Sensitive - Commercial

Office of the Minister for Forestry
Office of the Minister for Climate Change
Chair, Cabinet Economic Development Committee

**New Zealand Emissions Trading Scheme: design details and complementary measures**

## Proposal

1. This paper seeks Cabinet agreement to a package of proposals to improve incentives to establish new forests and store carbon in existing forests in the New Zealand Emissions Trading Scheme (ETS).

2. This paper includes detailed design proposals related to the recent decisions by Cabinet that:
   2.1. averaging accounting will be the compulsory accounting approach for all rotational post-1989 forests which apply for ETS registration after 31 December 2020; and
   2.2. existing ETS forestry participants with post-1989 forests registered in the ETS after 31 December 2018 will have the ability to use the averaging accounting approach (CAB-19-MIN-0197 refers).

3. Further decisions about a transition of existing post-1989 forests to averaging accounting are planned for June.

## Executive Summary

4. On 1 April 2019 Cabinet agreed to introduce averaging accounting for forestry in the ETS.

5. As part of this, Cabinet agreed that averaging will be the compulsory accounting approach for post 1989-forests that apply for ETS registration after 31 December 2020. Post-1989 forests registered in the ETS after 31 December 2018 and before 31 December 2020 will also have the ability to use averaging accounting, although it will not be compulsory.

6. This paper builds on those decisions by outlining the design details for averaging accounting. This paper also includes complementary proposals to support the introduction of averaging accounting.

7. The key proposals in this paper include:

*Design details for the implementation of averaging accounting*

a. Post-1989 forestry participants under averaging accounting will earn New Zealand Units (NZUs) up to the age at which their forest is assumed to have stored its long-term average carbon stock, based on multiple growth and harvest cycles;
b. These participants will earn greater or fewer NZUs if they lengthen or shorten their rotation lengths respectively;
c. Post-1989 forestry participants that enter the ETS after their first rotation will be unable to earn NZUs under an averaging approach, unless they extend the length or change the type of forest to store more carbon;
d. Further work is required to mitigate the risk of post-1989 forestry participants de-registering and then subsequently re-registering in the ETS under averaging to obtain a benefit to which they might not otherwise be entitled; and
e. There will be reduced reporting requirements for post-1989 forestry participants who use averaging.

*Complementary policies that are aligned with the introduction of averaging accounting*

f. Participants using averaging accounting will not be required to surrender units for emissions liabilities from temporary adverse events
g. Participants using averaging accounting will be able to offset their deforestation liability by planting an equivalent forest elsewhere

8. The proposed design details for averaging accounting are required to realise the benefits associated with its introduction. These include increased forest planting and reduced administrative costs and complexity for ETS participants. Elements of these design details will also be refined through the development of regulation.

9. The complementary policies are designed to align the way post-1989 forestry participants account for their forests under averaging with how New Zealand accounts for these forests internationally. We also anticipate that these complementary policies will make averaging a more attractive option for forestry participants.

10. These proposals were widely supported during public consultation on options to improve forestry within the ETS undertaken in September and August 2018. Officials have undertaken further research and analysis to refine these proposals, including targeted engagement with industry experts.

11. As part of the 1 April decisions, Cabinet agreed to officials reporting back on whether existing post-1989 forests registered before 1 January 2019 should be made eligible to transition to averaging accounting. We anticipate bringing a paper to Cabinet on this issue in June 2019.

## Background

*Cabinet recently agreed to introduce averaging accounting for forestry in the ETS*

12. In order to better support forestry in the ETS, in April 2019 Cabinet agreed that:
    12.1. averaging accounting will be the compulsory accounting approach for all rotational post-1989 forests which apply for ETS registration after 31 December 2020; and
    12.2. existing ETS forestry participants with post-1989 forests registered in the ETS after 31 December 2018 will have the ability to use the averaging accounting approach.

13. Averaging accounting is a simpler accounting approach, which reduces the risk associated with repaying units at harvest for ETS forestry participants. Through this, averaging accounting removes some of the current disincentives they face to establish new forests and join the ETS.

14. Currently post-1989 forestry participants in the ETS must use the 'stock change' accounting approach. This requires a participant to pay for any loss of carbon in their forests, even if that loss is temporary (such as when forests are harvested and replanted).

15. Following harvest, foresters must surrender to the Crown a significant amount of the New Zealand Units (NZUs) they have earned from the forest's growth. They then earn units as their replanted forests grow.

16. Under averaging, participants with newly registered forests would receive a sum of NZUs during their forest's first rotation that reflects the amount of carbon that is stored in their forest over the long term. These participants would no longer face harvest liabilities, provided they re-establish their forest without significant change in management.

17. Introducing averaging accounting to the ETS aligns with the way New Zealand accounts for forestry internationally. New Zealand will, however, still need to account for all the carbon storage lost when an area of forest is deforested.

18. As part of the decision to introduce averaging accounting, Cabinet also considered whether averaging accounting should be available to existing post-1989 forestry. We intend to return to Cabinet in June to discuss this issue further.

## Design of averaging accounting and complementary policies

19. This paper is divided into two sections:
    19.1. design settings for averaging accounting (Section A); and
    19.2. complementary policies to support the introduction of averaging (Section B)

20. These proposals are part of a wider work programme to improve the NZ ETS to better support New Zealand's climate change objectives and goals, including Cabinet agreement to introduce a permanent forestry category in the ETS and improve the operational forestry settings of the ETS (CAB-18-MIN-0606 refers), and wider improvements to the NZ ETS, led by the Ministry for the Environment.

*Public consultation in 2018 and subsequent research and analysis has been used to inform these proposals*

21. In July 2018, Cabinet agreed to public consultation on a range of proposed improvements to the way forestry operates in the ETS [CAB-18-MIN-0374 refers], including those covered in the scope of this paper.

22. Public consultation was carried out in August and September 2018. Further research and analysis on these proposals has also been undertaken, as has additional, targeted stakeholder engagement with a group of industry experts.

23. The submissions received during public consultation and the subsequent analysis been has been used to inform and refine the proposals in this paper.

**Section A: Design details for averaging accounting**

**Key proposals**

- Participants under averaging accounting will be credited up to the forest's average age, which will be based on the carbon stored in that forest over the long-term when multiple growth and harvest cycles are taken into account.
- The "average ages" for different forest types will be applied to participants through the use of "rotation period bands".
- ETS participants will be credited for the carbon stored in their forest, from registration up until it reaches the average age of the "usual rotation period band".
- Participants can receive additional NZUs for extra carbon stored by extending their rotation length beyond the usual rotation period band for their forest. If they reduce their rotation length below that for the band, they will need to repay units.
- As ETS participants using averaging accounting will cease earning units for a forest that has passed its average age, they will have reduced reporting requirements once their forest reaches this point.
- Further work is required to mitigate the risk of post-1989 forestry participants de-registering and then subsequently re-registering in the ETS under averaging to obtain a benefit to which they might not otherwise be entitled
- Associated regulations will be developed to support the implementation of averaging. Further design details about averaging will be contained in these regulations.

**The average age of a forest will be based on the carbon it stores over the long term**

24. Under the averaging approach, rotational post-1989 foresters will receive NZUs (one unit for each tonne of removals) on their first rotation[1] until their forest first reaches the average level of carbon that the forest is expected to store over the long-term.

25. The term 'average age' is used in this paper to describe the age at which a forest is expected to have stored its long-term carbon stock, and the term 'average age carbon stock' is used to describe the amount (quantity) of carbon stored at that age.

26. We propose that once the forest reaches its average age, NZU payments to the participant would cease. As long as the forest is replanted following harvest (within four years to avoid being considered deforestation), a participant will not be required to surrender any units for the current rotation.

27. If the participant then continues to harvest that area of forest around the same age, and maintains the same forest management, they will not be required to surrender any units on subsequent rotations.

28. We are also proposing that the existing provisions apply for when a post-1989 participant deforests. This rule requires them to surrender the same number of units they have received for the growth of the forest. This means that their surrender obligation will be capped, so they will not have to surrender more units than they earned for that forest.

*The measurement of the average age carbon stock will be based on existing rules*

29. The approach for measuring a forest's growth is already established in the ETS, and we do not envisage this approach changing for the introduction of averaging. The specific details of how the average will be calculated under this approach will be developed in regulations.

30. The current rules in the ETS require the carbon stock for forests under 100ha to be calculated using look-up yield tables in regulations (default tables that set out how much carbon is stored in the different forest types at given ages), and forests over 100ha using the participant specific Field Measurement Approach (FMA – participants measure their forests to create their own yield tables). Up until these forests reach their "average age", they will use the respective methods to determine their "average age carbon stock".

*A 'rotation period band' will provide flexibly in the precise harvest age*

31. The average age at which the forest stores its long-term carbon stock is based on the typical age at which that species is commercially harvested.

[1] Forests that are on their second or subsequent rotations are treated differently under averaging accounting. This will be explained later in this paper.

32. The actual age of harvest of individual forests, however, may occur slightly before or after the age used to calculate the "average age". This is because of a range of factors, including weather, availability of labour and log-prices.

33. If small changes in harvest age resulted in changes to a forests long-term average carbon stock, this could result in a large compliance burden if NZUs were credited and debited as a result.

34. To avoid this, we propose that all forests using averaging will have a "usual rotation period band" based around the standard harvest length for that forest type. The usual rotation period band will also reflect typical management practices (such as stocking rates/trees per hectare) that may cause variation in harvest age.

35. For example, all radiata pine harvested between 25 to 30 years of age may have an average age of 18 years, and those between 31 to 35 years may have an average age of 20 (point at which reaches its long-term carbon storage).

36. A usual rotation period band will also support those participants who prefer a simpler approach to calculating the average age of their forests, and avoids them having to make complex calculations for minor variance in the harvesting age.

37. The exact length of a 'usual rotation period band' will be defined in regulations, and it will be designed to capture a significant amount of the 'normal' commercial variance in rotation lengths.[2]

38. Using a 'usual rotation period band' which includes the majority of common harvest ages will give flexibility to participants to manage the harvest of their forests within a few years of the standard harvest age.

*Forestry participants who extend or reduce the length of their harvest rotations should be credited or debited accordingly*

*39.* The use of a 'usual rotation period band' is designed to balance a reduction in participant compliance costs, with providing the flexibility to earn additional NZUs through forest management practices, such as stocking rates (trees per hectare).

40. However, we are aware that some ETS forestry participants may wish to extend the rotation length of their forests beyond the usual rotation period band for the particular forest type in order to store more carbon. Similarly there may be some situations in which a forester needs to harvest their forests early.

41. ETS forestry participants can also make management choices that affect the long-term level of carbon that a forest is expected to store, such as changing species (e.g. moving from radiata pine to Douglas fir).

[2] For example, an age band for radiata pine which covered harvest ages 27-31 would cover the period for when 75 per cent of forests are harvested.

42. It is important to enable forestry participants to be rewarded for managing their forests in a way that increases carbon storage over time. This allows the plantation forest estate to change and increase carbon storage in response to changes in carbon price.

43. New Zealand can also recognise this additional carbon storage internationally to help meet our international climate change commitments.

44. It is equally as important to account for reductions in carbon storage, so that participants have a disincentive to reduce their storage over time. This also reduces the potential for gaming, where participants could claim a large amount of carbon storage initially, but in reality manage their forest to have shorter rotations than their credited intentions.

45. In order to provide the right balance, we propose creating a series of additional early and late rotation period bands for different forest types above and below the usual rotation period band.

46. Participants who wish to extend their rotation will be able to earn additional NZUs in the mandatory emissions return period (a 5 year period in which participants unit entitlements are calculated) where a change in age band occurs. This means that no additional NZUs would be provided to a participant until their forest has actually stored this carbon, and the extended harvest rotation length has been verified.

47. Similarly, if a participant chose to harvest in an early rotation period band, and had already received NZUs for the usual rotation period band, then they would be required to surrender the difference between these two.

48. Where a participant has harvested earlier or later than the relevant usual rotation period band, that forest will now have a new rotation period band applied to it. For subsequent rotations the participant will be eligible to earn, or required to surrender, units if they again harvest earlier or later than that new rotation period band.

49. This approach to calculating additional NZU credits and liabilities is a slight departure from the international accounting approach to calculating changes in the average age of a forest over multiple rotations.

50. However this approach provides great simplicity for participants, and any differences between the domestic and international approach are likely to balance out over time.

*Changes in forest type and management should also be recognised*

*51.* Participants will also have the ability and flexibility under averaging to change the type of their forest (i.e. its species) if they wish. As forest species sequester carbon at different rates, a change in forest type could alter the amount of long-term carbon stored in that forest. If a participant changes their forest type, we propose that a new usual rotation period band will apply based on the long-term carbon storage of that new forest type.

*52.* Other forest management actions, primarily stocking rates (trees per hectare), can also substantially change carbon stocks. Whether these changes could be recognised during future rotations will be designed and discussed through the regulations process.

*53.* If the average age carbon stock (amount of long-term carbon stored) of the new forest is higher than the average age carbon stock of the previous forest, then a participant will earn units for the increase in stored carbon. If the average age carbon stock of the new forest is lower than that of the previous forest, that participant will be required to surrender units down to the new average.

*Government may need to makes changes to forest type, average age, rotation period band and look-up yield tables*

54. As information over time may become more accurate and readily available, the Government may need to make changes to the regulations to reflect this. This can impact the information and settings used to calculate the carbon storage of post-1989 forests using averaging accounting. Such changes could be to:
    a. Forest type;
    b. Average age;
    c. Rotation period band; and
    d. Look-up yield tables.

55. If such a change was made to the regulations, different participants will be impacted differently, depending on what age their forests' under average accounting are at. To ensure that participants are not negatively impacted by any retrospective application of the regulations, we are proposing that:
    a. a participant with a forest that has reached its average age (on the first rotation), will not be eligible to earn, nor required to surrender, units to reconcile with the new calculation.
    b. a participant with a forest that has not reached its average age (on the first rotation) will now earn units in relation to the new calculation.

56. The end of a mandatory emissions return period (which occurs every 5 years) is the point in time where all participants must submit a 'return'. This return calculates their unit entitlements (or surrender obligations) for their post-1989 forests for that 5 year period. We are therefore proposing that any change in regulations applies from the beginning of the mandatory emissions return period in which the regulations come into force.

57. For example, if the look-up yield tables were updated in regulations, the new tables would be applied to calculate the carbon stock at the beginning of the mandatory emissions return period as well as the carbon stock at the end.

*Decisions made by previous owners of forest land related to averaging will apply to subsequent owners*

58. In addition to allowing post-1989 forest land to be bought and sold, the ETS allows for a variety of other forms of legal interest in a post-1989 forest land to be transferred between parties. This includes the option to opt-in to ETS participation when a new forestry right or lease is created over the forest land.

59. Currently the transferor is responsible for changes in carbon stock that occurred before the transmission of interest in that forest land. The transferee inherits all other future rights and obligations relating to that forest land. It is important to note that this current approach only applies to rights or obligations that are explicitly triggered by a decision or action (such as harvesting). Where a transferor takes an action that will impact on future rights and obligations, but has no effect on current ones, those future obligations remain the responsibility of the transferee.

60. We propose that this principle continue to apply to post-1989 forests subject to averaging accounting. If a previous owner has utilised any of the mechanisms that exist under averaging to affect the long-term carbon storage of an area of forest land, then any future rights and obligations arising from those decisions will transfer to any future owner.

61. For example, if a previous owner of an area of post-1989 forest land under averaging extended the first rotation beyond the normal rotation length (the usual rotation period band) to increase the amount of carbon storage, then any future owner will either have to retain the same rotation length (within the relevant rotation period band), or be liable to surrender NZUs if they harvest the forest area earlier.

62. We also propose that this principle is applied to the decision to transition from stock change to averaging accounting for eligible forests. Currently only forests registered after 31 December 2018 will be eligible to transition from stock change to averaging accounting, however a further decision will be brought to Cabinet in June 2019 for all existing post-1989 forests.

63. This means, for example, that if a previous participant has opted to transition from stock change to averaging accounting that decision will continue to bind any future owner. If a previous participant has not opted to transition, then any future owner will still be able to make that choice, provided the provisions are still in place.

*Post-1989 forests that enter the ETS after their first rotation will be unable to earn units up to the relevant average age for their forest type*

64. Existing post-1989 forests that are not currently registered in the ETS will be able to register under averaging accounting. Only approximately 50 per cent of New Zealand's eligible post-1989 forest land is currently registered in the ETS.

*65.* As noted above, under averaging, ETS forestry participants receive NZUs as their forests grow during their first rotation, up to the forest's long-term average. This is consist with how New Zealand will account for forestry internationally from 2021 under the Paris Agreement[3], where New Zealand will only receive international recognition of the carbon stored up to the average on the first rotation.

*66.* However, many of those post-1989 forests that are not currently registered in the ETS would likely be on their second or subsequent rotation if they were to register under averaging accounting.

*67.* Allowing post-1989 forests on their second or subsequent rotation to earn NZUs up to the average would mean the Government would be allocating units for carbon storage that it would not be able to use to meet New Zealand's international climate change commitments under the Paris Agreement.

*68.* As such, we propose that post-1989 forests registered in the ETS on their second or subsequent, rotation will be unable to earn any units up to the average age for their forest type. That forest will, from an operational perspective, be considered to be a post-1989 forest that has already reached its average age.

*69.* However, we also propose that should the participant take an action that would affect the forest's long-term carbon storage, such as an increase in rotation length or a change in forest type, then that forest should be eligible to earn for that change accordingly. This change in storage will be recognised against our international target.

**Transitioning to and from averaging accounting**

70. In addition to agreeing that averaging accounting will be the compulsory accounting approach for all post-1989 forests which apply for ETS registration after 31 December 2020, Cabinet also agreed in December 2018 [CAB-18-MIN-0606 refers] to introduce a new forestry activity into the ETS, the permanent post-1989 forest activity.

[3] The Paris Agreement is an international agreement which requires all nations to undertake ambitious efforts to combat climate change and adapt to its effects, with enhanced support to assist developing countries to do so. Parties put forward their targets under a "Nationally Determined Contribution" (NDC), of which the first one sets targets for 2021 to 2030.

71. The permanent post-1989 forest activity allows participants to enter a permanent forest into the ETS and receive additional benefits for doing so, in exchange for maintaining the required canopy cover of the forest for at least 50 years.

72. This means that there will be three different categories of post-1989 forests within the ETS:
    a. Post-1989 forests using the averaging accounting approach[4]
    b. Existing post-1989 forest participants using the stock change accounting approach
    c. Permanent post-1989 forests.

73. To enable flexibility within the scheme for participants to choose which activity suits their land or forest area best at that point in time, we consider that there should be some ability for participants to transfer their forest between these different categories.

74. As the above categories may have their unit entitlements and balances calculated using different methodologies, careful consideration must be given to ensure participants are not "double-credited" for already recognised sequestration.

75. We propose that further design of any transitional provisions be developed in a way that gives effect to that principle. To manage this risk we will ensure that the emissions return filed on transition does not allow any double crediting.

*Participants' ability to transition has been restricted in certain circumstances to minimise international misalignment and limit unnecessary administrative complexity*

76. The benefits of providing flexibility within the scheme to choose an accounting approach is however balanced against the need to align the domestic settings with the international rules. For this reason, available transitions have been restricted to limit ongoing misalignment. The more aligned the domestic and international settings are, the better the ETS carbon price will be able to drive emissions reductions that match up with the difficulty of our climate change targets.

77. We are therefore proposing that post-1989 forests using averaging accounting will not be able to transition to stock change. Averaging accounting will be applied internationally (replacing a carbon stock change approach) to all rotational post-1989 forests for our Nationally Determined Contribution starting in 2021.

78. Similarly, if a permanent post-1989 forest participant does not wish to sign up to another no-clear fell period (length of time the forest must maintain at least 30 per cent canopy cover), but wishes to remain in the ETS, they will be required to transition their forest to averaging accounting.

[4] Cabinet also agreed that existing ETS forestry participants with post-1989 forests registered in the ETS after 31 December 2018 will have the ability to use the averaging accounting approach.

*There are remaining decisions to be made on the ability of existing post-1989 participants under stock change accounting to transition to averaging*

79. We are planning to bring a paper to Cabinet in June which discusses whether existing post-1989 foresters have the ability to transfer from stock change to averaging accounting.

80. Averaging has some significant potential benefits for existing post-1989 foresters in terms of reduced administrative requirements and greater alignment between international and domestic accounting. However these need to be balanced against the overall impact on the supply of units within the ETS and, consequently, the fiscal costs and effectiveness of the NZ ETS in delivering emissions reduction targets.

81. The implications of a decisions to provide existing post-1989 foresters with the ability to use averaging accounting will be described in the June paper.

**Averaging will reduce reporting requirements for participants once their forests reach their default long term average age**

82. There is less need for participants to submit detailed returns once their forests have reached the average age. This is because they will no longer earn NZUs after this point. Reducing the reporting obligations has the potential to decrease the participants' administrative and compliance efforts.

83. We recommend that a post-1989 forest using averaging should continue to face the same reporting requirements as if it was using the stock change approach until it reaches the average age for that forest.

84. It is important that a forest that has not yet reached its average age has this level of reporting requirements as it will be earning NZUs for carbon storage, and the Government will need to ensure that this storage is as accurate as possible.

*85.* However once a post-1989 forest reaches its average age, the level of reporting requirements can be simplified. Reporting will still be required once every 5-yearly mandatory emissions reporting period, but at a reduced level as long as the forest's long-term carbon storage remains substantially unchanged.

*86.* Further work is required on the design of these reporting requirements. These reduced requirements are likely to include date of forest harvest, date of replanting, any specific changes to forest management (e.g. change in forest type, rotation length, stocking rates etc); and deforestation and deregistration (should they occur).

87. We propose that the specific details of these reduced reporting requirements are best developed in regulations to support the implementation of averaging.

**Avoiding the risk of a "deforestation loophole"**

88. Averaging accounting increases the potential economic return to foresters who plant new post-1989 forests as they will be able to sell more of the NZU's that they earn with less risk than they currently face.

89. This creates a potential risk that a forester who might not otherwise receive a benefit from averaging accounting might choose to deforest, replant their land and then register in the ETS as a "new" forest.

90. Under current ETS rules an area of forest land is able to be converted to another land use or left idle (with no trees) for four years, and be deemed to have deforested.

91. Afterwards a participant could replant and register this area of forest in the ETS, allowing them to earn NZUs from the beginning of the forests growth up to its long-term average.

92. This approach could be taken by foresters with post-1989 forests that are currently not either registered in the ETS, or those who have forests registered in the ETS using the stock change approach.

93. This risk was first identified during public consultation on proposed forestry ETS changes in August and September 2018.

94. If many post-1989 forestry participants took advantage of this option, it could come at a significant fiscal cost to the Crown. The Crown would have to cover the full liability internationally for the trees that the participants deforests, while the participant may only have to pay a small liability, or none at all if they were not yet registered in the ETS. This is because a participant's deforestation liability is capped at the number of units they have earned for that area of forest, while the Crown is still liable for the full amount internationally.

95. Once the participant replants the area of forest and starts to earn units through the ETS under averaging, the Crown could also claim these carbon storage benefits internationally. However the carbon storage generated after deforestation and replanting would be unlikely to outweigh the volume of carbon lost through the original deforestation.

96. This approach could also raise questions about the environmental integrity of these units, and whether they truly represent new carbon storage.

97. We consider that it is important to address this issue before averaging accounting is implemented. However, any solution needs to disincentive deforesting and re-registering, while not creating any significant unintended consequences (such as delayed planting, or a reduced incentive to establish forests).

98. Any changes also need to be considered carefully within the operation of forestry within the ETS as a whole.

99. We propose that Cabinet delegate a decision on the best options to address this potential loophole to the Minister of Forestry and the Minister for Climate Change, along with any other relevant Ministers.

**Averaging will require an extension of the current power to exempt participants from forestry related liabilities**

100. Pre-1990 forests currently face liabilities under the ETS for deforestation. Section 60 of the CCRA allows the Minister for Climate Change to recommend that the Governor General grant an exemption from liabilities under the ETS or from participation in the ETS in relation to pre-1990 forest land. These exemptions are considered by the Minister for Climate Change on a case by case basis. The exemption may only be granted if certain criteria are met, including that the Minister is satisfied that the environmental integrity of the ETS is not negatively impacted by the grant and the costs do not exceed the benefits.

101. Exemptions are rare, and to date only three have been made that relate to forestry. For example, one case involved offering an exemption from having to surrender NZUs for pre-1990 deforestation due to needing to remove trees from an archaeological site and keep the site clear of forest in order to protect it (in line with the Heritage New Zealand Pouhere Taonga Act 2014).

102. Currently section 60 can only be applied to liabilities for activities listed in Schedule 3 of the Act. These activities include deforesting pre-1990 forest land or pre-1990 offsetting forest land.

103. However, with the introduction of averaging and permanent forests, progressively more of the forest estate will be registered in the ETS.

104. We propose extending the coverage of section 60 to Schedule 4 forestry activities, which includes post-1989 forestry and permanent post-1989 forests. This is because post-1989 forests may be affected by the same unanticipated issues that affect pre-1990 forests.

105. Without this exemption there is a risk that the attractiveness of investment in post-1989 forestry may be reduced.

**Section B: Complementary policies to support averaging accounting**

**Key proposals**

- Participants using averaging should be exempt from emissions liabilities for temporary reductions in carbon storage due to adverse events.
- Participants using averaging can ‘offset’ their deforestation liability by planting another forest of equal or greater size and carbon stock elsewhere.

**Complementary polices can support the introduction of averaging**

106. With the proposed change to averaging accounting, there is also the opportunity to adopt some complementary policies related to forestry in the ETS.

107. These policies can complement the introduction of averaging by further reducing the financial risk and administrative complexity for ETS forestry participants.

**Averaging accounting reduces a participants risk to adverse events**

108. Forests face risk from adverse events, such as fire or wind throw. Currently a post-1989 forestry participant must account for any loss of carbon during one of these adverse events by surrendering NZUs to the Crown, as the stock change accounting approach is designed the reflect short term fluctuations in carbon storage.

109. As noted above, averaging accounting measures the long-term carbon stock of a forest over many years, and is therefore not concerned with short term fluctuations in carbon storage.

110. As such we propose that ETS forestry participants using averaging would not be required to surrender NZUs for carbon lost as a result of an adverse event, as long as the affected area of forest land is re-established within 4 years.

111. The participant would only be able to earn NZUs for the forest area affected by the adverse event once that area had accumulated the same amount of carbon it had just before the event occurred. They would however continue to earn NZUs for any unaffected areas that do not meet the requirements for this provision.

112. Removing this temporary liability is expected to further reduce the financial risk for foresters participating the ETS, encouraging them to sell their NZUs into the domestic market. This is particularly true for smaller foresters.

113. It is also likely to reduce the need for ETS participants to pay higher insurance premiums to cover NZU liabilities, further increasing the incentive for increased forest planting.

114. Additional requirements for this proposal will be developed in regulations to support the implementation of averaging accounting. This is likely to include further information on a range of specific adverse events (such as fire and wind throw) that would be covered by this proposal. Minimum thresholds of carbon stock loss and forest area, specific reporting requirements and calculation methods for determining when the affected area can continue earning NZUs are also likely to be included.

115. We propose that it is not appropriate to remove the adverse event liability for participants using stock change accounting. It would be inconsistent with the stock change approach for rotational forests, which is designed to record and reflect all temporary changes in carbon storage (such as harvest and temporary adverse events). It would also provide them with a benefit that results in a small increase to Crown risk.

**Offsetting of deforestation liabilities for post-1989 participants using averaging will increase land use flexibility**

116. "Offsetting" is a provision in the current legislation that enables participants with pre-1990 forests to avoid paying deforestation liabilities if they establish a forest of equivalent area and carbon stock elsewhere. The policy intent of this is to provide pre-1990 landowners with greater flexibility over their land if they need to change land use, while maintaining New Zealand's long-term carbon stock. As long as the carbon from the previous forest is re-established and stored, the atmosphere sees no long-term difference.

117. We are now proposing to apply this provision to participants with post-1989 forests under averaging accounting. Through averaging, a participant will most likely have a large first rotation income of NZUs, followed by a liability should they deforest sometime in the future. This deforestation liability may decrease land use flexibility, where the land might have a more productive and/or appropriate use in the future.

118. When Te Uru Rākau is satisfied that the forest is established and will store the same level of carbon as the previous forest, all liabilities for deforestation of the previous forest can be removed.

119. Once established, the offset forest will be treated as an averaging forest that has the same average age as the previous forest. The participant will then still be able to change forest management or species to increase carbon storage in response to changing carbon prices and would be liable for any reductions in carbon stock.

120. In aiming to strike the correct balance between enabling flexible land use for the right reasons, maintaining long term carbon sinks and protecting other environmental concerns, we propose the offsetting provisions should be applied within these restrictions:
    a. Only post-1989 forests under averaging accounting should be able to be offset;
    b. The old forest area must have already reached its average age; and
    c. The old forest and the new offset forest must be actively established rotational forests (rather than left to regenerate naturally).

121. We do not propose to offer offsetting to existing forests using the stock change carbon accounting approach. There is less need and therefore rationale to apply this rule, as deforestation liabilities are much lower for forests accounted for using the stock change approach when harvesting liabilities are considered, having less of an impact on land use flexibility. Enabling continued use of the stock change accounting approach through offsetting could also further increase the misalignment between domestic and international accounting in the ETS.

122. Limiting offsetting to averaging accounting forests that have already passed the average means that land use flexibility will be improved for those who need it the most (have the biggest financial liabilities), while also recognising that participants voluntarily signed up to a scheme that rewards the establishment and long term maintenance of forests.

123. Different types of forests can have a wide range of co-benefits for the environment and society, beyond carbon storage. It is important that while offsetting aims to maintain long term carbon sinks, the rules should be restrictive enough to not enable natural indigenous and permanent forests to be deforested, as they provide unique ecosystem services. Plantation forests, as they are mono cultures, can be relocated with only minor environmental impacts.

**Next steps**

124. The Parliamentary Counsel Office (PCO) will begin drafting amendments to the Climate Change Response Act 2003 (CCRA) that reflect the policy decisions in this paper. These amendments will be incorporated into the existing amendment Bill to the CCRA.

125. As noted in paragraph 79 above, we intend to bring a paper to Cabinet in June which discusses whether existing foresters with post-1989 forests registered in the ETS before 30 December 2018 should have the ability to transfer from stock change to averaging accounting.

126. Work is also underway of options to better incentivise the domestic production of long-lived harvested wood products (HWP) as a way to help meet our climate change commitments.

127. Long-lived HWP, such as wooden framing for houses or furniture, can store more carbon which is released slower than short-lived HWP like paper. These carbon storage benefits can then be recognised by New Zealand internationally.

128. We intend to return to Cabinet before the end of 2019 with these options.

## Consultation

129. This paper was drafted by the Ministry for Primary Industries (MPI). The following agencies were consulted on this paper: the Ministry for the Environment (MfE), The Treasury, Department of Prime Minister and Cabinet, Te Puni Kōkiri, the Ministry of Justice, the Ministry of Business, Innovation and Employment, the Ministry of Foreign Affairs and Trade, the Department of Conservation and the Environmental Protection Authority (EPA).

130. The EPA notes that implementing these proposed changes to the ETS, along with the wider package of proposed ETS changes, will have financial implications for them.

131. Without sufficient funding to put in place the necessary system and operational changes, the EPA notes that they will not be able to operationalise the changes to the ETS proposed in this paper and in related ETS papers.

## Financial Implications

132. Fiscal implications and budget appropriations associated with the high level decision to introduce averaging and allow existing participants to transition to averaging are covered in [CAB-19-MIN-0197 refers].

133. Over the period 2019-2050 the total expected net fiscal impact of allowing participants to account for changes in harvesting age as per recommendations 23-27) is $185 million, with the first costs falling in 2037.

134. Over this same period allowing participants to account for changes in harvesting age would provide an equivalent benefit in the form of additional carbon sequestration to meet New Zealand's climate change objectives.

## Legislative Implications

135. The policy decisions from this paper will require legislative change to be progressed through amendments to be made to the CCRA. A range of further CCRA regulations will be required in 2019 to implement these proposals.

136. A Bill to amend the CCRA is already on the 2019 Legislation Programme with a Category 2 priority. This Bill will give effect to the policy decisions in this Cabinet paper.

137. In order to support meeting this legislative timeframe, we propose that Cabinet invite the Minister for Climate Change, in consultation with the Minister for Forestry as appropriate, to issue drafting instructions to the Parliamentary Counsel Office to give effect to the recommendations in this paper.

## Impact Analysis

138. A Quality Assurance Panel with representatives from the Regulatory Quality Team at the Treasury, the Ministry for the Environment, and the Ministry for Primary Industries has reviewed the Regulatory Impact Assessment 'Emissions Trading Scheme Forestry Accounting Proposals' produced by Te Uru Rākau and dated April 2019. The Quality Assurance Panel considers that this **meets** the Quality Assurance criteria.

139. The problem is highly complex, however, it is clearly and thoroughly outlined. The RIA presents a sound evidence-based case, particularly in relation to the benefits of averaging accounting for ETS participants with rotational forests, who will benefit most from the changes proposed in this RIA. A strong case is also made to address the misalignment between ETS and international climate change accounting rules to help ensure the Crown is better able to meet its climate change targets.

140. We understand that further analysis of some of the detailed design features will be undertaken in the next RIA. Close monitoring will be required because there is some uncertainty around how landowners will respond, which could impact the estimated increase in afforestation levels. Some ETS participants will have good business reasons to choose to remain on stock change accounting, and will continue to navigate some of the complexities of the existing ETS system. Ongoing monitoring can help identify if and how the changes impact on these ETS participants.

## Human Rights

141. None of the proposals in this paper have human rights implications.

## Te Tiriti o Waitangi

142. The proposals in this paper are intended to support Māori landowners to increase the benefits they can realise from their forestry estates.

## Gender Implications

143. This paper has no gender implications.

## Disability Perspective

144. This paper has no disability implications.

## Publicity

145. A ministerial media release will be prepared and some media attention is expected, particularly from trade publications and media in regions where forestry is a prominent industry. At this stage, we are not expecting a negative reaction from stakeholders and media to this announcement.

## Proactive Release

146. Following Cabinet consideration we intend to consider the release of this paper, with certain redactions in line with the Official Information Act 1982.

## Recommendations

The Minister of Forestry and Minister for Climate Change recommend that the Committee:

1. **note** that in April 2019 (CAB-19-MIN-01 refers) Cabinet:
   1.1. agreed that:
      1.1.1. averaging accounting will be the compulsory accounting method for all forests registered in the New Zealand Emissions Trading Scheme (ETS) after 31 December 2020; and
      1.1.2. all forests registered in 2019 and 2020 will have the option to use the averaging accounting method.
   1.2. noted that officials intend to bring a paper to Cabinet in May 2019 that will provide further detail on the design of averaging for newly established and existing post-1989 forestry as part of a package of improvements to the incentives for forestry in the ETS**.**

2. **note** that this paper provides that extra design detail referred to in recommendation 1.1.1 above.

3. **note** that due to budget implications, officials will bring an additional paper to Cabinet in June that will ask for a decision on the eligibility for existing post-1989 registered before 2019 to use averaging accounting.

4. **note** that in December 2018 and March 2019 Cabinet also agreed (CAB-18-MIN-0606 refers and CAB-19-MIN-0109 refers) to:
   4.1. The introduction of a new permanent post-1989 forest activity
   4.2. A range of operational improvements to the forestry elements of the ETS, including in relation to offsetting, tree weed exemptions and the treatment of land owned by multiple Māori owners.

## Introduction

5. **note** that averaging accounting is a method to determine the long-term amount of carbon that is stored in a forest over multiple growth and harvest cycles.

6. **agree** that under averaging, participants with newly registered forests receive a sum of NZUs during the first rotation up until the point at which the forest is assumed to have stored its long-term average carbon stock. This is will be expressed as an “average age” for each forest type.

7. **agree** that the “average age” will be calculated and applied in the regulations, however in principle it will be based off:
   7.1. The type of forest; and
   7.2. The age at which the forest is harvested (assessed over multiple rotations) within prescribed “period rotation bands”.

8. **note** the above concept of “period rotation bands” means that all forests of the same type, harvested within a defined range of ages, will have the same “average age” applied to their forest. For example, a radiata pine harvested between ages 25 and 30 could all have the average age of 18.

9. **note** that the actual carbon stock of the forest at the time it reaches its “average age” is referred to as the “average age carbon stock”.

*Detailed methodologies and rules in regulations*

10. **note** that in practice participants can register forests in the ETS that have all the same characteristics, or with a mix (such as species, age, rotation length), which is all within one carbon accounting area (the area to which unit entitlements are calculated).

11. **note** that the high level design of averaging accounting has been mostly based around how a forest with the same characteristics within one carbon accounting area will interact with the ETS.

12. **note** that while the design principles outlined in this paper will apply to all post-1989 forests subject to averaging accounting in the ETS, officials are still developing the most practical ways in which all of these proposals will be implemented for the different types of forests.

13. **note** that, therefore, a considerable amount of supporting detail around aspects such as measurement methodologies, reporting requirements, application processes and unit flows are needed to fully give effect to the decisions in this paper.

14. **note** that officials propose that these details be included in regulations, rather than the Act itself.

15. **note** that the Ministers for Forestry and Climate Change intend to seek Cabinet’s approval to consult on their proposed regulations to accompany this Bill by August 2019. This will mean that the relevant select committee will have access to the draft regulations when it is considering the draft Bill arising from these recommendations.

**Section A: Design details for averaging accounting**

*Determining the “average age”*

16. **agree** that a forest will receive one unit for each tonne of removals up until it reaches its average age (as determined in regulations) on its first rotation.

17. **agree** that once a forest under the averaging approach has reached its average age:
    17.1. The participant will no longer be eligible to earn any further units as the forest continues to grow, unless the area of forest reaches an age higher than the usual rotation period band.

17.2. The participant will no longer be required to surrender any units on harvest for the current or any subsequent rotation, so long as any harvest activity occurs within the usual rotation period band for their forest.

18. **agree** that if a participant deforests at any point, they will be required to surrender the same amount of units as is currently required for post-1989 participants using the stock change methodology (including the application of section 190 which caps the amount of units that a participant can be required to surrender at their unit balance for the relevant area).

*Calculating the "average age carbon stock"*

19. **note** that current rules in the ETS require the carbon stock for forests under 100ha to be calculated using look up tables in regulations, and forests over 100ha using the participant specific Field Measurement Approach (FMA).

20. **agree** that the same threshold for determining whether participants are required to use the FMA or the lookup tables in the regulations apply to all post-1989 forest land, regardless of whether it is using the averaging accounting approach or the existing carbon stock change approach.

21. **agree** that up to and including the year in which a forest reaches its average age on its first rotation, that emissions and removals for post-1989 forests under the averaging approach will be calculated using the same methodology as post-1989 forests operating under the stock change accounting approach (with the exception of some specific exceptions such as temporary adverse events noted in recommendations below).

22. **note** that one of the implications of recommendation 23 above is that where a participant registers their forest in the ETS many years after the date that their forest was established, they will only be eligible to earn units back to the start of the Mandatory Emissions Return Period in which they registered.

*Calculation of emissions and removals for forests harvested in the usual rotation period band*

23. **note** while the average age of a forest is based in part on its typical age at harvest, the actual age of harvest may vary, especially over multiple rotations.

24. **note** that the usual rotation period bands specified in regulations will be set so as to capture the significant majority of all 'normal' commercial variation in rotation lengths.

25. **note** for example that under standard commercial practice, 75 per cent of all plantation forests of radiata pine in New Zealand are typically harvested within 2 years (plus or minus) of the usual rotation period of 28 years, and 95 per cent are harvested within 4 years of that usual period.

*Calculation of emissions and removals for participants who extend or reduce the length of their rotations*

26. **agree** that:
    26.1. where a participant harvests an area of forest earlier than the relevant usual rotation period band they will be required to surrender units down to their new average age.
    26.2. where a participant grows an area of forest later than the relevant usual rotation band they will be eligible to earn additional units up to their new average age.

27. **agree** that where a participant harvests either earlier or later than the relevant usual rotation period band, that the rotation period band they harvested in will become the new rotation period band for that area of forest. For subsequent rotations the participant will be eligible to earn, or required to surrender, units if they harvest earlier or later than this new rotation period band.

*Participant changes in forest type*

28. **agree** that participants whose forests are subject to the averaging accounting approach will have the right to change their forest type at any stage, such as by planting a different species after harvest.

29. **agree** that where a change in forest type occurs a new average age and usual rotation period will be applied for the new forest type.

30. **agree** that after changing forest type, the participant will be eligible to earn, or liable to surrender, an amount of units equal to the difference between the average carbon stock for the old and new forest types.

*Government changes in forest type, average age, rotation period band and look-up yield tables*

31. **note** that in the future, the Government is likely to update the information used to calculate the carbon storage of post-1989 forests using averaging accounting, including:
    31.1. Forest type
    31.2. Average age
    31.3. Rotation period band
    31.4. Look-up yield tables

32. **agree** that if any of the information in recommendation 31 is updated in regulations, then:
    32.1. a participant with a forest that has reached its average age, will not be eligible to earn, nor required to surrender, units to reconcile with the new calculation.
    32.2. a participant with a forest that has not reached its average age (on the first rotation) will now earn units in relation to the new calculation.

33. **agree** that if a participant's entitlement is changed through a change in regulation, then this new entitlement applies from the beginning of the mandatory emissions return period in which the regulations came into force.

*Transmission of interest on lands or forests*

34. **note** that in addition to allowing post-1989 forest land to be bought and sold, the ETS allows for a variety of other forms of legal interest in a post-1989 forest (such as those granted through a lease or forestry right) to also be transferred between parties independently of ownership of the underlying land. Collectively these are referred to as transmissions of interest.

35. **agree** that where a transmission of interest occurs in relation to an area of post-1989 forest that is operating under the stock change approach, but the land is eligible to transition to the averaging approach, that the transmission will not alter the right of any new owner to opt to transition to the averaging approach in the future.

36. **agree** that where a transmission of interest occurs in relation to an area of post-1989 forest that is operating under the averaging approach:
    36.1. if a previous participant has opted to transition from the stock change accounting approach to the averaging accounting approach, that decision will continue to bind any future owner.
    36.2. if a previous participant operating under the averaging accounting approach has utilised any of the flexibility mechanisms that exist, such as opting for a longer than normal rotation length, then any future rights and obligations arising from those decisions will transfer to any future owner of an interest in that land.

37. **note** that rules governing the transmission of interest will be the same for post-1989 forest under averaging as other post-1989 forests.

*Forests entering the ETS after their first rotation*

38. **note** that this section relates to an application to enter an area of post-1989 forest into the ETS, and operate under the averaging accounting approach, when the land is on its second, or subsequent rotation**.**

39. **agree** that an area of post-1989 forest land registered in the ETS on its second, or subsequent, rotation will be unable to earn any units up to the relevant average age. That forest will, from an operational perspective, be considered to be a post-1989 forest that has already reached its average age.

40. **agree** that notwithstanding recommendation 39 above, a post-1989 forest registered on its second rotation will still be eligible to earn additional units, or required to surrender units, if actions are taken that result in its average age, or average age carbon stock changing relative to the level in the rotation that the forest was registered in (such as a result of an increased rotation length or change in the forest type).

*Transitioning between different types of accounting approach for post-1989 forest land*

41. **note** that with the introduction of the averaging accounting approach, and permanent forest accounting approach, owners of an interest in post-1989 forest land will now have the option in some instances to choose to change the accounting approach that their forest is subject to in the future.

42. **note** that Cabinet previously agreed [CAB-19-MIN-0197 refers] that all forests registered in 2019 and 2020 will have the option to use the averaging accounting method.

43. **note** that a decision about the ability of post-1989 forests registered before 2019 to choose to use the averaging accounting method has not yet been taken.

44. **agree** that regardless of final decisions around which forests can opt to shift to the averaging accounting method, this should be a one-way option; once an area of forest has been shifted from the stock change accounting approach to averaging accounting, that decision cannot be reversed in the future.

45. **agree** that a regulatory power be established to provide the Minister for Climate Change the right to impose an end-date on to this ability to transition between the stock change and averaging accounting approaches at some point in the future.

46. **note** that requirements around consultation requirements and a minimum notice period before the Minister can exercise the power in 45 above will be specified in regulations.

47. **agree** that any transfer between accounting approaches will occur at the carbon accounting area level.

48. **agree** that when participants transition forests between accounting approaches, measures will be put in place to ensure they will not be able to receive units for sequestration already reflected in the unit balance for that forest (i.e. “double-crediting”).

*Reporting obligations*

49. **note** that rules guiding the reporting obligations of participants operating under the averaging accounting approach will be specified in regulations.

50. **agree** that those obligations should adhere to the following high level principles:
    50.1. that before the average age is reached, post-1989 forests under averaging should face the same reporting obligations as post-1989 forests under the stock change approach.

50.2. that after they have reached their average age, post-1989 forests under averaging will still be required to report at regular intervals, but may be required to provide significantly less information. In particular, in many instances participants will no longer be required to measure or report carbon stock changes once the forest has reached its average age.

*Avoiding the risk of a "deforestation loophole"*

51. **note** that there is a potential risk that a post-1989 forestry participant who might not otherwise receive a benefit from averaging accounting might choose to deforest, replant their land and then register in the ETS under averaging accounting in order to earn additional NZUs.

52. **note** that where this occurred it would come at a cost to the Crown, but provide no additional environmental benefit.

53. **agree** to delegate a decision on the best options to address this potential loophole to the Minister of Forestry and the Minister for Climate Change, along with any other relevant Ministers.

*Extending the current power to exempt ETS participants from liabilities*

54. **note** that the Act currently provides a general power for exemptions from ETS liabilities to be granted in relation to pre-1990 forests so long as the Minister is satisfied that the environmental integrity of the ETS is not negatively impacted by the exemption and the costs do not exceed the benefits.

55. **agree** to extend the existing exemptions powers to include all Schedule 4 forestry activities.

**Section B: Complementary policies to support the introduction of averaging accounting**

*Temporary adverse events*

56. **note** that the Act currently exempts post-1989 participants from a deforestation liability if a natural event permanently prevents the re-establishment of forest on that land (such as due to significant erosion).

57. **agree** that a similar exemption should be introduced for situations where an adverse event causes a temporary loss of forest in an area of post-1989 forest land that is operating under the new averaging accounting approach.

58. **agree** that this exemption against temporary adverse events should be limited to situations where all of the following criteria are met:
    58.1. the type of event is one of those listed in regulations;
    58.2. the carbon stock loss and area exceeds a minimum threshold defined in regulations;
    58.3. the affected area of forest land is re-established within 4 years.

59. **note** that rules governing the application process, reporting obligations, and unit flows in relation to this new temporary adverse events provision will be specified in regulations.

60. **agree** that:
    60.1. If the affected area of forest is below its average age on its first rotation, the participant will:
        60.1.1. Cease earning units for the affected forest area; and
        60.1.2. Continue earning units again only after the carbon stock in the affected area has re-gained the level that existed immediately prior to the adverse event occurring.
    60.2. In all other instances there will be no impact on the participant's unit flows in relation to the affected area**.**

*Offsetting*

61. **note** that the Act already includes provisions to allow owners of pre-1990 forest land to apply to shift all of the ETS related rights and obligations in relation to that land to a new area of 'offsetting' land.

62. **note** that these provisions require the new area of offsetting land to be at least as large as the original area, and be expected to store an equivalent or greater level of carbon.

63. **agree** that the types of forest land that are eligible to use those existing offsetting provisions be widened to include post-1989 forest land that meets all of the following criteria:
    63.1. it is currently subject to the averaging accounting approach under the ETS; and
    63.2. it has already reached its average age; and
    63.3. it is a rotational forest that has been actively established (rather than left to regenerate naturally).

**Next steps**

64. **note** that the Minister of Forestry and the Minister for Climate Change intend to bring a paper to Cabinet in June which discusses whether existing foresters with post-1989 forests registered in the ETS before 30 December 2018 should have the ability to transfer from stock change to averaging accounting.

65. **note** that work underway of options to better incentivise the domestic production of long-lived harvested wood products as a way to help meet our climate change commitments.

66. **note** that the Minister of Forestry and the Minister for Climate Change intend to return to Cabinet before the end of 2019 with options to incentivise the domestic production of long-lived harvested wood products

## Consultation

67. **note** that without sufficient funding to put in place the necessary system and operational changes, the EPA will not be able to operationalise the proposals in this paper and in related ETS papers.

## Legislative Implications

68. **invite** the Ministers for Forestry and Climate Change to issue drafting instructions to the Parliamentary Counsel Office (PCO) to give effect to the above recommendations.

69. **authorise** the Ministers for Forestry and Climate Change, in consultation with relevant portfolio ministers as appropriate, to make changes, consistent with the policy framework in this paper, on any issues that arise during the drafting process.

## Financial Implications

70. **Note** that fiscal implications and budget appropriations associated with the high level decision to introduce averaging are covered in [CAB-19-MIN-0197].

71. **Note** that over the period 2019-2050 the total expected net fiscal impact of allowing participants to account for changes in harvesting age (as per recommendations 23-27) is $185 million, with the first costs falling in 2037.

Authorised for Lodgement
Hon Shane Jones
Minister of Forestry

Hon James Shaw
Minister for Climate Change