

22 April 2022

Managing Exotic Afforestation Consultation,
Climate Change Policy,
Ministry for Primary Industries,
PO Box 2526, Wellington 6140

mpi.forestry@mpi.govt.nz

Subject: Managing exotic afforestation incentives

The Bioenergy Association is pleased to see the proposals in the discussion document *Managing exotic afforestation incentives* but believes that the proposals will create unnecessary complexity unless modified.

The main points of our submission are that:

- We agree that exotic forestry should not be included in the permanent category as otherwise the profitability of permanent exotic forestry will increase relative to other productive land uses, and thus distort wise land use decision making.
- Permanent exotic forests should not be encouraged as cyclical forests (always replanted after harvest) provide better carbon dioxide absorption than a permanent forest AND provide wealth creating products.
- We support only option 2. Only native species should be included within the permanent forestry category.
- Maximising the national greenhouse gas emission reduction benefits from forestry occurs from both the sequestration AND from the use of biomass residues as a fuel to replace fossil fuels. The policies developed from this consultation needs to take both into account.
- An undue focus on sequestration by forestry would result in an inability to produce enough biomass to replace fossil fuels.
- If landowners have a choice of options for registering their vegetation – permanent native, NZETS average accounting, NZETS stock change accounting, or He Waka Eke Noa then landowners will be optimally incentivised to make the best decision and are likely to use vegetation to maximise emissions mitigation.
- Remove bias for particular species or vegetation types and let farmers make the best decision appropriate for their land and soil types.
- Farmers should be able to have a choice in which scheme they include farm forestry. Remove the requirement that NZ ETS-eligible exotic forest would not be eligible for the He Waka Eke Noa system. Much farm forestry may be eligible to be included within the NZ ETS but isn't because of administrative costs so should be able to be included within He Waka Eke Noa.
- With clear incentives, farmers can contribute significantly more to New Zealand's energy needs, utilizing the 6-9% of least productive areas of their land to contribute biomass to meet 24 PJ of future energy demand.
- Have a farm based annual GHG accounting scheme which includes the liabilities from all farm emissions and all mitigation credits occurring in that same year. This provides recognition for mitigation from all vegetation planting regardless when planted. Use of default values such as is used for livestock accounting would keep the system administratively simple.

Our stakeholders

The Bioenergy Association represents a significant portion of suppliers of biomass and organic waste for recycling into energy; owners of biomass fueled heat plant; biomass fuel producers and suppliers; waste-to-energy investors and their consultants; gaseous biofuel producers, suppliers and users; transport biofuel producers and suppliers; researchers and equipment/appliance suppliers across New Zealand. It has members who have an interest in policies relating to:

- the recycling of biomass and waste for the production of energy and chemicals;
- reduction of greenhouse gas emissions to air from residential, commercial/industrial and agriculture applications, and
- wise use of our renewable natural biomass resources for the commercial and social betterment of communities.

Biomass for energy

It is imperative that greenhouse gas emission reduction policies take into account that biomass for production of energy can come from residues of plantation forestry, farm forestry and wood processing. Biomass harvest residues from farm forestry and residual organic waste from cropping and other agriculture activities is considered to be a recyclable biomass resource and it is able to be utilised to mitigate on-farm greenhouse gas emissions from livestock. The mitigation can often also reduce farm operating costs, or provide a revenue stream additional to existing farm activities.

Integrated land management of farm forestry and agriculture can provide greenhouse gas emissions mitigation, additional revenue for farm business, improved soil management and improved environmental outcomes across the whole farm. These revenue streams can incentivize farmers to plant more trees, resulting in more emissions reduction.

With Government policy to transition from use of fossil fuels for energy there is a growing demand for biomass for production of solid, liquid and gaseous biofuels. Currently 9% of consumer energy comes from biomass and recycled organic waste and this is expected to treble to 27% over the next three decades, provided adequate biomass is able to be sourced and made available in forms suitable for use as a biofuel. If biomass is locked up in permanent forests then this target will be more difficult to achieve.

The alternative to biomass for process heat is electricity which will require the construction of many more additional power stations if all possible uses of electricity for process heat, transport and industry grow as is currently predicted. Thus the cost of electricity will significantly increase resulting in a continuing high demand for biomass as the more cost effective option.

Recent surveys by the Energy Efficiency and Conservation Authority of the intentions of heat users in Otago and South Canterbury have shown that 70% of heat users would prefer to use biomass fuels instead of electricity, provided adequate supply of biomass can be maintained into the future.

Work by the Bioenergy Association has shown that with supportive programmes to incentivize plantation forest owners and farmers to optimize the integration of farm forestry (shelterbelts, erosion control, woodlots, managed riparian plantings etc) that there can be adequate quantities of biomass available to replace fossil fuels for energy and reduce greenhouse gas emissions.

Maximising the national greenhouse gas emission reduction benefits from forestry arises from policies which include both the sequestration AND from the use of biomass residues as a fuel to replace fossil fuels. The policies developed from this consultation needs to take both into account as an undue focus

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on sequestration by forestry would result in an inability to produce enough biomass to replace fossil fuels.

The biomass is also the primary feedstock for transition to a bioeconomy which the Government is also exploring.

A scenario of where the biomass may come from is shown in table 1.

Table 1: Sources of biomass for energy¹

		2050	
		Energy PJ	Quantity
Biomass			
	Municipal		
	Municipal wood wastes ¹⁸	2.4	266,000 tpa
	Arborist ¹⁹	0	158,000 tpa
	Agriculture and horticulture		
	Horticulture ²⁰	0.9	126,000 tpa
	Agriculture crop residues ²¹	6.2	351,000 tpa
	Shelterbelt ²²	0.6	82,000 m ³ pa
	New farm forestry ²³	16.4	
	Wood processing		
	Existing wood processing ²⁴	43	
	Port bark ²⁵	1.8	262,000 tpa
	Pulp log ²⁶	5.6	817,000 m ³ pa
	New wood processing residues ²⁷	13.2	
	Forestry		
	Harvested carbon forest	2	
	Production thinnings ²⁸	1.6	232,000 m ³ pa
	Waste thinnings ²⁹	3.6	192,000 odt pa
	Pruning residues ³⁰	0.5	25,000 odt pa
	Inforest landing residues ³¹	11.3	1,643,000 m ³ pa
	Cutover - ground based ³²	8	1,164,000 m ³ pa
	Cutover - hauler/cable ³³	1	145,000 m ³ pa
	Wilding forest	0.2	
	New plantation forestry residues ³⁴	10	
	Non residual sources		
	Sawmill chip	11.6	1,688,000 tpa
	Diversion from export K grade logs ³⁵	31.4	4,546,000 tpa
	Douglas Fir production thinnings ³⁶	0.9	
	Energy crops ³⁷	0	
		172.2	

¹ [Information Sheet 61: Sourcing biomass to meet the demand for solid, gaseous and liquid biofuels](#)

General points in our submission

This submission is complementary to the individual submissions from Bioenergy Association members which may provide more detail on specific aspects of the discussion document.

Policies for emission reduction from forestry should not be decided in isolation of the uses of biomass, and of the need for mitigation from agriculture. Permanent sequestration results in communities having an inability to use biomass for employment, wealth creation and as a replacement for fossil fuels.

A cyclical forest management regime is akin to being a permanent forest provided that replanting occurs soon after harvest.

The concern of landowners that good productive land will be used for forestry driven by the value of carbon credits, thus adversely affecting the resilience of rural communities, is a consequence of farmers having the freedom to use their land according to the value of the products which they can produce. Alternative policies which encourage integrated land use of farm forestry and agriculture would provide a good incentive for farmers to use their land more suited for forestry integrated with their traditional farm practices. The approach by He Waka Eke Noa goes some way to providing these incentives so decisions on the NZETS and forestry should take this into account.

A permanent forest should be that – a permanent forest and not able to be harvested and not replanted. Other forests should be referred to as cyclical which reinforces that even shelterbelts can be managed to provide wood and emissions mitigation, as well as shelter.

It is appropriate for New Zealand to place an emphasis on maintaining its land production capacity whatever the produce delivered. In general, we consider it is inappropriate for the emissions trading scheme to provide a strong incentive to move away from production forestry to non-production forestry where the potential for production exists.

New Zealand needs to move to much higher levels of forestry “relevant to historic levels” which would be good for both emissions mitigation, and wealth and wellbeing creation. Production forestry is only 6.3% of New Zealand’s land area.

We consider there is merit in considering a long rotation option but caution that targeting or confining this to where production options are genuinely poor will be a challenge. We share the concern that there is a risk of exotic forestry currently managed for production, under either stock change or averaging, being switched to permanent forestry with potentially adverse consequences for New Zealand.

It is also important to recognize that these considerations should not be restricted to only *pinus radiata*. There are a number of other species which are more suited to longer term rotation and have the potential to diversify products of forestry.

The Government has signaled that it would like to transition to a circular bioeconomy which provides an opportunity for a range of plant species to be grown to produce feedstock for energy, biochemicals and the production of bio-based materials to replace those currently derived from fossil fuels. The investment in additional forestry can not only provide the necessary feedstock for the manufacture of these products, with consequential financial returns, but can in a number of situations, provide mitigation of greenhouse gas emissions for free. In appropriate locking up of good productive forestry land for one objective can become a major barrier for other objectives such as transitioning to being a bioeconomy.

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We believe that integrating decisions on forestry with agriculture can be a door opener for a more resilient forestry and agriculture sectors and encourage mitigation so as to address the current high emissions from agriculture.

Many farms are already developing Environmental Management Plans for nitrogen and clean water so if the proposed emissions pricing regime dovetails to these the additional work for farmers should be able to be reduced, and synergies found. A whole of farm approach will be good for the farm business, ensure sound soil and erosion management, and ensure optimal environmental outcomes, including emissions mitigation. Mitigation can open up new commercial opportunities which can assist reduce the cost to farmers. These integrated land plans should be required of all agriculture and forestry land so that decisions on emissions reduction are provided to farmers who can decide the best scheme and be incentivised to have the right plant in the right place at the right time.

Answers to specific questions

Is this a fair description of the problem?

1. Do you agree with our description of the problem? Why/Why not?

Yes. However, our primary concerns of the current permanent exotic forestry policies can be summarised as:

- provide counter-productive incentives for wise land use;
- loss of productive land to non-productive activities;
- Oversupply of carbon credits from forestry thus reducing incentives for emission reduction initiatives in other areas;
- Focus on greenhouse gas emissions reduction at the cost of other cross sector objectives.
- Fail to integrate forestry and agriculture so that all land is optimally managed.

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

The use of biomass for energy provides a low cost and effective transition away from use of fossil fuels for energy. Analysis (refer above) shows that there is a need for additional quantities of biomass to be available which can only come from additional production forestry. Policies which encourage removal of land from production forestry will make it more difficult to replace fossil fuels.

Assessment criteria

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

Bioenergy Association agrees with the Government's broader objectives for forestry:

- Sequestration
- Substitution
- Economy and jobs
- Native biodiversity
- Environment
- Maori

And agrees that this will require often complex trade-offs and agrees with the criteria for assessment.

Designing exceptions (option three)

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

No. There should be no exceptions. Forests must be either permanent (native and never harvested) or cyclical. Cyclical can include both long and short rotations of any species but all vegetation areas should be managed under integrated land use plans applying to all land.

Vegetation not registered as permanent native should be registered under the NZETS or be included under the He Waka Eke Noa land management regime.

If a landowner of native vegetation wants to retain the option of possible future productive use they should be able to register the land under the He Waka Eke Noa regime.

5. Are there particular circumstances that you support introducing exceptions for (for example, exceptions for certain species of exotics)? Why?

No. The choice of species should be determined by the appropriateness of the land.

- **What are the likely impacts, risks and costs of allowing exceptions in these circumstances?**

Exemptions are not necessary and would only provide incentives for rotating the system through changing categories of registration.

Exemptions increase the administrative costs.

- **If we allow exceptions for exotic species under certain conditions, should we place additional conditions on the granting of this exception? What could these be?**

The easiest is to have no exemptions. We should be reducing complexity for farmers not increasing complexity which only encourages opposition and fear.

6. Are there alternative ways we can recognize and encourage these forests, either within or outside, the NZ ETS? (For example, through the resource management system.)

All vegetation should either be registered as:

- Permanent native
- NZETS compliant
- Covered by the He Waka Eke Noa regime.

This approach is simple and easy to understand. Farmers would be more relaxed if they had options they can choose and where they can obtain appropriate mitigation incentives.

Options to manage permanent afforestation

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

Option 2

Timeframes

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

Yes.

Implementing changes to the permanent forest category

13. 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?

If exotics are going to be removed from being included within the permanent category then the distinction between native and exotic will continue to be needed. Basing this distinction on the predominant species is practical.

14. 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?

An arbitrary small percentage could be exotic say 10%

15. 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)? Why? Are there other options we haven't considered?

Option 2. Provided the change is outside the control of the land owner eg wildings. The emphasis should be on permanent rather than species.

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

They should be transferred to the NZETS average accounting scheme, NZETS stock change accounting scheme, or to the He Waka Eke Noa regime.

17. If exotic forests are removed from the permanent category, what would an appropriate penalty be for clearing the forest before the end of the permanent period? Do you think the current penalty needs updating?

Permanent native should be permanent and there is no end of that period.

18. Are you a PFSI consent holder?

No

19. Do you agree with the proposal to allow exotic forest land in the PFSI to transition into the permanent post-1989 forestry activity, or would another approach be more suitable?

No. Only natives should be allowed in the permanent category

Long rotation category under averaging accounting

20. 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?

Creating a long rotation category under averaging accounting perpetuates the problems of having a single “one shoe fits all” approach. There will be a number of planting situations which are “not economic”. These may relate to location or species. The forest owners should have the option of adopting the average accounting approach or the stock change approach. Whilst it does require a greater level of administration, stock change accounting should be considered as a voluntary alternate option particularly when the level of uptake in this category is likely to be relatively low.

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

It would introduce yet another complexity of defining what qualifies as being included in a long rotation category.

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

The greatest cost is if the planting of marginal land areas does not occur as we need to maximise the quantities of biomass coming to the market. If landowners have a choice of options – permanent native, NZETS average accounting, NZETS stock change accounting, or He Waka Eke Noa then landowners will be optimally incentivised to make the best decision and are likely to use vegetation to maximise emissions mitigation.

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

Including only pinus radiata restricts land owners planting the right tree in the right place. Limiting any policy to only pinus radiata will stifle innovation and be a barrier to widening the opportunities that other species can provide.

24. Do you think a long rotation category aligns with the proposed changes to the permanent activity and supports the Governments wider forestry objectives?

No

25. 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?

Yes. Land owners should have the option of including “non-standard” plantings within the NZETS stock change accounting, or He Waka Eke Noa schemes.

Incentivising indigenous afforestation

26. 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?

There are many areas relating to land use where research and support is required so that the right tree is in the right place. This includes native forestry but also includes farm forestry and research on alternative species. It is hoped that the Industry Transformation Plan covers all these areas so that appropriate vegetation is on appropriate land regardless of whether it is native, exotic, woody or herbaceous. All these require incentivisation.

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The Bioenergy Association is pleased to make this submission and is encouraged that there is such open discussion on options. We are very happy to assist with further information and participate in further discussion so that greenhouse gas emission reductions are maximized while also maximising the economic and community wellbeing that arises from strong and wise land use.



Brian Cox
Executive Officer
Bioenergy Association

