

NTCF Submission, April 2022 - Final Version

Managing exotic afforestation incentives submission form

Key links

Main consultation page:

<https://www.mpi.govt.nz/consultations/managing-exotic-afforestation-incentives>

Discussion document:

<https://www.mpi.govt.nz/dmsdocument/50206-Managing-exotic-afforestation-incentives-Proposals-to-change-forestry-settings-in-the-NZ-Emissions-Trading-Scheme>

Regulatory impact statement:

<https://www.mpi.govt.nz/dmsdocument/50158-Regulatory-impact-statement-Managing-permanent-exotic-forestry>

Online Submission Form:

<https://survey.alchemer.com/s3/6763719/Managing-exotic-afforestation-incentives-Submission-Form>

Section A: What is the Problem?

There are 3 key issues with widespread permanent exotic afforestation...

1. It will drive land use change and displace productive land uses that provide wider economic and employment benefits
2. It may make it harder to achieve our long-term climate change targets
3. Widespread permanent exotic afforestation has environmental impacts

Please refer to pages 12-15, questions 1-2, of the [Discussion Document](#) to assist with your responses to the below questions.

2. Do you agree with our description of the problem?

- Yes

3. Why/Why not?

The short-medium term financial returns available from *Pinus radiata* (and potentially other exotic species), if included in the permanent forest category in the ETS, will

likely exacerbate a number of key issues and have the following impacts:

- undermine and disincentivise indigenous afforestation;
- displace communities, horticultural land use and employment, while the potential loss of arable land may also compromise our ability to produce food in a changing climate;
- negatively affect ecosystems and biodiversity: reducing habitat for native flora and fauna, increasing weed and pest problems, decreasing soil health, decreasing water quality and quantity;
- increase the already significant issue of wilding pines, which pose a serious risk to natural and indigenous landscape values and cost millions to control currently;
- risk the loss of mātauranga Māori;
- increase the risks from climate change of drought, fire and pests;
- potentially **increase emissions** as exotic forests have a much higher likelihood of forest fires than indigenous forests, and fires (increasingly likely in a warmer climate) will result in exotic forests flipping from carbon sinks to sources (emitters of carbon);
- reduce the availability of groundwater for other land uses, due to pines having high rates of water uptake;
- reduce the contribution of forested landscapes to the mental and physical well-being of the broader community.

Overall, inclusion of permanent exotic forests in the ETS privatises the benefit (income generated from carbon storage) and socialises the costs - social, cultural, ecological.

4. Do you have evidence you can share that supports or contradicts this problem definition? Or that demonstrates other problems?

- Yes

“Iwi face irreversible damage or even the loss of ancestral lands – but traditional knowledge and customary practices are also at risk, a new report says.”
(<https://www.stuff.co.nz/environment/128369978/hundreds-of-years-of-mori-knowledge-at-risk-if-environmental-decline-not-addressed>)

“The area of exotic forestry in 2018 was 12 percent higher (220,922 hectares higher) than in 1996. Of the land area that changed to exotic forestry, three quarters was from the conversion of land that was previously exotic grassland.” (Environment Aotearoa 2022, MFE,
<https://environment.govt.nz/publications/environment-aotearoa-2022/>)

“Clear felling of plantation forests, the harvest method used in Aotearoa, disturbs soils and increases sediment in waterways.” (Environment Aotearoa 2022, MFE)

“Between 1996 and 2018, of the 429,665 hectares of exotic grassland converted to other land uses, 64 percent (276,173 hectares) changed to the exotic forest medium

land cover class. Over this period, Gisborne had the largest change in exotic grassland, with a net decrease of 46,798 hectares, accounting for just over 22 percent of all losses of exotic grassland in New Zealand. Most (78 percent) of this change in the Gisborne region occurred because of the conversion of 39,538 hectares of exotic grassland to exotic forest.”

(<https://www.stats.govt.nz/indicators/exotic-land-cover>)

“Indigenous scrub/shrubland decreased by 18,684 hectares between 2012 and 2018 with decreases occurring in every region. Where there was loss, most was converted to exotic grassland (52.3 percent) or exotic forest (19.9 percent). There were particularly noteworthy losses of matagouri or grey scrub in Canterbury (1,457 hectares or 2.3 percent of Canterbury matagouri) and Marlborough (670 hectares or 24.2 percent), and fernland in the Chatham Islands (687 hectares or 2.6 percent) between 2012 and 2018.

Tussock grassland continued to decline between 2012 and 2018, but at a slower pace than previous periods, with 1,472 hectares lost. Hawke’s Bay lost 327 hectares of tussock grassland (or 1.4 percent) between 2012 and 2018. Between 1996 and 2012, Otago had the largest losses of tussock grassland with 20,773 hectares loss (or 2.6 percent) during this period.”

(<https://www.stats.govt.nz/indicators/indigenous-land-cover>)

“Wilding conifers are a problem. Wilding conifers cover more than 1.8 million hectares of New Zealand. Despite control efforts they are spreading at an estimated rate of 5% a year. Without large scale funding and control within twenty years 20% of New Zealand will be covered with wilding pines.

(<https://www.doc.govt.nz/nature/pests-and-threats/weeds/common-weeds/wilding-conifers/>) and

(<https://www.mpi.govt.nz/biosecurity/long-term-biosecurity-management-programmes/wilding-conifers/>)

“New scientific publications reviewed since January 2020 strengthen the evidence that climate change increases the frequency and/or severity of fire weather – periods with a high fire risk due to a combination of high temperatures, low humidity, low rainfall and often high winds – in many regions around the world.”

(https://sciencebrief.org/uploads/reviews/ScienceBrief_Review_WILDFIRES_Sep2020.pdf)

Canadian research on forest sink to source flip:

“For the past century, Canada’s managed forests have been a significant carbon sink, steadily adding carbon to that already stored. In recent decades, however, the situation has reversed in some years: Canada’s forests have become carbon sources, releasing more carbon into the atmosphere than they are accumulating in any given year. Several factors have contributed to this shift. The annual total area burned by wildland fires has increased substantially. Unprecedented insect

outbreaks have occurred. And annual harvest rates have shifted dramatically in response to economic demand, increasing in the 1990s and decreasing sharply with the global economic recession. The combination of these events and activities has resulted in Canada's managed forest acting as a net carbon source in years when large areas are burned."

(<https://www.nrcan.gc.ca/climate-change-adapting-impacts-and-reducing-emissions/climate-change-impacts-forests/forest-carbon/13085>)

Forest flux:

<https://www.globalforestwatch.org/blog/climate/forests-carbon-emissions-sink-flux/>

"Low flows are likely to be affected by forest growth because water will be intercepted that otherwise would have infiltrated into the soil under pasture and recharged the groundwater. There is some evidence from Glendhu to suggest that summer low flows were reduced by about 30% after eight years of tree growth (Fahey and Watson, 1991)."

(http://nzjf.org.nz/free_issues/NZJF39_3_1994/023DE35E-1180-4500-BA7A-C635D220B96D.pdf)

"During drier periods, reductions in available soil water result in closure of stomata, which in turn constrains growth of *P. radiata* and other conifers. While this response to water deficits helps conserve water by limiting evaporative losses, it also reduces carbon dioxide uptake, thereby reducing photosynthetic rate, tree growth and wood production"

(<https://nzjforestryscience.springeropen.com/articles/10.1186/s40490-015-0034-y>)

Research from Dr Alan Mark:

http://wiseresponse.org.nz/ILM/Alan_Mark-WaterYieldStudiesInOtago.pdf

Section B: Objectives and assessment criteria

Our proposed assessment criteria:

1. Provides sequestration to meet emissions budgets and targets
2. Supports gross emissions reductions
3. Provides substitutes for emissions intensive products and energy sources
4. Supports regional economies and jobs
5. Supports indigenous biodiversity
6. Provides environmental benefits
7. Supports Māori aspirations for their land
8. Effective, practical and implemented quickly

Please refer to page 16, question 3, of the [Discussion Document](#) to assist with your responses to the below questions.

5. Do you agree with our criteria for managing permanent exotic afforestation?

- Yes with significant caveats

There was no option to include this section of text in the response form, sadly!

We do support the criteria with the very strong caveat that afforestation is not undertaken as an alternative to emissions reduction. As a community, we need to radically decrease our emissions (as the IPCC WGRIII report released on 5th April 2022 reiterated). We cannot plant our way out of the climate emergency, but afforestation can contribute to our climate change response.

Indigenous permanent forests managed for carbon sequestration, pest control, and potentially future high-value continuous canopy selective harvest timber production present a significant opportunity to meet the proposed assessment criteria:

<https://pureadvantage.org/setting-the-record-straight-on-carbon-sequestration-in-managed-native-forests/>

Criterion 2: Supports gross emissions reductions

If the afforestation decreases gross emissions, it may be because it is replacing an emission intensive agriculture land use. This potentially creates a perverse outcome, whereby high quality soils are lost from agriculture because it is more economically viable to afforest them, which then impacts on agricultural outputs and exacerbates climate-induced food shortages.

Criterion 3: Provides substitutes for emissions intensive products and energy sources

This would support exotic forestry through timber replacing coal and steel, but we want timber that will work well in that context untreated, for a long time. It also supports exotic timber being grown for biofuel, which has serious ramifications for how our energy industry develops and needs much more consideration.

Criterion 4: Supports regional economies and jobs

This criterion needs to take an intergenerational approach. It must not take into account only the duration of the planting, or even just the intended life of the tree, but what happens next. It also needs to take into account any likely adverse economic impacts, such as the cost of managing increased flooding and siltation from clear felling.

Plantings of native large trees (e.g., Kahikatea) can be designed for harvesting in 100 years time or later giving future generations local access to high quality timber and wood products and work that supports the local economy. Landscape scale analysis to identify the most suitable areas for such plantings, in conjunction with other key land uses (including biodiversity protection, food production, timber and other forest production, carbon sequestration, economic output and community development), should be applied to optimise outcomes.

Criterion 5: Supports indigenous biodiversity

Should be stronger, we should be aiming to restore biodiversity and te mauri of the land more broadly.

Criterion 7: Supports Māori aspirations for their land

Needs a stronger definition. We suggest "the rohe" or "the region" so it is definitely applicable to land not currently owned by Maori. Or rephrase to "their ancestral land".

Section C: What is your preferred option?

Our proposed options to manage permanent exotic forestry in the NZ ETS

Option 1: Status quo: allow unlimited exotic and indigenous registration in the post-1989 permanent forestry category

Option 2: Prevent exotic forestry from registering in the permanent post-1989 category in the NZ ETS

Option 3: As for option two, but with exceptions for exotic species under certain conditions or criteria

Please refer to pages 17-20, question 7, of the [Discussion Document](#) to assist with your responses to the below questions.

6. Of these options: what is your preferred approach?

- ~~● Option 1 - Status Quo~~
- Option 2 - Exclude exotic forests from the permanent category
- ~~● Option 3 - Exclude exotic forests from the permanent category with some exceptions~~

7. Why?

There are several reasons why this is the best of the proposed options. Using the Assessment Criteria outlined in the consultation document, it is obvious that permanent exotic forestry cannot meet Criteria 2 - 6. Permanent exotic forestry has the potential to increase gross emissions as discussed throughout the consultation document (Criterion 2) with the increased risk of forest fires also potentially increasing emissions; may not produce low carbon substitutes or support regional economies and jobs (Criteria 3 and 4); and is poor at supporting indigenous biodiversity and environmental benefits compared with other options (Criteria 5 and 6).

Thus using MPI's own criteria, it is impossible for permanent exotic forestry to meet the government's objectives for afforestation.

It is important to consider the options holistically. One important component of a broad view is that the historic and current forest management of exotic species for production purposes has resulted in one of the most serious biosecurity risks to the landscape of Aotearoa. As quoted above, "wilding conifers cover more than 1.8 million hectares of New Zealand. Despite control efforts they are spreading at an estimated rate of 5% a year. Without large scale funding and control within twenty years 20% of New Zealand will be covered with wilding pines." These include radiata pines, contorta pines and douglas firs. Currently the government is committing \$100m over 4 years to a nationwide control programme, but this will not solve the problem. In Nelson/Tasman, \$7.1m is being spent controlling wilding pines around one forest park alone (Mt Richmond Forest Park), with wilding pines problematic in many other parts of the region. Currently much of the work to control them falls to volunteers, which is a precarious and non-strategic approach.

The budget required to fully address the current wilding pine problem across the landscape of Aotearoa is large, very large. And these are wilding pines that have

resulted from actively managed forests. How much more of a problem will we create by allowing large swathes of permanent conifer forests in our landscape, which will have much lower levels of management applied to them? The risk is too high, we are already paying a price we cannot afford, economically or ecologically. We should not take the risk of compromising other parts of the landscape with permanent conifer forests or permanent forests of any exotic species, which all have the potential to have adverse biosecurity outcomes.

It is also important to consider a holistic response to land use change in Aotearoa. Indigenous forest covered more than 80% of Aotearoa prior to human arrival, but now covers around 25% of the land mass. Not only has this historic deforestation added millions of tonnes of carbon to the atmosphere, it has resulted in serious declines in biodiversity – flora and fauna, terrestrial and aquatic, above and below ground. Much of this biodiversity was found nowhere else, and together the multitude of species formed the biotic components of healthy indigenous ecosystems unique to Aotearoa.

We have a responsibility to protect and restore these ecosystems because they have intrinsic value, because they are unique, because they define Aotearoa and because, properly cared for, they can provide significant ecosystem services to human-kind. The opportunity to undertake large-scale afforestation across the country should be considered holistically in the light of the other crises, particularly the biodiversity crisis. Re-afforestation at scale, with a diverse range of native species, has the potential to at least partially mitigate the biodiversity crisis for those species that depend on forests.

Native re-afforestation can also increase the resilience and resistance (ecological health) of adjacent or nearby existing forests, improving their ability to adapt to the changing climate.

Healthy native forests sequester carbon, not just in above-ground biomass but also in below-ground biomass (flora, fauna and microbial) and in soils. Healthy soils are critical to maintaining healthy ecosystems but in many parts of our landscape, soil health is severely compromised and this crisis in soil health has the potential to seriously impact human health and well-being in coming decades.

Native re-afforestation will also provide a wide range of other ecosystem services such as improved water quality across the landscape and decreased soil erosion. Enhancements to the mental and physical well-being of people when they are able to spend time in healthy forests is well documented. Providing unique (Kiwi) experiences for visitors is the back-bone of a sustainable tourism industry, with native forests central to that process.

All available levers need to be used to encourage and incentivise indigenous afforestation rapidly and at scale, to mitigate climate change (long-term enduring carbon sequestration), and address environmental degradation and biodiversity collapse.

Nature-based solutions can provide up to 37% of the emission reductions needed by 2030 to keep global temperature increases under 2°C - 30% more than previously

estimated.

(<https://www.nature.org/en-us/what-we-do/our-insights/perspectives/natural-climate-solutions/>;

<https://www.nature.org/en-us/what-we-do/our-insights/perspectives/natures-make-or-break-potential-for-climate-change/>)

Di Lucas ONZM, presents data supporting the case for slower growing long-term carbon sequestration indigenous afforestation:

<https://pureadvantage.org/radiata-pine-plantations-a-band-aid-to-nowhere/>

8. Are there other options you prefer, that we haven't considered?

Section D: Designing exceptions

Designing the options to manage permanent afforestation

Option 3 provides an option to allow for exceptions for some exotic species under certain conditions or criteria.

Examples of possible exceptions include:

- planting for erosion control
- planting on remote and marginal land
- certain species of exotic trees, e.g. redwoods for sustainable harvest
- plantations transitioning from exotic to indigenous forests over time

Please refer to pages 17-18, questions 4-6, of the [Discussion Document](#) to assist with your responses to the below questions.

9. Should we provide for exceptions allowing exotic species to register in the permanent forest category under certain conditions?

- No

10. Are there any alternative ways we can recognise and encourage these forests, either within, or outside, the NZ ETS?

Some consideration needs to be given as to how to encourage continuous canopy longer-rotation production forests - managed for pest control, carbon sequestration, high value timbers and nature-based forestry methods.

The Ekos submission presents the case for a Continuous Cover Forest Carbon Standard, and we are supportive of this - especially as it may accelerate the adoption of nature-forestry management practices and transition away from clear-fell forestry. We would also like to emphasise the consideration of non-timber and non-carbon values of trees that may also aid in emissions reduction, for example trees managed for the production of foods.

The Tomorrow's Forests' submission also presents the case for diverse continuous-canopy production forests, with long-term carbon sequestration benefits, that provide timber for domestic use, in a way that enhances environmental outcomes (contrasted with current use

of *Pinus radiata* managed through clear-fell harvesting techniques and treated with arsenic to make it ground durable).

From Tomorrow's Forests:

"Proposition 1: NZ needs to be growing a wider range of timber species for domestic consumption.

Reason 1: For decades, New Zealand has imported special purpose timbers, either as lumber, semi-finished products, or finished products. Over the last few years this has exceeded NZ\$1 billion annually (excluding pulp and paper products). Why aren't we growing more of these ourselves?

Reason 2: Over the last 10 years, NZ has imported 4,000 tonnes of raw arsenic salts primarily for the treatment of radiata pine. The majority of this is going into our environment as fence posts, horticulture posts, telegraph poles, other poles, piles, decking, near-ground framing, and some building framing. There is no satisfactory method of disposal, and arsenic, being a metal, does not break down. For instance, the wine industry estimates that around 500,000 posts are broken annually during harvesting. These cannot be burnt or buried and are sitting in stockpiles around the country. Why aren't we growing more naturally durable and ground durable timbers?

Outside the ETS there are lots of options. Attach financial incentives to managing indigenous forest, whether that's existing mature forest or young plantings, acknowledging the ongoing effort and cost beyond planting and land use change. Offer resources to help land owners select ecologically appropriate and climate resilient plantings. Create an ecotourism programme that connects tourists to new indigenous plantings in regions that want the extra tourism and where landowners want the labour. Control predators and browsers that undermine the success of indigenous forests as ecosystems. Easy access to funding for communities to plant out small areas. Really, it's an exercise in creativity. There is so much that could be done.

Section E: Timeframes for bringing in changes

If we choose option 2 or 3 (and exclude permanent exotic forests from the permanent category of the NZ ETS), we want to introduce this from 1 January 2023.

Please refer to page 19, question 8, of the [Discussion Document](#) to assist with your responses to the below questions.

11. Do you agree with our preferred approach (acting before 1 January 2023)?

- Yes
- ~~No~~

12. Why/Why not?

To discourage and avoid the unintended consequences of this kind of practice:

<https://www.rnz.co.nz/news/country/464428/overseas-investment-office-approves-austrian-aristocrat-s-farm-purchase-for-forestry-conversion>

Section F: Options for introducing exceptions

If we choose option 3...there are two ways we could do this:

- **Option 3A:** add the ability to introduce exceptions to the restriction on permanent exotic forests registering in the NZ ETS - via secondary legislation (Regulations)
- **Option 3B:** introduce a moratorium now, preventing any permanent exotic forests registering in the NZ ETS while decisions on exceptions are worked through

There are a range of ways a moratorium could apply, for example:

- it could end automatically
- it could require a decision after several years to continue (or to end)

Please refer to pages 17-20, questions 9-12, of the [Discussion Document](#) to assist with your responses to the below questions.

13. Do you support exceptions by regulations (option 3A) or exceptions after a moratorium (option 3B)?

- ~~Secondary legislation/Regulations~~
- **Moratorium**
- ~~No preference~~

14. Why?

We do not support exceptions. But if Option 3 is adopted, exceptions need to be worked through carefully alongside Iwi, and engagement with a range of stakeholders and subject matter experts including climate, environmental and biodiversity scientists and analysts. Please consider if a better option is to adopt an averaging category outside of the permanent [indigenous] forests category, for longer rotation exotic forests (potentially up to 40 years), that can be managed for carbon sequestration and continuous canopy nature-based production forestry.

15. If we choose to introduce exceptions by regulations, what conditions or criteria should be placed on the Minister in choosing to pursue these?

[The exotic afforestation must meet all of the criteria above.](#)

16. If we choose a moratorium (Option 3B) - how long should it be?

- ~~Short (1-2 years)~~
- ~~Long (3-5 years)~~
- **Other**

17. Why?

3-5 years is not long in the lifecycle of a tree or forest, and sufficient time is needed to realise the benefits from incentivising and preferencing indigenous afforestation. We would encourage a longer time frame to be consider eg. 10 yrs.

18. Do you think a different type of moratorium (whether it requires a decision to be ended/continued) would have different impacts? Or do you prefer a different approach?

A decision to be ended means it's an opt out system that may continue for much longer, or shorter for that matter. But for the latter, any government can change the legislation at any time, a longer end date on the moratorium presents less of a risk that it'll end sooner.

Section G: Defining an indigenous and exotic forest

Currently forests are defined by the predominant species present in a hectare. However forest and species may change from predominantly indigenous to exotic over time. We need to consider how we should treat indigenous forests registered in the permanent category when this occurs.

Options for addressing this:

- **Option 1:** Areas of forest which become predominately exotic are removed from the NZ ETS
 - **Option 1A:** Remove the land from the NZ ETS immediately
 - **Option 1B:** Allow the land to remain in the NZ ETS but transition to averaging accounting
 - **Option 1C:** Provide a time-period for the participant to become compliant again
- **Option 2:** We continue to treat the forest as it was originally registered in the NZ ETS, even if areas change to exotic over time

Please refer to pages 21- 23, questions 13-16, of the Discussion Document to assist with your responses to the below questions.

19. Currently the NZ ETS defines forests based on the predominant species in a hectare. However, forests change makeup over time. Do you think this definition of exotic and/or indigenous forests is appropriate for the permanent post-1989 category in the NZ ETS?

- Yes
- ~~No~~
- ~~Not sure~~

20. What level of exotic species in a forest would be acceptable for the forest to still be classified as an indigenous forest, and registered in the permanent post-1989 category in the NZ ETS?

10% or less

21. If forest changes from indigenous to exotic while registered in the permanent category, do you think it should be removed from the category (option 1) or be treated as indigenous (option 2)?

- It should be removed from the category
- ~~It should be treated as indigenous~~
- ~~Other~~

22. Why?

If an indigenous forest can be registered in the permanent forests category and then change to exotic (eg. *Pinus radiata*) over time, without consequence (removal from category), there is little/no incentive to manage and maintain a forest well for long term indigenous, environmental and biodiversity outcomes. It would simply open up a backdoor into the permanent category.

23. Are there other options we haven't considered?

Other options for categorising forests: number of species per hectare, percentage of species in a hectare that are indigenous, outcomes of the forest eg carbon sequestration, and food production, and biodiversity outcomes, and employment etc.

24. If we choose to remove forests which have become predominately exotic over time from the category, how do you think we should do this?

- ~~• Remove the land from the NZ ETS immediately (Option 1A)~~
- Allow the land to remain in the NZ ETS but transition to averaging accounting (Option 1B)
- ~~• Provide a time period for the participant to become compliant again (Option 1C)~~

25. Why?

There needs to be a financial incentive (and consequences) for people to manage and maintain forests well - as permanent indigenous; or averaging accounting (with long-rotation category option).

Section H: Penalties for clear-felling forests in the permanent category

Under the current rules, there will be high penalties for clear-fell harvesting forests in the permanent category to ensure forests remain permanently. The penalty for clear-fell harvesting will be equal to the value of the forest cleared below 30% canopy cover. We could make this penalty simpler to reduce the risks of registering indigenous forests in the permanent category. For example, we could establish a set rate per hectare of clearing.

Please refer to page 22-23, question 17, of the [Discussion Document](#) to assist with your responses to the below questions.

26. If exotic forests are removed from the permanent category, do you think the current penalty needs updating?

- Yes
- No

What is the percentage of canopy clearance that allows the forest to remain resilient? 30% sounds low and perhaps research could support an update on that figure even if the penalty otherwise starts the same.

The simpler version doesn't include any nuance. The 30% means that clear-felling cannot be denied by a company that leaves 20% intact. We suggest, leave it as is but review the percentage from a forest resilience perspective.

Section I: Existing PFSI covenants

In 2023, PFSI covenant holders will have the option to transfer the forest land in their PFSI covenants into the new permanent post-1989 forestry category or standard post-1989 forestry subject to averaging accounting.

We propose to allow the exotic forest in the PFSI to be able to transfer into the permanent post-1989 forestry category, and remain in the NZ ETS, regardless of the wider decisions that are made.

Please refer to page 22-23, questions 18-19, of the [Discussion Document](#) to assist with your responses to the below questions.

27. Are you a PFSI covenant holder?

- ☒ Yes
- ☐ No

28. Do you agree with the proposal to allow exotic forest land in the PFSI to transition into the permanent post-1989 forestry activity?

- ☐ Yes
- ☐ No

Permanent forest sink initiative exotics should be allowed to enter the permanent category of the ETS only if other exotics are allowed into the permanent category. Our preference is that they're not, none of them.

Section J: Averaging accounting for remote and marginal land

From 2023, newly registered production forests in the NZ ETS will be subject to a new carbon accounting method - averaging accounting.

Not all forests registered under averaging accounting will be harvested at the age which results in the corresponding average age. Forests on remote and marginal land with high harvesting costs are often left to grow older (and can store more carbon) than the typical harvest age if the costs of harvesting outweigh the revenue from selling the logs.

A long rotation category under averaging accounting for *Pinus radiata* forest which are not profitable to harvest at the typical harvest age could recognise the additional carbon which is likely to be stored by these long rotation forests.

Please refer to pages 24-25, questions 20-25, of the [Discussion Document](#) to assist with your responses to the below questions.

29. Should the Government create a long rotation category under averaging accounting for *Pinus radiata* forests which are not profitable to harvest at age 28, recognising the additional carbon which is likely to be stored by these long rotation forests?

- ☒ Yes
- ☐ No

We are concerned that this may encourage more radiata pine on marginal land. Our preference is that any long rotation category be used for continuous-canopy longer-growing higher-value species, than radiata pine. We suggest that for any new afforestation, radiata be restricted from this (ie. existing radiata pine forest only be included, not future plantings).

30. What do you think the impacts of introducing a long rotation category as proposed would be?

May incentivise forest owners to delay harvest until trees are more valuable (have earned the additional carbon credits); which in turn may make selective/continuous canopy harvesting methods more viable.

Why is the long rotation category only for *Pinus radiata*? Would it be beneficial to consider all exotic forests eligible for long rotation status?

31. Do you think forests in this category are likely to be harvested?

- ☐ Yes
- ☐ No
- ☒ Mixture

32. Are measures needed to prevent forests in a long rotation category being left permanently and never harvested, or to mitigate potential adverse effects of these forests being left permanently?

All forests should be required to have a land management plan that includes pest weed and predator control, wilding control, risk mitigation (fire, erosion), improving environmental and biodiversity outcomes.

33. What criteria should be in place to restrict the category to *Pinus radiata* forests which are not profitable to harvest at age 28?

NA / IDK

34. Do you think a long rotation category aligns with the proposed changes to the permanent activity and supports the Government's wider forestry objectives? **(For a reminder of our forestry objectives please refer back to page 16 of the Discussion Document)**

Yes

35. Are there alternative options to a long-rotation forest category that could be more effective at addressing the concerns raised by stakeholders about remote and marginal land and that align with the Government's forestry objectives? **(For a reminder of our forestry objectives please refer back to page 16 of the Discussion Document)**

NA / IDK

Section K: Biodiverse permanent indigenous forests

As part of the Government's consultation on its first ERP, we sought feedback on what is needed to make it more economically viable to establish and maintain indigenous forest on private land.

There was widespread support for more to be done to support the establishment of new and regenerating existing indigenous forests in NZ.

Suggested changes included:

- updating to NZ ETS look-up tables and measurement for indigenous forest species
- changing the NZ ETS settings to recognise biodiversity value as well as carbon sequestration
- removing barriers for private landowners to register in the NZ ETS
- recognising the importance of browsing animal management to increase or maintain carbon sequestration

- investigating whether the NZ ETS could work better for freehold general title land and Māori land

Please refer to pages 26-27, question 26, of the [Discussion Document](#) to assist with your response to the below question.

36. Do you have any further feedback on how the Government can reduce barriers and incentivise permanent indigenous afforestation to ensure we deliver long-term resilient, biodiverse forests?

Currently the economic barriers to native re-afforestation are high because the input costs are explicit, but not the beneficial outcomes. There are no dollar values assigned to either tangible or intangible outcomes. How to price the mellifluous song of the korimako or the vibrant splash of rātā in full bloom? The native biodiversity of Aotearoa is often characterised as priceless, but a price may be required to encourage native re-afforestation across a range of landscapes.

Quantifying the value of healthy native forests to water catchments, to soil retention, to soil health, to sustainable tourism, to physical and mental well-being and to a range of other ecosystem services would start to address this gap in understanding. The quantification process needs to include avoided costs from improved outcomes as well as added benefits.

It is also likely that the data underpinning the rates of carbon sequestration attributed to indigenous forests in the look-up tables in the current ETS are too low and too generalised in nature to be effective tools at encouraging native re-afforestation. Ensuring the carbon sequestration benefits of all options are strictly comparable with one another is important for decision-makers.

It is also important to take a long term view of re-afforestation with many exotic species having quite short life times. The full range of benefits, including carbon sequestration rates, associated with native re-afforestation are likely to persist for centuries, unlike those of “permanent” exotic forests.

Currently the input costs of native re-afforestation are high because nursery-grown plants are the primary revegetation option. Direct seeding may be able to provide a much more cost-effective option, particularly for steep sites or inaccessible areas, as it by-passes the nursery stage of revegetation operations. Delivering seed directly to site through a variety of mechanisms (hand sowing or using drones or machinery), in conjunction with adequate weed control, is one way to scale-up re-afforestation at a lower cost than planting. Trials are currently underway to test the effectiveness, including cost-effectiveness, of direct seeding in different ecosystems.

Your Information

37. Name: *

38. Title (if applicable)

39. Are you submitting on behalf of your organisation? *

- Yes
- No

- N/A

40. Organisation (if applicable)

[Nelson Tasman Climate Forum: Supporting Nature, Sequestering Carbon sub-group](#)

41. Do you represent Māori land and forest owners (either solely, or as part of your membership)?

- Yes
- No

42. Please provide one of the following:

- Address
- Email address
- Contact phone number

*

43. If you would like to have any or all of your submission or personal details withheld, please set out your reasons below