

22 February 2016

NZ ETS Review Consultation
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SUBMISSION ON NZ ETS REVIEW 2015/16

1. Thank you for the opportunity to submit on the 2015/16 review of the New Zealand Emissions Trading Scheme, as set out in the 24 November 2015 Discussion Document.
2. Thank you also for allowing me an extension of time for my submission (email from Erin Keenan of 17 February 2016).
3. I am available to discuss aspects of this submission.
4. I have set out some details of my background at the end of this submission.

Background to Submission

5. In order to address the limited questions asked in the discussion document, I first need to put my responses into context. Accordingly the majority of this submission deals with a more general review of the ETS itself. I then deal with the specific priority questions. I cover:
 - 5.1. Why New Zealand has an emissions trading scheme(ETS);
 - 5.2. The role that forests and forest products can play in meeting the problem that led to the introduction of the ETS;
 - 5.3. The wider benefits of forests;
 - 5.4. Approaches to recognition of public benefits;
 - 5.5. Lessons from large scale afforestation in New Zealand;
 - 5.6. Some basic principles that should be considered when developing policies, regulations and legislation;My responses to the priority issues in the discussion document.
6. My submission also provides much of the background relevant to the other matters for which submissions are due on 30 April 2016.

Why Does New Zealand Have an ETS?

7. The Emissions Trading Scheme arose in response to New Zealand's ratification of the United Nations Framework Convention on Climate Change (UNFCCC) in September 1993.
8. The convention's objective is set out in the box below.

Article 2 - Objective

The ultimate objective of this Convention and any related legal instruments that the Conference of the Parties may adopt is to achieve, in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

9. Ratification of the UNFCCC was followed by New Zealand's ratification of the Kyoto Protocol to the UNFCCC in December 2002. The protocol included legally binding targets for emission reductions that New Zealand was required to meet.
10. Further obligations arise from the 21st Conference of the Parties to the UNFCCC, held in Paris in November-December 2015, including New Zealand's Intended Nationally Determined Contribution (INDC).
11. The Paris Conference set a goal of limiting the increase in global average temperature to 1.5 °C above pre industrial levels

Article 2 1.

This Agreement, in enhancing the implementation of the Convention, including its objective, aims to strengthen the global response to the threat of climate change, in the context of sustainable development and efforts to eradicate poverty, including by:

- (a) Holding the increase in the global average temperature to well below 2 °C above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 °C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change;
- (b) ...

See page 21 of Adoption of the Paris Agreement at <https://unfccc.int/resource/docs/2015/cop21/eng/109.pdf>

12. The conference also noted that the INDCs so far submitted were insufficient to meet a 2°C target, let alone a 1.5°C target.

17. Notes with concern that the estimated aggregate greenhouse gas emission levels in 2025 and 2030 resulting from the intended nationally determined contributions do not fall within least-cost 2 °C scenarios but rather lead to a projected level of 55 gigatonnes in 2030, and also notes that much greater emission reduction efforts will be required than those associated with the intended nationally determined contributions in order to hold the increase in the global average temperature to below 2 °C above pre-industrial levels by reducing emissions to 40 gigatonnes or to 1.5 °C above pre-industrial levels by reducing to a level to be identified [];

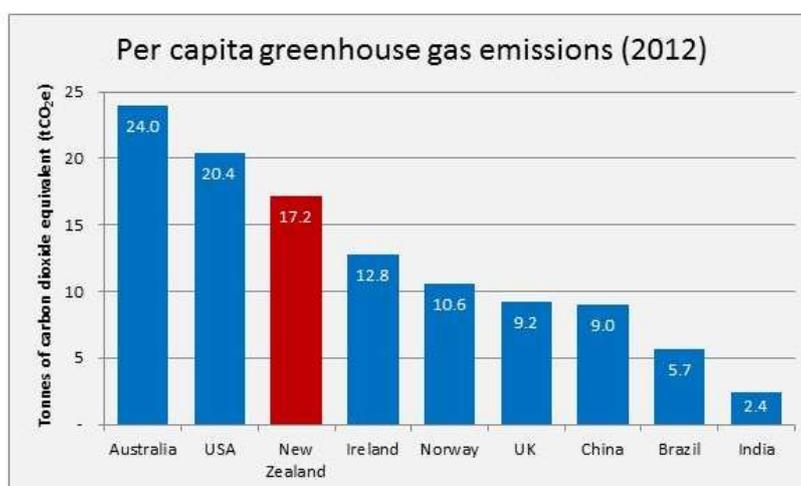
See page 3 of Adoption of the Paris Agreement at <https://unfccc.int/resource/docs/2015/cop21/eng/109.pdf>

13. Clearly, the obligation in Article 2 to the UNFCCC, set out above, requires much greater efforts by all parties to the convention than has been offered under the INDCs. Consequently, the intended contributions of all parties need to be treated as the absolute minimum that each country achieves and not just the upper limit of their obligations under the UNFCCC. New Zealand, which prides itself on being a responsible global citizen, and as a country with higher per capita emissions than many other countries (see graph below), will need to contribute significantly above the intended contribution presented to the Paris conference, if it is to meet its obligations under the convention.

We are a small country but our carbon footprint per capita is still significant.

Our greenhouse gas emissions are growing rapidly. In 2013 we produced 21 per cent more than in 1990.

If we look at our greenhouse gas emissions on a per capita basis, a person in New Zealand accounts for nearly twice the amount of emissions than a person in the UK and more than seven times the amount of a person in India. See graph below.



Source: <https://www.climatechange.govt.nz/reducing-our-emissions/our-responsibility.html> (accessed on 20 February 2016)

14. Unfortunately, the objective of the ETS, as expressed on page 3 of the discussion document, reflects only a minimum commitment view, rather than the more demanding expectation in the objective of the UNFCCC. The stated objective is:

To support and encourage global efforts to reduce greenhouse gas emissions by:

- *Assisting New Zealand to meet its international obligations;*
- *Reducing New Zealand's net emissions below business as usual levels.*

15. The evaluation of the ETS¹ concludes the ETS has contributed only minimally to changes in behaviour and decisions that would reduce emissions below business-as-usual levels. It also shows a lack of confidence in the ETS, demonstrated by the deforestation that occurred prior to (and since) the implementation of the ETS.
16. Clearly the ETS is not “fit-for-purpose” in terms of meeting New Zealand’s obligations under the Convention.

What Role can Forests Play?

17. While it is clear that all countries need to work towards eliminating, or at least substantially reducing, gross emissions of greenhouse gases, there are other actions countries can take to reduce net emissions. Forests and forest products can contribute to reducing both gross and net emissions as follows:
- 17.1. Forests and forest soils act as sinks for greenhouse gases extracted from the atmosphere. Increasing the area of forested land and increasing the average quantity of woody vegetation per hectare on forested land will increase the quantity of greenhouse gases stored in the sinks;
- 17.2. Logs harvested from forests continue to store the carbon that is in them when harvested. So wood in buildings, in paper and in other materials is also a sink for greenhouse gases. Increased use of such products, accompanied by replacing harvested forests, increases

¹ The New Zealand Emissions Trading Scheme Evaluation 2016, Ministry for the Environment, February 2016

the quantity of greenhouse gases in sinks (the impression many people have that cutting down a tree is bad for climate change is based on inaccurate information);

- 17.3. Disposing of demolition timber in landfills provides another greenhouse gas sink;
- 17.4. Use of forest products can replace the use of fossil fuels. When forest products decay or are burnt, they emit greenhouse gases, but those gases were originally extracted from the atmosphere by the trees they were made from. In contrast, using fossil fuels transfers greenhouse gases that were stored below ground to the atmosphere. Using forest products to displace fossil fuels can occur with bioenergy (e.g., when used as fuel in solid or liquid form), in bioplastics, when used in place of materials with high embedded fossil fuel energy (e.g. using wood and wood products in buildings instead of steel and concrete) and in other ways).
18. From the above it follows that forests and the use of forest products can be used to assist New Zealand to reduce both gross and net emissions of greenhouse gases.
19. My submission is that this can be best achieved by a comprehensive forest policy which aims at reducing both gross and net greenhouse gas emissions while at the same time ensuring that other benefits that arise from forests are enhanced, or at the very, least not reduced.

The Wider Benefits of Forests

20. As shown in the table below, forests, more than other land uses, provide society with significant public benefits, in addition to the benefits that accrue to the owner of the forest (“owner benefits”). Public benefits include carbon sequestration and storage, erosion and flood mitigation, maintenance of water quality, biodiversity, recreation, landscape, spiritual and cultural factors and more. Owner benefits, depending on the objectives of the owner, may include the sale of timber and non-wood products, fees for hunting or recreation, payments for the services provided to society (such as carbon credits), etc. The objectives of the owner may range from a commercial approach to maximise the rate of return received from the investment through to the philanthropic objective of preserving biodiversity and other benefits for the community, which may be achieved by creating private reserves or covenanting the forest in some manner.

Main ecosystem types and their services²

<i>Ecosystem service</i>	<i>Ecosystem</i>									
	<i>Cultivated</i>	<i>Dryland</i>	<i>Forest</i>	<i>Urban</i>	<i>Inland water</i>	<i>Coastal</i>	<i>Marine</i>	<i>Polar</i>	<i>Mountain</i>	<i>Island</i>
Freshwater			•		•	•		•	•	
Food	•	•	•	•	•	•	•	•	•	•
Timber, fuel, and fiber	•		•			•				
Novel products	•	•	•		•		•			
Biodiversity regulation	•	•	•	•	•	•	•	•	•	•
Nutrient cycling	•	•	•		•	•	•			
Air quality and climate	•	•	•	•	•	•	•	•	•	•
Human health		•	•	•	•	•				
Detoxification		•	•	•	•	•	•			
Natural hazard regulation			•		•	•			•	
Cultural and amenity	•	•	•	•	•	•	•	•	•	•

² Assessing the Economic Value of Ecosystem Conservation. Stefano Pagiola, Konrad von Ritter and Joshua Bishop. The World Bank Environment Department, Environment Department Paper No.101, October 2004

21. Each public benefit a forest owner provides to society has associated costs. These can range from the loss of use of productive land (such as reserves to protect biodiversity or marginal strips and other measures to protect water quality and minimise erosion), to the costs of measuring and reporting carbon stored or sequestered in the forest, the costs of providing and managing recreational facilities and the compliance costs associated with obtaining and meeting the requirements of permits, resource consents, etc.
22. The aim of a national forest policy is generally to maximise the public benefits that society receives from forests, while not detracting from the benefits the owner is entitled to receive. In many countries society is a significant forest owner, in which case there is a merging of public and owner benefits. In such circumstances society will be pay the costs associated with public benefits, usually in return for a lower owner rate of return.
23. Where the proportion of public ownership is small, society needs to consider carefully how it will obtain the public benefits of forests without reducing owner benefits to an unacceptable level that causes disinvestment in forests and/or forcing society to take ownership of the forests.
24. Globally FAO reports³ over 76% of forest is publically owned. On a regional basis, public ownership ranges from 89% in Europe to 57% in Oceania. In New Zealand (part of the Oceania region), around 60% of forest is publicly owned. However these statistics need careful examination. In New Zealand, the majority of the publicly owned forest is conservation land, while most of the forest available for timber production is privately owned. Securing public benefits from the privately owned forest generally requires more careful consideration than obtaining them from the publicly owned forest.
25. An important consideration is the ability of a land owner to change land use. If society's requirements for the public benefits from privately owned forest are too great the private owner will consider divestment options. If an alternative land use provides a greater return on investment (taking into account the costs associated with provision of public benefits), the owner may decide to change land use (and this has been observed in many parts of New Zealand in recent years). This is exacerbated if the compliance costs associated with the alternative land use are significantly less than those for the forest land. In New Zealand, forests available for timber production generally compete with land used for pastoral agriculture and there are significant differences in compliance costs for public benefits such as biodiversity, water quality and carbon storage, generally favouring pastoral agriculture.
26. Forest products have environmental benefits over other materials. Studies have shown wooden buildings have energy and climate change advantages (including acting as a carbon store) over concrete and steel buildings. Paper and cardboard packaging can replace plastic packaging derived from fossil fuels and energy can be obtained from wood, replacing or reducing the need for fossil fuels. A number of studies have shown health benefits in buildings where there are visible wood surfaces.
27. The availability of domestic markets for domestically grown wood and wood products can increase the return a forest owner derives from the forest, but this requires processing facilities.
28. From the above it is apparent that a forest policy should aim to:
 - 28.1. Recognise, in a positive manner, the public benefits forests provide to society;
 - 28.2. Encourage, rather than discourage private investment in forests, forest products processing and the use of forest products;
 - 28.3. Recognise the public benefits (particularly environmental) that derive from the domestic use of wood and wood products;
 - 28.4. Recognise the longevity of forests and consequently the need for stability in forest policy;

³ FAO Global Forest Resource Assessment 2015 (data for 2010)

- 28.5. Recognise that the quantity and quality of wood available for processing and marketing over the next two to three decades is already growing. While technology changes can be made, the species and properties of the wood to be harvested are already largely determined.

Approaches to the Recognition of Public Benefits

29. The Millennium Ecosystem Assessment discussed a number of mechanisms for recognising and improving the delivery of ecosystem services. These include⁴:

- ◆ Changes in institutional and environmental governance frameworks:
 - Integration of ecosystem management goals within other sectors and within broader development frameworks;
 - Increased coordination among multilateral environmental agreements and between environmental agreements and other international economic and social institutions;
 - Increased transparency and accountability of government and private-sector performance on decisions that have an impact on ecosystems, including through greater involvement of concerned stakeholders in decision-making;
- ◆ Economics and incentives:
 - Elimination of subsidies that promote excessive use of ecosystem services (and where possible, transfer of the subsidies to payments for non-marketed ecosystem services);
 - Greater use of economic instruments and market-based approaches in the management of ecosystem services (e.g. taxes or user fees for activities with external costs, creation of markets through cap-and-trade systems, payment for ecosystem services, mechanisms (e.g. certification) to enable consumer preferences to be expressed through markets);
- ◆ Social and behavioural responses:
 - Measures to reduce aggregate consumption of unsustainably managed ecosystem services;
 - Communication and education;
 - Empowerment of groups particularly dependent on ecosystem services or affected by their degradation, including women, indigenous peoples and young people;
- ◆ Technological Responses:
 - Promotion of technologies that enable increased crop yields without harmful impacts related to water, nutrient and pesticide use;
 - Restoration of ecosystem services;
 - Promotion of technologies to increase energy efficiency and reduce greenhouse gas emissions;
- ◆ Knowledge responses:
 - Incorporation of nonmarket values of ecosystems in resource management and investment decisions;
 - Use of all relevant forms of knowledge and information in assessments and decision-making, including traditional and practitioners' knowledge;
 - Enhancing and sustaining human and institutional capacity for assessing the consequences of ecosystem change for human well-being and acting on such assessments.

30. Examples of the recognition of environmental services in New Zealand include:

- 30.1. The ETS is an example of a nationwide economic valuation of an ecosystem service. Flaws in its design meant it neither encouraged new forest planting or prevented deforestation. Even with replanting, NZ's planted forests are likely to be a short-term carbon source in the 2020s as forests planted in the 1990s are harvested. If these forests are not

⁴ MEA 2005, Ecosystems and human well-being: Synthesis (pp20-23)

replanted the period of time over which they will be a source of emissions is significantly increased;

- 30.2. Nutrients have been traded in parts of New Zealand as a form of regulation to reduce nitrogen input into waterways (e.g. Lake Taupo);
 - 30.3. The afforestation grants schemes to encourage tree planting on erosion prone land. Approximately 42,000 ha were planted post cyclone Bola under the East Coast Afforestation Scheme (MPI, 2014). Unfortunately it could be argued that much of this planting was the wrong species (mainly radiata pine) in the wrong place for the wrong reason i.e. many of the plantings are not economic propositions and if economics was not a key driver then radiata pine may not be the best species to achieve enhanced slope stability;
 - 30.4. In the 1960s, the government instructed the NZ Forest Service to purchase land in the Upper Waipaoa catchment on the East Coast and establish forest on it as a flood mitigation measure (this was the origin of Mangatu forest). In this example the taxpayer paid the full cost of the land, plus establishment and management of the forest. In the 1990s, the government recouped some of the cost by selling the trees (the land was retained for possible treaty settlements) but subject to a number of conditions designed to ensure continued flood mitigation.
31. A single mechanism for recognition may not always be appropriate. For example, the ETS may be appropriate for viable plantation forests on easy topography, but is it also the best mechanism for severely eroded hill country or areas of sensitive landscapes?

Lessons from Large Scale Afforestation in New Zealand

32. There have been three phases of large scale afforestation in New Zealand:
 - 32.1. In the early 1900s, far sighted foresters were predicting the native forests would not be able to provide enough timber for domestic requirements by the 1950s. In 1925, government approved a tree planting programme aimed at creating a 120,000 ha State owned resource of introduced tree species. The target was reached in 1931, but continued for a further few years to provide employment during the depression of the 1930s. The private sector contributed a similar area. The plantation resource reached 300,000 ha with about 50% owned and managed by the State.
 - 32.2. In the 1960s and 70s, another wave of plantation forest establishment took place, this time to create a base resource for the development of exports. As part of the policy, forests were also planted for other purposes – regional development, employment and to reverse erosion on unstable soils or stabilise sand dunes encroaching on coastal farmland. By the mid-1980s, the plantation forest area had expanded to over 1.1 million ha, with the State still holding about 50%. Research, training and education in forestry had expanded (much of it State funded), new markets for forest products had developed and New Zealand had a well-deserved international reputation for plantation forest management and in forest research and training.
 - 32.3. In the early 1990s, a “spike” in the price being paid for export logs saw a further phase of forest investment. Unlike the two earlier phases this had no clear objective other than speculation. The State and the larger forestry companies did not take part and planting rates slowed as log prices dropped. By 2003 the plantation area reached 1.83 million ha. Since then there has been significant deforestation by plantation forest owners and at 31 March 2012 the area had reduced to 1.72 million ha. The ETS.
33. The lesson from these examples is that successful large scale afforestation can be achieved, but it is likely to require significant government input, especially if it is to have a lasting effect. The first two planting phases had a long term vision of creating a plantation resource with a use in mind for that resource. In both cases the programme was carried through, the resource was created, and the utilisation of the resource proceeded. The programmes also contributed other

benefits for New Zealand – for example, they were used for unemployment relief schemes, they were considered to be important for regional development, they included erosion prone areas, contributed to sediment reduction, peak flow mitigation and improved water quality. Sales of wood from State forests enabled the development of large processing plants including Tasman Pulp and Paper at Kawerau, the pulp mill at Karioi, the PanPac mill at Napier and the MDF plant at Rangiora. The Forest Service had sawmills at Waipa in Rotorua and Conical Hill in Otago.

34. The third plantation phase was a speculative investment that lacked a clear objective, other than a hope that export log prices would continue to escalate and that profitable markets would be available for all the resource. Unfortunately for some investors, the outcome has been disappointment, particularly financial and particularly when they find harvest of the crop is uneconomic, and there has been no return on the initial investment and subsequent management costs. This has had a significant effect on the way many people view forestry as an investment.
35. Government input does not have to include public ownership of land and trees (as was the case with the first two afforestation phases), but is likely to require factors such as clear objectives, long term vision, significant advisory services, availability of relevant research, a well trained workforce, etc.
36. I submit that the seriousness of climate change and the ability of forests and forest products to contribute to its mitigation lends itself to a large scale visionary and coordinated action in the same manner as the two plantation establishment programmes. It is likely to require:
 - 36.1. Education of the public on the relationship between forests and climate change so they have a good understanding of the issues and can be encouraged to support the programme;
 - 36.2. High quality professional advisory services for land owners, to educate them on the needs of the programme and help them to become involved;
 - 36.3. Ensuring research, training and other support services are available;
 - 36.4. Ensuring infrastructure (roads, ports, communications, etc.,) are available to support the programme;
 - 36.5. Removing regulatory “blockages” that unnecessarily hinder investment in forests, in processing and in the use of forest products;
 - 36.6. Improving access to export markets (particularly the non-tariff measures that discriminate against processed or partly processed products);
 - 36.7. Support for “wood first” type programmes that encourage the domestic use of wood and wood products on the basis that this supports the overriding need to reduce net emissions;
 - 36.8. Action against pests and diseases that damage indigenous forests, thereby reducing their effectiveness as carbon sinks (and also threatening loss of biodiversity);
 - 36.9. A range of measures to encourage investment, particularly where the likelihood of a commercial return from afforestation is marginal or not present, and to avoid unintended consequences from, for example, inappropriate choice of species.
37. Clear objectives and vision can ensure that unintended consequences are avoided. For example, one of the problems with the current ETS is that it favours use of radiata pine because it grows fast and is the quickest way to earn carbon credits. Consequently it can be established on inappropriate sites where harvest at maturity may be uneconomic (as has turned out to be the case for a proportion of the speculation afforestation phase in the 1990s), it may be used on erosion prone sites where a better solution might be to encourage regeneration to native species. When planted on the wrong sites and left largely unmanaged, it could become a hotspot for fire, disease or a source of wilding pines. A clear understanding of the likely long term future of each new forest (e.g. is it ever likely to be harvested) is essential to the appropriate choice of species and form of management.

Basic Principles to be Considered when Developing Policies, Regulations and Legislation

38. The following general principles need to be applied when developing forest policy:
- 38.1. Single-issue policies and regulations risk delivering sub-optimal solutions and unintended consequences. For example all forests contribute to climate change mitigation. Policies that focus on “carbon-forests” as a special category will generally create problems with implementation (in New Zealand we have extra administration burdens from coping with the arbitrary dates defining different categories – often within one forest management unit). A policy that encourages forest expansion rather than new forests with special rules would avoid this;
 - 38.2. Frequent changes in regulations, or poorly thought through regulations can discourage investment in forests or encourage land use change (both of which have occurred in New Zealand in recent years);
 - 38.3. The need to ensure that regulatory measures to protect forest benefits for society are balanced against consequential impacts on the property rights of the forest owner/manager.
39. General expectations for the regulatory framework affecting investment in and management of forests, including the use of the products derived from forests are that the framework is:
- 39.1. **Effective.** It should clearly be seen to be making a positive contribution to the issue being addressed;
 - 39.2. **Simple.** The objectives should be easily understood and implemented by those who are affected by it;
 - 39.3. **Free from bias** (also known as equitable). It should neither penalise nor favour different sectors of the economy including different land uses;
 - 39.4. **Relevant to New Zealand.** It needs to recognise the characteristics of New Zealand, including the economy, the nature of our forests and forest industry, and the physical environment and be developed accordingly;
 - 39.5. **Comprehensive and cohesive;**
 - 39.6. **Sustainable;**
 - 39.7. **Stable.** Frequent and/or substantial changes in the regulatory framework are not conducive to a sector where the period between a decision to invest and realisation of the investment is several decades;
 - 39.8. **Scientifically supportable;** and
 - 39.9. **Enforceable.**
40. The forestry provisions of the ETS clearly fail to meet most of these expectations as shown below:

Effective	<p>In the eight years from 31 March 2003 to 31 March 2011, the Ministry for Primary Industries⁵ reported a loss of plantation forest area of 6% or 108,000 hectares. The loss in the 2003-04 year was the first record of a decrease in plantation forest area from one year to the next since 1921. While there was an increase of 27,000 ha (average of 9,000 ha/year) in the three years to 31 March 2014, this is far less than the average increase of 51,000 ha/year in the decade to 31 March 2000.</p> <p>In such a situation we need to understand why land owners have made this abrupt shift in investment decisions - from establishing forest to deforestation. 2003 coincides with significant decisions regarding how</p>
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⁵ See National Exotic Forest Description at <http://www.mpi.govt.nz/news-and-resources/statistics-and-forecasting/forestry/>

	<p>New Zealand would implement the Kyoto Protocol to the United Nations Framework Convention on Climate Change. The decisions included:</p> <ul style="list-style-type: none"> • An emissions trading scheme (ETS) would be used rather than a carbon tax; • Forestry would be one of the first sectors to be included, while agriculture would be one of the last; • The Kyoto Protocol accounting rules would be embedded in the ETS with little modification for New Zealand circumstances; • The ETS would be applied at the individual forest ownership level. <p>The overall result has been a scheme that has not been effective in meeting its stated objectives.</p> <p>This conclusion is backed by the Ministry for the Environment’s 2016 evaluation of the ETS which stated “The NZ ETS appears to have contributed, but only minimally, to changes in behaviour and decisions that have reduced net emissions”.</p>
Simple	<p>The ETS as far as forests are concerned is complex, starting with the number of categories of forest and the differences that apply to each (e.g., pre-1990 and post-1989 forest, forest that is in the ETS and forest that is not in the ETS).</p> <p>The benefits (i.e. carbon credits) to forest and land owners from the ETS only last until the first crop reaches maturity. From that time onwards the landowner continues to have liabilities in the form of measurement, reporting, surrender of units and maintenance of forest cover. Units are surrendered as trees are harvested and while credits are received as the replacement crop grows and matures, the number of credits received (and later surrendered) for the each subsequent rotation will be similar to the credits received for the first rotation and surrendered on the harvest of that rotation.</p> <p>The application of the rules down to individual property level penalises owners of woodlots and small forests. These forests may have only a single age class, meaning surrender obligations on harvest cannot be spread over a wide range of age classes. This could impose financial hardship on small owners.</p>
Free from bias	<p>The omission of agriculture from the ETS means society is paying the costs associated with agricultural emissions. This is a subsidy for the agricultural sector. Agriculture receives a number of other subsidies (such as no loss of productive land along water ways, while forests must have riparian strips, able to allow stock to pollute waterways (gradually being tightened up), nitrogen credits around Lake Taupo, irrigation subsidies, less restrictions under the Resource Management Act, etc. Subsidies not only lower costs to the land owner, they also increase the value of the subsidised land, making it difficult (costly) for unsubsidised investors to purchase more land. The net result is an incentive for the unsubsidised land owner to change land uses or to sell the land for capital gain (and this is what has happened on a large scale, particularly in the Waikato catchment where there has been significant deforestation in recent year).</p>

	<p>Land use change from forest to pastoral lane is a double blow for New Zealand's objectives under the UNFCCC. Not only does it remove a carbon sink, but the new land use will generate more emissions than a forest does.</p>
Relevant to New Zealand	<p>The ETS does not recognise the mix of pre and post-1990 forest to be found in a single ownership, nor the differences between very large and very small forests. The same rules apply to all size classes. This places disproportionate costs on smaller owners, but larger owners are also affected by the requirement to account for the foreseeable future for the different categories of land recognised by the ETS.</p> <p>There was no requirement for the Kyoto Protocol rules to be embedded in domestic policy. Far simpler rules for domestic policy could have been prepared, which would have made the ETS more efficient and easier to understand.</p> <p>(New Zealand would of course still need to account internationally under the UNFCCC rules, but the ETS would be greatly simplified.)</p>
Comprehensive and cohesive	<p>The policy is restricted to the role of forests for climate change. It does not include the other public benefits forests provide and therefore produces a sub-optimal overall result. One example is the lack of consideration of biodiversity in a policy that encourages planting of a single introduced species.</p>
Stable	<p>As set out in the Ministry for the Environment's 2016 evaluation of the ETS, there have been a number of significant changes to the ETS since its introduction. In almost all cases, the changes have made forests a less favourable investment compared with other sectors. It is by no means in a stable state and the uncertainty created by the evolving policy has encouraged divestment of forest investments.</p>
Scientifically supportable	<p>As far as the climate is concerned the year in which a forest is established is irrelevant. However the Kyoto Protocol rules make a distinction between pre- and post-1990 forests and this has been embedded in the New Zealand ETS along with a number of other arbitrary dates which are unsupported in scientific terms and add complexity and confusion to the scheme. Similarly the Protocol convention that all the carbon is emitted from a tree when it is harvested is not scientifically correct and can penalise the owner of a forest.</p> <p>The requirement that a harvested forest is replanted in the same place is also not supported by science. The measure of success should be that the quantity of woody vegetation in New Zealand increases, rather than decreases over time. The holdings of individual land owners are irrelevant so long as the total increases.</p>

41. The overall effect of the above is to make it more attractive for land owners to switch from forestry to other land uses, particularly when carbon prices have been very low or when cheap credits have been available. Those who make the switch avoid the ongoing costs and liabilities from the ETS, and benefit from the higher land prices. But it also means a reduction in the overall storage of carbon in forests and an increase in emissions from land added to the agricultural estate.

42. As far as forestry is concerned the ETS is not meeting the objective of increasing the quantity of carbon stored in forests and reducing the country's net emissions of greenhouse gases - instead it is increasing emissions.

Submission Questions

43. Turning now to the specific questions raised in the submission document:

- 43.1. I submit it is time for a complete review of the ETS, at least as far as forestry is concerned. The Ministry for the Environment evaluation from the ETS excluded consideration of whether or not the ETS is the most appropriate tool. While it might have a place, other measures, need to be considered and the solution could well be a mix of different mechanisms;
- 43.2. At a minimum, the government should be working towards eliminating some of the unnecessary processes in the ETS as quickly as possible. A good example would be to eliminate the distinction between different categories of forest. The atmosphere doesn't recognise them and forest managers do not need them. They are a good example of the problems that arise when the results of an international negotiation become embedded in domestic policy, adding costs without any useful outcome;
- 43.3. The ETS should move to full surrender obligations immediately. There is no justification for "buy one get one free" policy and removing it, according to the NZIER report would have a minimal impact – not only on energy prices, but, unfortunately also as a mechanism to change behaviour (particularly at current fossil fuel prices);
- 43.4. In addition, the two for one process discriminates against the forestry sector, as does the continued non-inclusion in the ETS of some sectors of the economy. Removal of such subsidies, across the economy could have a significant impact on land values and land use change. The current policy settings encourage the view that it is best to get your land into the highest possible polluting state, because "pollution pays". This applies not just to the ETS, but also to the policies to improve the quality of the water in Lake Taupo, other subsidies to some sectors, etc.;
- 43.5. I would also argue there should be no adjustment, as a result of removing the two for one surrender obligation, to the free allocations supposedly at risk industries have received;
- 43.6. As I am not a direct participant in the ETS, changes to it will not directly affect me. I have approached this submission from my position as a forestry professional, wanting to see forests make a significant contribution to resolving a global challenge;
- 43.7. We should not be concerned about future price shocks. Should they occur, they act as a catalyst for change, which is what the ETS is supposed to be generating;
- 43.8. Rather than worrying about a price cap, there should be a floor price for carbon, which is increased on a regular basis. If there has to be a cap on the price, it should also be increased on a regular basis. If this sounds a bit like a carbon tax, so be it – it would be much simpler to apply, administer and process, cheaper, easier to adjust if behaviour isn't changing, etc.

About the Submitter

I have been a professional forester for over 50 years. I hold degrees in Science (Victoria University), Forestry Science (Aberdeen) and PhD (Canterbury). I have worked in general forestry and research, I was involved in the sale of State forests in the late 1980s and 1990s, I have been involved in several Treaty of Waitangi settlements, including project managing the implementation of the forestry part of the Ngai Tahu settlement.

I served on the NZ Institute of Forestry council for 11 years the last six as President (2008-2014). I have been a registered member of the Institute since 2000, I received the Forester of the Year award in

2005, the Kirk Horn Award in 2014, and was elected a Fellow of the Institute in 2008. In 2015 I received a Commonwealth Forestry Association regional award of excellence, South East Asia and the Pacific region, for an outstanding contribution to forestry in the region. I was appointed an Officer of the New Zealand Order of Merit in the 2016 New Year Honours for services to forestry.

Although nominally retired I currently chair the NZIF Foundation (a charitable trust). I also chair the New Zealand Forest Certification Association, which introduced the global PEFC forest certification scheme to New Zealand in 2015.

I have no forest, forest processing or associated investments, which assists me to give professional forestry advice, not potentially conflicted with personal ownership or financial interests.

Kind Regards



Andrew McEwen



Ph [redacted]

Mob [redacted]