



To: Ministry for Primary Industries
NES-PFConsultation@mpi.govt.nz

Submission on: A National Environment Standard for Plantation Forestry

Date: 11 August 2015

Submission from:

Mark Ross
Agcarm
City Chambers

[Redacted]
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Phone: [Redacted]

Email: [Redacted]

Submission on the National Environment Standard for Plantation Forestry

1. Introduction

- 1.1 Agcarm welcomes the opportunity to comment on the National Environmental Standard for Plantation Forestry (NES).
- 1.2 Agcarm's comments on the NES are focussed specifically on Section 6.4 – Hazardous Substances and New Organisms Act 1996.

2. Summary of Submission:

- 2.1 Agcarm is supportive of Section 6.4 in that the Environmental Protection Authority (EPA) under the Hazardous Substances and New Organisms Act is the sole decision-maker on permitting afforestation using genetically modified tree stock.

3 General Comment

- 3.1 The Environmental Protection Authority has a national role to manage GMOs under the HSNO Act. A national level approach to managing GMOs ensures consistency and avoids duplication throughout New Zealand
- 3.2 This has a number of advantages over any role that Local Government may have, including reducing cost burdens on tax and rate payers, and avoiding confusion on different rules being applied from a national and regional basis.
- 3.3 A national level approach to managing GMOs ensures consistency throughout New Zealand and given the technical complexity of assessing GMO applications ensure that one agency (the EPA) is adequately resourced to provide this service. The EPA has the necessary risk assessment, legal, policy and scientific expertise required to consider GMO applications.
- 3.4 By implementing clause 6.4 in the NES, duplication will be prevented. This has a number of advantages including preventing duplication, reducing cost burdens on tax and rate payers, and avoiding confusion on different rules being applied from a national and regional basis.

4 About Agcarm

Agcarm is the industry association for manufacturers and suppliers of crop protection and animal health products. For further information and a full list of members, see www.agcarm.co.nz.

These products protect public health, improve animal welfare and help environmental management. They:

- Play a pivotal role in growing high yield, sustainable food and fibre products;
- Help supply healthy, nutritional and affordable food;
- Keep New Zealand's agriculture, horticulture and forestry sectors internationally competitive.
- Our members are committed to safety, innovation and product stewardship.



We welcome the opportunity to submit on the NES PF Consultation

Alpine Energy welcomes the opportunity to submit on the Proposed National Environmental Standard for Plantation Forestry. We also support the submission made by the Electricity Networks Association on our behalf.

We **do not** support the NES as it stands in the 2015 Consultation document for the following reasons.

1.1 The purpose of the RMA

To refresh, the purpose of the Act is to (emphasis added):

promote the sustainable management of natural and physical resources.

(2) In this Act, sustainable management means managing the use, development, and **protection of natural and physical resources** in a way, or at a rate, **which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety** while—

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

(c) **avoiding, remedying, or mitigating any adverse effects** of activities on the environment.

Where natural and physical resources are interpreted in the RMA as:

natural and **physical resources** includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all **structures**.

And structure is interpreted as:

structure means any building, equipment, device, or other facility made by people and which is fixed to land; and includes any raft.

1.2 Omissions in the NES allow activities contrary to the purpose of the Act

We are of the view that the NES indirectly promotes an adverse effect on the environment contrary to Part 2 s5(2)(c) of the Act, by not mitigating against the effect of trees planted in the fall zone of power lines, where trees can fall on lines once mature, causing a power outage. By not mitigating against this adverse effect, the NES fails to protect physical resources (power lines), and therefore

protect a community from economic loss, social cost, as well as posing a significant risk to public health and safety, potentially causing death.

In short, the proposed NES, by not looking to mitigate the risk of planting trees in the fall zone, promotes activities contrary to the purpose of the RMA.

1.3 Additional regulation required to the NES

The NES should include regulation prohibiting the planting of trees in a forestry plantation, where a mature specimen will grow to within the fall zone of power lines and infrastructure.

1.3.1 Public health and safety

Planting trees that will mature and potentially threaten power lines is a risk to public health and safety that can be classed as very high to extreme. This can be classed as such because the likelihood of a tree being blown into power lines is a *likely* occurrence and will happen somewhere on our electricity network each year at least, while the consequences of a person contacting a knocked down line is likely to be death. What mitigates against this risk is simply the rural nature (remoteness) of most tree related power outages, as well as protection equipment on the lines and at the substation.

1.3.2 Economic loss

Falling trees causing power outages will impact a community economically. An NES should take into account the adverse effect trees planted in the fall zone around power lines can have on a community's future ability to sustain itself economically (Part 2 s5(2)).

In 2013, our network experienced an increase in 94 SAIDI¹ minutes due to trees in lines as a result of high winds. Normally total SAIDI minutes for the year are 160 for all outage sources including planned and unplanned outages. We value the loss of one SAIDI minute at \$ \$7,134 to our business alone. Therefore 94 SAIDI minutes due to trees contacting lines cost us, and ultimately the community we serve, more than \$658,000.

To this cost should be added the value of lost load (VoLL) to consumers connected to our network. Using an industry model, we calculate a VoLL for South Canterbury consumers of \$33/kWh. For one light commercial consumer, who on average consumes 8000 kWh/year (25 kWh/day), each day they do not have power can cost them more than \$700. In a severe windstorm, multiple consumers can be off for longer than a day.

It should be noted that under the Commerce Act an electricity network company cannot breach supply reliability limits set by the Commerce Commission for both SAIDI and SAIFI. There is a strong incentive to get power back on as quickly and safely as possible.

1.3.3 Social and cultural Cost

An NES should take into account the negative effect of planting trees in the fall zone of power lines on the ability of a community to function properly and carry out business as usual in the event of an outage.

¹ System Average Interruption Duration Index (SAIDI): a regulatory measure used by the Commerce Commission to measure a network company's reliability of supply. A network company is only allowed to exceed a normalised limit twice in a regulatory period. Exceeding the SAIDI limit a third time can result in substantive fines to the business and to directors.

1.4 Thank you for your consideration of this submission

We value the time and consideration on this matter.

Yours sincerely

Paul Christie

Senior Analyst

Pricing and regulation



The Bio Dynamic Farming and
Gardening Assoc. in N.Z. Inc.

Founded on the work of Rudolf Steiner



Submission to the Ministry of Primary Industries

from the

Bio Dynamic Farming and Gardening Association in NZ (Inc)

on a proposed

National Standard for Plantation Forestry.

1. The Association (incorporated 1945) exists to foster, guide and protect the biodynamic method of agriculture, horticulture and animal husbandry. Biodynamic methods are a subset of organic methods and the Association is a founding member of the national organics body, Organics Aotearoa New Zealand. The Association is also an organic certifier, using the Demeter system as do its partners in Demeter International. The Demeter trademark is the world's oldest organic trademark.
2. We note that the proposal, in its latest form, will disallow local communities the possibility of controlling the propagation of genetically modified organisms in their own area. The Association opposes this change to the proposal, and asks that it be rejected.
3. The proposal needs to take a strong line on some other environmental issues. We support limits to the amount of clear felling that can be carried out on erosion prone slopes, for example. The Association's Demeter certification programme has at times required the retirement from production of erosion prone land.
4. We also support strong rules on maintaining on-farm indigenous vegetation. We note that the amount of land covenanted under the Queen Elizabeth II National Trust has grown steadily¹ which indicates a will in parts of the rural community for the protection of such vegetation. National environmental standards should support this as far as possible.
5. Further, the Association supports strong rules on the protection of waterways.

¹ http://www.openspace.org.nz/Site/Publications_resources/Annual_statistics_maps_and_graphs.aspx

6. All such national rules should permit local communities to develop stronger rules if they so decide.
7. Some local communities have put a lot of work into developing robust procedures to manage genetically modified (GM) organisms. They have needed to do so principally because of policy failure at a national level.
8. The recent history of GM outside the laboratory in NZ includes cases of applications for field trials being allowed by ERMA with controls and those controls have not worked². The reasons are not clear but it appears that the interests wishing to use GM organisms do not have the capacity to fulfill requirements, or do have the capacity but have not been able or not willing to exercise it.
9. Local communities have seen that this failure, if repeated on a larger scale and in their area, could lead to them suffering financial losses as well as environmental problems.
10. Financial losses can arise if markets reject products because of adventitious GM material. There may then be further expense to the local community from the need to clean up the source of that material.
11. Environmental problems could arise because of the unexpected behavior of GM organisms. There are many introduced organisms whose botany is far better known than that of any GM would be. For example, *P. contorta* and other wilding pines are a problem in parts of New Zealand already and incur costs for communities already. Communities do not wish to see those difficulties replicated. GM trees won't solve existing problems without creating worse ones.
12. The inclusion in local plans of requirements for the control of GM organisms is effectively a statement of no confidence in the national strategies. This no confidence is reasonable in view of the poor history of the GM industry in its interface with public policy, as mentioned in 8 above.
13. The proposal appears to attempt to solve this difference of opinion by simply overriding the local strategies. This is not a reasonable approach. A better one would be to respond to the concerns of the local communities by ensuring that a national strategy delivered what they are seeking.
14. Therefore, instead of annulling local plans, Government should be adopting the principles in them and making them into a national programme. There should therefore be nothing in any national environmental standard that prevents local authorities managing GM organisms until such time as those authorities have agreed that national strategies make local controls unnecessary.

² See Bio Dynamic Farming and Gardening Assoc. submission to ERMA on application 200479, October 2010

15. The consultation documents give inconsistency in the management framework as a reason for overriding local decisions. Variation in itself is no problem in a free society, and is usually valued. The fact that different areas have different rules is not a problem in itself. But those who have interests in more than one area, and may require resources additional to those that they would require if rules were uniform. It is not the variation itself that is the mischief, but possible extra work for some parties. However, that idea is not logically applied in the present case, as the proposed standard will lead to extra work in other ways. For example, each time a proposal for any kind of release is offered for consultation by the Environmental Protection Authority, local communities, including territorial local authorities, will need to review their own position to decide what local factors they need to draw to the Authority's attention. Their duty to their locality will not cease to exist. Therefore, while on the face of things, work may appear to be reduced, there is no certainty in this. There could be a perverse consequence of it being increased but in different places. Rather than reduce costs, it may simply transfer them.
16. Further, it is not consistent with the idea of a knowledge economy to simply dismiss extensive intellectual work out of hand. This work includes the work of planners, advisors, as well as the courts. It needs to be valued, and its results incorporated into national strategies.
17. Overriding local strategies may have attractions in terms of the efficiency of those businesses that operate in many areas. It will be unhelpful to the confidence in and participation in the processes of self government; in other words, unhelpful to participatory democracy. The threshold for overriding local policies should therefore be set very high.
18. Further, there is a difference between overriding local controls on GM organizations and overriding other local policies. For example, some roads managed by territorial authorities feed into roads managed by a national agency. Roading has a long history in NZ, and is well understood. GM organisms, on the other hand, have a very short and somewhat poorly managed history in NZ. So the rules for GM organisms are much more work in progress than those for many other activities. This is a qualitative difference, and needs a qualitatively different response.
19. For all the above reasons the Bio Dynamic Farming and Gardening Association submits that no national environmental standard should prevent local authorities developing their own rules to manage the effects of GM organisms. The national standard should provide a minimum that local authorities can exceed if they wish. If it is well drafted, they will not need to exceed it.



Proposed National Environmental Standard for Plantation Forestry Template for Submitters

We would like to hear your views on the proposed NES-PF.

Please feel free to use this template to prepare your submission. Once complete please email to NES-PFConsultation@mpi.govt.nz.

As stated in section 8.2 of the consultation document, your submission must include at least the following information:

- your name, postal address, phone number and, if you have one, email address
- the title of the proposed standard you are making the submission about
- whether you support or oppose the standard
- your submission, with reasons for your views
- any changes you would like made to the standard
- the decision you wish the Ministers to make.

When commenting on specific draft rules, please be as clear as possible which rule you are referring to and provide a reference e.g. to the relevant page number, heading or text.

For more information about how to make a submission, please refer to section 8 of the consultation document.

Contact details

Name:

Community & Public Health, (Dr Alistair Humphrey, Public Health Physician)

Postal address:

[Redacted]

Phone number:

[Redacted]

Email address:

[Redacted]

Are you submitting on behalf of an organisation? Yes [] No []

If yes, which organisation are you submitting on behalf of?

Canterbury District Health Board

If you are a forest owner/manager, what size of forest do you own/manage (in hectares):

NA



Privacy Act 1993

Where you provide personal information in this consultation MPI will collect the information and will only use it for the purposes of the consultation. Under the Privacy Act 1993 you have the right to request access and correction of any personal information you have provided or that MPI holds on you.

Official Information Act 1982

All submissions are subject to the Official Information Act 1982 and may be released (along with the personal details of the submitter) under the Act. If you have specific reasons for wanting to have your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment for the release of submissions if requested under the Official Information Act.

Please indicate below if you wish your personal details to be withheld:

Please withhold my personal details where submissions are made public

Please withhold my personal details in response to a request under the Official Information Act 1982

Questions for submitters

The questions for submitters that are included throughout the consultation document are provided below. We encourage you to provide comments to support your answers to the questions below.

1. Do you think section 2.1 and 2.2 of the consultation document accurately describe the problem facing plantation forestry?

Please provide comments to support your views.

No submission comment

2. Do you consider that the conditions for permitted activities will manage the adverse environmental effects of plantation forestry?

Please provide comments to support your views.



Not entirely. It is good to see that most activities need a management plan whether that be an Erosion & Sediment Control Plan or a Quarry Management Plan, or similar. It is noted that the NES for Human Drinking Water Sources can still be applied however this has its limitations. It is only likely to be activated through a resource consent process and many of the activities where a community water supply intake could be affected by forestry activities, are permitted activities. It also only applies to drinking water supplies that serve greater than 500 people so many smaller communities which may be impacted by forestry activities, will not benefit from application of the NES. CDHB would like to see that water supply intake locations are identified within the management plans for the appropriate activity and mitigation measures identified and put in place. The reason for this approach is that water treatment systems may not be designed to treat large increases in turbidity caused by forestry operations which may increase sediment levels around supply intakes.

3. Are the conditions for permitted activities clear and enforceable (see appendix 3 of the consultation document)? Can you suggest ways of making the rules clearer and more enforceable?

Please provide comments to support your views.

Some explanation of how the permitted activity conditions will be enforced, such as how a management plan will be deemed suitable, an explanation of the approval process, should be included in the document. It is noted that if the permitted activity conditions cannot be met a consent will be required. Conditions imposed should include consideration for the location of community drinking water supply intakes and mitigation measures to be taken to protect these intakes.

4. Are the matters where local authorities can retain local decision-making appropriate (summarised in Table 2 and Table 4 and provided in detail in Appendix 3 of the consultation document)?

Please provide comments to support your views.

CDHB would like to see the reference to shallow aquifer reworded to read “greater stringency is allowed in relation to quarrying activities where the activity occurs over a shallow water table (less than 30m below ground level) above an unconfined aquifer within a drinking water protection zone defined in a regional plan”. Aquifers are not uniform in their nature, regional councils are likely to have some information regarding the material covering the aquifer and its ability to exclude contaminants.

5. Will the environmental risk assessment tools (the Erosion Susceptibility Classification, the Wilding Spread Risk Calculator, and the Fish Spawning Indicator) appropriately manage environmental effects as intended (see section 3.5 of the consultation document)?

Please provide comments to support your views.



No submission comment

6. Do you have any comments about any particular activity or draft rule (see appendix 3 of the consultation document)?

Please include reference to the rule you are referring to.

Earthworks. There is a requirement under permitted activity conditions that the regional and district council must be notified at least 20 working days and no more than 60 working days before earthworks operations start. CDHB recommend that this period should allow the regional or district council the opportunity to comment on the Erosion and Sediment Control plan and require any additional measures needed to protect drinking water supply intakes.

7. Is the NES–PF the best option to meet the assessment criteria (in Box 13 of the consultation document)?

Please provide comments to support your views.

No submission comment

8. Have the expected costs and benefits of the NES-PF been adequately identified (see section 4.3 of the consultation document)?

Please provide comments to support your views.

No submission comment

9. Are there any issues that may affect the successful implementation of the NES-PF (such as decision-makers applying the permitted baseline test more frequently)?

Please provide comments to support your views.

No submission comment

10. Please describe any risks or opportunities that you consider have not been identified or addressed in the proposal.



CDHB do not believe the NES addresses the risk to community drinking water supply intakes on rivers for activities which are permitted and are not going to trigger a resource consent. CDHB believes set back distances to drinking water supply takes need to be put in place under the management plans for each activity, and include mitigation measures to ensure sediment does not impact on the water quality drawn from an intake for treatment purposes.

Alternatively if there is a drinking water take off a river within 1000m of the activity, this could be an area where greater stringency can be applied by the council.

11. Will the proposed NES-PF support regional councils to implement the NPS-FM (see section 6.1 of the consultation document)?

Please provide comments to support your views.

No submission comment

12. What resources or other implementation activities would help you to prepare for and comply with the proposed NES-PF (see section 7 of the consultation document)? How should these activities be delivered (for example, training, online modules, guidance material)?

Support the idea of template management plans which will give forestry owners some practical ways of complying with the NES.

13. Are there any other issues that you would like to raise?

The NES for Plantation Forestry is to be commended for looking to address environmental issues. There is very little however on how these environmental issues may impact on public health. CDHB would like the aforementioned recommendations to be put in place.



Submission

To: Stuart Miller
Spatial, Forestry and Land Management
Ministry for Primary Industries
Email: NES-PFConsultation@mpi.govt.nz

From: John Reid

Date: 13 August 2015

Re: NES-PF Consultation

OUR COMMENTS ON THE NATIONAL ENVIRONMENTAL STANDARD- PRODUCTION FORESTRY

1. Thank you for this opportunity to comment on the National Environmental Standard – Production Forestry (the Standard) by the Ministry for Primary Industry and Ministry for the Environment.
2. The Challenger Scallop Enhancement (Challenger) represents all scallop quota owners for SCA 7 (top of the South Island). This area includes Golden and Tasman Bay and the Marlborough Sounds. Challenger works in conjunction with our in shore finfish commercial representatives and with Fisheries Inshore NZ Ltd (FINZ).
3. Challenger scallops supports the combined submission from the Paua Industry Council, Specialty & Emerging Fisheries and NZ Rock Lobster Industry Council and the submission from Fisheries Inshore New Zealand.

Lack of consultation

4. The seafood industry is the fourth largest merchandise-export industry and should have been consulted on the development of the Standard and the risk that it imposes on the marine environment and especially when it is contrary to the Resource Management Act and local authority planning controls.
5. It is a major policy *failure* that the Ministry for Primary Industry (MPI) and Ministry for the Environment (MFE) do not recognise that other primary sectors are integrated with the terrestrial and marine environments and must be consulted. What effects occur on land can have and do have specific impact

on the marine environment especially where forestry is in near proximity to the sea, e.g. The Marlborough Sounds and the greater Tasman area.

6. Challenger recognises that forestry is an important industry in New Zealand and produces economic, social and environmental benefits. In a recent NBR article (June 29, 2015), the president of the NZ Forestry Institute, Mr James Treadwell is quoted as saying “NZ is different from other countries in how it manages its natural resources and its approach to policies relevant to the primary sector”.

Seeing the Wood from the trees.

7. This standard falls short of the mark in its consideration of other primary sectors when land use for forestry is put under the microscope. Certainly in the Treadwell statement it pre-supposes that NZ has better policies than others for the management of its forestry's.

In fact the associate minister has said (Ms Goodhew) did not consider a national forest policy to be the most appropriate way to counter the effects of forestry's investment cycle and for more certainty and consistency in policy decisions on land use. Challenger couldn't agree more and support this statement.

8. Challenger does not agree with the removal of local authorities from the planning, management, monitoring, and decision-making. It is not acceptable to have this role forfeited to a national standard that puts regional catchments and marine coastal environments at risk.
9. The Standard is seriously flawed when it suggests the lack of co-ordination between local authority definitions for remedial actions or rules warrants the development of the Standard. Rather than proposing a further layer of bureaucracy, MPI and MFE should be working with local authorities to review and align planning controls to achieve standardisation.
10. Challenger represents the commercial; sector and manages this as a single species stock and as a shared fishery with the recreational sector. We rely on the coastal marine environment and have over recent years seen the increase in sedimentation from rivers and streams, impacting on sedentary, sessile and demersal fish stocks.
11. We note from your membership list for the Stakeholder working group that the seafood sector, southern South Island local authorities or the Marlborough District Council were not members. We have not been considered when the Sounds there is a significant commercial seafood and aquaculture infrastructure that are placed at risk by this Standard.
12. Notwithstanding the effect of suspended sediment and deposition effects of sedimentation on bivalve species the reduction in access to habitat for species such as blue cod especially will have a significant impact on the sustainability of stocks and access by the customary, commercial and recreational sectors.

The blue cod fishery in the Marlborough Sounds is already under stress from fishing and will not benefit from a reduction in available habitat that is close to shore and adjacent to a number of catchment runoff areas. Habitat reduction by sedimentation and marine farming has had serious effects on scallop, oyster and natural mussel beds.

Outcome.

Challenger welcomes a cessation to the decision-making until the commercial seafood sector has been consulted and the risks fully understood by the working group and government officials.

John S R Reid
Executive Officer
Challenger Scallop Enhancement Co Ltd

s 9(2)(a)

From: Ken s 9(2)(a)
Sent: Tuesday, 11 August 2015 2:03 p.m.
To: NES PF Consultation
Cc: s 9(2)(a)
Subject: Submission for the National Environment Standards for Plantation Forestry (NES-PF) close on August 11.

Submissions to the National Environment Standards for Plantation Forestry (NES-PF) close on August 11.

We oppose the National Environment Standards for Plantation Forestry (NES-PF)

CITIZENS ENVIRONMENTAL ADVOCACY CENTRE INC'.

EAST COAST HEALTH PROJECT

In association with NHTCF, RAG and other local residents groups.

s 9(2)(a) . Email, s 9(2)(a)
SEEKING SOLUTIONS THROUGH PUBLIC AND LOCAL INPUT AND CONSULTATION

(As defined by the Court of Appeal 1992)

11th August 2015. 2pm.

Ministry for Primary Industries (MPI)

We oppose the National Environment Standards for Plantation Forestry (NES-PF)

Ken Crispin.
Director, CER Environmental monitoring Ltd. (est' 2002)
Secretary,
Citizens Environmental Advocacy Centre In'c. (CEAC In'c.)

s 9(2)(a) . s 9(2)(a)

Our response to:

The Ministry for Primary Industries (MPI) is seeking your views on the proposed subject matter of a National Environmental Standard for Plantation Forestry (NES-PF). This is a proposal to change how plantation forestry activities are managed under the Resource Management Act 1991 (RMA). If implemented, an NES-PF would replace councils' existing district and regional plan rules for managing plantation forestry. It would provide a nationally consistent approach that is responsive to local environments.

Formal consultation will begin on Wednesday 17 June 2015 and close at 5pm on Tuesday 11 August 2015. A series of public meetings, and hui will be held as part of the consultation

Our response.

Cross pollination of genetic species is allowed under this change of the act you seek.

We see this as an inherent weakness that is overlooked here and may spread country wide without guaranteed controls which are not forthcoming and impossible to regulate, so if the cross pollination occurs our entire export potential will be at risk of destruction.

GE crops are not welcomed globally and no scientific long term studies have been conducted to date due to the short time they have been developed.

We choose to err on the side of Caution as WHO does with human health so please use WHO "Precautionary Approach" and do not allow the passing of the bill changing RMA rules to allow GE forestry planting until long term studies have been conducted and then assessed to ensure that human and crop safety are assured.

Canada & Hawaii has found the destructive effects of GE cross pollination amongst their crops causing damages, so we must not make the same errors.

<http://www.greenpeace.org/international/en/press/releases/hawaiian-farmers-warn-thai-far/>

https://www.organicconsumers.org/old_articles/ge/ge_canola.php

GE Canola--A disaster on the Canadian Prairies

Frankenfoods: The damning proof
Daily Mail, September 5 2003

Canada was the cradle of the GM food revolution promising farmers vast crops and untold profits. Seven years on, that dream has become a nightmare from which there is now no escape

The soft blue fields of flax that bloom only early in the morning, spread out like a lake against the vast prairies of Saskatchewan in Canada. Neighbouring crops of yellow oilseed rape dazzle in the early light and an eagle glides across the pristine sky. Nature could not appear more peacefully at work and few images could be more misleading.

These vast plains have been used as nothing short of a giant laboratory by international biotechnology companies. For it is here that the corporate 'scientists' have sown the seeds of their farming revolution in a bid to create a multi-billion-dollar global industry pushing genetically modified (GM) food to the world.

At first, Canada's farmers embraced the new technology. They were told it would bring crops with yields that were bigger and cheaper to produce than ever before. Times were hard, and they were eager for a miracle. But less than a decade later, they are reaping a terrible legacy.

Their produce is rejected in the global marketplace, costs are rising, and the livelihood of organic farmers and those who use conventional techniques is threatened by the spectre of GM contamination. GM seed is now spilling across 60 million acres of prime farmland.

At the same time, highly toxic chemicals - also sold at a huge profit by the biotech giants - have had to be reintroduced to contain the growth of 'superweeds'. These are the result of wild plants becoming infected with herbicide resistant genes from GM crops.

(ABRIDGED)

Background

1. Soil has so far received little attention in the assessment of the potential effects GE crops. There is an urgent need to study microbial populations and communities to further knowledge on how factors such as exudation of toxins from GE crops affect soil microbial ecology and to understand better the mechanisms and frequency of horizontal gene transfer.
2. Genetically engineered (GE) crops pose threats to soil health that are very poorly understood. These include the increased use of agro-chemicals the crops have been engineered to tolerate. The large scale growing of e.g. Roundup tolerant GE crops such as Roundup Ready (RR) canola, soybean, maize and eventually RR wheat in the future lead to a massive increased use of this agro-chemical that may have profound impacts on the ecology of soil microorganisms communities, soil health and fertility. And above all, genetic engineering has the capacity for surprises and the unexpected so the effects of growing GE plants on soil health cannot be predicted with any certainty.
3. The report from the Royal Society of Canada (2001) entitled '*Elements of Precaution: Recommendations for the Regulation of Food Biotechnology in Canada*' recognised, among many other points, that: 'Soils are arguably the most complex habitats within the biosphere. The soil environment is the focus of many concerns associated with the potential environmental effects of transgenic plants and animals' (p. 108); 'transgenic corn cultivar NK4640Bt expressing the *Bt* toxin gene cry1Ab exudes some of the toxin protein from the root into the surrounding rhizosphere and soil (p. 109). The Royal Society report made four recommendations on this issue (6.1 to 6.4) including the need for 'exhaustive and long-term testing for [the] ecological effects' of GE crop on soil (6.2).
4. A US National Research Council report entitled '*Environmental Effects of Transgenic Plants* (2002) raises similar concerns in respect to soil organisms (p. 71) and on the effects of the *Bt* toxin on soils (p. 163). The US NRC report recommended more research in order to gain better understanding of the effects of GE crops on non-target organisms like soil organisms (p. 255).
5. There is a relatively limited number of independent and peer-reviewed scientific publications on the impacts on GE crops on soil. They indicates that scientists know very little on this issue and what we know should not be considered, by government, conclusive enough to authorise the release of GE crops in the environment. (see the Reference section below and the attached Greenpeace Briefing on '*Environmental Dangers of Insect Resistant Bt crops* (December 2002, 4 pages)*.
6. Recent peer-reviewed scientific articles have confirmed and/or raised further concerns about the effects of GE crops on soil. We can mention, among others, the following recent articles:
 - 'Degradation of the Cry1Ab protein within transgenic *Bacillus thuringiensis* corn tissue in the field' (Zwahlen *et al.*, 2003a). This scientific article shows that it takes up to 200 days for the Cry1Ab protein to degrade in soil and therefore extended pre- and post-commercial monitoring are necessary to assess the long-term impact of *Bt* toxin in transgenic plant residues on soil organisms. According to the US Environmental Protection Agency's scientific advisory panel, *Bt* proteins 'are likely to be present in the rhizosphere soil not only throughout the growth of the crop, but perhaps long after the crop is harvested' up to 234 days. (US EPA (2001) Report from the FIFRA Scientific Advisory Panel Meeting, October 18-20 on *Bt* Plant-Pesticides Risk and Benefit Assessment);
 - 'Monitoring the spread of recombinant DNA from field plots with transgenic sugar beet plants by PCR and natural transformation of *Pseudomonas stutzeri*' (Meier & Wackernagel, 2003). This article shows that DNA was found in soil at a distance of 50 metres from pollen-producing plants surrounded by a strip with hemp plants as a containment regime. It also shows that DNA can persist in the field plot for at least a year;

- 'Effects of transgenic *Bt* corn litter of the earthworm *Lumbricus terrestris*' (Zwahlen et al., 2003b). This article shows that in laboratory condition, adult earthworms feeding on transgenic *Bt* corn lost 18% of their initial weight. This suggests that there may be long-term toxic effects on earthworms. Already in 2001, it has been shown that both earthworms and collembola (other small soil-dwelling invertebrates) can be affected by *Bt* crops (Marvier, 2001).

Liabilities and economics of transgenic crops

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Two growing patterns threaten current crop production practices in intensive agriculture: the cross-pollination of genetically modified (GM) crop varieties with conventional varieties, and the germination of volunteer GM seeds (seeds dropped, blown, or inadvertently planted). Cross-pollination of GM crops with crop varieties destined for non-GM, GM-free, or "organic" niche markets is of great concern to the corresponding producers. The growth of volunteer GM seeds can be controlled chemically, but at an added cost for producers. Both of these problems must be rapidly addressed to ensure that the adoption rate of GM crops remains high and that the commercialization of future varieties is not jeopardized.

Looming challenges

The first generation of GM crop products is poised to begin its eighth year of production in Canada, the United States, and several other nations. The large majority of these food products are derived from three leading crops in North America: canola (rapeseed), corn, and soybeans. For the most part, GM products entered the marketplace with minimal new regulation. The atmosphere surrounding the anticipated introduction of next-generation GM crops with novel uses is likely to be vastly different¹. Next-generation crops will face restructured regulatory systems, radically altered marketplaces, and new technology options².

Currently, the agrochemical industry faces two major challenges if it is to realize the potential of GM crops in the food, health, industrial, and environmental markets¹. On the one hand, to pay for large development and commercialization costs, investors and firms that have funded GM-related technologies must capture a share of the return on that investment. On the other hand, corporations and regulators must also ensure that the new traits and varieties created do not impose risks or liabilities that offset (or swamp) the value generated. At the farm level, in particular, there is significant risk of profit reduction and for co-mingling of plants with new traits with other crops, creating potential new liabilities.

In general, first-generation, "input-trait" GM crops (those traits with purely agronomic benefits) have been judged by regulators as substantially equivalent to existing varieties and have been allowed to be introduced into many of the existing commodity food systems without any

segregation. Many of these GM crops have the potential to cross-pollinate with other compatible crops of the same species or with weedy relatives, or to become volunteers in other crops, creating potential new environmental or crop–weed management risks that may offset the crops' benefits or create quality problems and new liabilities in other crops or the food system. Second-generation crops, which involve output modifications (traits with health and nutritional benefits), will likely only be viable if their purity or quality can be assured, which is problematic given the difficulty of attaining gene containment. Third-generation crops with new industrial, nutraceutical, or pharmaceutical properties will likely require effective gene control systems or simply will not be permitted to be released.

The problem with current intellectual property (IP) protection is that it does not fully control the use of transgenes once they are expressed in seed. Most GM crops can be propagated in subsequent years with seed from previous years. Although regulations and private contracts attempt to manage that activity, many in the industry note that these contracts are far from being enforceable. Industry sources estimate that in 2000 in the Saskatchewan region of Canada alone, more than 300,000 acres of wheat were planted with unregistered or obsolete plant varieties. Exports by volume are composed of some varieties that have not been, or are no longer, approved for release in Canada. Regionally across western Canada, wheat exports contain 0.6–2.4% of these unregistered or obsolete varieties³. Furthermore, Monsanto (St. Louis, MO) officials have estimated that without technology use agreements, they would lose as much as 25% of the royalty payments for "Roundup Ready" crops without hybrids; even with technology use agreements, they estimate that 10% of the acreage planted with Roundup Ready crops are not covered by agreements and do not involve royalty payments.

Fundamentally, the allocation of the benefits and management of these risks will need to be brought about by a combination of institutional and biological controls. The public sector will continue to have a say on when, where, and how GM crops are introduced and propagated, as well as in adjudicating property rights. Meanwhile, private firms will likely have a major role in managing and enforcing contracts and systems to capture their benefits and to manage the risks and liabilities of these new crops. Although regulation and market pressure may prevent some gene transfers, many genes are likely to continue to undergo dispersal and survival beyond a season⁴. Regardless of how effective regulations or contracts are, some producers (either deliberately or inadvertently) will misappropriate these new technologies, diluting the benefits and creating potential new risks and liabilities. Furthermore, even if all "cheating" (producers' illegal use of technology protected in a patent) could be controlled, many plant species are promiscuous sexually, creating natural gene flow to related species.

The liability cost of genes from GM crops "escaping and going rogue," or co-mingling and adversely affecting quality of other plant-based products, is significant. Four key liability issues can be identified and at least partially quantified: first, the potential for volunteer GM seed (seed inadvertently left in a field after harvest) to germinate the following year(s); second, the potential for pollen flow from GM crops to non-GM crops; third, the potential for co-mingling of GM and non-GM crops (this could jeopardize the value both of the crop in some markets and of downstream foods, products, or product lines if transgenes remain undetected before processing); and fourth, the potential for environmental risks associated with uncontrolled gene flow from GM varieties into related plants to impede export of GM varieties to nations that do or do not want to adopt the new technologies.

Gene flow and containment

Gene flow from GM plants creates liabilities in two ways. First, through conventional agricultural harvest practices, some seeds are left behind that germinate in the spring and, depending on the crop planted, may create a tolerance-level liability. The second is that pollen of a GM plant could fertilize a non-transgenic or "conventional" plant and the resulting hybrid seed might possess the trait for that transgene.

There is no harvesting system in place in the world that is capable of containing all the seeds produced on a plot of land. Many factors can combine to result in a large number of seeds (>103/acre) remaining in fields. These seeds germinate during planting in the following season, and, in the case of GM strains, the resulting volunteer plants must be controlled. In canola, for example, spraying with 2,4-dichlorophenoxyacetic acid (2,4-D) controls this problem. This chemical application means an additional cost to the producer of 1.50–2.00 Canadian dollars (C\$) per acre, however, and is not an acceptable option for organic producers. The introduction of herbicide-tolerant wheat (wheat that would survive being sprayed with a specific chemical that would normally kill its herbicide-sensitive ancestor) is expected to make controlling volunteers even more difficult, as 2,4-D does not control volunteer wheat, and thus producers will have to use a more expensive chemical to control herbicide-tolerant wheat volunteers. Officials at Monsanto have suggested that the most cost-effective method to control volunteer GM wheat will be to tank-mix and apply the herbicides Roundup and Assure at an estimated cost of C\$6.19 per acre. This method of controlling volunteer GM wheat is more than triple the cost of volunteer GM canola control. Officials with Aventis (Research Triangle Park, NC) suggest that all corn chemicals, with the exception of Liberty, can be used to control volunteer StarLink GM corn. The application rates of these chemicals differ and therefore the costs vary.

A recent study prepared for the Canola Council of Canada (Winnipeg, MB) surveyed 650 western Canadian canola growers on numerous issues, one of which was management of volunteer canola⁵. Half of the producers surveyed grew transgenic herbicide-tolerant canola and half grew non-GM canola. Of the producers planting transgenic herbicide-tolerant canola in 2000, 61% said that the difficulty of managing volunteer transgenic herbicide-tolerant canola was about the same as that of volunteer conventional canola. Interestingly, 16% said that managing volunteer transgenic herbicide-tolerant canola was easier than managing conventional canola varieties. The remaining 23% said that it was more difficult to manage volunteer transgenic herbicide-tolerant canola.

Cross-pollination is an issue of great importance to commercial agriculture, yet for some crops only minimal literature is available on this subject. For example, the most recent research conducted on out-crossing rates with wheat was carried out in Saskatchewan in the 1930s⁶. This has resulted in a research gap of over 60 years, and studies presently underway^{7, 8} are challenging the standards currently in place to prevent wheat cross-pollination. Following the publication of Losey's⁹ controversial study in *Nature*, which claimed that GM corn pollen was toxic to monarch butterflies, numerous other studies¹⁰⁻¹⁵ were initiated, many of which concluded that 90% of corn pollen is deposited within five meters of the edge of cornfields. Canola pollen, however, is dispersed over a more varying range¹⁶, and in one instance has been traced to a distance of 25 km (B. Kennedy, personal communication). For additional information on gene flow in other GM crop varieties, see Eastham and Sweet's¹⁷ recent European study on gene flow through pollen transfer.

It is important to emphasize that the range and timing of pollen dispersal is specific for crop type. For example, canola is frequently an open-pollinating crop that is pollinated by wind or vector insects (such as bees). Herbicide-tolerant varieties can cross-pollinate with each other, with non-transgenic or herbicide-sensitive varieties (such as Westar), and with weedy relatives (such as various mustard plants)¹⁸⁻²⁰. This has resulted in cross-pollinated hybrids that are resistant to more than one chemical. Other permutations of crossbreeding of GM and non-GM crops under winter survival rates can be seen in modified sugar beets⁴. In 1999, the first triple-resistant canola was discovered in Alberta²¹. On testing, these plants were found to be resistant to the herbicides Roundup, Liberty, and Pursuit by trait tests and genetic analysis for the recombinant genes. Although many in the canola industry had predicted that this would occur eventually, this triple-resistant hybrid was created by variety cross-pollination in just two years. Though resistant to herbicides, the hybrid variety is still susceptible to 2,4-D and can be controlled. The concern among many producers is that other crops, such as wheat, may already have developed resistance to some herbicides, making it more difficult to control cross-pollinated weeds or volunteers, so

that efforts to do this may be extremely expensive or all but impossible (see "Answers blowing in the wind").

Because canola, particularly the *Brassica rapa* variety, is an open-pollinating crop, there is considerable concern about canola genes escaping into related wild species. Technically, *Brassica napus* (also canola) can self-pollinate, but frequently up to as much as 50% of its pollen is dispersed. Mayer and Furtan²² estimate that any infestation of herbicide-resistant wild mustard above four plants per square meter would reduce the benefits of transgenic herbicide-tolerant canola to below zero. There is already significant evidence that some weeds are developing resistance to one or more of the herbicides involved in the control of weeds in canola-growing areas.

Recent research in France has examined the potential for genes from canola to flow into wild mustard, hoary mustard, and wild radish²³. This study found the average rates of out-crossing to be 0.18% for wild mustard, 1.9% for hoary mustard, and 23.8% for wild radish. Collaborative research between groups in Canada and France²⁴ has also shown that cross-pollination between canola and wild mustard is virtually nonexistent. The study examined 2.9 million wild mustard seeds and concluded that "no hybrid was found [A]ctual cross-fertilization appeared very low, below one per million"²⁴. A study on potential hybridization between canola and hoary mustard²⁵ found that although it was technically possible, the hoary mustard seed had to be imported from France in order for the study to be carried out in Canada, as hoary mustard cannot survive the winter season on the Canadian prairies. Although wild radish is a weed in the Maritimes region of Canada (with only one sighting in Alberta), given the limited canola production there, the potential for gene escape into wild radish was judged to be remote at best.

The inability to manage gene flow has had disastrous consequences in at least two instances in Europe. In May 1999, the Swiss Department of Agriculture (Bern, Switzerland) and the district president of Baden–Württemberg (Tubingen, Germany) announced that Pioneer Hi-Bred's (Des Moines, IA) non-GM corn seed varieties, Ulla and Benicia, had been found, on the basis of PCR tests, to be "contaminated" with foreign genes²⁶. As a result, many cornfields were burnt or destroyed and Swiss seed importer Eric Schweizer Samen AG (Winterthur, Switzerland) had to offer payments of 700 Swiss Francs per hectare to compensate affected farmers.

Later, in the spring of 2000, it was announced that the European Union (EU) had found a breeder's lot of canola seed imported by Advanta (Winnipeg, MB) that contained 0.4% unapproved GM traits. Advanta quickly determined that the unexpected presence of GM canola was caused by gene flow from GM foundation seeds that had been planted in a neighboring field. Canadian seed growers had followed isolation rules, but the genes still moved into the conventional foundation seed. Although the total acreage of the seed planted in most countries was insignificant (Sweden and Germany had 300 hectares and France had 600 hectares), the outrage expressed by environmental groups, the media, and some government officials surprised many in the Canadian canola industry. Although many termed the EU response an "over-reaction" and felt that the Europeans were reacting "hysterically," this incident highlights the need for both technological and regulatory solutions to prevent recurrence of similar incidents. The European countries faced a cost in dealing with this problem: France ordered all 600 hectares to be plowed down and Sweden allowed the canola to be harvested but prohibited it from entering the domestic or European market.

Containment regulations can also make adoption of new crops prohibitive. Many producers only adopt new crop varieties after watching a neighbor's success. A common practice for producers in western Canada is to seed 80 acres of a new variety as a test before fully adopting it. This field size represents roughly 10% of the average farm's 870 total cultivated acres²⁷. When Monsanto and AgrEvo (now Aventis) introduced their GM herbicide-tolerant canola varieties, they did so with 80-acre production contracts, as they believed this was the most economical method for producers to evaluate the new technology. The increased use of buffer zones at current or, in future,

expanded dimensions to control cross-pollination could drastically reduce the adoption rate of new-technology crops. If the buffer zone of 660 feet for Aventis' Starlink corn is used as a base, this entirely removes the option of 80-acre production contracts, as the buffer zone would consume the entire 80 acres. Moving to 160-acre production contracts is still very restrictive, as 76% of the land would be consumed in the buffer zone. Producers would be required to plant 40 acres in the center of a quarter section, a sub-optimal evaluation size. The remaining 120 acres in a quarter section would yield a sub-optimal return. Based on this, producers may not want to devote nearly 20% of total cultivated acres to testing new varieties.

Labeling and discrimination

Given these uncertainties, it seems inevitable that volunteer plants and cross-pollinated varieties will be co-mingled in the commodity food system. Consumer acceptance of GM plant materials in commercial products is continually changing. Regardless of the market, surveys continue to show substantial and rising consumer preferences for organic and non-GM crops or plant products. Consumers want to know what they are eating and they want to discriminate (despite the lack of a scientific basis for such discrimination) between organic, GM-free, and GM foods and ingredients. In response, some regulatory authorities have adopted process-based (rather than product-based) labeling rules to enforce segregation of GM and GM-free produce on the market²⁸. As several recent analyses of organic and non-GM products^{29, 30} have revealed the presence of GM material, control of GM cross-pollination and volunteer GM seed will be essential to foster consumer trust in products labeled non-GM and organic.

Co-mingling of GM and non-GM seeds has already imposed significant costs on the food industry. Perhaps the best-known case relates to Aventis's StarLink corn. This variety was approved for use in the United States as an animal feed and was required to be produced in segregated areas, surrounded by a buffer crop, which also was supposed to be marketed as feed. To make a long story short, the GM trait in the feed corn was found to have entered the human food chain, contaminating an estimated 10% of all foods containing corn meal. The costs of containing and removing the StarLink variety have been huge. Aventis has budgeted more than \$1 billion to compensate producers and pay for the logistics of withdrawing StarLink, and many food manufacturers, such as Taco Bell (Irvine, CA), have had to recall whole product lines that have been contaminated.

Although the StarLink contamination was an extreme case, it does not seem to have destroyed public confidence in the processed corn products. There are, however, examples where contaminations have jeopardized entire product lines. The introduction of transgenic herbicide-tolerant canola in western Canada destroyed the growing, albeit limited, market for organic canola. Because of the likelihood of out-crossing and pollen flow, buyers have shown increased reluctance to buy organically produced western Canadian canola because it might contain transgenes, which would violate the voluntary organic growers association standards in Canada. There is little authoritative data on the volumes or prices of western Canadian organic canola, but some ballpark estimates are possible using industry sources (D. Grier, personal communication). A conservative estimate would put the size of the market at less than 2% of the total canola market, equal to about 20,000 tons of organic canola traded annually, at a 100% price premium to conventional oil. This lost market amounts to between C\$100,000 and C\$200,000 annually, but the calculation probably underestimates the opportunity cost of a market that many thought had significant potential for growth over this period.

In a related case, in 1999 the EU detected the presence of a protein in a shipment of honey from Canada that originated from pollen with an unapproved GM traits and rejected the shipment. After honey is filtered, it contains 0.1% pollen, which falls well under the EU ban on GM products that contain more than 1% GM content, but in this case the traits found were not yet approved for consumption in the EU. Honey production in western Canada relies in part on honeybees collecting nectar from canola. As a result, honey shipments to the EU dropped \$4.8 million

between 1998 and 2000 (or by 55%), to the lowest level in more than ten years. Meanwhile, total shipments to all markets rose by 5% over the same period³¹. Recently, the EU banned Canadian honey because of the inability of Canadian honey producers to guarantee the absence of pollen from GM plants not yet approved in the EU³². This action by the EU has driven down domestic honey prices in Canada and cost the industry a market that has on average earned more than C\$5.3 million over the past decade.

It is not clear yet who will bear the ultimate liability for cross-contaminations or co-mingling. The StarLink incident spawned numerous lawsuits by producers, producer organizations, and various states (such as Missouri) against Aventis in an attempt to seek compensation for depressed corn prices that they claim resulted from lost foreign sales. Similarly, the pending counter-suit in Canada by Percy Schmeiser against Monsanto and the Saskatchewan Organic Directorate lawsuit³³ argue that because Monsanto owns the IP, it also should be liable for any lost sales due to contamination.

IP and export issues

Finally, many countries have ineffective IP protection mechanisms, reducing their attractiveness as markets for new technologies and causing them to lag in the adoption of new traits and varieties. In the canola sector, few companies export new cultivars to major growing regions in China or India because of their lack of effective IP protections. As a result, about half of canola producers worldwide are unable to access the latest technologies, which is one of the contributing factors to lower yields in those areas. For instance, despite significant subsidies for irrigation and fertilizer, India and China post average canola crop yields almost 40% and 3% lower than Canada's, respectively.

Finding a more effective IP protection mechanism that is not dependent on institutions that in many of these countries are very weak might improve the diffusion of new cultivars and technologies. If developing-world yields were to rise even 5% as a result of the introduction of new varieties, total canola production there would rise by about one million tons, worth approximately \$225 million to those producers and their markets. In brief, plants and people cannot be trusted to do what markets require. As a result, genes move, creating co-mingled traits in the food system and liabilities in the transfer of technologies between markets.

Control of liabilities

Institutional control, biological control, or a combination of both is required to manage the risks of GM crops. The public sector evaluates new GM crops for safety considerations, examining the new products against known products to determine whether they bring any new risks related to human consumption, the environment, and livestock (if used as feed). If a new GM variety is determined to be substantially equivalent, it will usually be approved for release. Most regulators also have some ability to examine risks once products enter the market and can intervene if an unexpected risk is detected. Although some of these products might be released only conditionally (for example, for production in a specified area or under conditions of isolation or segregation from food crops), most will be released without condition. In both cases, the private sector is generally responsible for managing the risks of new GM products once they enter the market. They use a combination of contracts, testing, and auditing to ensure compliance.

Although these instruments are very important, they cannot keep all the risks in check—in the field, genes are likely to be transferred and/or transported. Regardless of how effective regulations or contracts are, some actors will either deliberately or inadvertently misuse new technologies, creating potential new risks and liabilities. More importantly, however, many plant species are promiscuous sexually, creating natural gene flows (transfers and transports). In short, new biological control mechanisms are needed to manage many of the risks and liabilities of GM crops^{1, 34} (see p. 581).

The use of sterile seeds is well established—ancient Egyptians and Greeks produced seedless grapes circa 3000 BC. However, the potential of "terminator" technology to produce sterile seeds is highly controversial. Developing-world development agencies, governments, and environmental non-governmental organizations (NGOs) all have expressed concern that terminator technology could threaten landrace varieties, increase corporate concentration, reduce biological diversity, and ultimately destabilize agroeconomies of less-developed countries³⁵. In October 1999, mounting pressure from these and other opponents forced Robert Shapiro, then Monsanto's CEO, to announce: "We are making a public commitment not to commercialize sterile seed technologies, such as the one dubbed 'terminator'"³⁶.

As Monsanto's initial interest in sterility technology was prompted not by environmental concerns, but by the need to protect its intellectual property and prevent "brown bagging," convincing opponents that terminator technology is a potential solution to gene flow is likely to be an uphill struggle. It is interesting to note, however, that Monsanto's decision to halt development has not discouraged other companies from investigating sterile-seed technology: on May 8, 2001, for example, Syngenta received a patent for controlling plant fertility³⁷.

From a scientific perspective, such genetic use-restriction technologies (GURTs) as terminator need to be reassessed, as they clearly provide advantages. First, they can act as built-in safety mechanisms to prevent the escape or spread of potentially harmful traits (such as herbicide tolerance) from new GM crops. And second, they can reduce product liabilities assigned to the seed growers by preventing contamination through co-mingling with non-GM crops.

Conclusions

Irrespective of scientific rationale, current political and societal pressures are likely to lead to more stringent regulation of future GM varieties. In effect, regulators will be faced with the choice of either outright rejection or imposition of regulations for detailed production and market segregation. Outright rejection of new GM crops would be excessive given the level of risk and potential benefits. What's more, if more stringent risk-management measures are introduced, they could jeopardize future R&D investments in GM products. Capital is one of the most liquid commodities in today's marketplace and, by banning GM products, countries (and the global industry) risk losing not only investment capital, but R&D-intensive firms as well.

The introduction of the first wave of GM products went largely unnoticed by consumers and much of the food industry. This pattern cannot (and will not) be repeated for second- or third-generation products. As noted above, the costs of denying the risks are potentially very high, ranging from a net present value of C\$1–2 million lost sales in the organic canola market to the \$1 billion cost of the StarLink failure.

Similarly, control mechanisms are not cheap. Often, regulatory responses, whether national or international, can cost in the millions for technologies that are widely dispersed, with both high fixed and variable costs. One potential advantage of GURTs such as terminator is that although they are expensive to develop, the overall cost may be as low as \$250,000 per new variety released³⁵. As this would add only about 10% to the price of developing a new commercial variety (and many firms report at least a 10% loss on their return due to incomplete enforcement of intellectual property), this option may be substantially more effective than other approaches.

Many of the risks and potential liabilities of GM crops are only partially manageable by public and private institutions. Although institutional costs to manage risks are high, the cost of failure is even higher. Ultimately, an inability to manage the risks and control the liabilities may reduce net returns on investments so much that GM technology may become infeasible.

To realize the benefits of GM crops while minimizing risks, changed attitudes are required in both government and industry. On the institutional side, governments can and should improve the

regulatory oversight of GM crops, aggressively pursuing the use of refugia, contract registration, regional regulation, and mandatory crop rotations and audits. The agbiotech industry must also take its responsibilities more seriously. The introduction of first-generation GM products was directed at getting producers to adopt the technology, and many of these producers do not seem to have had a strong appreciation of the importance of managing and containing the technology. This must be addressed by educating producers and increased benefit sharing by private firms.

GM crops are currently affecting producers and exporters of not only edible crops and oilseeds, but other products as well. Therefore some form of control mechanism is needed. To maintain the current situation will only result in higher costs for seed development companies and producers in the long run. With the socio-economic distortions created by subsidies on the decline, there will be some affects on trade and hence on producers³⁴. Regulators and industry officials must examine the effects on the market of commercial release of a control mechanism for GM crops, compared with the results of leaving the situation as it is, with an expected rise in litigation costs. Although the initial cost of introducing a control mechanism may be high, the long-term benefits of such a technology may be sufficient to justify commercialization.

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11 August 2015

Dear Minister M.P.I

Cc Stuart Miller

Ministry for Primary Industry

P.O Box 2526

Wellington 6140

To Whom It concerns:

Please note we as a family have lived with a philosophy of sustainable living since 1999. Our land is managed using holistic management and our business is conducted employing the tools of environmental awareness, ethical employment and enhancement of natural resources.

After 14 years we now reside to the fact that as a family we are unable to reach our goals of sustainable evolution in land management and lifestyle due the lagging and misinformation promoted as a Nation to what it means to be sustainable.

Self-justification, professional hypercritics and compliance at all personal and business level, along with promoted illusions of what successful people are, dominate societies ability to focus on sustainability and resource enhancement

Please consider my submission presented below

Shane Hyde

Eco-land Ltd

(Longest serving Sustainable Land Management & Design Company in N.Z)

s 9(2)(a)

Phone s 9(2)(a)

Email s 9(2)(a)

www.ecoland.co.nz

Submission: M.P.I" Proposed NES for Plantation forestry "

11 August 2015

Opposing the standards:

Nationally applied standards limit sustainable development & socially powered community growth, environmentally undermine regional ethic and promotes G.E generated pollution.

Statement: "I do not wish to be burdened financially, physically or legally by the promoted M.P.I National Environmental Standard for plantation forestry. It **FAILS** to promote sustainable land management as required within section 5 of the R.M.A and fails to adequately protect social, environmental, economical values of citizens within diverse regions of N.Z. It fails to provide the flexibility to enable intrinsic values of these communities to be maintained." (Shane Hyde, Eco-lands Farm, Northland, N.Z) *Actively building business around sustainable choices and design* Eco-land Ltd

Based on the following grounds:

- National standards limit individual regional development
- National standards hinder evolution of management
- National standards create platforms for specialist professionals
- National standard promoted provides opportunity to regionally pollute
- National standard compliance is not regional diverse
- National standard for plantation forestry locks growers into further regulatory boundaries
- National standards remove existing property rights

- National standards limit individual regional development

Regions already have developed regionally specific plans. Individual wetland catchment management is the most sustainable form of land management. This needs to be adaptable to each regional situation and a national standard does not have the flexibility to maintain manage land use at this level.

- National standards hinder evolution of management

Current National standards such as MPI Indigenous forest standards, D.O.C Standards are slow to adapt to new management concepts. Our ability to evolve management quickly is the key to improving land management sustainability.

- National standards create platforms for specialist professionals

National standards is based on science proven strategies, most truly sustainable land management is done holistically and is inclusive of scientific findings. "Science is like a draft horse with blinkers on" Historic regional knowledge is not applied to a national standard. Individuals will not be able to economically afford specialist advice, as the case with

Indigenous forest planning, as the resource will not maintain the economic burden of require research, regulation and compliance.

- National standard promoted provides opportunity to regionally pollute

Minimum standards erode at communities abilities to enhance their living environments. Standards are effectively a default setting in which business can grow business from. Socially a National Standard supports legally irresponsible regional behaviour

- National standard compliance is not regional diverse

Each region already has planning and management systems in place addressing regionally specific conditions and social importance's. A National standard creates a legal platform that has ability to undermine other regional specific activities. Creation of a national standard based on historic regional models is not adaptive to environmental changes such as climate change, social evolution and economic demand.

- National standard for plantation forestry locks growers into further regulatory boundaries

Why would a forester wish to accept additional controls on land management? Limiting their land use opportunities and restrict the holistic management with added financial requirements of plans that can become out dated quickly due economy or social value changes.

- National standards remove existing property rights

1. I do not wish to defer or erode my existing property rights.
2. I wish to maintain my ability, as small scale forester, to grow and harvest both planted and management enhanced forests with in our privately owned land boundaries.
3. I do not want or land to be locked into singular land management classification
4. I do not wish our operations to be contaminated by legally sponsored unsympathetic technology release that has no accountable for pollution and economic disadvantage.
5. I do not want my market advantage to be undermined by business focused on economies of scale that operate without local environmental and social responsibility.
6. I wish policy makers embraced sustainable from a new perspective: living as an individual, as a catchment, as a region, as a nation then as an economy!
7. Pollution needs to be addressed at source and not deferred. Accountability needs to be legally directed at emitters and socially directed at consumers.
8. Land management should not carry burden of either industry or social complacency.

9. Carbon foot print is only a smoke screen for other environmentally accumulative emissions such as dioxin and potentially G.E....
10. I do not wish to be burden further by hypocrites promoting policy. A general lacking of understanding towards the meaning of, OR GENERAL UNWILLINGNESS TO PARTICIPATE IN, sustainability at a personal level leads to the development of and promotion of policies such as this National Environmental Standards for plantation forestry.
11. The promotion of plantation forestry in itself is unsustainable activity as nature offers the most sustainable form of forestry through natural regeneration. Physically planted trees are the only plants addressed within the NES. No inclusion of managed regeneration. No inclusion of indigenous forests.
12. A minimum national standard for forestry as a whole would be proactive providing it be a base from which Regional Councils can build on and providing it does not provide a legal platform for business to exploit or erode a regions powers to maintain its regionally identified diversity and culture.
13. A preferably outcome would be socially driven, regionally specific policy administered by a local Governance of Ministries such as D.O.C , MPI, Health, Welfare..... this would give localised mandate to resolve local issues and gain advantage of locally unique advantages or diversity. An example is Northlands abundance of regenerative totara trees that's economic opportunity is frozen through a MPI "National standard" Indigenous Forest Act.
14. I do not wish to be burdened financially, physically or legally by the promoted M.P.I National Environmental Standard for plantation forestry as it does not promote sustainable land management as required within section 5 of the R.M.A. It fails to adequately protect social, environmental, economical values of citizens within diverse regions and fails to provide the flexibility that enable intrinsic values of these communities to be maintained.

Shane Hyde

Eco-land Ltd

(Longest serving Sustainable Land Management & Design Company in N.Z)

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N.Z Herald

Letter to the Editor

5 07 2015

G.E trees

Current pine production is environmental non sustainable with rotation duration of between 20-30 years. Little value is added to these crops grown with intent to provide localised employment. Reality is quite the opposite. Land tied up for longer periods with community collapse due declined permanent employment opportunity. Contractors from abroad contracted for planting, pruning and harvest due scale and operation timing.

European countries lead us by example not driven by quantity but quality and environmental best practice. Communities have permanent foresters working the individual valley catchments. The wood being processed in local sawmills supplying the village with its needs and surplus turned into furniture or sent to city markets. Yes trees grow slower but the value is higher the progressive harvest damage is limited and is spread across 100 years. Our native forest species could provide this!

Our pine forestry model see's the total collapse of the ecosystem and disruption of the soil 3-4 times within the same 100 years yielding a return value near similar. Our scientists and Scion researchers wish to encourage faster rotations of G.E trees.

New Zealand is a country created by many generations of pioneers of many different cultures. These combined people fought hand in hand to retain democratic rights and individuality. In my generation I have witnessed this pride be eroded by debt, profession greed and social structure collapse. Many are without time to participate in community and are disempowered to be politically aware.

Why is our democratically elected so dedicated to pollute our Island regardless the "majority voice" in the name of unproven science and the buttering of the self-interest of international investor's? Once polluted we lose an enormous marketing opportunity "G.E free" such a loss to a country in perfect isolation for individual gain could be viewed as deliberate treason.....

Shane Hyde

Eco-land Ltd

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

From: Shane Hyde [REDACTED]
Sent: Monday, 6 July 2015 6:05 p.m.
To: [REDACTED]
Subject: Disappointment with your Ministry

Hi [REDACTED]

It is appalling that sustainable indigenous forestry land owners are held to ransom with regulations and compliance yet the same Ministry promotes technology that has potential to destroy the current marketing opportunity of being "G.E free" with unproven potentially polluting gene technology.

What is appalling is the fact that my future markets are being destroyed by a Government department that is supposed to promote and enable sustainable resource use.....environment and social outcomes

Regards
Shane



South Island Eel Industry Association

Eel Enhancement Co. Ltd.

Representing the North Island Eel Industry

Attention Stuart Miller, Spatial, Forestry and Land Management,

Ministry for Primary Industries,

PO Box 2526,

Wellington 6140

11th August 2015

Submission on: National Environmental Standard – Production Forestry, Consultation Document

This submission has been tendered by the South Island Eel Industry Association Inc (SIEIA), and the Eel Enhancement Company Ltd (EECo). The name and address for service is:

Attn: Bill Chisholm, Chisholm Associates, [REDACTED]

Ph [REDACTED], email [REDACTED]

If a hearing is necessary, **we would like to be heard in support of this submission.**

EECo acts on behalf of the commercial eel quota owners in the North Island. EECo works for optimum fishery management, utilization and enhancement (such as to utilize otherwise-wasted Karapiro elvers to enhance the Waikato Eel resource for all) and we also work for good environmental management (e.g. re; abstraction, damming, flood control works, water quality, discharges, fish passage) affecting fisheries resources.

SIEIA represents commercial eel fishermen who utilise the eel resource in the South Island. Our members comprise the majority of eel quota and fishing permit holders, who take the majority of the shortfin and longfin eel catch in the South Island. SIEIA has a long history of advocating for the protection and enhancement of freshwaters in the South Island.

On behalf of New Zealand's commercial eel fishers, we make this submission to the "National Environmental Standard – Production Forestry, Consultation Document", (hereafter referred to as the Proposal).

Submission

As a general comment, we are unhappy with the low level of consultation with our organizations. We constantly make MPI aware of our concerns regarding water quality, and yet no direct communication has ever occurred with us, despite this Proposal being developed

over the last 5 years. At no time were we notified of any of the public consultation meetings, and at no time have we been approached for input. If we had been involved at the early planning stage, then many of the poor planning choices outlined in the Proposal would not have appeared.

We are mindful that this process is now well-advanced. Prior to it proceeding any further, we request to be fully involved in any meetings which may be formed to further develop the Proposal.

Furthermore, we endorse the submission provided by the Specialty and Emerging Fisheries Group, in conjunction with the NZ Rock Lobster Industry Council and the Paua Industry Council. This submission intends to focus our more specific concerns for freshwater management, especially the management of sediment discharges, water quality, water quantity and fish passage.

In response to the specific questions asked in the Proposal, Appendix 1:

1. Do you think section 2.1 and 2.2 accurately describe the problem facing plantation forestry?

There is not enough description of point and non-point sediment discharges from forestry activities, and specifically how these will be better managed by the Proposal. Indeed, discussion on sedimentation effects appears to only focus on managing them through application of the Erosion Susceptibility Classification.

We advise that the application of the Erosion Susceptibility Classification to production forestry activities will not effectively manage the problem of sedimentation, turbidity or fish passage caused by forestry activities. We do not agree with statements that the environmental benefits of forestry suitably mitigate these effects.

We are very concerned that the Proposal does not seek to manage the effects of contaminant discharge, water yield or (upstream and downstream) eel passage.

2. Do you consider that the conditions for permitted activities will manage the adverse environmental effects of plantation forestry?

Absolutely not. The Proposal appears focussed on making production forestry a permitted activity in all but the most extreme conditions. The Proposal avoids the management of related forestry activities (burning, spraying etc), and also avoids the problem of water yields. Somehow, the Proposal considers temporary streams as of lower value than permanent waterways. This is contrary provisions in the RMA, which correctly require equal consideration of temporary and permanent water bodies. The value of temporary water bodies to eel passage, and eel habitats, is very high. We oppose any attempt to downgrade this in planning documents.

3. Are the conditions for permitted activities clear and enforceable? Can you suggest ways of making the rules clearer and more enforceable.

The Rules are not clear, and enforceability is reduced because the Rules significantly reduce the permitted baseline for all forestry activities. We suggest that the Rules are re-drafted to reflect Resource Management Act Section 43A (3) (b), which does not allow for permitted activities which cause adverse effects which are more than minor. The burden of proof must be in favour of the environment in this regard. We believe that more work is required on the adverse effects of the forestry activities provided for in the Rules, and the Rules need to be re-drafted to reflect those adverse effects.

4. Are the matters where local authorities can retain local decision-making appropriate?

Under the Proposal, Councils can apply more stringent rules to meet the requirements of the NPS – Freshwater Management. However, the impetus for doing so will be reduced by the permissive nature of the Standards outlined by the Proposal. There are national issues relating to sedimentation of water bodies from production forestry on inappropriate lands (not just the very steep and erodible lands). These are not properly dealt with by the proposal, and Councils (i.e. ratepayers) will need to provide the resources to fix this. Without these extra Council resources, production forestry will be able to proceed in inappropriate areas, unfettered by the provisions of the RMA.

5. Will the environmental risk assessment tools (the Erosion Susceptibility Classification, the Wilding Spread Risk Calculator, and the Fish Spawning Indicator) appropriately manage environmental effects as intended?

Absolutely not. The Erosion Susceptibility Classification is not a suitable safeguard for the purposes of managing point and non-point sediment discharges emanating from forestry activities. We prefer the present system, unchanged, as it requires resource consent where adverse effects are apparent, regardless of a third-rate classification system which was not designed for this purpose.

6. Do you have any comments about any particular activity or draft rule?

Yes. See below:

(i) Setbacks from the coastal marine area.

The proposed setbacks are utterly inadequate to protect freshwaters from the adverse effects of earthworks and harvesting. We suggest that setbacks are set on a sliding scale relative to the slope and soil erodibility of the area. In this regard, the Erosion Susceptibility Classification might be of some value, but more detailed techniques for setting appropriate setbacks will need to be developed.

(ii) Earthworks.

Page 66 –There should be no allowance for overburden to be pushed downhill without the need for obtaining a resource consent.

It is not clear what the 5000 m³ limit means. Does it imply that earthworks operations under 5000 m³ do not have permitted status, or does it mean that forestry earthworks under 5000 m³ do not require an Erosion & Sediment Control Plan?

(iii) Harvesting

Page 72 – The regional conditions for permitted activity discharges from ground disturbances outside riparian zone includes:

“All temporary harvest tracking must be stabilised with water controls or other means as required to minimise sediment discharge in stormwater.....”

There is no definition of what are “water controls”, or “other means as required”. We believe that RMA S 107 controls should apply in these instances.

Page 72 – Riparian disturbance. This should be prohibited.

(iv) Mechanical Land Preparation

Page 74 – Slopes of 25 degrees are often inappropriate for mechanical land preparation. There should be no downhill ripping allowed on slopes over 25 degrees. We suggest that this provision be deleted, and replaced with a more appropriate set of criteria which minimises the risk of excessive sedimentation of waterways.

(v) Forestry Quarrying

Pages 77-78 where extraction is not allowed within 20 metres of a “surface water body”. This conflicts with Table 2, which prohibits gravel extraction from the beds of rivers, as it allows gravel extraction in riverbeds which are wider than 20 metres (which are commonplace in the South Island).

(vi) General conditions

There needs to be a general condition whereby the upstream and downstream passage of eels is not impeded by any forestry activity.

(vii) River Crossings

Page 89. Fish passage. Delete reference to “relevant fishery manager”. Such people do not exist. No exclusions should apply, including temporary streams, which are very important for fish passage (especially eels).

Page 89. Contaminant discharges. “all practicable steps” is meaningless and unenforceable. “Minimising the disturbance of the bed” is also unenforceable. Sediment is a contaminant, so there is no reason why it should be allowed to be released to the water body without any further controls. The eight hour rule should be deleted, as it requires a level of compliance monitoring which Councils are not resourced to achieve.

Page 90. Maintenance. Delete reference to temporary crossings. These are often more damaging than permanent crossings, and need to be managed to avoid adverse effects. There also needs to be a permitted-activity condition which prevents any permanent or temporary crossing from impeding the upstream and downstream passage of native fish.

7. Is the NES – PF the best option to meet the assessment criteria in Box 13?

We can see no statutory basis for these assessment criteria. It looks as though someone dreamed them up for the purposes of allowing a more permissive consenting regime for production forestry. We believe that the assessment criteria are unsuitable for determining options for the management of the adverse effects of production forestry. As far as we can tell, they have no statutory backing, and so must be re-written in the light of public submissions.

Managing sediment discharges by applying the outdated Erosion Susceptibility Classification to the permitted baseline is a mistake. This will not have the effect of managing sedimentation in freshwaters and will adversely affect community values in general and our industry in particular.

While the Proposal does, indeed, remove variation between Council planning controls for plantation forestry, these are not necessarily “unwarranted”. The Proposal removes controls which may be unwarranted, but it also removes controls which are warranted.

The proposal does not improve the certainty of RMA processes and outcomes for plantation forestry stakeholders, as Councils will need to apply more stringent planning rules (eventually), after the damage has been done. The underlying purpose of the RMA is therefore not achieved.

Both foresters and the community will be left wondering whether the outcomes are robust or not, because the Erosion Susceptibility Classification, on its own, is not able to manage the actual and potential adverse effects of forestry, particularly sedimentation, and the Proposal is silent on the other effects on water yield, burning and hazardous substance use. The cost of monitoring compliance will be shifted from the forestry companies to the ratepayer. This will either increase rates, or reduce compliance (usually both).

8. Have the expected costs and benefits of the NES – PF been adequately identified?

We believe that the costs of forestry activities on freshwater environments, and consequently our industry, have not been adequately identified or addressed in the consultation document. The cost-benefit analysis is substandard, because the Proposal merely shifts monitoring and compliance costs from the forestry developer to the wider community. More work is needed before the Proposal proceeds to the implementation phase

9. Are there any issues that may affect the successful implementation of the NES – PF (such as decision-makers applying the permitted baseline more frequently)?

The more permissive Rules will cause production foresters to assume that fewer environmental controls are necessary.

10. Please describe any risks or opportunities that you consider have not been identified or addressed in the proposal.

An additional concern is that Section 43A (3) of the RMA has not been correctly applied, especially with regard to point and non-point sediment discharges, and their consequent effects on freshwater environments.

11. Will the proposed NES-PF support regional councils to implement the National Policy Statement – Freshwater Management?

No. Because adverse effects on freshwaters will still occur, as the proposal seeks to significantly lower the permitted baseline. This means that Councils will need to undertake a significant amount of research to bolster forestry provisions in their Plans. It will also make it much more difficult to undertake compliance and monitoring, as consents will no longer be needed for most activities. The proposal does not provide effective management of non-point discharges of sediment or other contaminants, which are inevitably caused by production forestry.

12. What resources or other implementation activities would help you to prepare for and comply with the proposed NES – PF. How should these activities be delivered?

We object to the Proposal in its current form, and so have no comment to make on its further implementation, except that it should be stalled. We seek the Proposal to be referred back to MPI for re-drafting, along with more comprehensive consultation with affected stakeholders, such as ourselves.

13. Are there any other issues that you would like to raise?

It is not appropriate to have a National Environmental Standard for a single industry, which spans such a wide range of activities. Our preference is that National Standards are activity-based (e.g. disturbance of streambeds), rather than industry-based (such as forestry).

We want all of the “out of scope” matters listed in Table 2 (page 20) to be included in the Standard. If a single industry Standard is to proceed, then The RMA requires such Standards to manage all of the actual and potential effects of an industry.

Yours faithfully



Pp Victor Thompson – Chairman, South Island Eel Industry Association.
Tom Hollings – Executive Officer, Eel Enhancement Company Ltd.



11 August 2015

Electricity Engineers Association

s 9(2)(a)

Stuart Miller

Spatial, Forestry and Land Management

Ministry for Primary Industries

PO Box 2526

Wellington 6140

Submission emailed to: NES-PFConsultation@mpi.govt.nz

SUBMISSION ON THE NATIONAL ENVIRONMENT STANDARD FOR PLANTATION FORESTRY

Introduction

The Electricity Engineers Association (EEA) is the national representative organisation for engineering, technical and health and safety issues within the electricity supply industry. Our members include corporate and individual representatives from all sectors of the electricity supply industry including generation, electricity networks, contractors (operation/maintenance), engineering consultancies and equipment suppliers. The EEA has been extensively involved in engineering, compliance and safety issues relating to trees/forests in close proximity to electricity networks.

There are approximately 150,000 km of electricity supply electric lines (power lines) in New Zealand including 12,000 km of which are transmission lines and are already covered by an existing NPS and NES for Transmission. Over 80% of New Zealand's overhead network is located in rural/rugged/remote locations and frequently are impacted upon by forestry/tree activities.

The EEA thanks the MPI for opportunity to make this submission. The electricity industry is supportive of the NES-PF as a means for asserting consistent national technical standards for managing forest activity adverse effects. Disappointingly, the NES-PF counts electricity infrastructure out of scope. This submission recommends including electricity infrastructure in scope of the NES-PF, if it is to meet its own aims and objectives for certainty in forest activities, and for it to conform to RMA standards

for sustainable management of natural and physical resources and management of adverse effects on the environment.

The EEA requests that the Government amend the NES-PF to include coverage of adverse forestry effects on electricity infrastructure, this including electricity supply generation, transmission and distribution assets within plantation forests.

The EEA requests opportunity to discuss its submission with MPI representatives, and Peter Berry Executive Director EEA can be contacted at 04 473 8600 to arrange this.

Key submissions and recommendations

The EEA submits that excluding electricity infrastructure from the NES-PF:

- Increases risk that the forest environment, forest operators, communities and other stakeholders will occasionally realise the very adverse effects that NES-PF seeks to control, and that
- Because the NES-PF does not recognise or control adverse forestry effects on electricity infrastructure, it does not adequately conform to RMA standards and expectations for sustainably managing the environment, and it misses a valuable opportunity for real gains in this area.

The EEA recommends that:

- The NES-PF be amended to recognise adverse forestry effects on electricity infrastructure, with setbacks, as the means for a consistent national approach to controlling these effects. The amendment should apply to all electricity infrastructure inclusive of electricity generation, transmission and distribution assets located within the plantation forestry covered by the NES-PF.
- As previously recommended, that setbacks for planting be at a distance equivalent to fall height at growth limit for harvest plus 2 metres as a minimum from electricity distribution power lines and their support structures, or, setback as otherwise agreed in writing with the electricity network or other power line owner.
- As a fall-back position, that the NES-PF compels authorities (rather than give them discretion) to exercise stringency locally through setbacks separating forest activity from electricity infrastructure. The fall-back proposal, however, involves significant disadvantages of long implementation lead time because of planning cycles. And this option involves economic and operating uncertainties similar to those the NES_PF seeks to resolve for forest operators.

Setbacks from electricity infrastructure

Electricity network businesses are not seeking exceptional setback conditions compared with other property or asset owners. Electricity network businesses occasionally own the land on which their power lines are situated. Otherwise their (power line) presence preceded forest activity and their legal interest is via easement

or statute. The power lines are considered to be physical resources under the RMA, and as such are able to be under the jurisdiction of the NES-PF.

Electricity networks have requested setbacks for planting equivalent for fall height at growth limit for harvest plus 2 metres as a minimum from the power lines and their support structures, or, setback as otherwise agreed in writing with the electricity network or other power line owner. This is not too dissimilar from setbacks for other parties for which setbacks are required under the NES-PF.

Electricity network businesses consider this level of setback sufficient as a threshold for notification and negotiations where other planting / harvesting options are sought that do not hazard the electricity infrastructure. Examples might include shorter species trees for harvest maturity, grown near to or under the lines.

The following evidence develops and supports the key submissions and recommendations and should be read in conjunction, as should the EEA 2010 and 2011 submissions, enclosed under covering email.

Environmental and safety effects of forest activity on electricity infrastructure

Forest activity, specifically trees and tree work activity too close to electricity infrastructure involves adverse effects on electricity infrastructure, affecting community well-being, public and worker safety, economic sustainability and certainty for forest operations. It also increases risk of the adverse effects that the NES-PF seeks to avoid. The EEA, Electricity Networks Association (ENA) and electricity distribution companies have made numerous submissions on these matters since the NES-PF consultations commenced in 2011. These have been accompanied by recommended setbacks for forest activity from electricity networks. The NES-PF is the most efficient method for setting uniform standards for managing these effects, in line with the aims and objectives of the NES-PF. Adverse effects from trees close to power lines include:

- Public and worker safety risks from electrical voltages in and around trees close to or in contact with power lines, including trees that are fallen on the lines for any reason from wind/storm to tree worker actions;
- Forest fire hazards to electricity networks, forests, public and worker forest occupants, economic and ecological impacts including loss of carbon sinks;
- Disruption to community safety and well-being and to business operations through loss of power supply;
- Economic loss to electricity businesses including risks of significant fines for failure to maintain supply continuity required by regulation, and insured and uninsured costs from loss of supply.
- Losses to forest business operations through forest and other property damage and subsequent cost recovery actions; subsequent premium hikes.

Electricity industry surveys have indicated widespread and common incidence of issues involving actual or potential losses outlined above where electricity infrastructure runs through forests covered by the NES-PF. In the relatively few cases where electricity networks have managed to successfully negotiate forest activity setbacks (for forest planting, maintaining, and harvesting) with forest owners, incidents involving actual or potential loss of the sort outlined have been greatly reduced. This reflects the benefits that would be widely available to all parties if adverse forestry effects on electricity infrastructure were to be recognised and managed through the NES-PF.

General Submissions

The EEA is concerned that a number of features of the new NES-PF detract from what should otherwise be an effective tool for managing adverse environmental effects of forest activity. In particular:

Narrow range of managed adverse effects

The objects of the NES-PF are narrow, essentially limited to controlling adverse effects of erosion and sedimentation, wilding spread, fish passage, soil and riparian vegetation disturbance. Since the NES-PF counts electricity distribution networks to be out of scope, the NES-PF misses opportunity to manage effects of forest activity on infrastructure that lead to risks of realising the very adverse effects that the NES-PF aims to avoid. For example, fire caused by tree strike on power lines will directly or indirectly adversely affect erosion, sedimentation, fish passage, riparian vegetation. Categorising electricity distribution to be out of scope excludes the likelihood of these adverse effects being managed before the fact.

Inconsistencies in recognising property ownership and managing risks

NES-PF coverage is inconsistent in recognising property or assets owned by other parties and the consequent increased risks of adverse effects that the NES-PF seeks to avoid. The NES-PF provides setbacks for permitted activities, covering, for example, neighbouring properties, housing, roads etc, yet the NES-PF does not recognise electricity infrastructure property or the risks arising from forest activity adverse effects on these. As discussed already, poorly managed forest activity involves risk of realising the adverse effects that the NES-PF aims to avoid. Recognising electricity infrastructure owned by electricity companies, and establishing setbacks for forest activities from these (as for other property) would support and enhance all of the NES-PF objectives in respect of forest activity, and significantly reduce risks of the adverse effects it seeks to manage, while enhancing the efficiencies and certainties for forest activity that the NES-PF aims to achieve.

Impact on planning of counting infrastructure out of scope

The NES-PF will become the benchmark standard and obligation for local authority plans to manage the NES-PF stated adverse effects. Electricity industry experience is that very few local authorities treat adverse forestry effects on electricity infrastructure. The NES-PF benchmarks local authority plan obligations, and as the NES-PF treats electricity networks as being out of scope, it is predicted that local

authorities may omit planning consideration concerning adverse forestry effects as related to networks going forward. The risks, however, will not go away. Counting electricity networks as out of scope is a significant missed opportunity for certainty and consistency at the forest/electricity infrastructure interface, and for reducing the risks of the adverse effects that the NES-PF seeks to manage.

The EEA also notes that earlier editions (2010) of the proposed NES-PF did at least include greater stringency requirement's, with setbacks from infrastructure. The new proposed version has removed even that mention. Absence of a governing statement requiring local authority plans to manage forest activity effects on infrastructure will increase risk of forest activity effects on infrastructure going forward, and will increase risk of realising the adverse effects that the NES-PF aims to avoid. This will escalate further when Government initiatives to stimulate increased forest plantation come into play in the near future, for example through the Permanent Forest Sink Initiative and the Afforestation Grants Scheme.

The EEA, ENA and numerous distribution networks have made repeated submissions detailing these effects that are enabled by the lack of local authority rules concerning forestry. The EEA submits that the circumstances outlined above are contrary to the purpose and intent of both the RMA and also the proposed NES-PF.

Clarity concerning provisions for greater stringency locally – the fall-back position

The narrative in section 3 alludes to ability for councils to be more stringent, including for matters out of scope. However while section 3.4 specifically mentions matters for more stringency, the Table 4 referred to does not include mention of infrastructure. Yet Appendix 3 table titled 'Matters that are out of scope of the proposed NES-PF...' lists 'infrastructure identified by councils as needing setbacks for safety or function reasons', this under the table sub-heading 'effects that may arise from forestry activities'.

The EEA is concerned that while infrastructure is ruled out of scope, Table 4 does not acknowledge electricity infrastructure. The EEA is also concerned at the discretionary nature for council decisions about whether such effects warrant more stringency.

The EEA firstly recommends strongly that the NES-PF acknowledge and include infrastructure, with uniform national setbacks. If this is not attainable, the fall-back should be for the NES-PF to *oblige* councils to be more stringent, not to leave it to council discretion. The stringency provision should require locally specified setbacks to manage adverse forestry effects on infrastructure. This fall-back would at least provide a level of certainty that adverse effects will be considered and managed. It is significant, however, that the fall-back local stringency approach would have very long implementation lead time for local plans to adopt it, and it would involve economic and operating uncertainties and inconsistencies that the NES-PF seeks to address for forest operators.

Disadvantages of individual local planning for electricity infrastructure vis-a-vis NES-PF aims and objectives

The NES-PF is all about planning and operational consistency for forestry activities. There is no doubt that forest activity adverse effects towards electricity networks is a matter to be reckoned with, in terms of objectives the NES-PF seeks to achieve. There would be huge disadvantages along the lines of the issues the NES-PF seeks to resolve, if networks are forced to influence planning constraints on a case by case basis across New Zealand. On the other hand, managing the effects through inclusion of electricity distribution infrastructure in the NES-PF would bring all the benefits of efficiency, operational certainty and reduced risk of the adverse effects that the NES-PF seeks to achieve.

The NES-PF not meeting its own or RMA objectives

The electricity industry is concerned that the NES-PF is inadequate in meeting its own objectives and the purposes of the RMA.

The objectives of the NES-PF ('NES') are to: remove unwarranted variation between council planning controls; to improve certainty of RMA processes for plantation forestry (PF) stakeholders (consistent with RMA purposes); to improve certainty about environmental outcomes from PF activities for forestry stakeholders, communities, nationally; to contribute to resource management system cost effectiveness, through 'fit-for-purpose' planning rules to manage the effects of plantation forestry.

The EEA notes that the NES-PF as it stands targets environmental effects for just 4 areas, by standardising planning controls across 8 forestry activities. The 4 areas are, chiefly: land erosion, fish spawning and swimming, riverbeds and wilding spread.

The EEA supports coverage of these affected areas through the NES-PF and the likely efficiencies through standardised planning controls around these, towards achieving the objectives of the NES-PF.

The EEA is deeply concerned, however, that the NES-PF only partially meets wider RMA purposes, in respect of forest activity:

- Significant effects across a number of the 8 forest activities affect sustainability of physical resources (power supply), including the structures supporting this. For example, by not mitigating against the effects of trees planted in the fall zone of power lines (i.e. where they can fall into the lines and disrupt power supply once mature) the NES-PF fails to protect physical resources (the power lines including their structures) and thereby fails to protect communities from economic loss, social cost, as well as posing significant public and worker health and safety risks. In this regard the NES-PF fails to adequately promote the purpose of the RMA.
- Planting trees that will mature and potentially threaten power lines creates significant health and safety risk for workers and the public.

These sorts of effects are pervasive. A 2012/13 survey of electricity networks identified that 95% of respondents reported having issues in forests, with most of those indicating the issues were significant. Survey data indicated that, on average, there is a tree fall and contact/damage to power lines at about 7% of forest sites (where there are lines) per year. One respondent also noted they had had a problem with 90% of the forestry sites in their area at some point due to insufficient clearances.

Recent analysis by one electricity network noted economic impact from tree fall into power lines on their own network in one recent year as being in the order of \$658,000.00. This cost arose from mature trees falling into power lines due to wind action, and resultant liabilities for loss of system minutes. One small business without power may incur business losses at \$700.00 per day. While this exemplifies just one of many categories of losses involving tree fall into lines, it does illustrate economic costs to the community resulting from a regime that has permitted tree planting too close to power lines. Multiply these and other potential costs of losses to count transmission and the remaining 32 electricity networks having rural networks gives some indication that economic effects are significant.

The examples outlined above illustrate the impacts on communities reliant on electricity routed through forest locations. These include serious social, economic, and health and safety effects, not to mention sustainability of the forests and power supplies traversing these areas.

The electricity distribution sector has previously submitted extensively and sought engagement on these effects in previous NES-PF iterations.

Electricity (Hazards from Trees Regulations)

Forest interests have argued that the Electricity (Hazards from Trees Regulations) ('Trees Regulations') are a sufficient instrument to manage forest activity effects on electricity infrastructure. This is manifestly not the case. As has been submitted on numerous occasions by electricity networks, the Trees Regulations are unsuitable as an instrument for managing competing interests in terms of RMA and NES-PF aims and objectives. At most the Regulations empower network owners to take action where tree growth limits from power lines are about to be encroached. By that stage the conditions for forest activity adverse effects upon electricity infrastructure are already fully developed. Trees that may conform to Trees Regulations growth limit zone can and do fall into power lines, whether from natural causes, weather events or during harvest activity. Branches and other vegetation from outside the growth limit zones can and do fall or blow into power lines, causing power outages, fire, or heightening risk of these events. These risks are exacerbated by apparent increasing incidence of severe storms and dry periods.

The Trees Regulations are impotent in regard to planting and harvesting activities including fall distances sufficient to manage adverse effects of forest activities on electricity networks. The RMA and tools such as the proposed NES-PF are appropriate means to establish consistent rules for local plans to manage these competing interests for the wider sustainability and benefits sought by the RMA. This

view aligns with page 5 of the consultation document, stating that ‘the RMA is the main legislation used to manage effects of plantation forestry”

The sheer volume of trees that can fall, the cost of dealing reactively with trees in forests, and risks and consequences in forests, warrant a more proactive and efficient approach to managing with vegetation, in line with RMA purposes and objectives of the NES-PF.

The Transmission NPS

The NES-PF counts electricity infrastructure out of scope. However it does recognise the Transmission NPS, and it does recognise that forest activities can have adverse effects upon infrastructure. Such effects are generally more intense for electricity distribution assets because their power line linear exposure to forests is far greater than for transmission lines. The distribution assets generally having less height, are inclined to be more affected by close tree growth. The relative 12,000 Km transmission to 138, 000 Km distribution power lines gives some indication of the relative exposure.

It is also important to note that while the Transmission NPS does cover transmission power lines, it does not cover or provide any framework for planning obligations in relation to electricity distribution networks.

The EEA notes the NES-PF statement (section 6.2) to the effect that counting electricity distribution infrastructure out of scope is necessary to ensure councils and foresters adhere to the Transmission NPS requirements. The EEA is curious about this rationale for excluding electricity infrastructure (which must surely include both transmission and distribution?) from the scope of the NES-PF. The EEA understands that although the Transmission NPS obliges local authority planning to recognise Transmission, it does not invoke uniform technical standards as a basis for determining local rules. These are decided through the local planning process (with difficulty and at significant cost it seems), and it appears that the arrangement may involve similar inefficiencies that the NES-PF seeks to address for the foresters – variances in rules, operating and economic uncertainties etc.

The EEA supports the good planning principles and practices through which the Transmission NPS obligates local authorities and eventually foresters, in respect of transmission assets. The next progression should be to give effect to uniform national technical standards, practically applying the Transmission NPS to preventing adverse forestry effects on Transmission. The NES-PF would be an appropriate tool to achieve this. And for distribution assets, not covered by an NPS but coming under the RMA environment, physical resource including structure protections, the NES-PF would similarly be an ideal instrument for technical standards capable of protecting them from adverse forestry effects.

Regulatory incompatibility increasing risk to health and safety

The government is in the process of Safety Reform through introducing risk-based health and safety legislation and regulation. A basic tenet is that those who create the risk, including those in the supply chain who influence the risk, have an onus to manage and reduce health and safety risk, so far as they can influence these outcomes. An overarching purpose is to eliminate risk not only at the workplace but also to those members of the public who may be affected by what happens in the workplace. As already outlined, numerous electricity industry submissions have detailed health and safety risks to workers, to the public and to communities, from environmental safety effects of forest activity. Key examples are threats to life (forest

recreational users; wider communities) of fire from tree strike electrical contact, and also worker electric shock or electrocution from tree fall into power lines. Not requiring setbacks, combined with existing incentives to plant for maximum land use, while without immediate effect at the planting stage, turns into unacceptably high risk effects when the forest reaches full growth (threat of tree fall into power lines and resultant effects) and at harvest time. In this sense, failure to regulate forest activities through the local authority planning stage (i.e. through NES-PF) creates systemic regulatory conflict that comes to fruition many years after the fact. It is more efficient in every way to address safety issues by including safety considerations at the forest planting stage.

The EEA is concerned that not addressing the risks of forest activity, the NES-PF effectively counters government policy and wishes for a safer New Zealand through its safety legislative initiative. The divergence at regulatory level runs counter to concerted efforts to improve forest workplace safety. It will create long-term conflicting goals and behaviours leading to greater safety risks to workers, public and community, contrary to the aims and aspirations of the RMA.

The EEA submits that the MPI and specifically the NES-PF working group have an obligation to support government national safety goals and consistent legislation vis-a-vis risk elimination. Providing for adequate planting and forest setbacks at the planning stage is a significant key to this consistency in forest activity. Conversely, to not do so implicates long term responsibility for heightened risk from forest activity effects, enabled by systemic regulatory conflict.

Specific Submissions

The EEA provides answers to the following questions where relevant to electricity industry submissions. The answers should be read in conjunction with the comment and submissions in the General Submissions section of this EEA submission.

1. Do you think section 2.1 and 2.2 of the consultation document accurately describe the problem facing plantation forestry?

In general the NES-PF is headed in the right direction, so far as standardising planning rules are concerned towards managing the narrow range of adverse environment effects are concerned. However the NES-PF as it stands fails to reach its full potential for managing the effects because of its exclusivity. For example failure to recognise adverse FORESTRY effects upon electricity networks leaves open a high likelihood that the adverse effects intended to be managed by the NES-PF will on occasions be realised when at-risk interactions occur at the forest/distribution network interface. The clearest example of this is fire from tree/wire strike event.

A further example is the NES-PF objective to support operational and economic certainty for forest operators. Excluding distribution networks from NES-PF rules will increase operational and economic risks to forest operators in the long run. For example failure to specify set-backs at planting and harvesting will create unwanted

felling compliance costs at harvest maturity. More stringent health and safety risk management under current Safety Reform will require specialist skills beyond forest faller skills, to deal with trees within tree fall distance of electricity lines. Already at the current time, tree workers are being challenged by the workplace safety regulator around their skill fitness to deal with trees within two tree lengths, and in many cases, contractors simply walk away from the economic and safety uncertainty. Bands of un-felled and aging trees exacerbate the risk of fall onto power lines, harm to workers or public, fire and other effects. In the absence of NES-PF rules around the forest/distribution network interface, and in light of likely increased forest activity, this sort of hazard to NES-PF objectives is going to increase.

The simple solution is to recognise the forest activity effects upon power distribution networks through the NES-PF. This can best be achieved by requiring planting and also harvesting setbacks, to support the long term operating and economic certainty forest operators seek through the NES-PF.

2. Do you consider that the conditions for permitted activities will manage the adverse environmental effects of plantation forestry?

In so far as it goes, the EEA generally considers that the conditions are likely to manage the environmental effects. But this is qualified by the large gaps in NES-PF coverage described in this submission. The EEA submits that these gaps exacerbate the risks of realising the adverse effects that the NES-PF aims to solve. Recognising electricity infrastructure and including setbacks for permitted forest activity, as submitted, will greatly enhance the likelihood of the NES-PF achieving its aims and objectives.

3. Are the conditions for permitted activities clear and enforceable (see appendix 3 of the consultation document)? Can you suggest ways of making the rules clearer and more enforceable?

Appendix 3 table 'Matters that are out of scope of the proposed NES-PF' does mention electricity infrastructure and the need for setbacks at local authority's discretion. As has been submitted on many occasions, the best benefits would be realised under the NES-PF by including Forest activity effects on electricity infrastructure, ensuring consistent national controls. If this cannot be achieved, the next best option would be for the NES-PF to obligate local authorities to plan for forest activities and require setbacks, working out the detail on a case by case basis, rather than leaving it to council discretion. That would go some of the way to resolving the status quo, which to date has been rare recognition by local authorities of the need for rules locally to manage forest activity effects on electricity infrastructure. As mentioned in the General Submissions, the fall-back position involves severe disadvantages of long implementation lead times because of plan reviews. It also features the variations around economic and operating uncertainty for foresters that the NES-PF is seeking to address.

4. Are the matters where local authorities can retain local decision-making appropriate (summarised in Table 2 and Table 4 and provided in detail in Appendix 3 of the consultation document)?

The NES-PF has taken the position that electricity networks (infrastructure) are out of scope. Regarding local decision-making, the main body of the NES-PF document makes mention of the ability to retain local decision-making, but Table 4 does not link this with electricity infrastructure. The EEA notes that the original 2010 draft NES-PF at least acknowledged infrastructure as needing more stringent controls in local plans, with setbacks, in forest activities (e.g. afforestation). The EEA subsequently developed formulae to maximise forest land use while utilising sensible setbacks to manage adverse effects on electricity networks from planting through to harvest. EEA observes that no available submissions seem to have taken issue with the electricity industry proposals since 2010, yet the final development was that the work group merely called infrastructure out of scope. As has been argued under 'General Submissions', the exclusion of electricity network infrastructure is detrimental to achieving the NES-PF objectives.

The EEA is curious about the 'considered and collaborative' approach and the work group interests that led to this conclusion.

The EEA would be appreciative of ministerial review and comment on the process and the decision itself in light of both the RMA and also NES_PF aims and objectives.

At least if electricity infrastructure were to be acknowledged, with a requirement for more stringent planning, with forest activity setbacks, this would positively contribute to the NES-PF objectives.

5. Will the environmental risk assessment tools (the Erosion Susceptibility Classification, the Wilding Spread Risk Calculator, and the Fish Spawning Indicator) appropriately manage environmental effects as intended (see section 3.5 of the consultation document)?

6. Do you have any comments about any particular activity or draft rule (see appendix 3 of the consultation document)?

7. Is the NES-PF the best option to meet the assessment criteria (in Box 13 of the consultation document)?

The EEA believes that the NES-PF is a good option to meet the assessment criteria.

The EEA is disappointed that electricity infrastructure has been counted out of scope. This is a missed opportunity to incorporate all the benefits of the NES approach to

managing forest activity adverse effects on infrastructure, certainly enhancing the effectiveness of the NES-PF going forward. The EEA hopes that the NES work group will heed the EEA and electricity industry strong recommendations to make this change.

8. Have the expected costs and benefits of the NES-PF been adequately identified (see section 4.3 of the consultation document)?

The EEA has noted that recent amendment to the Climate Change Response Act 2002 removed liabilities for land required to remain clear to implement best practice forest management. The EEA considers this should make setbacks more practicable for foresters, the legislative change ostensibly reducing grounds for objecting to implementing planting and growth setbacks.

9. Are there any issues that may affect the successful implementation of the NES-PF (such as decision-makers applying the permitted baseline test more frequently)?

See general and specific submissions.

10. Please describe any risks or opportunities that you consider have not been identified or addressed in the proposal.

See general and specific submissions.

11. Will the proposed NES-PF support regional councils to implement the NPS-FM (see section 6.1 of the consultation document)?

12. What resources or other implementation activities would help you to prepare for and comply with the proposed NES-PF (see section 7 of the consultation document)? How should these activities be delivered (for example, training, online modules, guidance material)?

13. Are there any other issues that you would like to raise?

All covered in the general and specific submissions.

Conclusions

The EEA submission concludes that failure to include electricity infrastructure in the NES-PF increases the risk of realising the adverse effects that the NES-PF seeks to resolve. It is a failure of the NES-PF to fully meet its own aims and objectives and to meet wider purposes and objectives of the RMA. In particular:

- The range of effects it manages do not reflect the scope of effects anticipated by the RMA;
- It treats property (asset/physical resource) owners inequitably;
- It will detrimentally impact planning for forest activity effects on infrastructure at the local level;
- By default it will encourage large and ever increasing forest activity social, economic, community well-being and other environmental effects upon electricity infrastructure and upon forest activity;
- It will create regulatory conflict with safety legislation and support unsafe forest practice and behaviours in the long-term;

Conversely, to include coverage of effects on electricity infrastructure would further reduce risks of realising the specified adverse effects, and it would positively contribute to achieving the NES-PF aims for forest operation, economic and administrative certainty, while contributing positively to broader RMA aims and objectives in respect of safe and sustainable power supply to communities.

The EEA proposes that the Government needs to lead this policy issue, to ensure RMA purposes are achieved at the forestry/electricity infrastructure interface.

Positively:

- The NES-PF offers opportunity to develop the Transmission NPS into specific national technical standards for transmission, and to recognise setbacks for distribution electricity infrastructure, which are not covered by any NPS but which are a recognised physical resource under the RMA;
- It provides opportunity to fill what has been a management void in the interface (a gap proven as not able to be met by the Trees Regulations) between forest and electricity infrastructure, positively contributing to the wider aims of the RMA in respect of these activities.
- It would resolve regulatory conflicts for consistency with government policy for workplace and public safety.
- As a fall-back position, it affords opportunity to compel local authority stringency provisions, with setbacks, for forest activity adverse effects on electricity infrastructure, albeit the fall-back includes disadvantages in term of implementation time-lag, NES-PF aims for standardisation and certainty, for forest operators.

Recommendations

1. The EEA strongly recommends that the NES-PF recognise electricity infrastructure and include national setback standards for permitted forest activity.
2. If this is not achievable, the EEA recommends that the NES-PF obligate local authorities to recognise forest activity adverse effects on electricity infrastructure, with setbacks, detail to be worked out at the local level to manage these effects.

The EEA requests that this submission be read in conjunction with the EEA October 2010 and June 2011 submissions on behalf of the electricity industry. These detail the adverse effects of forest activity on electricity infrastructure. They detail the benefits to the NES-PF of including electricity infrastructure coverage, and they provide background to formula for calculating setbacks and also for maximising land use under power lines for managing and harvesting crop species having lower height at maturity.

The EEA would be appreciative of further dialogue with the MPI and NES-PF work group members concerning the electricity industry submissions. Please contact EEA Executive Director Peter Berry on s 9(2)(a) to arrange this.

Yours sincerely

A handwritten signature in black ink that reads "Peter Berry". The signature is written in a cursive style with a horizontal line at the end.

Peter Berry

Executive Director

Electricity Engineers Association

Enclosures

Previous detailed submission for review with this current EEA submission:

- EEA submissions to MfE dated 28 October 2010
- EEA submission to MfE dated 12 June 2011



From the Electricity Networks Association (ENA)

**Submission on 'A National Environmental Standard for
Plantation Forestry'**

*Submission to the Ministry for Primary Industries and to the Ministry for the
Environment via*
NES-PFConsultation@mpi.govt.nz

11 August 2015

To Stuart Miller
Spatial, Forestry and Land Management
Ministry for Primary Industries
PO Box 2526
Wellington 6140
Submission emailed to: NES-PFConsultation@mpi.govt.nz

1. The Electricity Networks Association (ENA) appreciates the opportunity to make a submission to the Ministry of Primary Industries and to the Ministry for the Environment on '*A National Environmental Standard for Plantation Forestry*' (NES PF).
2. The ENA represents all of New Zealand's electricity distribution businesses (EDBs) or lines companies, who provide critical infrastructure to NZ residential and business customers. Apart from a small number of major industrial users connected directly to the national grid, electricity consumers are connected to a distribution network operated by an ENA member, distributing power to consumers through regional networks of overhead wires and underground cables. Together, EDB networks total 150,000 kms of lines. Some of the largest distribution network companies are at least partially publicly listed or privately owned, or owned by local government, but most are owned by consumer or community trusts.

Executive Summary

3. ENA is very disappointed to see from the consultation document that the proposed NES PF would leave rules about forest planting around distribution lines 'out of scope' of the NES PF. As we understand it, the proposed 'out of scope' approach will mean that these matters can still be dealt with by councils – that is for EDBs the status quo approach continues. However, this means there will remain a significant issue for EDBs as these matters have generally not been considered to date by councils.
4. The impacts of forestry activities on EDB assets are significant - forest trees falling on EDB assets and power lines cause power outages (affecting residential and business consumers) and can result in asset damage. Trying to manage these trees around lines in forests more generally also creates significant costs. Trees that can fall on, or otherwise contact, lines can also present safety issues (including forest fire risks) to workers and the wider public.
5. The NES PF presents a significant opportunity to introduce real improvements across the country in a timely and consistent way. It is intended that councils would be required to introduce the NES PF within 6 - 12 months after the NES PF is gazetted. Leaving it to councils to address the issues for EDBs (i.e leaving them 'out of scope' and leaving to the status quo) will mean lengthy delays as changes to individual local plans wouldn't arise until plans are next reviewed and that is if (and only if) councils would elect to address them in the future. The status quo suggests that this is unlikely to occur to any significant extent. Private plan change options are also uncertain and very costly. In our view, the issues are complex and are difficult for councils to assess - central government direction is sorely needed.
6. We note that mechanisms in regard to other asset and land owners are however proposed for inclusion in the NES PF, and that these are similar to those proposed by the Electricity Engineers Association (EEA) and ENA. We do not see that the need for any local variation around EDB assets is a strong enough argument to warrant being treated differently, especially when weighed against the associated time delays and low likelihood of being addressed under the status quo model. Notification and consultation with EDBs in regard to forest activities that may affect them should be a very minimum requirement under the NES PF.
7. Moreover, leaving so many issues out of scope defeats the purpose (and stated objectives) of the NES PF, including in reducing uncertainty and inconsistency for foresters.

8. It is also important that MPI ensure that the proposed NES PF rules (and what it in versus out of scope) do not prevent, limit or disincentivise the clearing of existing vegetation and trees around lines, including to enable access to assets for inspection and maintenance. Earthworks can also impact on EDB assets, and it does not seem the standards that apply here are in scope either.

The Status Quo – Forest Trees Causes Significant Issues for EDBs

9. For many electricity distribution businesses the forests/lines problem is a significant and costly issue.
10. When trees and power lines come into contact the consequences can be particularly concerning. Issues occurring in forests when trees come too close to, or contact, power lines include:
 - (a) Public and worker safety risks due to the presence of electrical voltages around trees that come too close to, or contact, power lines, and from unstable trees when trying to restore power after storms.
 - (b) Forest fires with associated public and worker safety risks, and economic and ecological impacts including the loss of forests and actual carbon sink losses.
 - (c) Disruptions to power supply with resultant economic and social impacts on businesses and communities.

Here we note that some lines through forested areas supply many customers; others supply as few as one or two customers. These customers can be regularly affected by outages. As an example, one ENA member reports a small community of businesses and residents that had lost power for 2-3 days at a time, about 6 or 7 times over a 10 years period because of tree contact with a power line in a local forest.

- (d) Economic loss to electricity lines companies and electricity generators.

As well as more direct costs, economic regulation of lines companies under the Commerce Act means lines companies may be penalised for loss of supply or failure to meet quality standards. Outages can at times affect revenue, including for generators, for example where a tree falling on a line means a generator is unable to inject power into the local network.

11. ENA surveyed its members in 2012/13 about trees. 95% of the survey respondents reported having issues in forests, with most of those indicating the issues were significant. Survey data indicated that, on average, there is a tree fall and contact/damage to power lines at about 7% of forest sites (where there are lines) per year. One respondent also noted they had had a problem with 90% of the forestry sites in their area at some point due to insufficient clearances.
12. We do not wish to imply that there is an issue with all forestry owners, as many work well with their local lines companies. However, clearly from evidence provided by members in support of this and the EEA submission, there are significant and widespread issues under the status quo. Indicative data from our survey also indicated that those who were managing

to get forest owners to implement wider clearances in forests were seeing positive results in terms of fewer incidences.

13. It is important to note that the issues our members report in forests almost always apply to situations where the trees were planted *after* the lines were in place. For new lines, wherever possible, members avoid placing lines in forested areas but if there are no feasible alternative, easements (which factor in tree management) are negotiated through forests. Since the passing of the Electricity Act 1992, EDB's wishing to place new works in private land have had to do so through agreements with landowners. The Electricity Act 1992 also grand-parented the rights of existing works.

The Tree Regulations Are Limited in Scope

14. Councils and other parties often assume that the Electricity (Hazards from Trees) Regulations 2003 provide the means for EDBs to deal with all tree issues. However, the Tree Regulations are quite limited in their scope. These regulations do not deal with trees at the planning and planting stages, but merely set rules for ensuring trees and branches are cut back from the relatively narrow growth limit zones specified by the regulations, once the trees are grown.
15. The Tree Regulations do not generally deal with what the industry terms 'the fall zone issue' either. At times, trees that may conform to the Tree Regulation 'growth limit zones' can (and do) fall into power lines, whether from natural causes, weather events or during harvest activity. Branches and other vegetation from outside the growth limit zones, can also fall or blow on to lines. The Tree Regulations are also largely 'one size fits all', applying across all tree owner scenarios, from a single tree in an urban garden to large scale commercial plantings of forests.
16. In a forestry setting, the sheer volume of trees that can fall, the costs of dealing reactively with trees in forests, and the risks and consequences in forests warrant a more proactive and efficient approach in our view, particularly as the number of storm events seems to be increasing, as do the extent of dry periods. Pre-emptively addressing these at the planting stage through an NES PF is consistent with the purpose of the RMA itself, and of the NES PF objectives. Clearly it would also be more efficient to deal with issues proactively at the planting stage.
17. We also note that in the Executive Summary of the consultation document it says that "*the RMA is the main legislation used to manage the effects of plantation forestry*".

EDB Infrastructure "Out of Scope" of Proposed NES PF

18. We were very disappointed that effects on network utility infrastructure are intended to be 'out of scope' of the NES PF. As we understand it, this means that no standards/rules apply under the NES PF, but that it does mean at least that councils can deal with them. At times, however, the latter intent is not very clear in the discussion document. The discussion document tended to focus on when councils could be 'more stringent', and the expectation in regard to 'out of scope' rules was not always clear.
19. On page 94 (of the hard copy consultation document) these expectation were at least clearer:

“Matters that are out of scope of the proposed NES-PF

Infrastructure: Effects on network utility infrastructure is identified by district councils as needing setbacks for safety or function reasons.

Rationale:

The effects of forestry on network infrastructure, particularly health and safety issues, should be managed at a local level to account for local circumstances.”

20. If these matters are to continue to be left out of scope we submit that clear direction is needed in the NES PF that while this is an out of scope matter, councils can and should deal with them. There needs to be more **explicit** reference in the NES PF to “effects on utility infrastructure”, and the requirements and expectations. More guidance on how other NESs may apply would also be useful. We also think that as a minimum that notification and consultation with EDBs should occur regarding forestry activities that can adversely affect EDB assets, and functions.
21. If our assumption that leaving EDB matters ‘out of scope’ of the NES means that councils can still consider these factors is a wrong assumption, we would appreciate you contacting us as soon as possible. We are also uncertain as to whether the fact that some rules are covered in an NES, while others are ‘out of scope’, could mean the former takes precedence should there be a conflict between two objectives. (See paragraph 46 for a more specific example of this concern).

The Proposed NES PF is Limited in Scope

22. We note that adverse environmental effects to be addressed by the NES PF are very limited in scope more generally, as outlined in Table 1. The NES PF focus is limited to a relatively narrow range of environmental impacts including erosion and sediment control, and impacts on water quality, wilding spread, impacts on cultural sites, over burden disposal, fish impacts, debris and slash management.

Proposed NES PF does not fully promote the purposes of the RMA

23. The NES PF could better promote the purpose of the RMA. The purpose of the Act is to (emphasis added):

....*promote the sustainable management of natural and physical resources.*

*(2)In this Act, sustainable management means managing the use, development, and protection of natural and **physical resources** in a way, or at a rate, **which enables people and communities to provide for their social, economic, and cultural well-being and for their health and safety while—***

(a) sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and

(b) safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and

(c) avoiding, remedying, or mitigating any adverse effects of activities on the environment.

24. Natural and physical resources are interpreted in the RMA as:

natural and physical resources includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures

and structure is interpreted as:

structure means any building, equipment, device, or other facility made by people and which is fixed to land; and includes any raft

25. That is, as we understand it, electricity distribution networks are already existing, and are considered physical resources under the RMA.

26. As detailed elsewhere in this submission, inadequate separation from power lines in forests can impact on

- **Public health and safety**
- **Economic Well being**

Falling trees causing power outages will impact on communities and businesses economically.

- **Social and Cultural Well being**

We submit that an NES should take into account the negative effect planting trees in the fall zone of power lines can have on the ability of a community's ability to function properly and carry out business as usual in the event of an outage.

27. The focus of, and thus the outcome sought from, an NES for Plantation Forestry must surely be on the consistent and sustainable management of forestry plantations and in regard to its effects more widely. To promote the requirements of the RMA, and the objectives behind the NES PF, we submit that the NES PF should consider and include rules and standards necessary to avoid, remedy, or mitigate the effects of plantation forestry on electricity networks.

28. To leave so many matters out of scope significantly undermines this objectives and the effectiveness of the NES PF in our view. ENA strongly recommends the NES PF facilitate safe and sensible planting around EDB infrastructure in forests, going forward.

Proposed NES PF Considers Other Land and Asset Owners

29. We also note that the proposed NES PF provides direction in regard to setbacks from other land and asset owners, such as adjoining land owners, dwelling owners, and also regarding

setbacks from roads. We do not understand why EDBs with an interest in the land, and land use, are not similarly covered by the NES PF.

30. EDB's will on occasion own land outright, but more usually will have a legal interest in land via easement or statute (and sometimes through designation). These other interests in land have been noted by LINZ:

*"There exists other rights, restrictions and responsibilities in land which are created and managed in terms of other legislation or rules of law.."*¹

31. We do not see that the need for any local variation around lines is a strong argument, and certainly not a strong enough argument to warrant being out of scope, especially when weighed against the associated time delays, and low likelihood of being addressed, under the status quo model. The requirements around lines are fairly consistent from one region to the next, and the proposed standard and guidelines proposed by the EEA can allow for local site variation and considerations.
32. We also note that one of the tools to be used with the NES PF (the wilding spread risk calculator) considers the impacts of wilding spread on (among other things) existing land use. We do not see why the NES PF should be more limited in its scope.
33. EDBs do not wish to seek any more protection than is necessary for the safe, sustainable and efficient running of reliable networks. The changes we seek to the draft NES PF are ultimately about protecting public and worker safety, and to help ensure that a secure and reliable power supply is maintained for residential, business and industrial consumers. They are also to ensure that EDBs as physical resources are protected under the RMA, via the NES PF.

More Central Government Direction Needed

34. While we think that it is positive that MPI/MfE recognises that there are important health and safety and function reasons for considering EDB matters in regard to forestry activities we strongly submit that these should be in scope of the NES PF, in preference to leaving to councils, for the following main reasons:

Including EDB matters would ensure inclusion and deliver faster improvement to the Status Quo

35. Including EDB considerations in the NES PF will ensure timely inclusion. Leaving the matter outside the scope of the NES PF means that even if councils agree to incorporate rules, the EDB would have to either go through costly private plan change processes, or wait for the next planning rounds - these can be years away. Both of these options also have uncertain outcomes.

¹ From "A 10-20 year strategy for developing the Cadastre: Knowing the extent of Land-Related rights." Land Information New Zealand. 12 October 2012.

Including EDB matters would ensure inclusion and consistency

36. Inclusion in the NES PF will ensure these matters are considered and taken into account - very few local councils consider this currently. It would also mean that local government would have a clear policy direction from central government in these matters, and the clear set of standards would give foresters (and EDBs) certainty and consistency across the country.
37. In our view central government direction is needed, not just to hasten the introduction of clear standards, but because a high level of technical and legislative knowledge is needed in these areas in order for individual councils to determine what is an appropriate rule or consideration. More broadly, EDBs experience a lack of certainty and consistency in outcomes and decision making under the RMA, and we suspect the complexities in relation to electricity distribution and the wider frameworks around it, are one key reason.

Increased Scope Would better meet NES PF Objectives

38. Leaving significant issues out of scope of the NES PF also means there is less certainty for foresters, and fails against the purpose and objectives of the NES in our view. The purpose of the NES for Forestry Plantations is surely also to identify a consistent framework of rules and standards throughout the country for plantation forests so that foresters will know with certainty what is required regardless of the location of the plantation forest. It should be noted the EDBs also work across many different council boundaries, so improved consistency is also a critical objective from their point of view. One member works across as many as 21 different district councils, and 5 different regional council, jurisdictions.
39. We also note that the Government is simultaneously seeking to encourage more land conversion to forestry (through the Permanent Forestry Sink Initiative and through Afforestation Grants) and we submit that it is critical that the NES PF is in place at the forefront to ensure the problems experienced currently with forests being planted too close to lines are not exacerbated in new forests also.

EDBs not Covered by NPS and NES for Transmission

40. Section 6.2 of the consultation document when referencing leaving the effects of utility infrastructure out of scope, notes the NPS for Electricity Transmission (NPST) applies. It is important to note that the NPST (and NESTA) *do not apply* to electricity distribution assets – these apply only to those owned by Transpower who operate the National Grid. We submit the impacts on EDBs are significant. We also note that EDB circuits cover nearly 150,000 km, while Transpower's cover 12,000km. We understand that Transpower will be commenting on the adequacy of the NPST and NESTA regarding forests, but from our perspective without including rules/standards in the NES PF in regard to EDBs, councils will remain directionless from central government on this issue.

EEA Has a Suggested Rule for Inclusion

41. In a previous submission, the EEA proposed a setback (similar to the ones in the draft NES PF for setbacks from dwellings, adjoining land and roads) such that:

A setback for planting equivalent to fall height at growth limit for harvest plus 2 metres as a minimum from the power lines and their support structures, or, setback as otherwise agreed in writing with the EDB or other power line owner.”

42. The EEA also drafted a detailed guide to accompany this proposed standard which took into account relevant factors such as slopes and hills etc. on tree fall.
43. We consider this to be a fair approach in that it would be the threshold for when notification and discussions are required with power line owners. Discussions can consider where other planting/ harvesting/ vegetation management options could potentially be implemented within the setback that do not present a hazard to the EDB infrastructure. As businesses, EDB are sensitive to the commercial imperatives on foresters.
44. We would be happy to meet with MPI, MfE and foresters to discuss the above suggestion, and any others, in more detail.
45. Sensible planting near lines can also prevent problems, costs and potential liabilities for forest owners too. For example, and the EEA’s submission outlines these matters more fully, failure to specify set-backs at plantation and harvesting can potentially create unwanted felling compliance costs at harvest maturity. More stringent health and safety risk management under current Safety Reform will likely require specialist skills beyond forest faller skills, to deal with trees at least within tree fall distance. Already at the current time, tree workers are being challenged by the workplace regulator around their skill fitness to deal with trees within two tree lengths, and in many cases, contractors simply walk away from the economic and safety uncertainty (leaving the trees near lines, at increasing risk of fall as these age).

Other Considerations

46. It is unclear to us if the proposed framework, with some matters being in, and others out of, scope present any problems should there be conflicting objectives. As an example, could rules encouraging or requiring the retention of vegetation mass to assist with “filtering water runoff” conflict with the need to clear vegetation around lines? If so, would ‘in scope’ rules take precedence or not over ‘out of scope’ rules, where there was a conflict?
47. We also note the proposal aims to allow clearance of indigenous vegetation in certain circumstances. We submit the standard should also note that clearance of vegetation (indigenous or otherwise) is also necessary around power lines (including to maintain access to those lines) including, but not limited to, that required by the Electricity (Hazards from Trees) Regulations 2003.
48. Undermining infrastructure, such as overhead electric lines support structures, through earthworks poses significant risks to forests and infrastructure. ENA agrees with the EEA’s previous submission that the NES PF should establish a consistent minimum standard for earthworks based on the existing Electrical Code of Practice (ECP) 34 for Electrical Safety Distances Section 2 ‘Minimum Safe Distances for Excavation and Construction near Overhead Electric Line Supports’.

Conclusion

49. The issues experienced in terms of forestry being planted too close to lines are significant. These include power outages and costs to other consumers, and damage to assets. Public and worker safety issues can also arise such as from downed lines, unstable trees near those lines after storms, and risks to the public and firefighters from fires. It is costly to try and deal with trees established too close to lines retrospectively - surely it is better not to incentivise such planting in the first place. The NES PF is the ideal mechanism to set sensible rules at the planning and planting stage, and to improve on the status quo in a timely, consistent and significant manner.
50. We do not wish to imply that there is an issue with all forestry owners, as many work well with their local lines companies. However clearly from evidence provided by members in support of this and the EEA submission, there are significant and widespread issues under the status quo. However, the proposed NES PF will, as it stands, not improve on that (poor) status quo.
51. Moreover, leaving so many issues 'out of scope' of the NES PF defeats the purpose (and stated objectives) of the NES PF in reducing uncertainty and inconsistency for foresters, and does not promote the purposes of the RMA. EDBs also work across multiple council jurisdictions and would value increased consistency too.
52. We note that mechanisms for setbacks are proposed for inclusion in the NES PF for other asset and land owners. We do not see that there is any particular need for any local variation around lines, and it is certainly not a strong enough argument in our view to warrant EDB matters being out of scope, with the associated time delays and low likelihood of being addressed under the status quo model.
53. It is also important that MPI/MfE ensure that the rules (including what is in, versus out, of scope) do not, prevent, limit or disincentivise the clearing of existing vegetation and trees around lines. Being able to access assets for inspection and maintenance is also important. Earthworks can also impact on EDB assets.
54. We also understand the Government is looking to encourage greater conversion of land to forestry in the future through changes and/or extension to schemes such as the Permanent Forest Sink Initiative and the Afforestation Grants Scheme. ENA submits that the NES PF needs to incorporate rules in regard to electricity distribution networks to ensure that adequate setbacks from lines can be incorporated in new plantations that develop in response to those. Nor should these schemes prevent or disincentivise clearing around existing lines where needed for safety and supply security (and access to service those lines).
55. The ENA's contact person for this submissions is Tanya Ashby (s 9(2)(a) [REDACTED] [REDACTED]).
56. Thank you for the opportunity to make this submission.

Graeme Peters
Chief Executive
Electricity Networks Association
P: s 9(2)(a) [REDACTED]
M: s 9(2)(a) [REDACTED]



Proposed National Environmental Standard for Plantation Forestry

Template for Submitters

We would like to hear your views on the proposed NES-PF.

Please feel free to use this template to prepare your submission. Once complete please email to NES-PFConsultation@mpi.govt.nz.

As stated in section 8.2 of the consultation document, your submission must include at least the following information:

- your name, postal address, phone number and, if you have one, email address
- the title of the proposed standard you are making the submission about
- whether you support or oppose the standard
- your submission, with reasons for your views
- any changes you would like made to the standard
- the decision you wish the Ministers to make.

When commenting on specific draft rules, please be as clear as possible which rule you are referring to and provide a reference e.g. to the relevant page number, heading or text.

For more information about how to make a submission, please refer to section 8 of the consultation document.

Contact details

Name:

Vern C Goodwin

Postal address:

s 9(2)(a)

Phone number:

s 9(2)(a)

Email address:

s 9(2)(a)

Are you submitting on behalf of an organisation? Yes [] No []

If yes, which organisation are you submitting on behalf of?

Environmental Noise Analysis and Advice Service

If you are a forest owner/manager, what size of forest do you own/manage (in hectares):



Privacy Act 1993

Where you provide personal information in this consultation MPI will collect the information and will only use it for the purposes of the consultation. Under the Privacy Act 1993 you have the right to request access and correction of any personal information you have provided or that MPI holds on you.

Official Information Act 1982

All submissions are subject to the Official Information Act 1982 and may be released (along with the personal details of the submitter) under the Act. If you have specific reasons for wanting to have your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment for the release of submissions if requested under the Official Information Act.

Please indicate below if you wish your personal details to be withheld:

Please withhold my personal details where submissions are made public

Please withhold my personal details in response to a request under the Official Information Act 1982

Questions for submitters

The questions for submitters that are included throughout the consultation document are provided below. We encourage you to provide comments to support your answers to the questions below.

1. Do you think section 2.1 and 2.2 of the consultation document accurately describe the problem facing plantation forestry?

Please provide comments to support your views.



In relation to environmental noise, Yes. For the avoidance of doubt, all these submissions relate to non-occupational noise which is generally referred to as environmental noise and is subject to the RMA. These submissions expressly do not cover occupational noise which is jurisdictionally subject to health and safety legislation.

This organisations experience of plantation forestry environmental noise effects upon people of communities, (ie noise of a non-occupational type) extends back to the early 1970's, albeit that it has been a relatively rare event for forestry activity to be near residential living activity areas and to produce environmental noise adverse effects upon people that required investigation, control measures, or territorial local government (TLA), actions under the RMA or its predecessors including the Noise Control Act 1982 Act or Health Act 1956..It is acknowledged there is inconsistency in the approach used by TLAs in noise aspects of land use planning and that is a problem for a nationwide industry.

2. Do you consider that the conditions for permitted activities will manage the adverse environmental effects of plantation forestry?

Please provide comments to support your views.

In relation to environmental noise, No. The framing of the question requires a categorical answer hence "No". The reasons are principally that no method for measurement of noise has been stated and no method for assessment of noise has been stated. How noise is to be measured and assessed is an essential element of any noise rules intended to be enforceable. This is a long-established requirement found in decisions of the Environment Court and its predecessors.

Noise rules in New Zealand will normally cite a relevant New Zealand Standard as the prescribed basis for measurement of environmental noise ie NZS 6801:2008 Acoustics -Measurement of environmental sound, and a relevant New Zealand Standard for the assessment of noise, e.g. NZS 6802:2008 Acoustics-- Environmental noise , or NZS 6803:1999 Acoustics—Construction Noise.

Those are the standards for assessment prescribed in the only other NESs with conditions for permitted activities which include noise limits for environmental noise. Those NES are:

Resource Management (National Environmental Standards for Electricity Transmission Activities) Regulations 2009, and,
the Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008.

Thus if the proposed NES is to include, as it is recommend it should, noise limits as conditions for permitted activities, then the proposed NES must included reference to relevant New Zealand Standards as to how noise is to be measured and assessed for the rules to be meaningful. Exactly which method of assessment should be selected will be subject of comment below.



3. Are the conditions for permitted activities clear and enforceable (see appendix 3 of the consultation document)? Can you suggest ways of making the rules clearer and more enforceable?

Please provide comments to support your views.

In relation to environmental noise, No. See previous comment where the absence of how noise is to be measured and assessed is identified as an essential element missing from the proposed NES.

4. Are the matters where local authorities can retain local decision-making appropriate (summarised in Table 2 and Table 4 and provided in detail in Appendix 3 of the consultation document)?

Please provide comments to support your views.

In relation to environmental noise, Yes in part. In Table 2 "matters out of scope" under the heading "Effects that may arise from forestry activities," the words "Nuisance issues" are included. This terminology is potentially confusing as environmental noise might be construed as an out-of-scope item when it is in practice an included item in relation to purported controls on permitted activities, and it is a necessary element of controls on permitted activities. Appendix 4 includes environmental noise as an appropriate matter for control.

5. Will the environmental risk assessment tools (the Erosion Susceptibility Classification, the Wilding Spread Risk Calculator, and the Fish Spawning Indicator) appropriately manage environmental effects as intended (see section 3.5 of the consultation document)?

Please provide comments to support your views.

In relation to environmental noise, not applicable

6. Do you have any comments about any particular activity or draft rule (see appendix 3 of the consultation document)?

Please include reference to the rule you are referring to.



In relation to environmental noise, yes the proposed rule needs redrafting and inclusion of a basis for measurement and assessment. It is recommended the construction noise standard is the basis for assessment. Smart drafting might require additional wording to transform “recommended upper limits found in table 2 of NZS 6803 into provisions deemed necessary in the NES. Similarly a rider may be required in relation to Table 3 in that standard. NZS6802:2008 and the limits proposed in the draft proposal are not considered appropriate for an NES.

Other NES provide a useful basis with necessary modifications eg the following is a suitable basis for a rule.

(1) Plantation forestry is a permitted activity if the conditions in subclauses (2) (3) and (4) are complied with.

Conditions

(2) Plantation forestry activities shall be deemed to be construction noise for the purposes of New Zealand Standard NZS 6803:1999 Acoustics—Construction Noise.

(3) The noise from the Plantation forestry activity must comply with New Zealand Standard NZS 6803:1999 Acoustics—Construction Noise.

(4) The method of measurement must comply with New Zealand Standard NZS 6801:2008 "Acoustics --Measurement of environmental sound" which shall replace the methods of measurement and reporting specified in section 6.1 of Zealand Standard NZS 6803:1999 Acoustics—Construction Noise.

..

7. Is the NES–PF the best option to meet the assessment criteria (in Box 13 of the consultation document)?

Please provide comments to support your views.

In relation to environmental noise, Yes. National consistency will promote sustainability.

8. Have the expected costs and benefits of the NES-PF been adequately identified (see section 4.3 of the consultation document)?

Please provide comments to support your views.

In relation to environmental noise, no comment, as limited basis for evaluation.

9. Are there any issues that may affect the successful implementation of the NES-PF (such as decision-makers applying the permitted baseline test more frequently)?

Please provide comments to support your views.



In relation to environmental noise, no comment

10. Please describe any risks or opportunities that you consider have not been identified or addressed in the proposal.

In relation to environmental noise, no comment

11. Will the proposed NES-PF support regional councils to implement the NPS-FM (see section 6.1 of the consultation document)?

Please provide comments to support your views.

In relation to environmental noise, maybe. ...

12. What resources or other implementation activities would help you to prepare for and comply with the proposed NES-PF (see section 7 of the consultation document)? How should these activities be delivered (for example, training, online modules, guidance material)?

Ministry of Health's Environmental Noise Analysis and Advice Service should be consulted about preparation of guidelines and any training including presentations to stakeholders.

13. Are there any other issues that you would like to raise?

Please enter your comments here ...



Proposed National Environmental Standard for Plantation Forestry Template for Submitters

Contact details

Name:

Bryn Quilter (Chair of New Zealand Fish Passage Advisory Group)

Postal address:

s 9(2)(a)

Phone number:

s 9(2)(a)

Email address:

s 9(2)(a)

Are you submitting on behalf of an organisation? Yes

If yes, which organisation are you submitting on behalf of?

New Zealand Fish Passage Advisory Group

If you are a forest owner/manager, what size of forest do you own/manage (in hectares):

N/A

Privacy Act 1993

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Please withhold my personal details in response to a request under the Official Information Act 1982

Questions for submitters

The questions for submitters that are included throughout the consultation document are provided below. We encourage you to provide comments to support your answers to the questions below.

1. Do you think section 2.1 and 2.2 of the consultation document accurately describe the problem facing plantation forestry?

See response to Question 5.

2. Do you consider that the conditions for permitted activities will manage the adverse environmental effects of plantation forestry?

We support the requirement that fish passage applies both to existing and new culverts. Our over-arching concern is that there should be accountability and that all relevant structures will actually meet the permitted activity condition. The location, design and maintenance of structures must be documented and a programme implemented to ensure each structure provides for fish passage within an acceptable timeframe.

3. Are the conditions for permitted activities clear and enforceable (see appendix 3 of the consultation document)? Can you suggest ways of making the rules clearer and more enforceable?

More clarity needed with the following terms:

The term: **“relevant statutory manager”** needs to be defined in the glossary and under rationale.

The term: **“Perennially-flowing”** should be replaced with “perennial rivers” to make it consistent with the definition and terminology used elsewhere in the proposed NES-PF. As it is currently written, crossings only have to provide for fish passage on ‘perennially-flowing’ rivers, which excludes intermittently-flowing streams that continue to contain residual pools when the flow ceases. Such intermittent streams are ecologically valuable and provide important habitats for a range of native fish species. The definition of **“perennial river”** in the glossary includes these rivers with residual pools and thus we recommend the adoption of this term in the stream crossing rules so that fish passage is considered for all waterways

The terms: **culvert, bridge or any other in-stream structure** needs to be clear that this is inclusive of any upstream and downstream appendages e.g. flumes, socks, aprons, weirs, vertical pipes etc that can also impede fish passage.



Timeframes

Deadlines are required for assessing and remediating existing structures for fish passage. Whilst the proposed NES-PF says that existing crossings must provide for fish passage, it does not actively promote the practical implementation of identifying and dealing with a legacy of existing culverts. It will take time and money to do this work and forestry companies must be prompted to produce a plan to achieve this. It is suggested that a deadline of 2 years following the proposed NES-PF becoming operative be imposed for the completion of this assessment of all culverts and 5 years for the remediation of all culverts. Based on experience in some regions five years is considered long enough to do all the remediation within the forestry setting. However, forestry companies should be able to apply to the regional council for an extension in exceptional circumstances i.e. when the number of fish passage barriers is so large that they cannot cope in that time period (for example if the company have more than 100 culverts requiring major remediation). A report on the assessment and remediation programme must be provided to the regional council.

Quality control and auditing around fish passage.

Because assessing and remediating fish passage requires specialist knowledge and experience, this work must either be carried out by, or well supervised and quality controlled by, “a suitably qualified person”. Recommendation: add definition of “*a suitably qualified person*” with respect to fish passage management.

On-going monitoring and maintenance of fish passage.

We agree with the need for on-going monitoring and maintenance of all structures to ensure they continue to meet the requirements for fulfilling permitted activity status. However, we believe that this needs to be accompanied by guidance, e.g. on the frequency of monitoring and timelines for undertaking remediation where problems are identified, to help ensure accountability for this process. We also recommend the implementation of reporting requirements that document monitoring activities and actions resulting as a consequence of those activities. All sites identified where there is likelihood that fish passage is being impeded must be reported to the regional council and a programme implemented to remediate it.

Enforceability

As suggested above, effective enforcement requires notification and documentation/reporting of all new and existing structures to ensure fish passage is provided for and maintained. This can be difficult to measure, but the most effective way would be to ensure that all structures adhere to best-practice design criteria for fish passage (as a minimum), which is currently not allowed for in the proposed rules. Unless it meets the best-practice design criteria and is maintained to meet them, then it should not meet the fish passage condition and therefore cannot be a permitted activity.

The restricted discretionary activity rules must require fish passage. If not they are inconsistent with the Freshwater Fisheries Regulations 1983. In essence the only way that the restricted discretionary activity rules can be met is if exemption is obtained from Director General of Department of Conservation.



4. Are the matters where local authorities can retain local decision-making appropriate (summarised in Table 2 and Table 4 and provided in detail in Appendix 3 of the consultation document)?

Local authorities need to decide the following:

- Whether the assessment about fish passage is correct and whether a person is suitably-qualified to make the assessment.
- Whether deadlines for assessing and remediating structures to provide for fish passage can be extended due to a particular circumstance.
- Audit the on-going monitoring and maintenance of fish passage at in-stream structures.
- Whether alternative locally-appropriate flow calculations are needed.
- Where fish passage barriers should be retained (to avoid pest or predatory fish from impacting native fish populations).

5. Will the environmental risk assessment tools (the Erosion Susceptibility Classification, the Wilding Spread Risk Calculator, and the Fish Spawning Indicator) appropriately manage environmental effects as intended (see section 3.5 of the consultation document)?



Fish spawning (pg86)

While members of our group are concerned about many aspects of the proposed NES-PF, we have generally restricted the scope of our submission to the subject of fish passage. However, the proposed NES-PF is a package and without good protection of fish habitats and spawning sites, the benefits of providing fish passage will not be realised.

Our group has some strong concerns about the use of the fish spawning indicator tool and the gaps in the rules relating to fish spawning and migration. We consider that there are a number of missing species that are at high risk from forestry (some species have already been lost due to forestry) and that fish passage management is critical for their survival in forestry areas, especially where built barriers may be implemented. We believe that consideration of migration timing should be directly addressed as well as spawning time.

An important example for fish passage management is the incomplete fish lists used in the fish spawning conditions. For example, thirteen highly threatened non-migratory galaxiids have been excluded from the original assessment of fish spawning and migration and not replaced with a surrogate (Smith 2014). In addition the 21 fish listed within the fish spawning conditions are not the most critical, threatened or at risk from forestry activities. Currently forestry companies could harvest from highly threatened key non-migratory galaxiid locations as the spawning sites for that species have been excluded. Similarly important species could be adversely affected due to forestry activities occurring at a time when fish are known to be migrating within waterways.

The fish spawning indicator tool is limited and has many gaps. Spawning timing is regionally variable and the proposed windows in the conditions. Spawning habitats are not restricted to river beds and many fish lay their eggs on riparian margins. These rules need to be revised to add consideration of these points.

6. Do you have any comments about any particular activity or draft rule (see appendix 3 of the consultation document)?



General River Crossings (p89)

We strongly recommend that consideration be given to including the following conditions relating to structure design to maximise the likelihood of the fish passage requirements of the Freshwater Fisheries Regulations 1983 being fulfilled:

General conditions (pg 89) and to crossing-specific conditions (pg 90 to 91):

Stream crossings must be installed in such a manner that

1. The natural alignment of the stream is maintained;
2. The natural gradient of the stream is maintained;
3. Bed material is retained throughout the full length of the structure.

Flow calculations (pg 89).

We support these methods, but note that Point 4 is the most important as it allows councils to approve their own (often more locally appropriate) methods.

Rules applying to temporary culverts (pg 90):

1. The consultation document defines ‘temporary culverts’ as being those culverts in place for less than two weeks (page 90). We commend the use of the two week time limit for temporary crossings and believe this is a positive step for minimising the impact of temporary crossings on instream habitat and fish passage. However, we would like to see clear guidance/controls on the use of temporary crossings to avoid situations arising where this criteria is exploited, for example, by moving temporary crossings by a few metres every couple of weeks or temporarily removing them and then putting them back in place repeatedly.

Rules applying to single culverts (pg 90):

3. The minimum culvert diameter should be: Culvert diameters at the point they intersect with the river bed must be at least 1.2 x the average stream bed width + 0.5m. This approach is in line with current national best-practice for providing fish passage (Auckland Council, Waikato Regional Council and NZTA guidelines).
5. Replace the criteria requiring that the “culvert invert be at least 100 mm below the level of the bed of a river or lake”, with the “culvert invert should be a minimum of 20% of the culvert diameter below bed level” as per the Auckland and Waikato guidelines.



Rules applying to battery culverts (pg 91):

2. The aggregate culvert diameter at the point where they intersect with the river bed must be at least 1.2 x the average stream bed width + 0.5m. This approach is in line with current national best-practice for providing fish passage (Auckland Council, Waikato Regional Council and NZTA guidelines). For example, for a stream with a mean bed width of 5 m, the aggregate culvert width would need to be $1.2 \times 5 + 0.5 = 6.5\text{m}$, and a three culvert battery would (subject to designing for flow conveyance) require, say, 3 x 2.15m culverts set below stream bed level.
3. Replace the criteria requiring that “at least one culvert invert be at least 100 mm below the level of the bed of a river or lake”, with “all culvert inverts should be a minimum of 20% of the culvert diameter below bed level” as per the Auckland and Waikato guidelines. Having all culverts at the same level would best mimic natural bed width and form and reduce the likelihood of stream bed scour leading to perched culvert fish barriers
6. Instead of the criteria requiring that “The culvert is sized to pass annual average flow” and “It must be constructed to allow greater flows to pass over it without structural failure”, the size prescription should be based on an AEP design flow event with no surcharging. We consider that the average annual flow is too small to reliably and consistently allow fish passage. For all events above the average annual flow (i.e. for 6 months every year) this arrangement could act like a ford and the culverts could be surcharged resulting in increased velocities and thus become an impediment to fish passage. This rule is far more permissive than, and inconsistent with, the single culvert rules which require no heading up (surcharging) in the 5% AEP event. The 5% AEP design flow event could be used as per single culverts.

Rules applying to drift decks (pg 91):

4. A rule addressing fish passage must be added.
5. There is inconsistency with respect to design requirements compared to culverts and battery culverts. In the definition used in the consultation document glossary, drift decks are simply box culverts (either single or battery) and not round as ostensibly assumed for the rules for 'culverts' and 'battery culverts'. Whether round or rectangular, single or multiple barrel, the rules for culverts should be the same, so for fish passage the key items are as set out above for the “Rules applying to battery culverts (pg 91)” times 2, 3 and 6.

Rules applying to fords (pg 91):

1. A rule addressing fish passage must be added.
2. Due to the high risk that fords will impede fish passage, we recommend that they are not included within the permitted activity rules at all.



7. Is the NES–PF the best option to meet the assessment criteria (in Box 13 of the consultation document)?

No comment.

8. Have the expected costs and benefits of the NES-PF been adequately identified (see section 4.3 of the consultation document)?

No comment

9. Are there any issues that may affect the successful implementation of the NES-PF (such as decision-makers applying the permitted baseline test more frequently)?

Refer Question 3 comments.

10. Please describe any risks or opportunities that you consider have not been identified or addressed in the proposal.

Freshwater Fisheries Regulations 1983

There is no mention on the NES-PF of the fish passage requirements set out within the Freshwater Fisheries Regulations 1983. These were identified in a previous draft of the river crossing tool but have been removed. The Freshwater Fisheries Regulations 1983 states that no ford or culvert crossings can impede the passage of fish without dispensation from the Director General of the Department of Conservation. We recommend that the regulations be directly referred to within the NES-PF as they are a legislated rationale for the provision of fish passage in New Zealand. Add to Section 6 of NES-PF

11. Will the proposed NES-PF support regional councils to implement the NPS-FM (see section 6.1 of the consultation document)?

No comment.

12. What resources or other implementation activities would help you to prepare for and comply with the proposed NES-PF (see section 7 of the consultation document)? How should these activities be delivered (for example, training, online modules, guidance material)?



Permitted General River-Crossing Condition - Fish Passage (pg 89).

The proposed NES-PF must ‘future-proof’ the regulation by referring to the need to implement the most up to date best-practice guidelines for stream crossings. The NZ Fish Passage Advisory Group will be developing updated guidelines for design and maintenance of structures in the next two years. Some of the design criteria currently included in the proposed NPS-PF, e.g. culvert width/diameter, are inconsistent with existing best-practice for providing for fish passage. Consequently, the design criteria included in the proposed NES-PF are not as effective as they could be at managing and minimising the potential for adverse environmental effects. We would recommend that to achieve permitted activity status, structures should meet best-practice design guidelines for providing fish passage.

We strongly recommend that consideration be given to including the following conditions relating to structure design to maximise the likelihood of the fish passage requirements of the Freshwater Fisheries Regulations 1983 being fulfilled:

General conditions (pg 89) and to crossing-specific conditions (pg 90 to 91):

Stream crossings must be installed in such a manner that

6. The natural alignment of the stream is maintained;
7. The natural gradient of the stream is maintained;
8. Bed material is retained throughout the full length of the structure.

13. Are there any other issues that you would like to raise?

Thank you for the opportunity to submit on this National Environmental Standard for Plantation Forestry (NES-PF). It is pleasing to see that some previous comments provided by NZFPAG to Stephen Dobson (Sept 2014), have been taken on board and the proposed NES-PF improved.

We note that the page numbers provided above are based on the online consultation document (accessed 10 August 2015) and that some versions obtained by NZFPAG members during the consultaion period do not match that version.



12 August 2015

Ministry for Primary Industries
PO Box 10-420
Wellington

COMMENTS ON THE NATIONAL ENVIRONMENTAL STANDARD – PRODUCTION FORESTRY

Fisheries Inshore New Zealand

1. Fisheries Inshore New Zealand Limited (FINZ) represents the inshore finfish, pelagic and tuna fisheries of New Zealand. It was formed in November 2012 as part of the restructuring of industry organisations. Its role is to deal with national issues on behalf of the sector and to work directly with and on behalf of its quota owners, fishers and affiliated Commercial Stakeholder Organisations. As part of that work FINZ also works collaboratively with other industry organisations, Sector Representative Entities and Seafood New Zealand.
2. FINZ represents 239 inshore fishstocks that are managed under the Quota Management System, the quota owning members of FINZ collectively own more than 51% of the quota in 187 fishstocks and between 40 and 51% in a further 17 fishstocks.
3. FINZ members also have interests in fishstocks in the freshwater environment, such as eels, that may be adversely affected.
4. Our key outputs are the development of, and agreement to, appropriate policy frameworks, processes and tools to assist the sector to more effectively manage inshore, pelagic and tuna fishstocks, to minimise their interactions with the associated ecosystems and work positively with other fishers and users of marine space where we carry out our harvesting activities.
5. This submission has been prepared by Jeremy Helson of Fisheries Inshore New Zealand Limited. Any queries should be directed to Dr Helson: s 9(2)(a) .

General Position

6. FINZ considers that there are serious shortcomings in the proposed National Environmental Standard and that the adverse effects on the seafood sector, and the marine environment generally, have not been sufficiently addressed.
7. FINZ supports the combined submission made by the Paua Industry Council, the NZ Rock Lobster Industry Council and the Specialty and Emerging Fisheries Group.

The Consultation Process

8. As the majority of the fishstocks represented by FINZ occur in the inshore marine environment at some stage of their life-history, many of these stocks will be potentially affected by sediment discharges generated by forestry activity.
9. Despite this clear and well-understood link, FINZ has not been directly consulted on this proposal or advised of the schedule of public meetings. We request that the proposed Standard does not proceed any further until consultation with the wider seafood sector has been undertaken.

Potential Impacts

10. Seafood is New Zealand's fourth largest merchandise export. The adverse effects of forestry activities on the coastal marine environment have been well documented. Impacts on these fisheries caused by sedimentation can have wide-ranging effects on the sector that may reduce export revenues and employment in regional economies.
11. MPI's own research shows the effects of sediments on fish and fisheries. For example, Morrison et al. 2009 state:¹

In New Zealand, arguably the most important land-based stressor is sedimentation, including both suspended sediment and deposition effects, and associated decreases in water clarity. ... Impacts may be direct on the species themselves. ... Indirect effects include the modification or loss of important nursery habitats, especially those composed of habitat forming (biogenic) species."

12. It would appear that the adverse effects on the marine environment, as discussed by Morrison et al., have not been considered in any detail. As such, the proposed standard may be contrary to section 43A(3)(b) of the *Resource Management Act 1991* as consideration of adverse effects was unreasonably confined three issues.
13. It is disappointing that the formation of MPI has not yielded closer integration between terrestrial and marine sectors such that policy can be developed in a more thoughtful and holistic manner.

Inadequate Conditions

14. The conditions proposed in the discussion document will not manage the effects of plantation forestry on the coastal marine environment. Because of the potential for direct sediment run-off from forestry activities, we would expect as an absolute minimum that any area within two nautical miles of the coastal marine area be zoned "red". We would also expect that any area that discharges into sensitive areas or areas that are known to be of significant value to fisheries management such as estuaries, harbours and enclosed marine waterways should also be zoned "red".

Other Fishing Impacts

15. While FINZ does not represent recreational or customary fishers, we acknowledge their right to use and enjoy our marine resources. FINZ works to ensure our fisheries resources are healthy and well managed for the benefit of commercial, recreational and customary fishers alike. The adverse effects of forestry activities do not solely reduce the quality of commercial fisheries, but all fisheries.
16. FINZ considers that the adverse effects on recreational and customary fishers should also be explicitly considered and appropriate and targeted consultation undertaken if this has not occurred to date.



¹ *New Zealand Aquatic Environment and Biodiversity Report No. 37.*

Jeremy Helson
Chief Executive

Submission on the proposed NES for Plantation Forestry

Thank you for the opportunity to submit on the consultation document of June 2015.

1. I have concerns that a national standard does not fit all regions of NZ. Every river catchment is different in topography, size, slope, soil type, rainfall, climate, governance, population etc. The young soil types of the Gisborne East Coast liquefy easily and are very different from neighbouring regions. To reduce the present GDC requirement for site specific harvesting consents would not only be foolish but an environmental crime.
2. re Page 22 of the document Environmental Risk Assessment Tool 1; Erosion class classification in the Gisborne East Coast region table 5, orange 57% and red 23% of Gisborne land area. **Note; Gisborne east coast has severe and extreme erosion risk land that is 43% of that total risk level identified area in NZ.** Therefore to have a division between orange and red land in this region is wrong and a consent should be needed for both orange and red land when harvesting, roading, earthworks and river crossings. The restricted discretionary status should remain on activity in this region.
3. The proposed weakening of the present Gisborne District Council, GDC, harvest standards would be detrimental to the efficient process that we have now.
4. I am a farmer, farm forester and forest manager who has had 2 woodlot harvests and I am a participant of the East Coast Forestry Project .I have planted woodlots since the 1980s and then participated in the East Coast Forestry Project planting on steep erodible land on my property .
5. I do not agree that the proposed NES section on P 22 and 23 are wise in the Gisborne East Coast region, and therefor would like the activity status to remain restricted discretionary for both the orange and red zone land

Thank you for the opportunity to present this submission

Nick Seymour

Chairman

Gisborne East Coast Branch of the NZ Farm Forestry Assn

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Proposed National Environmental Standard for Plantation Forestry

Template for Submitters

We would like to hear your views on the proposed NES-PF.

Please feel free to use this template to prepare your submission. Once complete please email to NES-PFConsultation@mpi.govt.nz.

As stated in section 8.2 of the consultation document, your submission must include at least the following information:

- your name, postal address, phone number and, if you have one, email address
- the title of the proposed standard you are making the submission about
- whether you support or oppose the standard
- your submission, with reasons for your views
- any changes you would like made to the standard
- the decision you wish the Ministers to make.

When commenting on specific draft rules, please be as clear as possible which rule you are referring to and provide a reference e.g. to the relevant page number, heading or text.

For more information about how to make a submission, please refer to section 8 of the consultation document.

Contact details

Name:

Barbara Rouse

Postal address:

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Phone number:

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Email address:

s 9(2)(a)

Are you submitting on behalf of an organisation? Yes []

If yes, which organisation are you submitting on behalf of?

Heritage New Zealand Pouhere Taonga

If you are a forest owner/manager, what size of forest do you own/manage (in hectares):



Privacy Act 1993

Where you provide personal information in this consultation MPI will collect the information and will only use it for the purposes of the consultation. Under the Privacy Act 1993 you have the right to request access and correction of any personal information you have provided or that MPI holds on you.

Official Information Act 1982

All submissions are subject to the Official Information Act 1982 and may be released (along with the personal details of the submitter) under the Act. If you have specific reasons for wanting to have your submission or personal details withheld, please set out your reasons in the submission. MPI will consider those reasons when making any assessment for the release of submissions if requested under the Official Information Act.

Please indicate below if you wish your personal details to be withheld:

Please withhold my personal details where submissions are made public

Please withhold my personal details in response to a request under the Official Information Act 1982

Questions for submitters

The questions for submitters that are included throughout the consultation document are provided below. We encourage you to provide comments to support your answers to the questions below.

1. Do you think section 2.1 and 2.2 of the consultation document accurately describe the problem facing plantation forestry?

Please provide comments to support your views.

The problems described are faced by many industries operating across local authority boundaries and over long time frames.

2. Do you consider that the conditions for permitted activities will manage the adverse environmental effects of plantation forestry?

Please provide comments to support your views.



3. Are the conditions for permitted activities clear and enforceable (see appendix 3 of the consultation document)? Can you suggest ways of making the rules clearer and more enforceable?

Please provide comments to support your views.

Appendix 3 contains a permitted activity rule for “known archaeological sites”, that allows disturbance only if the activity is carried out in accordance with an archaeological authority under the Heritage New Zealand Pouhere Taonga Act 2014 (HNZPTA) (P. 91) Further, the permitted activity rule sets out an accidental discovery protocol for “unrecorded archaeological sites”. While the intention of the rule, to ensure that operators are aware of the requirements of the HNZPTA to obtain an archaeological authority, is supported, there are several problems with the way this rule is set up.

First, if an operator modifies or destroys an archaeological site without an archaeological authority, the way this rule is written, the operator would need a resource consent as this defaults to a discretionary activity – this is made explicit on page 85 (last row). This introduces unnecessary regulatory duplication, as in this situation an archaeological authority would be required and HNZPTA could prosecute the operator for modifying or destroying the site without authority.

The same is true for the requirement to stop work and obtain an archaeological authority for disturbing an “unrecorded” site. Failing to do so activates the discretionary activity default as above, which would duplicate the archaeological authority requirements of the HNZPTA, and possibly result in prosecution.

The problem results from introducing the requirement as a permitted activity rule, which then requires a default position (in this case discretionary resource consent) if the rule is violated.

Section 42 sets out the requirements for obtaining an archaeological authority – note that authority is required to modify or destroy any archaeological site, not only recorded sites, but also where the person “ought reasonably to have suspected that the site is an archaeological site.

Unless an authority is granted under [section 48](#), [56\(1\)\(b\)](#), or [62](#) in respect of an archaeological site, no person may modify or destroy, or cause to be modified or destroyed, the whole or any part of that site if that person knows, or ought reasonably to have suspected, that the site is an archaeological site.

(2) Subsection (1) applies whether or not an archaeological site is a recorded archaeological site or is entered on—

- (a) the New Zealand Heritage List/Rārangī Kōrero under [subpart 1](#) of Part 4;
or
- (b) the Landmarks list made under [subpart 2](#) of Part 4.



Question 3 continued

A protocol for sites “exposed or identified before plantation forestry activities” suggests that this is a substitute for obtaining an archaeological authority before undertaking the work.

While we support the intention of this rule, it has unintended consequences both for forestry operators in introducing potential regulatory duplication, and putting them at risk of prosecution or project delays if they assume that the procedure for “unrecorded sites” is a substitute for proper investigation of potential archaeology and obtaining an archaeological authority in advance of undertaking the work.

We suggest that this would be better as an advice note included within the NES. The advice note could set out the requirements of section 42, and the recommendations of the procedure to follow if a site is discovered that could not have been anticipated. We would like the opportunity to work with you on the wording of a suitable advice note.

4. Are the matters where local authorities can retain local decision-making appropriate (summarised in Table 2 and Table 4 and provided in detail in Appendix 3 of the consultation document)?

Please provide comments to support your views.

Heritage New Zealand supports the recognition in table 4, p. 20 that councils need to be able to set more stringent rules for “Places and areas of known cultural or historic heritage value” to reflect local values (as provided for by RMA 44A (2)). This is appropriate given the status as a “matter of national importance” accorded to historic heritage under section 6(f) of the RMA, to be protected from “inappropriate subdivision, use and development”. The document also explicitly recognises the provision for local authorities to deal with the effects of permitted activities that relate to effects not dealt with in the NES (RMA 43A (5)).

The provision for councils to apply more stringent rules is expressed (p.96) as “places and areas of known cultural or heritage value identified in regional or district plans including... **but not currently covered by the archaeological authority provisions of the Heritage New Zealand Pouhere Taonga Act 2014**”. This exclusion of matters covered by the archaeological authority provisions was inserted to prevent regulatory overlap. Councils will still be able to make rules relating to scheduled archaeological sites for matters such as discharges of contaminants, fuel storage, placement of overburden from quarrying, that may not trigger a requirement for an archaeological authority. We would like the opportunity to continue working with you during the drafting stage of the NES to ensure that the intention of this provision is preserved.

5. Will the environmental risk assessment tools (the Erosion Susceptibility Classification, the Wilding Spread Risk Calculator, and the Fish Spawning Indicator)



appropriately manage environmental effects as intended (see section 3.5 of the consultation document)?

Please provide comments to support your views.

6. Do you have any comments about any particular activity or draft rule (see appendix 3 of the consultation document)?

Please include reference to the rule you are referring to.

See the discussion above on the general conditions relating to Archaeological sites on page 81.

7. Is the NES–PF the best option to meet the assessment criteria (in Box 13 of the consultation document)?

Please provide comments to support your views.

The NES provides the opportunity to realise the benefits of a nationally consistent framework of rules for plantation forestry that balances the economic benefits with the environmental effects and acknowledges the benefits of consistency to operators who operate across different district or regions.

8. Have the expected costs and benefits of the NES-PF been adequately identified (see section 4.3 of the consultation document)?

Please provide comments to support your views.

9. Are there any issues that may affect the successful implementation of the NES-PF (such as decision-makers applying the permitted baseline test more frequently)?

Please provide comments to support your views.



It is important that regional and district plans have a robust set of objectives and policies to guide decision-making on resource consents, and to guide the development of any additional rules to protect historic heritage. This could have been addressed through the production of a NPS and NES. In the absence of a NPS, guidance on the NES could address suitable objectives and policies that councils could consider incorporating at the next plan review. Many councils are undertaking rolling reviews of district plans, so the opportunity for review could arise sooner rather than later.

10. Please describe any risks or opportunities that you consider have not been identified or addressed in the proposal.

It would have been useful to see a short discussion on the requirements of the HNZPTA in Chapter 6 p. 41.

11. Will the proposed NES-PF support regional councils to implement the NPS-FM (see section 6.1 of the consultation document)?

Please provide comments to support your views.

See question 9.

12. What resources or other implementation activities would help you to prepare for and comply with the proposed NES-PF (see section 7 of the consultation document)? How should these activities be delivered (for example, training, online modules, guidance material)?

See question 9

13. Are there any other issues that you would like to raise?

Thank you for the opportunity to make a submission. Heritage New Zealand notes the intention to allow local authorities to make more stringent rules to protect historic heritage values, and to ensure that operators are aware of and comply with the archaeological authority provisions of the HNZPTA. However, addressing the latter by way of a rule has unintended consequences, and we would appreciate the opportunity to continue to work with you to ensure that the intention of these provisions is retained without risking unnecessary regulatory duplication.

ICOMOS NEW ZEALAND
TE MANA O NGA POUWHENUA O TE AO
INTERNATIONAL COUNCIL ON MONUMENTS AND SITES
CONSEIL INTERNATIONAL DES MONUMENTS ET DES SITES
CONSEJO INTERNACIONAL DE MONUMENTOS Y SITIOS

s 9(2)(a)

WWW.ICOMOS.ORG.NZ

Stuart Miller
Spatial, Forestry and Land Management
Ministry for Primary Industries
PO Box 2526
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11 August 2015

NES-PFConsultation@mpi.govt.nz

**Proposed National Environmental Standard for Plantation Forestry
Summary Consultation Document**

<http://www.mpi.govt.nz/news-and-resources/consultations/proposed-national-environmental-standard-for-plantation-forestry/>

Thank you for the opportunity to comment on this proposed environmental standard.

ICOMOS is an international non-governmental organisation of heritage professionals dedicated to the conservation of the world's historic monuments and sites. The organisation was founded in 1965 as a result of the international adoption of the Charter for the Conservation and Restoration of Monuments and Sites in Venice in the previous year. ICOMOS is UNESCO's principal advisor in matters concerning the conservation and protection of historic monuments and sites. The New Zealand National Committee was established in 1989 and incorporated in 1990.

ICOMOS New Zealand (ICOMOS NZ) has 99 members made up of professionals with a particular interest and expertise in heritage issues, including architects, engineers, heritage advisers, archaeologists, lawyers and planners.

In 1993 ICOMOS NZ published the ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value. A revised ICOMOS New Zealand Charter for the Conservation of Places of Cultural Heritage Value (the Charter) was approved in September 2010 and is available on the ICOMOS NZ website. The Charter is widely used by heritage professionals and local authorities throughout New Zealand to inform heritage conservation processes and practice.

General

Both the Resource Management Act 1991 (RMA) and the Heritage NZ Pouhere taonga Act 2014 protect archaeological sites and other heritage such as wahi tapu.

On p.23, the statement” Cultural or historic heritage matters often reflect local values, so are not suited to be managed nationally” is questionable at best, as is that on page 40:....

On p. 40, it is stated:

In terms of managing unique local environments, including significant waterbodies, and cultural and historic heritage values, there may be little change because local communities retain some flexibility to establish more stringent rules to manage many of these areas (see section 3.4). In relation to wāhi tapu that meet the definition of archaeological sites, there is little change because the proposed rules are very similar to those in place under most existing plans (see the archaeological rules in general conditions in the draft rules in appendix 3).

We disagree with the view implied by these statements. It is not sufficient to leave areas of known cultural or heritage value to local authorities to protect, rather than to the Standards themselves.

Also, there needs to be a mention of the HNZTPA 2014 in conjunction with references to RMA 1991. The reference to the HNZTPA 2014 on p. 83 is a step in the right direction but needs to be supplemented, see below. It should be prefaced with the statement “All archaeological sites, whether recorded or not are protected under the HNZPTA”.

Compliance with these acts by incorporation in, and following, the proposed NES-PF rules and internal company standards is the key to protection.

Table 1 (p.14) should include risks to archaeological sites under all headings, except pruning and thinning to waste. Risks to sites in forestry blocks include:

- All establishment operations
- Bulldozing of roads, firebreaks, and fire control operations
- The full extent of sites has not been properly recorded in the company’s compartment maps; out of date documentation
- Harvesting, especially hauling, skidding, and landing construction
- Wilding pines and weeds establishing on non-planted areas, crating unstable conditions
- Pig-rooting in favourable open areas

Similarly, Appendix 2 (Forestry activities and their effects) makes no mention of archaeological sites under sub-headings Mechanical land preparation, Afforestation, Earthworks, Quarrying, Harvesting and Replanting, yet all of these activities have potentially adverse effects on archaeological and other heritage sites, including wahi tapu/wahi tupuna.

The specifics of the proposed rules

In Appendix 3 Rules for eight plantation forestry activities, there is no provision for identification and avoidance of archaeological sites. Potential damage to archaeological sites should be included as a specific risk under appropriate activities.

For a guide on forestry practice see the pertinent parts of Kevin L. Jones *Caring for Archaeological Sites: New Zealand Guidelines* (2007: section 3.3) (<http://www.doc.govt.nz/documents/science-and-technical/sap243entire.pdf>). This work should be referenced in the new rules.

There should be a rule requiring survey for and assessment of archaeological sites.

There should be a requirement for:

- Pre-establishment assessment and archaeological survey, as noted above
- Long term, on-ground identification of archaeological sites by marker posts
- No planting or re-planting of archaeological sites
- Plantation establishment and logging plans that give effect to protection of archaeological sites
- Fire management plans and operations management that deal with the need to protect sites
- During felling operations, sites are to be re-identified and clearly marked
- No felling onto sites, no hauling across sites
- Regular hunting should be allowed in blocks

In the course of harvesting, if and where archaeological sites are located, there should be a requirement on forest planners and logging contractors to adopt procedures that will minimise the damage to sites. These should include but not be limited to: directional felling, felling on to prepared protective layers of brush or slash/logs, care with hauling lines, care with movement and placement of tracked or wheeled logging equipment and cable haulers (if used).

Thank-you for the opportunity to comment on these proposals. ICOMOS NZ would be happy to discuss the detail of proposed changes further as required.

Kevin Jones

s 9(2)(a)



PAUA INDUSTRY COUNCIL LTD



SPECIALTY & EMERGING FISHERIES



NZ ROCK LOBSTER INDUSTRY COUNCIL



11th August 2015

To: Ministry for the Environment; Ministry for Primary Industry

Submission on: National Environmental Standard – Production Forestry, Consultation Document

This is a submission on behalf of the Rock Lobster Industry Council, the Paua Industry Council and the Specialty and Emerging Fisheries Group, on the proposed National Environmental Standard – Production Forestry (the Standard).

The address for service for the submitters is **Attn: Bill Chisholm,** [redacted], **ph** [redacted], **email** [redacted]

If a hearing is carried on on these matters, the submitters would like to be heard in support of this submission.

The NZ Rock Lobster Industry Council (NZRLIC) is an umbrella organisation for nine regional organisations known as CRAMACs, which operate in each of the rock lobster (CRA) management areas of New Zealand. CRAMAC membership comprises CRA quota owners, processors, exporters and fishermen in each region.

The Paua Industry Council (PIC) is the national representative organisation of the commercial paua fishing industry in New Zealand. The organisation receives its mandate from five regional organisations known as PauaMACs, which represent the interests of quota owners and Annual Catch Entitlement holders in each of the paua Quota Management Areas.

The Specialty and Emerging Fisheries Group (S&E) is the organisation which represents a range of developing commercial fisheries which fall outside the normal commercial sphere. Fish stocks represented by S&E include shortfin eel, longfin eel, kina, yellow-eye mullet, octopus and inshore clams.

All of the commercial stocks represented by NZRLIC, PIC and S&E are potentially affected by sediment discharges generated by forestry activity. None of the organisations represented by this submission have been directly consulted on this proposal, nor advised of the schedule of public meetings, in spite of the clear relevance of this proposal to inshore fisheries. We request that the proposed Standard does not proceed to its implementation phase, and that the Ministry for Primary Industry undertakes further consultation with us on this proposal forthwith.

Submission

A. General Comments

1. We are very concerned about the non-existent consultation with our Industry to date.

The commercial inshore fishing industry is New Zealand's fourth largest merchandise-export industry, rivalling forestry in its value (approximately 3 billion dollars). The adverse effects of unrestricted forestry activities on the coastal marine environment have been well-documented. MPI's own research shows the effects of sediments on fish and the need for effective change (Morrison *et al* 2009). We note that the development of this process has been ongoing since 2009, and there have been consultation meetings throughout the country over the last two months, but to date our representatives have not been approached for input.

We are mindful that this process is well-advanced, and may shortly proceed to the implementation of regulations. Given that inshore fishing resources are at risk from unrestricted forestry activities, we formally request to be fully involved in any further development of this process.

2. We are very concerned about the use of industry-based environmental standards.

It does not seem appropriate to have a National Environmental Standard for a single industry, which spans such a wide range of activities. Our preference is that National Standards are activity-based (e.g. disturbance of streambeds), rather than industry-based (such as forestry). It is illogical to have earthworks rules, sediment discharge rules or river crossing rules for forestry different from those for farming or for subdivision.

The actual and potential adverse effects of these activities are the same regardless of their purpose. Considerable confusion may occur when forestry activities and other activities are combined (e.g. placement of culverts on a property for both forestry and general farming activities). While it is not unreasonable to seek consistency for these activities across Councils, this should be effects-based, not industry-based.

Table 2 (page 20) lists matters which are "out of scope" of the Standard. There is very little explanation or analysis why these matters are "out of scope", except that Councils will retain the ability to "...*manage them as they consider appropriate*".

The difficulty is that the "out of scope" matters listed in Table 2 are activities which are normally practiced at some stage of the production forestry cycle. These include non-point discharges of substances such as tannin, agrichemicals, fertilisers and pollen. If the Standard is supposed to manage the actual and potential effects of an entire industry such as production

forestry, then **all** the actual or potential effects of that industry must be considered, not just **some of them**.

3. We dislike the excessive permissiveness of the proposed Standard

The proposed Standard provides a considerably higher level of permissibility than most Council Plans currently allow. The Standard raises the permitted baseline far above the level whereby actual and potential adverse effects are no more than minor. While Councils can impose stricter controls in “sensitive” areas, this will not reduce the potential for serious adverse effects on wider coastal marine environments.

As it stands, Councils will need to monitor forestry operations which will take considerable Council time and resources. With 94% of New Zealand’s erosion susceptibility classes being subject to the “Permitted with conditions” regime and not requiring resource consents, this means that ratepayers will be footing the bill. We believe that the wider social benefits accruing from good plantation management are overstated in the consultation document, and ratepayers should not have to bear the burden of covering the costs of monitoring operations and enforcing compliance. We do not believe that any mechanism can easily be put in place which requires plantation owners to contribute to the cost of Council monitoring their operations. Without this monitoring, the proposed Standard is therefore simply a voluntary Code of Practice masquerading as a Standard. This undermines the purpose and integrity of the RMA.

4. The consultation document is mostly silent on the actual and potential effects of forestry activities on the coastal marine environment and fisheries.

We are very concerned that the proposed Standard is contrary to Section 43A (3) (b) of the RMA. This is because the consultation document focuses on only three potential adverse effects (wilding threat, erosion & sedimentation and freshwater fish spawning), with no consideration of the known adverse effects to the coastal marine environment and associated fisheries, which have been well-documented. For example, Morrison *et al* 2009 studied the effects of land-based activities on inshore fisheries. They conclude:

In New Zealand, arguably the most important land-based stressor is sedimentation, including both suspended sediment and deposition effects, and associated decreases in water clarity (which may also be driven by nutrient effects). Impacts may be direct on the species themselves, such as clogging of the gills of filter feeders and decreases in filtering efficiencies with increasing suspended sediment loads (e.g., cockles, pipi, scallops), reductions in settlement success and survival of larval and juvenile phases (e.g., paua, kina), and reductions in the foraging abilities of finfish (e.g., juvenile snapper). Indirect effects include the modification or loss of important nursery habitats, especially those composed of habitat-forming (biogenic) species (e.g. green-lipped and horse mussel beds, seagrass meadows, bryozoan and tubeworm mounds, sponge gardens, kelps/seaweeds, and a range of other ‘structurally complex’ species).

It needs to be recognised in the Standard that forestry activities are a significant contributor to this damage. Appendix 2 of the consultation document does not acknowledge this, and

thereby understates the wide-ranging extent of adverse effects of production forestry throughout New Zealand's environment.

It would appear to be of no value to anyone to have the activities listed in Table 2 as "out-of-scope", as these are practiced at some stage by most forestry activities. There are potential adverse effects of forestry activities on marine ecosystems from agrichemicals, fertilisers, pollen and other contaminants entering waterways, as well as water yield issues for freshwater fisheries.

5. Adverse "Legacy Effects" have not been considered.

"Legacy effects" are caused by planning documents which allow activities to continue unabated, without sufficient knowledge of the long-term effects of such activities. An example of this is the nitrate pollution of groundwaters through massive dairy expansion throughout New Zealand. Once the significance of the effects on water quality was determined, the huge investment in dairying on inappropriate soils created a "legacy effect" where these effects now cannot easily be avoided, remedied or mitigated. Catch-up planning instruments are now being implemented to remedy the situation, but the environmental and economic costs to all parties will be borne by communities for many years to come.

Similar laissez-faire permitted-activity provisions are proposed by the Standard, based on the outdated Erosion Susceptibility Classification which was not designed for planning purposes of this nature. While the potential effects of forest development on marine environments have been well-documented, their scale and significance needs more recognition in the Standard, as do methods to avoid/remedy/mitigate them.

Decision-making based on such low-quality information could lead to wholesale plantation in inappropriate areas. Once planting has occurred, it is too late to obtain better information and consequently change harvesting rules, without either destroying the investment in forest value or causing significant adverse legacy effects, especially on marine ecosystems.

6. The Standard relies on applying information not designed for this purpose.

This is a major failing of the proposed Standard. The Standard relies on the application of Erosion Susceptibility Classifications which are largely out of date, relying on techniques developed in the 1960's, and were not designed for the purposes of informing planning documents relating to production forestry, or managing downstream sedimentation effects of such practices. The original Land Resource Inventory was used to determine whether land could support pasture. The judgement of erodibility assumed a vegetation cover of grass and activities associated with grazing, not production forestry and associated earthworks and harvesting.

This is sloppy planning at best, and dangerous at worst. While the Erosion Susceptibility Classifications provide some relevant information on possible erosion and sedimentation effects, they are not fit-for-purpose to be used in a planning document outlining National Environmental Standards. We advise that applying permitted-activity status on the basis of low-grade information such as the Erosion Susceptibility Classification is unacceptable in National Environmental Standards.

B. Answers to questions.

Appendix 1 of the consultation documents seeks formal feedback through a series of more specific questions. Our response to these questions are as follows:

1. Do you think section 2.1 and 2.2 accurately describe the problem facing plantation forestry?

We agree that there is merit in reducing variation between Council Plans. However, with regard to forestry activities, this is perhaps better achieved through more thorough consultation between Councils and the Forestry Industry, and greater consideration of forest industry submissions. The real problem might be that Councils are reluctant to consider submissions seeking consistency between planning instruments, because this may not tally with the pre-conceived ideas of Council staff. We believe that the problem of “unwarranted variation” is better managed through Council staff training, and more comprehensive consultation and consideration of submissions, than through the imposition of blanket Standards which favour one particular industry at the expense of another, and ignore wider environmental effects.

Section 2.2 discusses environmental outcomes, focussing on fish spawning habitat and sedimentation risk. There needs to be a whole additional section on the downstream effects of sedimentation, including the effects on the coastal marine environment. Forestry is a significant contributor to this sedimentation, not just at the establishment and harvesting stages, but at all stages of the life-cycle of a production forest.

Some of the environmental benefits of production forestry appear to be overstated. Production forestry does not necessarily reduce erosion risk. While minor soil runoff can be reduced, the risk of slipping, slumping and mass-wasting can be greatly increased. The moderation effect of flood flows is minor, but the adverse effects on water yield during low flow periods can be significant. Habitat may be provided for some indigenous species, but the destruction of marine habitats through sedimentation can be devastating. The belief that “generally, adverse environmental effects are well-managed” is not borne out by the evidence (e.g. Morrison *et al* 2009, Davidson 2015) that in some areas significant and costly damage is being done to our industry as a result of inappropriate forestry practices.

In conclusion, we believe that sections 2.1 and 2.2 do not provide an accurate description of the actual and potential effects of plantation forestry, with positive effects being overstated and adverse effects being either understated or ignored.

2. Do you consider that the conditions for permitted activities will manage the adverse environmental effects of plantation forestry?

We believe that the conditions, as stated in the consultation document, are wholly inadequate for managing the effects of plantation forestry on the coastal marine environment. Because of the potential for direct sediment runoff from forestry activities, we would expect, as an absolute minimum, that any area within 2 kilometres of the coastal marine area be zoned “red”. We would also expect that any area which discharges into sensitive areas such as estuaries, harbours and enclosed marine waterways (such as the Marlborough Sounds) be similarly zoned “red”.

Both zoning and conditions relating to erosion-susceptibility of land need to be re-thought. . It would at least need to be significantly upgraded to high resolution-definition mapping (which is available), and the outdated (1960's) methodology reviewed to ensure that it was able to manage adverse sedimentation effects which ultimately affect coastal marine habitats.

3. Are the conditions for permitted activities clear and enforceable? Can you suggest ways of making the rules clearer and more enforceable.

Specific comments on the Rules are provided in Section C below. Unfortunately, the Rules are written in typical “planspeak”, which accounts for their lack of intelligibility. The ability to communicate in plain-english writing is an art form which is now lost from planning documents in New Zealand. For example, Page 75 “Matters to which discretion is restricted” states:

Discretion must be restricted to the effects that the specific permitted activity condition(s) that could not be met was attempting to avoid...

Along with its very poor grammar, this statement is incomprehensible. It should be reworded in plain English thus:

Discretion is restricted to the following effects:

- *Ecological and aquatic ...*

Furthermore, the conditions for non-permitted activities appear to simply reflect situations where permitted activity status cannot be met. The temporary nature of many forestry activities (such as roading, windrowing etc), and the grey areas in the rules, will allow most activities to go ahead with very few enforceable controls. By the time an activity is identified as not-permitted, it will be too late and the adverse effects will have already occurred.

The Resource Management Act Section 43A (3) (b) provides the general tenet, that if an activity cannot guarantee adverse effects which are no more than minor, then it may not be permitted. The burden of proof must be in favour of the environment in this regard. We believe that the opposite is the case under the proposed Standard and its rules.

4. Are the matters where local authorities can retain local decision-making appropriate?

The consultation document states that values relating to the coastal marine area are “*more appropriately managed at a local or regional level*”. We contend that, for sedimentation effects of forestry operations, this is absolutely not the case. The effect of sediment and other contaminant plumes to the coast is a nationwide problem which requires nationwide solutions.

While provision exists for Councils to apply more stringent rules to meet the requirements of the NPS – Freshwater Management, we expect that, for all activities which result in sediment discharges to water, the restriction described in RMA S 107 must apply. The ability to “water down” the S 107 provisions is made possible by the proposed Standard .

5. Will the environmental risk assessment tools (the Erosion Susceptibility Classification, the Wilding Spread Risk Calculator, and the Fish Spawning Indicator) appropriately manage environmental effects as intended?

Absolutely not. The Erosion Susceptibility Classification is outdated, and not fit-for-purpose with regards to managing or preventing sediment inputs to waterways from forestry activities. There is some doubt as to whether the Wilding Spread Risk Calculator is relevant, as wilding pine spread is managed under the Biosecurity Act more than the Resource Management Act. The Fish Spawning Indicator has some merit, although we are aware that much of the information relating to native fish spawning comes from low-quality electrofishing data and anecdotal records in the NZ Freshwater Fish Database.

We would prefer, as an absolute minimum, the provisions of S 107 (c) to (g) apply to forestry activities. i.e. A resource consent is required if, after reasonable mixing, there are any changes in colour, clarity etc of the receiving waters resulting from the activity.

6. Do you have any comments about any particular activity or draft rule?

Yes. See Section C below.

7. Is the NES – PF the best option to meet the assessment criteria in Box 13?

No. The NES – PF seeks to manage (amongst other things) sediment discharges resulting from forestry activities. This is principally done through applying the outdated Erosion Susceptibility Classification to the permitted baseline. This will not have the effect of managing sedimentation in the freshwaters and ultimately the coastal marine environment. In response to the specific questions in Box 13:

- Does the option remove unwarranted variation between Council planning controls for plantation forestry?

This option removes controls which may be unwarranted, but it also removes controls which are warranted.

- Does the option improve the certainty of RMA processes and outcomes for plantation forestry stakeholders, while maintaining the underlying purpose of the RMA?

This option does improve certainty for forestry stakeholders, but fails to maintain the underlying purpose of the RMA, particularly for managing contaminant discharges to water.

- Does the option improve certainty for forestry stakeholders and communities about environmental outcomes from plantation forestry activities?

No. Both parties will be left wondering whether the outcomes are robust or not. Having permitted activity baselines linked to the Erosion Susceptibility Classification, to the exclusion of other controls regulating sediment discharges to water, is a major mistake which will adversely affect communities, especially those who utilise freshwater and coastal marine environments (such as commercial fishermen). It is also silent on point and non-point discharges of other contaminants to waterways, such as agrichemicals, leachates and other hazardous substances.

- Are there significant barriers or complexities to implementation?

Yes. Because of the considerable detail provided in the rules, any variation to them will be a nationwide task, rather than a local Council task.

- Is it possible to monitor compliance with the option, and can the option be enforced? With difficulty. Ratepayers will need to pay for monitoring the effects of the permitted activity rules. While some forestry operations can be configured to comply with (the *laissez-faire*) permitted baselines, many grey areas remain within the rules which will stymie compliance and enforcement. For example, Page 89 contains conditions for contaminant discharges from the construction or removal of crossings. Condition 2 states:

Those constructing or installing the crossing take all practicable steps to avoid the discharge of sediment, including by minimising the disturbance of the bed.

There is no certainty in requirements to take “all practicable steps”, or “minimising the disturbance of the bed”. Provisions of this nature cannot be easily enforced, unless they are attached to a consent which provides the appropriate context for their implementation, and allows for monitoring their effects at the consent-holder’s cost.

- Are the benefits of the option expected to exceed the costs? We believe that the damage to our industry as a result of inappropriate forestry activities is vastly more than any returns from such forestry. This option seeks to make it even easier to undertake forestry operations in inappropriate areas, which will undoubtedly cause more damage to our industry.

- Is it easy to monitor the impact of the policy? Currently, consent-holders pay for the costs of monitoring their activity. Removing the requirement to obtain consents will have the effect of shifting monitoring costs on to the wider community.

8. Have the expected costs and benefits of the NES – PF been adequately identified?

We believe that the costs of forestry activities on the coastal marine environment, and consequently our industry, have not been adequately identified or addressed in the consultation document. The evidence from Morrison *et al* (2009) suggests that significant adverse effects on marine environments have not been considered, which is contrary to Section 43A (3) of the RMA. Accordingly, we request that a great deal more work is done, along with significantly more discussion with the commercial fishing industry, before proceeding to the implementation of regulations, or any further drafts or iterations of this Standard are publicly released.

9. Are there any issues that may affect the successful implementation of the NES – PF (such as decision-makers applying the permitted baseline more frequently)?

Perhaps the main issue will be the effect of greater permitted baselines causing a presumption amongst production foresters that fewer environmental controls are necessary.

10. Please describe any risks or opportunities that you consider have not been identified or addressed in the proposal.

A concern is the legal implications of the Ministry for Primary Industry developing a National Environmental Standard when it is the responsibility of the Ministry for the Environment.

A further concern is that Section 43A (3) of the RMA has not been correctly applied, especially with regard to point and non-point sediment discharges, and their consequent effects on freshwater and marine environments.

11. Will the proposed NES-PF support regional councils to implement the National Policy Statement – Freshwater Management?

No. Because adverse effects on freshwaters and the coastal marine area will still occur, and the greater permissiveness of these activities means that they will be worse. Despite the need for Erosion and Sediment Control Plans for earthworks and Harvest Plans for harvesting, any requirement to obtain a resource consent in most areas is only triggered by non-compliance with the permitted baseline. In other words, an adverse effect has to occur before a Council can require a consent, or changes to Harvest and/or Erosion & Sediment Control Plans. The implication of this is that all the emphasis is on remedying adverse effects with very little emphasis on avoiding adverse effects in the first place, which is what the NPS – FM is supposed to do.

Furthermore, the Standard is silent on managing point and non-point discharges of other contaminants, which are inevitably caused by production forestry. These include (but are not limited to), agrichemicals, fertilisers, pollen and wood-pulp leachate (e.g. tannins). Either these issues will not be managed by Councils, causing adverse environmental effects, or discharge consents will be required, negating any advantage that permitted-activity status would have on forestry operations. Omitting the management of these related discharges from the Standard is a major mistake which has the potential to cause serious problems for both foresters and the wider community in the future.

12. What resources or other implementation activities would help you to prepare for and comply with the proposed NES – PF. How should these activities be delivered?

We have no comment to make on the implementation of the NES – PF in its current form, as we believe that it is not written to a standard which is suitable for implementation at this stage.

13. Are there any other issues that you would like to raise?

The lack of rules requiring resource consent in the ‘Moderate’ and ‘High-Under 25 degree’ susceptibility classes is not acceptable. There are already many instances of adverse effects from plantation harvesting operations in these zones. This will reduce the ability of Councils to influence Erosion and Sediment Control Plans and Harvest Plans prior to operations commencing and reduces their ability to monitor performance or to take enforcement action.

A principal concern relates to roading earthworks and harvesting operations, as these are most likely to generate sediment into waterways. As a general rule, the greater the extent of earthworks, the greater the risk of adverse effects, especially with regards to sedimentation. It therefore follows that measurable constraints on clearcut size, clearcut aggregation and

roading density should be part of the Standard and thresholds should be set to match the sedimentation effects. The Standard does not mention clearcut size, clearcut aggregation, and roading density, nor set thresholds and match these to the erosion susceptibility class. Such thresholds need to be defined and incorporated in the Standard as a means of mitigating sedimentation risk in all erosion susceptibility zones.

The Standard contains no measurable thresholds for sedimentation, dissolved oxygen, or stream temperature. Nor do they relate to discharge thresholds outlined in S 107 of the RMA. These thresholds need to be defined and incorporated in the Standard, along with acceptable methodologies for measurement, recording and reporting.

C. Specific Comments relating to Rules

1. Setbacks from the coastal marine area.

The Rules list setbacks as normally 30 metres, but allows Councils to apply more stringent setbacks in areas with “important values”, hazard areas or to align with the NZ Coastal Policy Statement.

We maintain that a blanket 30 metre setback is utterly inadequate to protect the coastal marine environment from the adverse effects of earthworks and harvesting. We suggest that, instead of “setbacks” to avoid adverse effects, a 2 km (at least) “red zone” be applied from the coastal marine zone.

2. Earthworks.

Page 65 – the description of sediment impacts needs to include the smothering of coastal habitats.

Page 66 – we question the wisdom of allowing road widening and realignment on slopes over 35 degrees. There should be no allowance for overburden to be pushed downhill without the need for obtaining a resource consent.

It is not clear what the 5000 m³ limit means. Does it imply that earthworks operations under 5000 m³ do not have permitted status, or does it mean that forestry earthworks under 5000 m³ do not require an Erosion & Sediment Control Plan?

3. Harvesting

Page 71 – some provision for public notification should be made, rather than just a 20-60 day Council notification.

Page 72 – The regional conditions for permitted activity discharges from ground disturbances outside riparian zone includes:

“All temporary harvest tracking must be stabilised with water controls or other means as required to minimise sediment discharge in stormwater.....”

There is no definition of what are “water controls”, or “other means as required”. We believe that RMA S 107 controls should apply in these instances.

Page 72 – Riparian disturbance. Should include amongst the “more than minor adverse effects” 4th bullet point “Damage to the coastal marine environment”.

Page 73 – Restricted discretionary – consent conditions should include “effects on the coastal marine environment”.

4. Mechanical Land Preparation

Page 74 – Slopes of 25 degrees are often inappropriate for mechanical land preparation. There should be no downhill ripping allowed on slopes over 25 degrees. We suggest that this provision be deleted, and replaced with a more appropriate set of criteria which minimises the risk of excessive sedimentation of waterways.

Page 75 – Matters to which discretion is restricted - should include “effects on the coastal marine environment”.

5. Forestry Quarrying

Pages 77-78 where extraction is not allowed within 20 metres of a “surface water body”. This conflicts with Table 2, which prohibits gravel extraction from the beds of rivers, as it allows gravel extraction in riverbeds which are wider than 20 metres (which are commonplace in the South Island).

We have serious concerns where quarrying is set up for multiple activities, of which forestry may only be one. Compliance and enforcement of non-forestry quarrying will be virtually impossible under these circumstances.

6. General conditions

There needs to be a general condition whereby the upstream and downstream passage of eels is not impeded by any forestry activity.

7. River Crossings

Page 88 – An additional risk should be added:

- *“Damage to the coastal marine environment from sedimentation.”*

Page 89. Fish passage. Delete reference to “relevant fishery manager”. Such people do not exist. No exclusions should apply, including temporary streams, which are very important for fish passage (especially eels). This section should be reworded thus:

Fish Passage. 1. The crossing provides for the upstream and downstream passage of fish in all waterways (permanent and temporary).

Page 89. Contaminant discharges. “all practicable steps” is meaningless and unenforceable. “Minimising the disturbance of the bed” is also unenforceable. Sediment is a contaminant, so there is no reason why it should be allowed to be released to the water body without any further controls. The eight hour rule should be deleted, as it requires a level of compliance monitoring which Councils are not resourced to achieve.

Page 90. Maintenance. Delete reference to temporary crossings. These are often more damaging than permanent crossings, and need to be managed to avoid adverse effects. There

also needs to be a permitted-activity condition which prevents any permanent or temporary crossing from impeding the upstream and downstream passage of native fish.

D. References

Davidson, R.J.; Richards, L.A. 2015. Significant marine site survey and monitoring programme: Summary 2014-2015.
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Yours faithfully



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