



15 April 2022

S22.07

Submission to the Ministry for Primary Industries on Managing exotic afforestation incentives

Introduction

1. The National Council of Women of New Zealand, Te Kaunihera Wahine o Aotearoa (NCWNZ) is an umbrella group representing over 200 organisations affiliated at either national level or to one of our 13 branches. In addition, about 450 people are individual members. Collectively our reach is over 450,000 with many of our membership organisations representing all genders. NCWNZ's vision is a gender equal New Zealand and research shows we will be better off socially and economically if we are gender equal. Through research, discussion and action, NCWNZ in partnership with others, seeks to realise its vision of gender equality because it is a basic human right.
2. This submission has been prepared by the NCWNZ Climate Change and Environmental Sustainability Action Hub and the Parliamentary Watch Committee after consultation with the membership of NCWNZ.
3. NCWNZ thanks the Ministry for Primary Industries for the opportunity to comment on this discussion document. It is encouraging to see that there is wide-ranging thinking on improvements to the Emissions Trading Scheme to make it more effect as a tool for mitigating climate change.

Is this a fair description of the problem?

Q1: Do you agree with our description of the problem?

4. NCWNZ supports the description of the problem, however members raised other issues.
5. One of the problems highlighted on p12 is the comparative economic return of exotic forest, which encourages planting of pines as a moneymaking enterprise. In its

submission on the Climate Change Response (Zero Carbon) Amendment Bill in 2019¹, NCWNZ requested that change to the ranking of priorities for projects be considered with the environmental impacts being listed first and the economic impact last. NCWNZ recommends the same ordering for allocating land and land uses for emissions reduction to strengthen the environmental gains and limit regards for profitability. The focus should be on the environmental benefits.

6. Another problem mentioned on p12 as a consequence of this is the increasing land area being converted to exotic forest. There are multiple effects arising from this:
 - a. Social effects on communities – closure of facilities, reduction in mutual support of neighbours, loss of jobs followed by loss of population as people move away.
 - b. As more productive land is converted to forestry, New Zealand could lose food security because of there not being sufficient land for food production into the future, both for internal consumption and for export.
 - c. In a similar way our wool industry including merino, could be adversely affected if there were similar conversion of land from sheep farming, in a sector where more land is required if the industry is to thrive².
 - d. Wilding pines are already a widespread problem in New Zealand. These raise the risk of wildfire, they are pest plants for other land uses, and are very difficult to eradicate as they spread easily into inaccessible areas.
 - e. A landscape dominated by pine trees has associated health problems for people living in the area, mostly in allergic reaction to the pollen each spring. It is fine and light and so is widely distributed, and there is a probable rise in health costs for people as the area of pine forest increases.
 - f. As recognised on p15, in New Zealand exotic species have a life span measured in decades compared to the centuries of indigenous forest, which raises the question of what "permanent" means in this context. At some stage in the nearer future any management plan will need to include mechanisms for removal of dead trees in a way that is not damaging to the environment. Slash from logging has already created problems for downstream communities in times of heavy rainfall such as East Coast and this will increase as the area of exotic forest increases.
 - g. Pine forests suffer from all the disadvantages of monoculture through the lack of resilience to disease and pests, or other damage. As small rural communities fall

¹ NCWNZ. 2019. Submission to the Environment Committee on the Climate Change Response (Zero Carbon) Amendment Bill Government Bill 136-1. S19.16. <https://ncwnz.org.nz/wp-content/uploads/2019/07/S19.16-Climate-Change-Response-Zero-Carbon-Amendment-Bill.pdf>

² Wool Impact NZ plans for positive impact. 2022. <https://www.rnz.co.nz/national/programmes/countrylife/audio/2018835708/wool-impact-nz-plans-for-positive-impact>

apart with a likely significant increase in plantings of pine forest the New Zealand landscape outside the cities will become a sea of pine devoid of other life.

Q2. Do you have evidence you can share that supports or contradicts this problem definition? Or that demonstrate other problems?

7. All the predictions for the effects of climate change on New Zealand raise the spectre of more frequent and severe storm events. In 2001 the Climate Change Programme of the Ministry for the Environment published 'Climate Change Impacts on New Zealand', and this indicated the possibility of more frequent and more intense droughts and floods (p13). We are now seeing this happen. Already storms have major impacts on exotic forest with wind throw and the movement of slash or other loose plant material.
8. The loss of soil by making it inaccessible or unsuitable for use in agriculture or horticulture presents a major risk to the New Zealand economy. This can happen in several ways:
 - Top quality soil, such as in Pukekohe, is sold and covered with housing which takes that land permanently out of production.
 - Erosion from the removal of tree cover leads to soil being lost from steep slopes.
 - In flood events, large quantities of soil are carried away and this is another permanent loss. In 2004 the Manawatu River had a major flood event during which staff from [Manaaki Whenua](#) Landcare Research took a series of samples from the river and analysed them for soil particles. This showed that soil was being lost out to sea at the rate of 25 cubic metres per second.
 - Deterioration of soils under pine plantings make it unsuitable for much other planting after harvest other than continuing with pines. [Manaaki Whenua](#) Landcare Research scientists have carried out research on soils under different types of cover and this has shown these different characteristics:
 - a. Pine forests have a thin litter layer whereas native forests generally have thicker litter, fermentation, and humus layers above topsoils.
 - b. Topsoils under pasture tend to be thicker than those under both forest types but especially pine forests.
 - c. The understory vegetation of pine forests tends to be sparser / not as dense as understory vegetation in un-grazed (by deer etc.) native forests.
 - d. Soils under pine forest are more acidic compared to pastures but probably don't differ much from native forests, depending on the type of native vegetation³.

³ Dr Craig Ross, soil scientist formerly of Landcare Research, personal communication. 2022.

Q3: Do you agree with our criteria for managing permanent exotic afforestation? If not, what would you change and why?

9. Overall, yes NCWNZ agrees with the criteria as outlined. It will be necessary for some time to use forestry to sequester carbon from emissions as well as tree planting by individuals and community groups, especially since it takes a long time to change people's behaviour. Individuals may use carbon offsets to absorb emissions from car usage or flying, for example. This does contribute to reducing atmospheric carbon, but the human tendency is to continue to use a car or take an aeroplane in the same way as we have done for years. This can become a mind game very similar to the indulgences of the mediaeval church. It took 500 years and the Reformation for the Catholic Church to abolish indulgences and we do not have this time, as the most recent IPCC report has stressed.

Designing exceptions

Q4, Q5, Q6

10. For simplicity, it would be preferable not to have exceptions, but there will always be alternative possibilities raised from those allowed for in the plan. It is common for people to regard their project as an exception so there will be calls for this and so any plan needs to be prepared with clear criteria of what might constitute an exception and how this will be addressed.
11. An example of a possible exception might be the Whakarewarewa Forest in Rotorua with its giant redwoods – these are slow growing and long lived.

Options to manage permanent afforestation

Q7: Of these options, what is your preferred approach? Why? Are there other options you prefer that we haven't considered?

12. NCWNZ supports Option 3 (Prevent exotic forestry from registering in the permanent category in the NZ ETS.). This option allows more flexibility but is therefore likely to be more difficult to manage. It would enable inclusion of a wider variety of forest types and sizes to be included, with a greater number of types of ownership.

Timeframes

Q8: Do you agree with our preferred approach (acting before 1 January 2023)? Why/why not? If not, what is your preferences?

13. NCWNZ agrees. Regarding exotic forest as permanent is counter-intuitive given the life of the trees in New Zealand and minimising the area of forest that might come under this category is desirable.

Comparing Options

Q9: Do you support exceptions by regulations or after a moratorium? Why?

14. The route to making an exception through secondary legislation has more gravitas, in that it is generally regarded as a higher order of importance than a moratorium. The

consequence of flouting regulations is generally greater than that for a moratorium, which can be relatively easier to work around

Q10: If we choose to introduce exceptions by regulations, what conditions or criteria should be placed on the Minister in choosing to pursue these?

15. NCWNZ has no clear views on this aspect.

Q11: If we choose a moratorium – how long should it be? Why?

16. Short – 1 to 2 years maximum

Q13: Currently the NZ ETS defines forests based on the predominant species in a hectare. Do you think this definition of exotic and/or indigenous forests is appropriate?

17. Labelling a forest by its dominant plant type is standard ecological practice; it is usual to talk about “beech forest” or “tawa forest” for example. It is recognised that these descriptors refer to the major canopy species and that there will be other species, such as ferns and shrubs making up other layers within the total complexity of that particular ecosystem. This is an appropriate way to describe a forest.

Q14: 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 category? Q15: If forest changes from indigenous to exotic while registered in the permanent category, do you think it should be removed or treated as indigenous?

18. Given the problem of wilding pines and other weedy species it is inevitable that there will be some incursion of exotic species, and this will be difficult to avoid and remediate. It would be hard for foresters to have regular oversight in remote locations and thus easy for the incursion to be large and well established before it is noticed. While it might be preferable to set the marker for change of category at a low level such as 10%, it is probably more realistic to make this number a bit higher such as 20%. Beyond 33% the forest is at the stage where tipping into exotic forest is the more likely outcome.

Q17: What would be appropriate penalty for clearing the forest before the end of the permanent period?

19. The owner of the land makes money by harvesting the timber and selling it on and so there is plenty of incentive to fell when the price is high to maximise profit regardless of whether this is the end of the permanent period. In this case NCWNZ suggests that the forest owner pay the price of the land itself in recompense for lost carbon credits.

Q18: Are you a PFSI covenant holder?

20. No. NCWNZ has no pecuniary interest in any forests.

Long rotation category under averaging accounting

Q20-Q25

21. Members did not forward much commentary on this topic. Some suggested that there be separate targets for exotic and indigenous forest as a step to accommodating

indigenous forest within carbon accounting. There was an emphasis on thinking long-term for permanent planting and moving past monoculture.

Q26: Do you have any further feedback on how the Government can reduce barriers and incentivise to permanent indigenous afforestation to ensure we deliver long-term resilient, biodiverse forests?

22. Spread across Aotearoa New Zealand are numerous areas of indigenous forest which have been conserved under QEII covenant as permanent reserve. Most of these are small areas but have been set aside from a larger area of agricultural land. By enabling small areas such as these to fall within the ETS they could form the foundation for including indigenous forest within the ETS. Currently there is a cost to owners in covenanting land - they are still liable for rates on the land that has been covenanted, there is loss of production from conserving rather than felling the forest, and the costs of pest control for example - but being able to claim carbon credits would offset some of the cost and may lead to more indigenous forest being put into covenant. To accommodate these small parcels the area that can be counted for ETS purposes will need to be reduced. NCWNZ members expressed a strong preference for indigenous forest over exotic.
23. There will need to be careful thought given to when might be a start date for including QEII forest and there are two possible options: back-dating to post-1989 as for exotic forest, or 1 January 2023 to coincide with the removal of permanent exotic forest as set out on p12.
24. Another possible land type to consider is wetlands. Several members raised this and commented on their efficacy as carbon sinks. In the reporting on Tuesday 5 April on the large fire at the Awarua-Waituna wetlands near Invercargill, Emeritus Professor Sir Alan Mark told the interviewer on RNZ's Morning Report that wetlands make a large contribution to the sequestration of carbon and that the fire currently burning through the wetland would be releasing substantial emissions (which had been sequestered) to the atmosphere. This suggests that setting aside wetlands as carbon sinks would assist in reducing New Zealand's emissions and would have significant ecological benefits at the same time. These benefits include flooding control and water quality management, and gains in indigenous biodiversity.
25. Most of New Zealand's wetlands have been drained on the assumption that they were useless and could be "improved" for agriculture, and as a consequence there has been a drastic decline in native biodiversity. An example of this is seen with pāteke (also known as brown teal); these were once common, but the population is now not much above 2500. These ducks are rarer than whio.
26. To include wetlands within the ETS will take extensive preparation – measuring each area and its volume, calculating sequestration rates, and establishing ownership are

some of the work that will be required. Ephemeral wetlands as in areas of dunes will be a challenge.

Conclusions

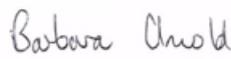
27. NCWNZ commends MPI for the document and the consultation.

Postscript

28. Members did experience some difficulty in that the pale grey type of the document is hard to read against the white background.



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