and advice has been produced for the purpose of informing stakeholders and for consultation in a government discussion document.
- 2 A wider package of changes to forestry in the ETS is being developed. This package addresses the accounting approaches used for post-1989 forests in the ETS, operational changes, and a new permanent forest activity for the ETS. These will be supported by proposals (in the wider ETS work across government) for a revised penalty and compliance regime as a means to encourage participants towards compliance with their obligations.
- 3 The scope of this part of the RIA is limited to the operational improvements for the forestry sector within the ETS. The proposals have been identified through the ETS review (including public submissions) and follow-up work. Many of the issues have also become evident through the operation of the scheme since 2008.

Key Limitations

- 4 The ability to evaluate the size of the impact of some of the proposals is difficult as it depends on forest owner behaviour. However we know the changes will improve the operational efficiency of the ETS.
- 5 The approach New Zealand uses in its international reporting and accounting needs to be considered for some of the options proposed. Where an international rule is reflected in the ETS, the approach used internationally helps determine the best approach domestically, i.e. if we depart too far from the international rule the fiscal risk to the Crown increases as we may not be able to count the full impact of actions taken domestically towards our climate change mitigation targets. Where ETS data is used in the international reporting, we need to ensure the timelines for delivery are aligned.
- 6 The forestry package objectives and criteria include the objective to 'improve ETS operations' and a set of four criteria. While these frame the general analysis, some of the proposals can only be measured against a few of these criteria, or a criterion applies differently to different stakeholders (e.g. small and large foresters).
- 7 The operational improvement proposals in this document are largely independent of the accounting methodology used or the introduction of a permanent post-1989 forest activity into the ETS. They are intended to work to support any accounting approach. That said, some options become more important under different accounting approaches.
- 8 The operational implications of any changes in the accounting approach are being considered through the accounting work stream and will be finalised following the public consultation.
- 9 For the majority of the proposals there is only one option proposed (other than the status quo) is proposed. This is because the proposals are new processes or functions to address where the legislation is not working as intended, or provide more clarity to existing drafting.
- 10 Some issues identified in the recent ETS review are out of scope of this analysis. This includes operational changes that involve improvements to the ETS forestry sector Regulations (which are being addressed through a separate process with public consultation having closed on 3 July 2018); and significant changes to what is considered a 'forest' in the context of the ETS (e.g. minimum area needed to qualify) as this would be a major policy change.

General problem definition and objectives as it relates to forestry operational improvements.

What is the context within which action is proposed?

- 11 In 2008, the ETS was introduced under the CCRA as the country's primary policy to reduce net emissions below business-as-usual, and assist New Zealand to achieve its international targets. It has been amended several times since then with the last major set of amendments made in 2012.
- 12 With the differences in the size and experience of the forest owners in the ETS there is a wide diversity in the ability to manage the complexity of participation in the ETS. Many smaller participants rely on buying in advice on ETS compliance (e.g. from forestry consultants), which increases the cost of them taking part in the ETS and reduces the returns (under any accounting approach).

What is the policy problem or opportunity?

- 13 During the recent review of the ETS, the complexity of the forestry rules was identified as a significant barrier for post-1989 forest owners interested in joining, particularly for small forest owners. This means forest owners (and owners of non-forest land) are less likely to join the ETS, thus forgoing potential income from New Zealand Unit (NZU) sales. This can mean the carbon price is not being taken into account when making land use decisions.
- 14 Subsequent to the review, Te Uru Rākau interviewed a number of participants, forest owners and landowners to better understand why different ETS participants are taking part, what barriers people face to taking part, and their overall views of the ETS.
- 15 The feedback from the review and the interviews is consistent. Most materially, participants do not differentiate the source of their positive or negative experiences with the ETS: their engagement with the ETS, and the regulatory agencies, is part of one continuous process.
- 16 Key feedback from participants was:
 - (i) Participants join and remain in the ETS for forestry for a range of reasons, beyond simply revenue from selling NZUs. These range from a desire to 'do their bit' to address climate change; promote other environmental outcomes (e.g. erosion control and biodiversity); acting on advice; or they joined in the past and simply continue to be in the ETS.
 - (ii) The ETS has a high compliance burden and taking part in the ETS has up-front costs before units are received from registration and completion of emissions returns.
 - (iii) Participants describe the scheme as complex, difficult to understand (many participants rely on buying advice), difficult to gain unbiased information about and compare with other options, as well as being overly bureaucratic and burdensome.
 - (iv) There is a lack of trust in the system based on what people have experienced themselves, what they hear from others, and what they have seen in the past. Informal networks and stories are important sources of information.
 - (v) The ETS is not customer friendly, with limited ability for the Crown (Te Uru Rākau) to assist participants if they need it.

- (vi) Penalties are seen as a barrier to participation, as the consequence of doing something wrong is very high, and the likelihood of getting something wrong is also high.
- 17 The differences in participant size and forest composition (e.g. species and management) result in issues around the capacity of forestry participants to meet their obligations, and comply with the law. This is due to both the complexity of the accounting system forest owners need to comply with, and the diversity of the forests they have registered.
- 18 There is an opportunity to design an ETS that is simple to get right and hard to get wrong to encourage participation with the scheme.
- 19 The specific objectives and criteria identified for the overall forestry package of improvements are listed below. These criteria are the same as those used in the overall ETS forestry package, just presented differently here.
- 20 Each proposal in this document is assessed against the relevant criterion or criteria. Where appropriate, we divide the criteria into primary benefits (i.e. the key impacts) and secondary benefits (i.e. where the change impacts other parts of the ETS or assists the ETS as a whole to meet the criteria).

Criteria:

- **Improve NZ ETS (permanent and rotational forest) incentives**
 - Promotes afforestation of both rotational and non-harvested forests
 - Encourages forest preservation (discourages deforestation)
 - Encourages extra carbon storage in forests
- **Improve ability of NZ ETS to effectively meet climate change targets**
 - Minimises fiscal cost to the Crown from meeting climate change targets
 - Supports alignment between NZ ETS unit supply and how NZ will meet its climate change targets.
 - Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups
- **Improve NZ ETS operations**
 - Improves administrative efficiency
 - Reduces complexity and cost for participants
 - Reduces administrative cost to the Crown
 - Promotes accuracy in reporting by participants
 - Supports ability to identify and manage non-compliance
- **Consistent with NZ's broader climate change programme**
 - Provides durable regulatory certainty and predictability
 - Reflects the Crown's responsibilities as a Treaty partner
 - Supports economic growth and social resilience
 - Supports international reputation
 - Maintains integrity of wider ETS settings
 - Avoids perverse incentives and unintended consequences

[Are there any constraints on the scope for decision making?](#)

- 21 This RIA only considers the problems with the ETS forestry operational settings that can be addressed by legislative changes to the CCRA. Other work streams in Te Uru Rākau, MfE and

the EPA are addressing the other regulatory issues identified in the ETS review such as forestry accounting, issues with the Permanent Forest Sink Initiative (PFSI) and compliance settings.

What do stakeholders think?

- 22 The issues in this document will be included in a wider public consultation covering the complete set of changes to forestry in the ETS. This is planned for later in 2018. Forestry stakeholder groups will be targeted in this consultation.

Issues and Options

- 23 We have identified 26 operational and technical changes to improve how forestry is treated within the ETS that would require legislative change to the CCRA.
- 24 These changes are divided into three groups:
- A. Significant changes** (five proposals) which will positively impact investment decisions in forestry, improve the ETS for a large numbers of forest owners, or require Regulations to be developed at a later date once the legislative package is delivered;
- B. Changes linked to the accounting decisions** (four proposals) where final policy decisions will be tied closely to decisions on if and how averaging is introduced to the ETS but where, irrespective of any changes to accounting rules, there are still operational reasons to change from the status quo; and
- C. Minor and technical changes** (17 proposals) to improve areas where the legislation creates uncertainty for participants, is not working in line with the policy intent, or is contradictory.
- 25 These proposals are largely independent of the accounting methodology that will be used for post-1989 forest and the proposed introduction of a permanent post-1989 forest activity. The changes being proposed here are intended to work to support any accounting approach (e.g. the netting off of emissions returns), or do not interact with post-1989 forests (e.g. pre-1990 forest offsetting).
- 26 The first two categories of changes are addressed in the Issues and Options Analysis section of this RIA, with a full analysis presented for each. As the minor and technical changes tend to only have one option, i.e. to fix the legislation where the CCRA is not working, we are putting these proposed changes in Appendix One.

(A) Significant changes

- 27 The five significant operational changes are:
- 1 Providing more certainty on the classification of land as post-1989 forest land (eligible to earn units if registered), or pre-1990 forest land (with deforestation liabilities if converted to another land use);
 - 2 Improve pre-1990 offsetting forest land to allow greater flexibility of land use;
 - 3 Simplifying the process to access exemptions from deforestation liabilities for areas of tree weeds;
 - 4 Improving access to existing exemptions for multiple-owner land (particularly multiple-owner Māori land); and
 - 5 A simpler process to implement section 60 applications (which allows exemptions from emissions liabilities in cases where unanticipated events occur).

A1. More certainty on land classification

What is the policy problem or opportunity?

- 28 Currently Te Uru Rākau can only determine land eligibility for the ETS once the land is in forest and an application is received, or if the participant undergoes a complex and costly ‘emissions ruling’ process (which does not provide full certainty of eligibility).
- 29 In practice, this means potential participants only know the status of their forest land, and any obligations or entitlements, once they have established forest and paid to register with the ETS; or if deforestation has occurred.
- 30 When an area of forest has its status determined, a notice (under s195 of the CCRA) is placed on the title. However, these notices do not contain any spatial information as to which parts of the land the notice applies to: effectively the notice states there is an area of forest on the land which is in the ETS, but not where.
- 31 Te Uru Rākau has identified most of the pre-1990 forest land in 2010/11 for the purposes of granting exemptions and allocating units under the Forestry Allocation Plan (FAP) and the under 50 hectare exemption for deforestation.
- 32 Around half of the forest established after 1989 has been identified as post-1989 forest land when it was voluntarily registered in the ETS.
- 33 It is difficult to conclusively determine the post-1989 eligibility of land without it already being in forest and registered with the ETS. Public datasets, such as the Land-Use and Carbon Analysis System (LUCAS NZ), or the Land Use Classifications, are not at a useful scale relative to the ETS information requirements, have data limitations and may not be up to date.
- 34 For landowners, this means their ability to participate in the scheme is unknown, increasing the potential cost to landowners (from attempting to register ineligible land), and reducing investor confidence in forestry. Te Uru Rākau typically rejects 10 per cent - 50 per cent¹⁰⁶ of the area of post-1989 forests as ineligible where forest owners are unable to demonstrate that their land meets the legislated criteria.
- 35 Should a landowner require certainty, they may apply for an ‘emissions ruling’ which enables the EPA to declare if the landowner will be undertaking an activity. However, this process is rarely used as it is complex and costly for the participant, and the current CCRA drafting means the rulings remain somewhat ambiguous, failing to provide the certainty needed. For example, the ruling could determine the land was not forest land on 31 December 1989 (the first part of the post-1989 definition) but not that the land will become forest land (e.g. trees above 5 metres at maturity).
- 36 The lack of certainty on how land may be classified under the ETS imposes undue risk on landowners and investors, reduces the efficiency of the ETS as a tool to deliver cost-effective emissions reductions, and impacts on the reputation of the ETS. If new owners don’t understand their obligations, they may be exposed to an ETS liability (e.g. they may consider the land they buy to be deforested, but in fact it may be temporarily un-stocked pre-1990 forest land).

¹⁰⁶ This depends on the quality of the imagery available to determine the land cover in 1990, the land cover around 1990 and the type of forest being established.

What options are proposed to address the problem?

- 37 There are two linked options which we believe will improve the ability to ensure land eligibility:
- 1.1. Enable the creation of a map of ETS eligibility; and/or**
 - 1.2. Improve the emissions rulings process to provide better certainty.**
- 38 These options are linked: the map provide a simple and low cost way to determine the status of the land, while the ruling process could act as an appeal mechanism.

Option 1.1 The land eligibility map

- 39 This proposal is to amend the CCRA to allow land eligibility (as pre-1990 or post-1989 forest land) to be determined by reference by a definitive map. This map would be made available via a publically available GIS layer (a map of land eligibility) to provide spatial information around the land.
- 40 This map would describe the land status of forest land (e.g. registered post-1989, pre-1990 land, native forest in 1990), any areas with special status in the ETS (e.g. exempt land) and areas of non-forest land (e.g. agricultural land that would qualify as post-1989 forest land).
- 41 We propose to define this map through regulations under the CCRA. The required process to set the regulations will ensure that that the public is notified of any changes and the economic and fiscal impacts of the map are considered.
- 42 We intend to use the MfE developed LUCAS mapping, which supports the international greenhouse gas reporting, as the basis for this map. There are already links between the information gathered in the ETS and the LUCAS map. This will assist in ensuring that the forests in the ETS support New Zealand achieving our international targets
- 43 Through operational policy Te Uru Rākau will establish a process to periodically update the map to account for participant behaviour (e.g. update the area of pre-1990 forest land to account for deforestation) and any emissions rulings. We propose this occurs once per Mandatory Emissions Return Period (MERP)¹⁰⁷.

Option 1.2 Improved emissions ruling process

- 44 The EPA's existing powers to 'rule' if a person is, or would be undertaking an activity will remain with minor and technical amendments as necessary to remove ambiguity about the standing of the ruling.
- 45 With the creation of the map the primary purpose of emissions rulings for the forestry sector will shift. It will move from being a means for the landowner to determine what their land status is, to act as an appeal mechanism if a person disputes the map's classification. The operational policy around this appeal mechanism would involve a clear process to contest land status by a landowner (e.g. if more information becomes available about what has happened with the land), noting that map updates are not rulings and that the rulings process is still available.

¹⁰⁷ The five- year period, which all post-1989 forest participants are required to submit a mandatory emissions return within 6 months of its conclusion. The current MERP is 2018-2022

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary Criteria

- *Provides durable regulatory certainty and predictability*
- *Promotes afforestation of rotational and non-harvest forests*
- *Improves administrative efficiency*
- *Reduces complexity and cost for participants*
- *Reduces administrative cost to the Crown*

- 46 The creation of a definitive eligibility map will result in the ability to participate being more certain and predictable. It would also significantly reduce the risk associated with planning investing for ETS eligible forests, and will improve investor confidence in the overall scheme. Potential ETS participants would be able to refer to the map to find out what ETS status their land has, or would be classified as, under the ETS. This would reduce complexity and cost for them. The simpler process would also reduce administrative complexity for the regulators. As access to the ETS would be easier, it should also incentivise more afforestation.

Secondary criteria

- *Supports alignment between ETS unit supply and how NZ will meet its climate change targets*
 - *Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups.*
 - *Supports economic growth and social resilience*
- 47 As the proposed map would be aligned with the LUCAS land use map, it would assist alignment of the ETS unit flows with the emissions and removals recorded for the forestry sector's contribution to our national emissions reduction target.
- 48 This proposal also front loads the cost of determining land eligibility for the ETS into the development of the map. As the cost of developing the map will be borne by the Crown it reduces landowner costs of joining the ETS and the cost Te Uru Rākau carries for each application in the ETS (and follow up discussions where land is ruled ineligible). The costs and trade-offs around the options to develop the map will be elaborated upon in the final decision paper.
- 49 Emissions rulings are relatively uncommon (as they are not particularly effective). We are unable to anticipate the number of rulings that would be requested under this policy: the more restrictive the map is for eligibility, the more rulings we expect to undertake.
- 50 The additional economic activity from the extra afforestation would also support economic growth and social resilience in the regions.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

A1. More certainty on land classification		
Objective	Option 1.1 Enable the creation of a map on ETS eligibility.	Option 1.2 Improve the emissions rulings process to provide better certainty.
Improve ETS (rotational and permanent) forestry incentives	++	++
Improve ability of the ETS to effectively meet climate change targets	+	+
	On balance between long term reduction and the investment in developing the map.	
Improve ETS operations	++	0/-
	A map will create a far more efficient process to determine eligibility.	Accessing this rule will provide certainty, but will still the time and effort intensive.
Consistent with New Zealand's broader climate change programme	+	+
Overall assessment	++	+

A2. Improved process for pre-1990 forest deforestation offsetting

What is the policy problem or opportunity?

Fixing offsetting

- 51 Forest offset planting was introduced to the ETS in 2013 to allow pre-1990 forest landowners who want to deforest to avoid deforestation liabilities by establishing a forest of equivalent area and carbon stock elsewhere. However, should they fail to meet the conditions of offsetting, the landowner is liable for the emissions units (around \$16,000 per hectare at current prices) and any penalties we levy (up to \$30 per unit not surrendered).
- 52 Since 2016 a number of offsetting applications have been received, covering around 3,000 ha of pre-1990 forest land. Once the applications were approved, concerns were raised that the offsetting provisions are unclear or impractical, expose landowners to financial risk, and that they unnecessarily restrict the ability of landowners to undertake offsetting.
- 53 We have identified that the current rules for pre-1990 offsetting do not work, principally because:
 - i. Offsetting is strictly pass/fail for the entire application, meaning if even 0.5 ha of offset forest fails to establish, the entire application must be rejected;

- ii. There is limited time to establish the replacement forest, which varies according to what the forest owner does with the land (if the land is actively converted to non-forest use, they have 2 years to establish the offset forest however, if there is no conversion the period is 4 years); and
- iii. Once approved, the application cannot be amended to reflect what is happening on the ground and the success of forest establishment.

Forest Allocation Plan (FAP) unit clawback

- 54 Currently users of pre-1990 forest offsetting need to repay any FAP units that the deforested area had received (between 11 and 37 NZUs per hectare)¹⁰⁸. This rule could become a significant barrier to the flexibility pre-1990 forest offsetting is meant to offer, as increasing carbon prices will increase the cost of this clawback being used: at a carbon price of \$40 the cost of using offsetting will roughly double for farm foresters moving forest on their land.
- 55 When offsetting was introduced, the decision was made to clawback the second tranche of the FAP from those owners who use offsetting, as they regained some flexibility in land use (vs. a full deforestation liability)¹⁰⁹. However, the analysis was focused on the impacts on landowners compared to the full deforestation liability (55per cent to 75per cent reduction rather than the cost of the forest owner undertaking offsetting). At the time, the cost of repaying the clawback was based on a carbon price of \$10.41 ('the current low carbon price'), so the clawback would be expected to increase the cost by up to \$385 per hectare.
- 56 However, if the carbon price rises the requirement to repay the FAP may act as a barrier for land-use flexibility by increasing the cost of pre-1990 offsetting. It may be possible to factor in the cost of repaying the FAP into the price paid for pre-1990 forest land, and pay a lower price per hectare. If harvest (and deforestation) is several years away, factoring in changing carbon prices may be difficult to incorporate into land pricing¹¹⁰. We have had some stakeholder feedback that the FAP clawback acts as a barrier to the uptake of pre-1990 forest offsetting.
- 57 We intend to offer the public the opportunity to comment on this, as part of a wider question on barriers to taking up offsetting.

What do stakeholders think?

- 58 We have tested this approach with the Forestry Reference Group, and other key stakeholders, who agree that the current rules for offsetting do not work. While some stakeholders want even more flexibility than our proposed solution, we believe the proposal strikes the correct balance between flexibly for the landowner and the Crown's ability to ensure compliance.
- 59 Landowner feedback has indicated there is likely to be good demand for the flexibility offered by this rule, particularly from farm foresters who wish to move a forest within their farm to better respond to changing management practices and other regulations (e.g. water quality).
- 60 Further feedback will be obtained through consultation.

¹⁰⁸ Forest Allocation Plan (FAP) units were allocated to owners of pre-1990 forest shortly after the ETS was introduced as a recognition for the loss in flexibility of land use.

¹⁰⁹ This clawback option was decided as a result of the, then, Governments' desire for fiscal neutrality of the proposed 2011 amendments which included consideration of the full or partial cancellation of all second tranche units (for all pre-1990 forests)

¹¹⁰ The wider work on regulatory predictability will assist in overcoming this concern.

*What options are proposed to address the problem?***Option 2.1 Delivering an offsetting policy that is more workable for participants**

61 Working with stakeholders, and considering the international alignment, we have developed a proposal to increase the flexibility of pre-1990 forest offsetting. This proposal consists of 4 key policy changes to improve offsetting:

- i. Extend the time frame for offsetting to be achieved (if land is converted) to 4 years after clearance (harvest), regardless of the application date. This will enable time for infill planting should areas of the new offset forest fail.
- ii. Allow participants to amend the defined area of pre-1990 forest land to be deforested and the area of offset forest to be established. This amendment process would be a one off opportunity, after which the offsetting approval is finalised. This will enable forest owners to establish a larger area of offset forest than is needed for carbon equivalence, and then modify an application to reflect what area of forest successfully establishes.
- iii. Move away from the 'all or nothing' approach for the full application and make it explicit that only the deforested pre-1990 forest land that is not matched by the offset forest is subject to the deforestation liability.
- iv. Allow the owner of the offset forest to carry over surplus areas of successfully established offset forest to a future offsetting application if they have not previously counted it against deforestation¹¹¹. This would allow a landowner to submit an initial application, with planned over-achievement in their offset forest to effectively use it as a land bank.

62 We propose to provide advice on the FAP clawback, following public feedback and as part of the overall consideration of the changes to offsetting and forestry.

Discarded option: Flexibility beyond what has been proposed.

63 Some stakeholders have pushed for longer periods to undertake the offsetting, and/or greater ability to deforest prior to establishing the replacement (offset) forest. We have discarded these options for two reasons:

- i. A longer period to undertake offsetting (e.g. 10 years) will significantly reduce the Crown's ability to differentiate deforestation (with unit surrender obligations) from the conversion of land associated with offsetting: this differentiation is key to compliance. More generally, if non-compliance is assessed to have occurred after a significant period of time the owner of the pre-1990 forest, and the landowner when compliance is assessed, is more likely to be different. The landowner will be liable for the deforestation emissions, through no fault of their own.
- ii. Being able to count the land deforested using pre-1990 forest offsetting in the international accounts as carbon equivalent forests (the international term) is key to reducing the fiscal risk from offering this policy in the ETS. The international rules require that evidence is provided to show the relationship between the forest land and the corresponding offset forest. This is most effectively demonstrated with a relatively short time period, and the offset forest being established prior to the deforestation.

¹¹¹ We also intend to provide clarity that newly planted land that does not get 'used' in an offset application can be registered as post-1989 land.

- 64 Practically, the pre-1990 forest owners can achieve the same amount of flexibility through the preferred option by undertaking successive applications, and carrying over any ‘excess’ planting between applications. While this may result in slightly higher administration costs (from submitting the application), the majority of the cost will be very similar (e.g. mapping the same total area).

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Reduces complexity and cost for participants*
 - *Avoids perverse incentives and unintended consequences*
- 65 The likelihood of meeting the rules will be improved if they are more flexible. This will avoid the unintended consequence of pre-1990 participants failing to meet offsetting provisions, and facing considerable deforestation liabilities despite attempting to establish an offset forest.
- *Provides durable regulatory certainty and predictability*
 - *Encourages forest preservation (discourages deforestation)*
- 66 An improved offsetting process that works as intended in all cases would provide a predictable and durable process, and would result in more deforestation being offset by equivalent forests. This means that less deforestation emissions would be recorded in our national accounting/reporting of greenhouse gas emissions.
- *Supports economic growth and social resilience*
 - *Reflects the Crown’s responsibilities as a Treaty partner*
- 67 Flexible land use allows optimisation of the land under forests and agriculture, which would improve economic growth and social resilience. As a large proportion of pre-1990 forest land is owned by Māori, an improved process would allow these landowners to make the best use of their land resource.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

A2.Improved pre-1990 forest offsetting provisions.	
Objective	Option 2.1 Delivering an offsetting policy that is more workable for participants
Improve ETS (rotational and permanent) forestry incentives	+
Improve ability of the ETS to effectively meet climate change targets	+
Improve ETS operations	++ An improved process will allow participants more certainty that their offsetting application will pass.
Consistent with New Zealand's broader climate change programme	++ A large proportion of pre-1990 land is owned by Māori, and this option will provide an improved process to offset for these landowner s.
Overall assessment	++

A3. Improved process for tree weed deforestation exemptions

What is the policy problem or opportunity?

- 68 Owners of pre-1990 tree weeds may apply for an exemption from deforestation liabilities if they want to remove the tree weeds. The process for this exemption is a significant barrier to landowners using this option to reduce the cost of controlling tree weeds. It is also a costly and complex process for Te Uru Rākau.
- 69 Tree weed spread is a significant environmental and conservation issue in New Zealand. The exemption process is highly prescribed and has limited flexibility; and exemptions cannot be applied for pre-1990 tree weed forest that received an allocation of units under the Climate Change (Pre-1990 Forest Land Allocation Plan) Order 2010. The success of the government funding for the management of tree weeds depends upon removing pre-1990 tree weed forests entirely from designated priority management zones. The current ETS settings limit this funding's ability to achieve tree weed control.
- 70 Much of the operational detail for tree weed exemptions sits in the primary legislation (CCRA). This doesn't allow the flexibility to deal with an issue that can take many years to ensure eradication in a single area, nor to capitalise on the experience gained thorough the current programmes to control tree weeds.

- 71 For example, the current rules require that, once approved, an area of tree weeds must be completely removed by the end of the Mandatory Emissions Return Period¹¹² otherwise the landowner is responsible for deforestation emissions liabilities. This effectively limits the granting of tree weed exemptions to the first few years of the MERP, otherwise the landowners are bearing significant risk of not achieving control.
- 72 Land that received NZUs through the FAP is currently ineligible for a tree weed exemption. Te Uru Rākau is aware of one case where this is acting as a barrier for the owners of a high country farm undertaking tree weed clearance, which is supported by the regional council, DOC, MPI, and Te Uru Rākau.

What do stakeholders think?

- 73 Tree weeds (or wilding conifers) are widely recognised as an environmental problem. Amongst many stakeholders there is ongoing concern about their spread so proposals for their control will likely be supported.
- 74 A subset of the forest industry advocates that tree weeds be allowed to establish in large areas of non-forest land, as a low cost way to achieve New Zealand's international targets. Te Uru Rākau does not view this a viable approach due to:
- i. Enabling the spread of wilding conifers is contrary to the Government's *National Wilding Conifer Control Programme*¹¹³ which aims to prevent the spread of tree pests and to progressively remove them from much of the land already invaded. Reconsidering this national strategy is beyond the scope of considerations in the ETS forestry package.
 - ii. The international rules relating to carbon sinks for forestry require the wider consideration of environmental impacts (e.g. biodiversity). The expansion of tree weeds is likely to fail this test; and
 - iii. Expanding areas of wilding conifers is of significant concern to the public and their encouragement will likely lead to a reduction in the social licence to operate for well managed conifer plantations.

- 75 Feedback on the current proposals will be obtained through consultation.

What options are proposed to address the problem?

Option 3.1 The proposal is to put most of the process detail into the Regulations, to enable a more flexible approach to controlling pre-1990 tree weeds.

Option 3.2 We propose to remove the FAP related limit from the policy, to better manage tree weeds across the landscape.

- 76 If a decision is made to encourage the spread of wilding conifers we believe it is still sensible to provide simpler access to the exemptions. In such a situation (where wilding conifers are expanding) there will still be a need to remove tree weeds from some locations (e.g. to protect biodiversity at a specific site).

¹¹² A five year period that underpins much of the ETS for forestry, the current one is between 2018-2022

¹¹³ The Programme is led by MPI, DOC and Land Information New Zealand (LINZ).

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Reduces complexity and cost for participants*
- *Provides durable regulatory certainty and predictability*
- *Improves administrative efficiency*

- 77 This proposal will simplify the process for landowners and provide greater flexibility to undertake tree weed clearance. We are not proposing to change the size of the exemption, and therefore this proposal has no fiscal impact.
- 78 An improved process would reduce complexity and cost for landowners, and be more efficient for all parties. It would mean that landowners who have tree weeds and are under pressure to remove them would have a more user-friendly process to gain exemptions and be able to complete their tree removal work. A process that works as intended in all cases would provide a predictable and durable process, and would result in more tree weeds being eradicated.
- 79 We expect there to be minimal fiscal impact of allowing land which has received a FAP to be granted a tree weed exemption. The FAP has already been recorded as a fiscal expense when it was allocated. The impact can be managed through the process which sets out the total allowable exemptions.

Reduces administrative cost to the Crown

- 80 A more streamlined process with operational detail in the Regulations would be easier to implement and adapt, and would reduce cost for Te Uru Rākau.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

A3.Improved process to grant pre-1990 tree weed exemptions		
Objective	Option 3.1 Put most process detail into regulations, to enable a more flexible approach to controlling pre-1990 tree weeds.	Option 3.2 Allow land that has received the FAP to receive an exemption
Improve ETS (rotational and permanent) forestry incentives	0	0
Improve ability of the ETS to effectively meet climate change targets	- An improved process will allow participants to remove tree weeds without incurring liabilities, which will result in the removal of carbon sinks.	- An improved process will allow participants to remove tree weeds without incurring liabilities, which will result in the removal of carbon sinks.
Improve ETS operations	+ Landowners who are under pressure to remove tree weeds will face a more user	+ Landowners who are under pressure to remove tree weeds will face a more user

	friendly process, however, there will be minimal savings for the Crown.	
Consistent with New Zealand's broader climate change programme	0/ This option aligns with the New Zealand's agenda to eradicate tree weeds, but removes a carbon sink.	0/ This option aligns with the New Zealand's agenda to eradicate tree weeds, but removes a carbon sink.
Overall assessment	+	0

A4. Improved access to existing exemptions for land in multiple ownership

What is the policy problem or opportunity?

- 81 Since 2012, persons who owned less than 50 hectares of pre-1990 forest land have been able to apply for the land to be declared exempt from deforestation liabilities. The purpose of this was to exempt the many owners of small blocks of pre-1990 forest from having to comply with the ETS, and to reduce the government's administrative burden.
- 82 As well as the area test, accessing the exemption required each person who was the legal owner of the land owned on 1 September 2007 to make a statutory declaration that they owned fewer than 50 hectares (ha) of forest on 1 September 2007¹¹⁴. Where land has joint owners, each of these is required to sign.
- 83 These conditions have proved exceedingly challenging in cases of multiple ownership, particularly Māori land held under Te Ture Whenua Māori Act 1993. Data to support the FAP (from 2010) estimates that roughly 62 per cent of the Māori freehold land blocks lacked an ownership structure at that time. This effectively deprives Māori of an option to access an exemption open to other owners of pre-1990 forest.
- 84 Contributing factors include ownership records not being up-to-date, significant numbers of owners (some blocks in excess of 300) and the difficulty locating and contacting all the owners registered on the block title (the Māori Trustee estimates that they have contact details for around 50 per cent of owners of most blocks). These factors mean that completing a statutory declaration from every owner is administratively difficult, if not impossible.

What do stakeholders think?

- 85 This issue became evident in 2012 when the FAP and 50ha exemption process was underway. Māori in particular are aware of the issue, and there have been non-legislative efforts to resolve it without success. We consulted the public (with little reaction), and worked with TPK and the Maori Trustee on these non-legislative options.
- 86 Feedback on the current proposals will be obtained through consultation

¹¹⁴ The 50ha rule is agnostic to the current forest holdings of the land owner (e.g. they could have acquired additional forest land in 2017), the key test is that the land owner must have had less than 50ha on 1 September 2007.

What options are proposed to address the problem?

Option 4.1 (Preferred)

- 87 The proposal is that where land had more than [a number of¹¹⁵] owners on 1 September 2007, the current professional trustee or trustees (who may have been appointed at any time), may apply for an exemption for pre-1990 forest land contained within that land title, provided that the area of pre-1990 forest land contained in the title was less than 50 hectares on 1 September 2007.
- 88 We need to test with the public where a general definition of ‘multiple-owned land’ would apply. This is to ensure that this option can be extended to all forest owners in New Zealand, rather than only those who own land under the Te Ture Whenua Māori Act 1993.
- 89 We will also consult as to whether the exemption should be open to all land under Te Ture Whenua Māori Act 1993, where there is a trustee or an appointed agent for land outside a trust (via the Māori Land Court).
- 90 Allowing the agent to apply, and the trustee to apply if they were appointed after 1 September 2007 is important, as roughly 62 per cent of the Māori freehold land blocks lacked an ownership structure in 2010.
- 91 For these trustee/agent applications, the 50ha threshold will relate to the land title rather than a trustee’s/agent’s landholdings. Many trustees sit on multiple trusts, representing owners of fractions of a hectare of forest, and are likely to own more than 50ha collectively. Not making this change would maintain the problem of excluding them from applying.

Discarded options

- 92 Two alternative options have been considered and discarded:
- i. Use of section 60 exemptions: we could grant multiple owned land a section 60 exemption. This is not the preferred approach as a section 60 exemption can be administratively burdensome to complete, and would be duplicative of the consultation process around legislative changes.
 - ii. Offering an exemption for all Te Ture Whenua Māori Act 1993 land would be more challenging to offer as it would require the upfront assessment of all forest land on all blocks of Māori land, regardless if there is an intention to deforest. In contrast the preferred application process will better target those blocks where deforestation is likely.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Avoids perverse incentives and unintended consequences*
- *Reduces complexity and cost for participants*
- *Reflects the Crown’s responsibilities as a Treaty partner*

¹¹⁵ We will propose 10 in the consultation document as this seems to be the upper limit of current multiple owned land applications under the 50 hectare exception. However, we are not fixed on this number.

- 93 The current rules have the unintended consequence that not all owners of multiple-owned land are able to obtain an exemption for their pre-1990 forest land. The proposal would resolve this, and reduce the complexity faced by these owners. The issue is particularly relevant to Māori freehold land that was not incorporated in a trust or incorporation when the last round of exemption applications was implemented.
- 94 As this change will enable landowners to access an existing exemption, it is not anticipated to have a fiscal cost.

Secondary criteria

- *Supports economic growth and social resilience*
- 95 Obtaining this exemption increases land use flexibility which in turn supports economic growth and social resilience.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

A4.Improving access to existing exemptions for multiply owned land.	
Objective	Option 4.1 Allow the trustees and agents for multiple-owned land to complete the application, even if they were appointed after the 1 September 2007 deadline
Improve ETS (rotational and permanent) forestry incentives	0
Improve ability of the ETS to effectively meet climate change targets	0
Improve ETS operations	+ Reduces cost for participants, but with minimal savings to the Crown.
Consistent with New Zealand 's broader climate change programme	+ Allow multiple owned eligible land to obtain relevant exemption, rather than unintentionally excluding this group. Reflects the Crown's responsibilities as a Treaty Partner.
Overall assessment	+

What is the policy problem or opportunity?

- 96 Section 60 is a provision in the CCRA which allows for exemptions to be granted from some ETS obligations. This process requires the Minister for Climate Change to be satisfied that certain conditions are met, and allows a participant to be exempt from some or all of an activity and not have to surrender units for the emissions.
- 97 In the context of forests, these exemptions cover the deforestation of pre-1990 forest land. While the process to grant a section 60 exemption is time consuming, the section 60 exemptions are often granted after deforestation has already occurred. While it is permissible to apply the section 60 exemptions to some events that have already occurred in certain

circumstances, the relevant section of the CCRA is not clear on this, which makes it challenging when we are drafting the Order in Council (to give effect to the Minister's decision) as we need to manage concern about applying the regulations retrospectively.

- 98 Often deforestation is only discovered well after it has occurred. Of the three section 60 exemptions for forestry that have received policy approval, two relate to deforestation that had already occurred.
- 99 Ultimately, this has led to the current provisions in the CCRA being too rigid to be used for genuine cases that are within the intent of the policy.

What options are proposed to address the problem?

Option 5.1 (recommended)

- 100 We propose that the legislation makes it explicit that section 60 exemptions can be granted for activities which occurred prior to the Order in Council. This would apply to all sectors. There are sufficient safeguards to allow a retrospective power; the Minister must consider a number of factors before making a decision, and Cabinet would also consider the specifics of each application.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Provides durable regulatory certainty and predictability*

- 101 Explicitly allowing exemptions to be made retrospectively will ensure more regulatory certainty that an exemption is possible for an unanticipated event.

Secondary criteria

- *Avoids perverse incentives and unintended consequences*

- 102 The current rigid provisions have an unintended consequence that exemptions can't be granted for genuine cases that are within the intent of this policy. The proposal would remove this.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

A5.Simpler Section 60 exemptions	
Objective	Option 5.1 Proposal to make the legislation explicit that section 60 exemptions can be granted for activities which occurred prior to the Order in Council.
Improve ETS (rotational and permanent) forestry incentives	+ Provides more certainty for participants, improving confidence in the ETS.
Improve ability of the ETS to effectively meet climate change targets	0

Improve ETS operations	++ Provides more certainty that exemptions can be made after an unexpected event has happened.
Consistent with New Zealand 's broader climate change programme	0
Overall assessment	+

B. Decisions linked to the accounting decisions

103 There are four proposals that offer an opportunity to improve the operation of forests in the ETS, though the final policy decisions on these issues will be linked to decisions around the accounting approach. These are to:

1. Align when participants need to file a mandatory emissions return so that it matches our international targets (or periods) and the introduction of averaging;
2. Change operational details if forest offset planting is offered to post-1989 forests;
3. Extend section 60 to post-1989 forests; and
4. Improve clarity on cost recovery.

B1. Aligning mandatory emissions return periods to match our international targets and the proposed introduction of averaging.

What is the policy problem or opportunity?

104 All post-1989 forestry participants must submit a Mandatory Emissions Return (MER) at the end of the Mandatory Emissions Return Period (MERP). When participants undertake their MERs, the number of NZUs they are to receive or surrender is determined, and then forest owners can sell or buy units in the market.

105 The first MERP was aligned to the Kyoto Protocol's First Commitment Period (2008-2012) and then five yearly periods after that (i.e. 2013-2017, 2018-2022). This misaligns the current MERP with:

- (i) NZs international targets (both 2020 and 2030 targets)
- (ii) The introduction of change in the way New Zealand accounts for forestry internationally (which starts in 2021).

106 To support decisions around unit supply, it makes sense to align the MERPs to the new international targets, or two five year MERPs, if the target covers a 10 year period.

What options are proposed to address the problem?

107 The proposal is that a shorter MERP is offered (three years) to allow alignment with international targets and the introduction of averaging accounting. This 'mini-MERP' would be designed to reduce forestry participant' costs (e.g. participants with more than 100 ha of forest would not be required to undertake the costly Field Measurement Approach (FMA) for this return). We will look at options to further reduce the cost for participants, e.g. a lower fee for filing a MER.

108 If a mini-MERP is offered (2018-2020 or 2023-2025) it should largely be driven by the timing of the introduction of averaging.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria:

Supports alignment between ETS unit supply and how NZ will meet its climate change targets
Reduces cost and complexity for participants.

- 109 The proposal would mean that the units issued under the ETS would be aligned with NZ's accounting for our emissions reduction target under the Paris Agreement. It would also reduce an unnecessary cost and complexity for ETS participants subject to the FMA¹¹⁶.

Secondary criteria:

Avoids perverse incentives and unintended consequences

- 110 The proposal would resolve the unintended consequence (that could not have been envisaged earlier) of the ETS five-year periods becoming misaligned with international accounting periods.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

B1. Aligning mandatory emissions return period		
Objective	Option 1.1 The proposal is that a mini-MERP is offered (three years) to allow alignment with international targets	Option 1.2 Align the mini-MERP to the introduction of averaging
Improve ETS (rotational and permanent) forestry incentives	0	0
Improve ability of the ETS to effectively meet climate change targets	+	+
Improve ETS operations	+	+
Consistent with New Zealand's broader climate change programme	+	+
Overall assessment	+	+

¹¹⁶ Field Management Approach. This is a method to calculate the carbon stock in post-1989 forest land. It is mandatory for land with 100 hectares or more registered in the ETS during a MERP, or land with a PFSI covenant with a forest sink area of 100 hectares or more during a MERP.

B2. Offer deforestation offsetting to post-1989 forests

What is the policy problem or opportunity?

- 112 Pre-1990 forest landowners can offset their deforestation emissions by planting an equivalent forest on another site. To provide greater land use flexibility, and help make ETS participation more attractive, there is an opportunity for deforestation offsetting to also be made available for post-1989 forests.
- 113 Currently owners of post-1989 forest land can voluntarily remove their land from the ETS (deregister), or if they deforest they must deregister the land as it is no longer forest land. In both cases they have to then surrender the NZU balance of the affected land.
- 114 Under the current saw-tooth carbon accounting regime, deforestation offsetting is unlikely to be attractive because forest owners will generally deforest after harvesting when the unit balance (maximum number of units needing to be repaid) of the deforested land is zero or very low. Around 85 per cent of the pine in the ETS would face no additional ETS costs if they were to deforest compared with harvesting, offering little incentive to replant if the forest is not in a suitable location.
- 115 But under the proposed 'average accounting' regime, where a unit balance equal to the level of long-term average carbon stock would have to be surrendered if the land is deforested after harvest, offsetting would be more attractive as planting an equivalent forest is likely to be a cheaper option. This would be particularly relevant to newly planted forests, as they would be registered at a young age and earn units from zero.
- 116 More flexible land use could increase competition for, and the price of, suitable forestry land. However, the demand for offsetting land is expected to be only a small proportion of the total land available for afforestation.

What options are proposed to address the problem?

- 117 The proposal is to allow post-1989 forestry participants who use average accounting, and deforest or voluntarily remove their land from the ETS, to plant an equivalent forest instead of surrendering the unit balance.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Promotes afforestation of both rotational and non-harvested forests.*
- *Encourages forest preservation (discourages deforestation)*

- 118 Allowing offsetting for post-1989 forests would make ETS participation more attractive as there would be increased land-use flexibility for registered forests. This may lead to more afforestation. It would also mean that fewer deforestation emissions would be recorded in our national accounting/reporting of greenhouse gas emissions.

Secondary criteria

- *Supports economic growth and social resilience*

- 119 Flexible land use allows land use to be optimised, which would improve economic growth and hence social resilience.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

B2. Offer deforestation offsetting to post-1989 forests	
Objective	Option 2.1 Allow post-1989 offsetting
Improve ETS (rotational and permanent) forestry incentives	+ Allowing offsetting for post-1989 forests will increase flexibility for participants, improving forest incentives.
Improve ability of the ETS to effectively meet climate change targets	++
Improve ETS operations	+
Consistent with New Zealand's broader climate change programme	+
Overall assessment	+

B3. Extend section 60 to post-1989 forests.

What is the policy problem or opportunity?

- 120 Under certain conditions Section 60 of the CCRA allows the Minister to recommend that the Governor General grant exemptions from ETS liabilities. It is used when costs to participants are disproportionate against the intent of the ETS; so far there have been three forestry applications made under Section 60.
- 121 Each case application is considered on its own merits, and the Minister must be satisfied that the order will not materially undermine the environmental integrity of the ETS and that the costs don't exceed the benefits.
- 122 Section 60 currently applies to Schedule 3 activities, but doesn't cover Schedule 4 activities which includes post-1989 forests. As post-1989 forests can be affected by unanticipated issues that require deforestation as well (e.g. earthquake damage), extending the remit of section 60 will increase the confidence of post-1989 forest participants that there are options to provide relief from the cost of emissions liabilities should the unexpected (when the legislation is drafted) occur and it be determined there is no other option but to deforest.

What options are proposed to address the problem?

- 123 The proposal is to allow the application of section 60 to post-1989 forest land that is subject to average accounting, and the permanent post-1989 forest land activity (if that proposal is agreed to).

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups*
- 124 As post-1989 forests can have unanticipated deforestation events where the forest clearing has a public benefit, it is appropriate that the cost of deforestation emissions can be weighed against the public benefit and exemptions granted, where they can be justified.
- 125 Assessing the fiscal costs of extending the section 60 provisions to post-1989 would be exceptionally challenging at this stage as we cannot anticipate how it would be used. The fiscal implications, and options to minimise these, or any use of this provision is manageable as the Minister for Climate Change (and ultimately Cabinet) must be satisfied the costs do not exceed the benefits on a case-by-case basis.
- 126 As a consideration of Section 60 is maintaining the environmental integrity of the ETS we do not see precedence as likely, particularly as exemptions are considered on a case-by-case basis and there are sufficient balances in place to ensure each case is considered on its individual merits.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; - - much worse than

B3. Extend section 60 to post-1989 forests.	
Objective	Option 3.1 The proposal is to allow the application of section 60 to post 1989 forest land, and permanent post-1989 forest land.
Improve ETS (rotational and permanent) forestry incentives	++ Allows participants more certainty that they can access an exemption if they are faced by an unexpected event.
Improve ability of the ETS to effectively meet climate change targets	0
Improve ETS operations	+
Consistent with New Zealand's broader climate change programme	0
Overall assessment	+

B4. Better clarity on cost recovery

What is the policy problem or opportunity?

- 127 Currently, the administering agencies recover some of their costs from ETS participants, however the current cost recovery regime is inconsistent and incomplete.
- 128 An example of this is the recovery of Te Uru Rākau's costs for assessing land for pre-1990 forest offsetting applications and post-1989 forest registration. Both of these provide a benefit to the forest owner¹¹⁷, and require land to be assessed to the similar standard, and to similar criteria. However pre-1990 forest offsetting is free, while post-1989 forest is partially cost recovered. This difference is a result of historical decisions rather than overall design intent.

What options are proposed to address the problem?

Option 4.1

- 129 The proposal is that the current regulation-making powers in the Act would be reviewed to allow the cost recovery framework to be extended to all relevant parts of the ETS where it is not currently in place.
- 130 We are including this in the consultation document primarily to alert the ETS participants and other submitters that cost recovery options will be considered later.
- 131 We do not propose to define the cost recovery settings in the near term, but rather provide broad advice to Cabinet around the cost implications of the detailed accounting decisions, and the incentives that result. Once the relevant changes are made to the Act we will undertake a separate process to determine the appropriate final level of cost recovery. This will include undertaking the appropriate cost recovery RIA.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups*
 - *Reduces administrative cost to the Crown*
 - *Provides durable regulatory certainty and predictability*
- 132 Government policy is to recover the costs of programmes that it operates, as appropriate. A consistent and balanced cost recovery regime that is durable and predictable would provide certainty to ETS participants.

¹¹⁷ Land users using the pre-1990 forest offset option face a lower cost of deforestation as they convert land uses, while post-1989 forest owners earn income from the carbon stored in their forests.

Table Key: Variations from the status quo: ++ much better; + better than; 0 about the same; - worse than; -- much worse than

B4. Better clarity on cost recovery	
Objective	Option 4.1 Create enabling provisions for cost recovery, with future decisions later.
Improve ETS (rotational and permanent) forestry incentives	0
Improve ability of the ETS to effectively meet climate change targets	0
Improve ETS operations	+
Consistent with New Zealand's broader climate change programme	+
Overall assessment	+

Conclusions

What option, or combination of options, is likely best to address the problem, meet the policy objectives and deliver the highest net benefits?

- 133 Overall MfE and Te Uru Rākau recommend that the 26 approaches described in this document are implemented, following consultation, to address the issues identified with the current legislative framework.
- 134 While they are largely independent of one another, and decisions can be taken separately on each issue, we recommend that they are all consulted on as part of the forestry package.
- 135 All proposals require amendment to the Climate Change Response Act, so it is sensible to resolve these issues in one step.

Overview:

- 136 Many of the changes proposed in this RIA are intended to be enabling and to support the overall ETS package of changes for forestry accounting and permanent forests.
- 137 While some proposals will provide benefits for specific landowners (e.g. multiple-owned land), the majority of the benefit will be from these changes supporting the wider ETS (and forestry programmes) to deliver on their objectives through improved investment confidence. This skews the benefit analysis below: individually the benefits are relatively small, but in aggregate are significant.
- 138 Much of the benefit from the minor and technical changes will be to reduce the likelihood of the participant making an error. While improved compliance rates will be beneficial from the Crown perspective (e.g. it will improve the integrity of the ETS, and reduces operational costs), the key benefit for the participant will be to reduce the risk of exposure to the (often significant) penalties that result from non-compliance. The use of professional service providers (consultants) is not a guarantee that participants will be compliant, as the current law is often unclear and prone to misinterpretation. Both the penalty and compliance regime and the market governance are being consulted on via the whole of government document 'Improvements to the New Zealand Emissions Trading Scheme: Consultation Document'.

Summary table of costs and benefits of the preferred approach

Affected parties	Comment:	Impact	Evidence certainty
Additional COSTS of proposed approach, compared to taking no action			
Regulated parties (ETS participants, forest and landowner s). The determinant of the cost will be if a forest is pre-1990 or post-1989 forest land, as this	The costs of these changes are likely to be relatively minor to landowners as they will be more easily able to comply with their ETS obligations. The specifics relating to how each issue reduces the costs on the regulated parties is covered in each section.	Low	High

impacts their interaction with the ETS.	While a few proposals have a small cost impact on some participants many of these are the one-off result of landowner actions, and no more than the status quo ETS. These impacts are discussed under the relevant section.		
Regulators of the ETS (Te Uru Rākau/ MPI , EPA)	Some proposals would increase costs to the regulators such as creating and maintaining a land classification map, and allowing further applications for 'less than 50 ha' exemptions.	Medium	Medium
Wider government	<p><i>Fiscals</i></p> <p>Overall, the proposals in this document have little direct fiscal impact as they either improve access to policies with an existing fiscal cost and/or require subsequent consideration of the fiscal costs later.</p> <p>One option within one proposal may result in a small fiscal cost, however, we are not seeking a decision on this option now.</p> <p><i>Local government</i></p> <p>There may be a marginal cost on local and regional councils as a result of their role in regulating forests and other land uses.</p> <p>For the main, these costs are likely to be manageable through the relevant cost recovery provisions¹¹⁸.</p>	Low	medium
Other parties	n/a		
Total Monetised Cost		n/a	
Non-monetised costs		Low to medium	Medium to high

Expected BENEFITS of proposed approach, compared to taking no action

Regulated parties (ETS participants, forest and landowner s).	The most significant benefit will be greater confidence to invest in forestry and the primary sector. This particularly applies to those wanting to establish post-1989 forest (regardless of species or forest size).	Medium	High
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¹¹⁸ For example, the National Environmental Standards for Plantation Forestry allow for the recovery of costs that result from their monitoring.

The determinant of the cost will be if a forest is pre-1990 or post-1989 forest land, as this impacts their interaction with the ETS.	<p>Those proposals taking preferred position (the minor and technical) will result in benefits to the forest owner, though the benefit from each individual proposal is likely to be are relatively small.</p> <p>Specific change provide benefits: Owners of pre-1990 forest land will benefit from additional land use flexibility Multiple owned Māori land will gain flexibility over their land use decisions Owners of tree weeds will receive greater flexibility and fewer costs as they work to control tree weeds.</p>		
Regulators of the ETS (Te Uru Rākau (MPI), EPA)	<p>As many of these proposals will simplify the ETS and improve the compliance rates within the ETS, the primary benefit to the regulators will be through reduced enforcement costs.</p> <p>This will also reduce the friction between forest and landowners and MPI/EPA as key decision making powers become more transparent (e.g. the land eligibility map).</p>	Medium	High
Wider government	These changes will improve the integrity of the ETS, and make international reporting simpler.	Medium	High
Other parties	n/a		
Total Monetised Benefit			
Non-monetised benefits		Medium	

Are the preferred options compatible with the Government's 'Expectations for the design of regulatory systems'?

139 Yes, in that they are mostly aimed at reducing, simplifying or clarifying legislative compliance and making it easier for participants to comply.

Implementation and operation

140 The proposals will be given effect by amendments to the Act, as well as some consequential amendments to the Regulations.

- 141 Following consultation and final policy decisions incorporating feedback received, the proposals would be given effect by amendments to the CCRA, as well as some subsequent amendments to the Regulations. Once implemented, the changes would be communicated to stakeholders through existing channels (website, email distribution lists, forestry periodicals), workshops as required and the updating of existing guides.
- 142 Most changes will be implemented through MPI¹¹⁹ and EPA¹²⁰s current processes:
- i. The minor and technical amendments focus on getting the ETS to work more effectively. These changes will therefore be made operational through our BAU processing.
 - ii. Those changes linked to averaging will be implemented as the operational policies for averaging are finalised. It is likely that the averaging work stream will result in new ways in how we work, but this is part of that consideration.
 - iii. Those significant changes will require new operational policies, or the regulations to be developed to deliver on these. Where existing tools are used (e.g. the emissions ruling process) we will look to simplify the process as far as possible.
- 143 The majority of the risk that results from these proposals relates to how well the outcomes are communicated to with stakeholders. We are confident that the range of options for outreach and our ability for repeat engagements, will help reduce this risk.
- 144 There is some risk around the delivery time line, particularly the development of the IT system to support the new accounting approaches (linked to the Mini-MERP and the averaging 'go live' date). We are managing these risks through forward planning e.g. the IT system needs a rebuild, so we are making the design as flexible as possible. However, the specific details of these options will be subject to another round of public consultation as those regulations are developed (as required under the CCRA).
- 145 There are some risks around the time line for the delivery of the changes that require the development of the regulations. We intend to manage this by beginning the policy development of these regulations, once Cabinet agrees to the amendment of the CCRA.

Monitoring, evaluation and review

How will the impact of the new arrangements be monitored?

- 146 The impacts of the changes would be monitored through current systems – that is, by analysing the reaction of stakeholders, rates of non-compliance, new registrations, withdrawal rates, uptake of applications for offsetting and exemptions, and through stakeholder reference groups.
- 147 Monitoring and evaluation of the specific provisions in place will be ongoing. If there is a significant shift in the data gathered through the BAU monitoring (above) MPI will explore the reasons for this and determine if this is a result of a change in the wider ETS¹²¹, New Zealand's

¹¹⁹ MPI administers the ETS for forestry, provides notification to the EPA when a participant is non-compliant and there is a penalty or compliance obligation; and advises the EPA the number of NZUs the EPA needs to transfer or receive from the participant.

¹²⁰ The Environmental Protection Authority (EPA) manages the administration of the ETS including compliance, reporting and market information and operates the New Zealand Emissions Trading Register.

¹²¹ For example, a decline in the carbon price would result in reduced registration rates.

primary sectors¹²², an issue with how the forestry parts of the ETS are perceived (a communication issue), or an issue with the legislation/regulation.

- 148 We will also be linking to the international greenhouse gas reporting system (LUCAS, run by MfE), which we will use to assess the impact of the permanent forest activity on New Zealand's international accounting.

When and how will the new arrangements be reviewed?

- 149 Information on the success of the changes, and any new issues with ETS implementation are collected on an on-going basis. They are then addressed when the next opportunity to amend the CCRA arises¹²³. However, there is no further review of the CCRA planned at this stage. Should the Minister of Climate Change initiate a review under s160 of the CCRA we would include the permanent forest option in that.
- 150 Where regulations are being developed, any emerging issues will be proposed to the Minister to be part of the annual regulations update.

¹²² For example, if the dairy pay out increases we would expect lower rates of new forest establishment on dairy support land.

¹²³ E.g. this could be through a statutes amendment bill, or if more significant at the decision of the responsible Minister.

Appendices

Appendix One: (C) Minor and Technical Improvements

- 151 We have identified 17 proposed changes which are minor and technical where the legislation does not correctly give effect to the policy intent behind the ETS, or is not clear around what current law means for the forest owner, these changes relate to:
1. Simplifying transfers of post-1989 forest land
 2. Interested parties notified when land is added or removed
 3. Reconfiguring Carbon Accounting Areas
 4. Clarifying the timing of deforestation
 5. Emissions return for post-1989 forest land with mixed ages
 6. Emission returns for natural disturbance events
 7. Removing unnecessary emissions return requirements
 8. Excluding post-1989 land with tree weeds
 9. Reviewing decisions
 10. Deregistering post-1989 forestry participants who cease to be legal entities
 11. Rounding rules required for certain calculations
 12. More flexibility in submitting mandatory emission returns
 13. Standardise timeframes for surrenders and repayments
 14. Require all returns to be 'net returns'
 15. Optional transfer of participation when a forestry right is granted
 16. Planted and naturally regenerated native forest on cleared forest land
 17. Exempt land eligible as post-1989 forest land

1. Simplifying transfers of post-1989 forest land

What is the policy problem or opportunity?

- 152 When ETS registered post-1989 forest land is transferred, such as being sold, ETS participation transfers to the new landowner or forestry right/lease holder. There are various forms of transfer, collectively termed 'transmissions of interest' under the CCRA.
- 153 Whenever there is any change in legal ownership (except when less than 40per cent of the members of an unincorporated body change), the parties involved must notify the EPA and submit an emissions return within 20 working days¹²⁴ of the date of transfer.
- 154 The problem is that there is very low compliance with these requirements (less than 10per cent). To ensure full compliance with the statutory requirements, Te Uru Rākau must commit additional resources to work with the parties to complete the transfer. In some cases, this can delay the land transactions.
- 155 The underlying cause of the problem is a lack of awareness by those involved in a land transaction where the land is registered in the ETS as post-1989 forest land. This means that land can be transferred (sometimes more than once) without the change in ETS participation being recorded.

What options are available to address the problem?

- 156 It is proposed to mitigate this problem by removing any unnecessary transfer from the ETS process through treating executors of wills as if they were the registered participants of the post-1989 land subject to the wills.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- 157 The proposals are expected to have a positive impact on administrative efficiency for the administering agencies and participants and would support the ability to identify and minimise non-compliance as it would remove an unnecessary step in the process.

¹²⁴ <http://www.legislation.govt.nz/act/public/2002/0040/latest/DLM1662782.html>

2. Interested parties notification when land is added or removed

What is the policy problem or opportunity?

- 158 If a landowner is a post-1989 forestry participant, the holder of a forestry right, or lease over the land is considered to be an interested party under the CCRA. Similarly, if a forestry right or lease holder is the participant, then the landowner is an interested party.
- 159 When a participant adds or removes land from the ETS¹²⁵ then the EPA must notify the interested party¹²⁶. However, interested parties are not required to notify the EPA if they change their contact details which means Te Uru Rākau must find the new contact details of interested parties when needed, which can be difficult and time consuming.

What options are available to address the problem?

- 160 It is proposed that a more efficient process for updating contact details would be for participants to notify interested parties when they add or remove land, rather than the EPA.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Improves administrative efficiency*
 - *Reduces administrative cost to the Crown*
- 161 It is more sensible and efficient for participants to notify the interested parties if they add/remove land as it is in the participant's interest to do so.

3. Reconfiguring Carbon Accounting Areas

What is the policy problem or opportunity?

- 162 Post-1989 ETS participants are allowed to reconfigure (subdivide or merge) their Carbon Accounting Areas (CAAs). Currently if CAAs are removed and the same land re-registered within 20 working days, the participant must surrender the units that have been issued to the land, but can then only regain units issued in the current five-year emissions return period. If the land was registered in a prior five-year period, the participant does not regain the same amount of units that were surrendered.

What options are available to address the problem?

- 163 Provide a new process for reconfiguring CAAs. A new process would allow relevant post-1989 participants to reconfigure their CAAs, without losing any units.

¹²⁵ Adding land is where more post-1989 land is included in the participant's registration (and earn units or surrender if the stock is reduced). Removing post-1989 land results in an emissions liability (in most cases), which comes at a financial cost (as units need to be surrendered), and impacts the amount of low risk carbon the landowner can access.

¹²⁶ <http://www.legislation.govt.nz/act/public/2002/0040/latest/DLM1662781.html> (6 and 7).

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Reduces complexity and cost for participants*
- *Avoids perverse incentives and unintended consequences*

164 This proposal simply ensures that the original policy intent is properly implemented, and avoids the unintended consequence of imposing a cost on some participants who want to reconfigure their CAAs.

Secondary criteria

- *Promotes afforestation of rotational and non-harvest forests*

165 The ETS would be more attractive if the flexibility provided by reconfiguration is fully available.

4. Clarifying the timing of deforestation

What is the policy problem or opportunity?

166 There is a misalignment of deforestation provisions between section 179 and 181. If a participant harvests their pre-1990 forest, then later chooses to convert to another land use within four years, it is unclear as to the date on which the deforestation occurred.

167 If pre-1990 ETS participants choose to convert their land within four years of harvest, they may be technically non-compliant and may face enforcement action for an unavoidable breach of the Act.

168 The underlying problem is the unintended consequence that the legislation has caused due to different definitions of deforestation in section 179 and 181.

169 Section 181 of the CCRA has been found to be unhelpfully worded and ambiguous. If a forest is converted to non-forest land say two years after harvest, the initial clearance (harvest) is technically part of the section 181 process but this is not as obvious to the reader as possible. Te Uru Rākau considers that the CCRA would benefit from clarification by legislative amendment in due course.

What options are available to address the problem?

170 Section 181 also provides for cases where pre-1990 forest land is cleared by one owner, then transferred to a new owner who wishes to convert it to another land use.

171 In these cases the new landowner is treated as deforesting on the date of the first action on the land that is inconsistent with it remaining forest land, following the land transfer date.

172 We propose extending this provision to any pre-1990 forest landowner who clears the land, but doesn't make the decision to deforest until later.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Provides durable regulatory certainty and predictability*
- *Avoids perverse incentives and unintended consequences*

173 The proposal to improve these deforestation provisions would provide clarity and certainty to forest landowners who deforest their land.

5. Emissions return for post-1989 forest land with mixed ages

What is the policy problem or opportunity?

174 If a CAA consists of stands of more than one age with some trees planted in the current emissions return period, the current rules determine the emissions return period as commencing at the date on which the youngest trees in the CAA¹²⁷ were established. The extra carbon contribution from the older trees is excluded, which is against the intent that carbon stock change is to be assessed on all the area in a CAA.

175 Te Uru Rākau is aware of 20 CAAs belonging to 18 unique participants covering 1,888 ha that have been, or will be affected by this problem.

What options are available to address the problem?

176 The proposal is to amend the Act to ensure that the emissions or removals from all trees in a CAA are included in an emissions return.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Provides durable regulatory certainty and predictability*
- *Avoids perverse incentives and unintended consequences*

177 The proposal simply results in avoidance of the unintended consequence that some emissions or removals in a CAA may go unreported. The proposal would clarify this and provide certainty in the future.

6. Emission returns for natural disturbance events

What is the policy problem or opportunity?

178 Participants with forest land that is affected by a natural disturbance face unnecessary compliance, as they are required to submit an emissions return but are not required to surrender any units.

179 Participants are faced with unnecessary compliance costs after a natural disturbance that permanently prevents re-establishment of forest. Participants will already be facing the burden of dealing with the natural disturbance, and this unnecessary cost places an extra burden on this class of participants. This has occurred in one or two cases, however, the provision is clearly unnecessary.

¹²⁷ Other conditions apply if the CAA was constituted following removal of land from a CAA or a transmission of interest; or if an s189(4A) return was submitted.

What options are available to address the problem?

- 180 Exempt participants faced with a natural disturbance that permanently prevents re-establishment of a forest, from needing to fill out an emissions return when they remove the land from the CAA.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Provides durable regulatory certainty and predictability*
- *Avoids perverse incentives and unintended consequences*

- 181 The proposal would simplify this process and remove the unintended requirement to submit an unnecessary emissions return.

Secondary criteria

- *Reduces complexity and cost for participants*
- *Reduces administrative cost to the Crown*

- 182 Costs to all parties would be reduced.

7. Removing unnecessary emissions return requirements

What is the policy problem or opportunity?

- 183 Participants who have an approved offset forest application may be confused as to whether they are exempt from section 56 and 65, as this is not explicitly worded in section 179A. This class of participant may submit an emissions return unnecessarily as a result of this confusion.
- 184 The nature of the problem is minor, as participants may or may not realise that they are exempt from section 56 and 65. There is an opportunity to amend section 179A to provide clarity around this exemption.
- 185 The underlying problem is the lack of clarity provided in section 179A about exemptions from section 56 and 65. The problem can be solved if clarity is provided in this section.
- 186 This has only occurred in a few instances, however, there is potential for participants to be confused and therefore the opportunity to remove this uncertainty. If more forest owners undertake offsetting it is expected the chance of this confusion will increase.

What options are available to address the problem?

- 187 Amend the relevant sections of the CCRA to explicitly note the exemption from the notification and emission return requirements. This will benefit both current pre-1990 participants wishing to establish an offset forest, and post-1989 participants who we are proposing to access the ability to offset.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Provides durable regulatory certainty and predictability*

188 The proposal would clarify this issue and provide certainty to participants.

8. Excluding post-1989 forest land with tree weeds

What is the policy problem or opportunity?

189 Tree weeds pose a threat to the environment due to their ability to spread and colonise other land. Section 187(5) was added to the CCRA in 2012 with the intention of excluding tree weed land from being registered in the ETS. But to avoid making an amendment that had retrospective application, participants who had registered land containing tree weeds before this amendment were excluded. The problem is that those existing participants are able to add more land containing tree weeds.

190 If tree weed land is registered in the ETS, the landowner would have to repay the units issued if a later decision is made to deforest. The opportunity is to amend the wording of section 187(5) to prevent participants who had tree weeds registered before 2013 from adding further tree weed land to their registration.

191 This problem has only occurred in a few cases, however, the potential to encourage the planting of tree weeds needs to be completely removed to avoid environmental harm. Since 2012, only 5 approved applicants have added land where the forest species are predominantly naturally regenerated tree weeds. These applications represent 391ha, most of which has since been deregistered. Nevertheless the opportunity remains for some participants to add more land containing tree weeds which is against the policy intent.

What options are available to address the problem?

Either

Amend the relevant section to exclude from the ETS all tree weed land registered after 2012 (dependent on if there is any residual still registered).

Or

Amend the relevant section to exclude from the ETS all future registrations of tree weed land, or areas which become tree weeds, regardless of who applies to register.

192 We have no preferred option and will consult on both.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Provides durable regulatory certainty and predictability*
- *Avoids perverse incentives and unintended consequences*

193 The proposal would clarify the policy that forest land with tree weed cover can't be registered in the ETS, and remove the current unintended consequence that some existing participants can add land with tree weeds.

9. Reviewing Decisions

What is the policy problem or opportunity?

- 194 If the EPA detects a mistake in their decision making, they are not enabled to review that decision. This may mean that a mistake will be unnecessarily disregarded. This can undermine the integrity of the ETS.
- 195 The underlying problem is that the wording in the Act does not grant the EPA the power to review their decision. This problem can only be solved if the Act is amended. The evidence is clear when assessing the wording of section 144, and from years of experiencing this issue.
- 196 There is a precedent in the Act where the Minister has the power to review allocation plan decisions.

What options are available to address the problem?

- 197 The proposal is to allow the EPA to reconsider, revoke or replace a decision that is deemed incorrect, provided that the affected person is consulted before amending a decision. The affected person if dissatisfied with an amended decision has existing rights of review under sections 144-146.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups*
 - *Avoids perverse incentives and unintended consequences*
- 198 The proposal would more appropriately allocate the risk of incorrect decisions between the Crown and participants, and avoid any unintended consequences of incorrect decisions.

10. Deregistering non-complying forestry participants

What is the policy problem or opportunity?

- 199 The EPA has no powers to deregister non-compliant participants in key scenarios where they may be undermining the integrity of the ETS. This places an unwanted burden on the EPA and participants are treated unequally. The current compliance tools have little impact on those who are persistently non-compliant. For example:
- There are 14 cases where participants ceased to be legal entities and did not deregister from the ETS or close their holding accounts;
 - Of the small minority of participants who did not complete their surrender on time, 83per cent completed them within 60 days, 11per cent completed them within 60 – 100 days, and 6per cent remain outstanding.
 - The EPA also have a number of outstanding Excess Emissions penalties (in some cases participants have surrendered or repaid the units but not paid the penalty; in other cases both the penalty and units remain outstanding).
 - 227 post-1989 participants have failed to submit a mandatory emissions return (MER).
 - Approximately 66 pre-1990 participants have notified the beginning of the activity but have not notified the end. Approximately 54 of these have one or more missing years in their emissions return record.

What options are available to address the problem?

- 200 The proposal is to allow the EPA to deregister ETS participants in the following scenarios:
- a) When participants cease to be legal entities; or
 - b) Where a participant is no longer carrying out a forestry activity; or
 - c) When participants fail to submit MERs; or
 - d) Where a participant has not surrendered units or paid a penalty.
- 201 Each of these scenarios represents a situation where the burden of ensuring full compliance is placed on the EPA, which currently cannot de-register them. The EPA should be granted this power to improve the efficiency of ETS operations.
- 202 However, as there will be perception issues around scenarios b), c) and d), we intend to consult on where these thresholds lie (e.g. how late would a MER need to be to trigger the provision).

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Maintains integrity of wider ETS settings*
 - *Supports ability to identify and manage non-compliance*
 - *Appropriately allocates risk, and burden sharing between the Crown, ETS participants, sectors and groups*
- 203 The inability of the EPA to deregister non-complying participants is a gap in the current scheme that should be addressed to improve integrity. Equity is relevant, as allowing non-compliant participants to remain in the scheme alongside compliant participants is unfair.

11. Rounding rules required for certain calculations

What is the policy problem or opportunity?

- 204 There are rounding rules in the Climate Change (Forestry Sector) Regulations relating to methodologies in the regulations, but they don't apply to methodologies specified in the Act i.e. where land is removed from a CAA, or for the amount of repayment following an offsetting forest land application. The nature of the harm is minor, however, there is opportunity to improve clarity for participants who are unsure about the specifics of rounding rules.

What options are available to address the problem?

- 205 Specify rounding rules that are consistent with the rounding rules in the forestry sector regulations.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Promotes accuracy in reporting by participants*
- *Reduces complexity and cost for participants*

- 206 The proposal would provide clarity for participants, improve accuracy and remove ambiguity about how rounding is to be applied.

12. More flexibility in submitting mandatory emissions returns

What is the policy problem or opportunity?

- 207 Currently only the registered post-1989 forestry participant can submit the mandatory emissions return due at the end of each five-year period. Situations can arise where an ETS transmission of interest process hasn't been fully completed by the last date for submitting the return. However, the transferor (who would be responsible for submitting the return) will no longer hold an interest in this land, and may be unwilling to undertake a return with no benefit to themselves.
- 208 The nature of the harm is that an emissions return may not be filled out or submitted. This places a burden on the EPA to follow up participants with outstanding emissions returns, which will be further complicated if the transmission of interest has been completed and the land is under new ownership.
- 209 The underlying problem is that the requirement to submit an emissions return lies with the registered participant if the land is going under a transmission of interest, even though the transferee will now be the interested entity.

What options are available to address the problem?

- 210 The proposal is to allow persons who have submitted a transmission of interest notification (i.e. either the post-1989 transferee or transferor) to submit a mandatory emission return form.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Improves administrative efficiency*

- 211 The proposal would provide more flexibility for participants to comply with the transmission of interest requirements

13. Standardise timeframes for surrenders and repayments

What is the policy problem or opportunity?

- 212 Due dates for different forestry participant obligations (surrenders and repayments) may be calculated from the date of submission, date of approval, or the date on which a notice is sent to a participant. Additionally, the current law can result in situations in which participants are in breach of their obligations through no fault of their own. It is proposed that timeframes for repayments and surrenders be calculated from the date that the Registrar issues the repayment or surrender instruction/notice. This will improve the simplicity, transparency and administrative efficiency of the Scheme.
- 213 This change applies to all participant that need to file a return. This change will simplify Te Uru Rākau's outreach to the sector, to alert them to their obligations, as we will be given a clear

message (one date for returns) rather than a complex set of instructions, which is dependent on participant circumstances. This will assist in compliance.

What options are available to address the problem?

- 214 The proposal is to standardise the timeframe for surrendering/repaying units to 60 working days from the date on which a Registrar approved the notice giving rise to the surrender/repayment.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Improves administrative efficiency*
- *Reduces complexity and cost for participants*

- 215 The proposal would reduce complexity for participants and regulators which makes obligations easier to understand and comply with.

14. Require all returns to be net returns

What is the policy problem or opportunity?

- 216 Currently a forestry participant can claim units, even if they owe and have not surrendered units for emissions from other parts of their forest. Making the returns 'net' not only resolves this issue, it will reduce the number of transactions the EPA must manage.

What options are available to address the problem?

- 217 The proposal is that participants' unit entitlements are made net of any unit surrender obligations that that participant may have.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- *Maintains integrity of wider ETS settings*
- *Improves administrative efficiency*
- *Reduces complexity and cost for participants*
- *Reduces administrative cost to the Crown*

- 218 By netting off returns the primary benefit is to maintain the integrity of wider ETS settings by preventing participants from not complying with unit surrender obligations, while still receiving units for removal activities. It is also a more efficient process and would reduce complexity and cost for the regulators and participants.

15. Optional transfer of participation when a forestry right is granted

What is the policy problem or opportunity?

- 219 Post-1989 participants may want to grant a forestry right (e.g. as a mechanism to sell a cutting right to another party), but remain as the ETS participant. Currently when a forestry right or lease is granted, the ETS participation automatically transfers to the holder of the forestry

right or lease. This automatic transfer may not suit either the current ETS participant or the forestry right/lease holder.

- 220 This issue has only arisen in a few cases to date, but it is likely to become more common as the harvesting of post-1989 forests accelerates.

What options are available to address the problem?

- 221 It is proposed to make the transfer of participation optional when a landowner participant grants a forestry right or lease. These cases were unforeseen when the Act was originally drafted. The proposal would not create any costs to the Crown, or perverse outcomes.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

- 222 By simplifying the interaction of ETS participation and the granting of forestry rights, this proposal provides positive benefits against two criteria:
- i. *Reduces complexity and cost for participants:* this proposal will avoid the participant changing once (when right is granted) or twice (when right is granted and ends), and the consequent need to manage the re-registration of CAAs. As many forestry right holders are likely to be over 100ha of registered forest, this also avoids the need to interact with the FMA.
 - ii. *Reduces administrative cost to the Crown:* with fewer transfers of participation Te Uru Rākau has a reduced need to undertake transactions with little impact on the number of units transacted. Transmissions of interests are also a significant drain on Te Uru Rākau's time as many go unreported.

Secondary criteria

- 223 This proposal will have two wider impacts on the ETS.
- i. *Improves administrative efficiency:* the administration of the ETS is simpler and less complex for both the Crown and the participant.
 - ii. *Promotes afforestation of both rotational and non-harvested forests by reducing the costs of the forest owner making land management decisions.*

16. Planted and naturally regenerated native forest on cleared forest land

What is the policy problem or opportunity?

- 224 When forest land is cleared, it is treated as deforested unless it is re-established in forest within the methods and timeframes specified in s179.
- 225 However these tests do not cover cases where the land is reforested by a combination of tree planting and natural regeneration. For example, when tree weeds are cleared, some landowners undertake restoration planting of native tree species (e.g. rimu, totara) within a regenerating landscape to encourage a biodiverse forest to develop more quickly.

What options are available to address the problem?

- 226 It is proposed to amend the tests so that they cover cases where cleared land is re-established in a forest by a combination of planting trees and natural regeneration of trees.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria

227 This proposal :

- i. reduces complexity and cost for participants by making it simpler to comply with the forest re-establishment provisions of the ETS (and avoid technical deforestation of land),
- ii. supports the ability to identify and manage non-compliance by removing the need for the landowner to demonstrate how the forest was re-established, and allows Te Uru Rākau to focus on if the forest is there or not.
- iii. Avoids perverse incentives and unintended consequences by reducing the ability of the ETS to act as a barrier to promoting the other values of forests (e.g. if the landowner wants to undertake enrichment planting of biodiverse species).

17. Exempt land eligible as post-1989 forest land

What is the policy problem or opportunity?

228 If land which was deforested under an exemption is to be eligible to join the ETS, the current landowner must surrender NZUs for that land as if it was not exempt. At around \$16,000 per ha, this acts as a significant barrier to future afforestation and best practice farm management. It will become particularly problematical as the 'exempt' status stays with the land in perpetuity (even once the pre-1990 forest is removed), and the land is subsequently sold and brought.

229 This rule was introduced to limit the ability of landowners to game the system: deforest exempt land and then rapidly replant a post-1989 forest and earn units. We propose that deforested exempt land that becomes forest land nine years or more after being deforested is eligible for post-1989 forest land.

230 This nine year 'stand down' is chosen to align with the current nine year rule for pre-1990 forest land deforestation. Under the nine year rule, a pre-1990 forest owner they must surrender NZUs equal to the highest carbon stock in the previous nine years. This prevents a forest owner gaming the rules by harvesting a pre-1990 forest, replanted, and then the young trees being deforested (and the emissions liability based on young trees).

231 There are 17,100 ha of exempt land, so this proposal would contribute to the promotion of afforestation, and allow more flexibility in farm land use.

What options are available to address the problem?

232 It is proposed to amend the Act so that deforested exempt land that becomes forest land nine years or more after being deforested is considered to be post-1989 forest land.

What criteria, in addition to monetary costs and benefits, have been used to assess the likely impacts of the options under consideration?

Primary criteria.

- i. Reduces complexity and cost for participants: by removing the need to surrender units to join the ETS the landowner will have a simpler process to register in the ETS (not need to map) and it will be lower cost (as they will not need to surrender units).
- ii. Minimises fiscal cost to the Crown from meeting climate change targets: the exemptions have already been recorded onto the Crown accounts so the Crown is, at worst, forgoing revenue from any unit payment (however, this is unlikely as the landowner will simply not register in the ETS). New Zealand will receive international recognition for the newly planted forests.
- iii. Avoids perverse incentives and unintended consequences: many landowners applied for the under 50ha exemption to preserve their land management options. If this requirement was kept in place, it will act as a barrier to the re-establishment of forest on erodible land as it would effectively 'cut off' a source of cash flow (NZU sales).