

New Zealand Emissions Trading Scheme Review Consultation

Submission from Scion on Other Issues DUE 30 April

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Preamble

Scion

Scion is New Zealand's pre-eminent forest research organisation. Scion's core purpose is to drive innovation and growth from New Zealand's forestry, wood product and wood-derived materials and other biomaterial sectors, to create economic value and contribute to beneficial environmental and social outcomes for New Zealand. With over 60 years of experience Scion has:

- Undertaken substantial work with Government to provide authoritative technical information to support both policy development and policy implementation in the use of forest trees as a carbon sink.
- Worked extensively with the New Zealand forest owners and Government Departments to support their work to address the impact of the Emissions Trading Scheme (ETS) and matters relating to carbon sequestration in forestry.
- Managed a broad range of research programmes in partnership with the New Zealand forest industry to support economic development through forestry and forest products. This also includes science and innovation in relation to land-use within environmental limits, forest biosecurity (surveillance, eradication and protection) and market access; and mitigation of forest hazards (fire, wind and erosion/flooding).
- Led advanced research programmes to expand opportunities for wood processors including via new materials, bio-energy and specialty chemicals derived from forest biomass.

New Zealand's forestry sector

- The forest industry is New Zealand's third largest industry producing over \$4.5 billion of export revenue and about \$3 billion in domestic revenue per annum. The industry's strategic goal is to lift export earnings to \$12 billion per annum by 2022.
- New Zealand attracts substantial overseas investment into forestry. New Zealand's natural climatic advantages, world class sustainable forest resources and management systems and tools, strong research base and political stability are all attractive to investors.
- New Zealand's ability to grow and utilise renewable forests for a wide range of products provides a strategic, competitive advantage that is expected to strengthen as markets for low carbon renewable composite materials, energy and biochemical products grow.
- There is a large and steadily emerging economic opportunity for provision (and monetisation) of forest ecosystem services beyond timber production such as carbon sequestration, improved water quality, flood and erosion protection; and biodiversity enhancement.

Summary of this submission

In the first stage of the ETS Review on priority issues, we stated our belief that the ETS must provide a clear and sufficient carbon price signal (>\$15/t CO₂e) to incentivise behaviour and investment change toward lower emissions technology, systems and practice; and drive mitigation and adaptation innovation. Scion suggests that by regarding the principal objective of the ETS as being to meet New Zealand's international obligations (primarily through the trading of units), New Zealand is missing an opportunity to drive the transition towards a low emissions future. The ETS Review questions need to be considered in the context of the broader objective of the ETS – reducing emissions and encouraging the transition to a “lower carbon” economy that is also resilient to the effects of a warmer climate with more frequent extreme weather events.

This submission comments on the impact of the ETS on Scion's business, (Q 9 and 10), then comments from our expertise and knowledge on the impacts on the forest growing sector. We restate our reasons why agriculture should be included in the ETS.

Other issues: business responses to the NZ ETS

9. Do you consider the future cost of emissions in your business planning? If yes, how do you do this?

Scion has been monitoring and reporting its main sources of carbon emissions since 2008. Our main carbon emission sources are from gas used for heating (47%), electricity (26%) and air travel (22%). Scion joined the Enviro-Mark scheme in 2012 (<https://www.enviro-mark.com/>) and gained Bronze certification in 2013. We are looking to move to Silver accreditation this calendar year.

Scion's latest campus development plan seeks to further consolidate the building footprint on the Sala Street Campus in Rotorua and has an aspirational target of 30% lower emissions by 2030. This will be achieved by up to a 50% improvement in the utilisation of non-laboratory space, increased heating efficiency, reduced gas usage and greater use of desktop and other

forms of video conferencing to reduce travel demands. Smaller steps include the installation of sensor lights and energy saving light bulbs.

Scion's procurement policy requires the whole of life impacts of purchases to be considered - this policy is fully aligned to Whole of Government procurement guidelines.

10. What would improve your ability to take into account the future cost of emissions in your business planning?

A consistent public policy framework and coherent national plan for emissions reduction to achieve New Zealand's 2030 NDC (and 2050 emissions reduction commitment) is the most positive way to assist Scion to achieve its target. The ETS needs to be stable over electoral cycles and provide a clear and sufficient market price for carbon that incentivises new investment into low emission building technologies and operating systems.

Other issues: protecting competitiveness through free allocation

11. Under what conditions should free allocation rates start to be reduced after 2020?

With the Paris 21 Climate Agreement including all of New Zealand's trading partners, the rationale for the present allocation of units will diminish over time as the Agreement comes into force and trading partners ETS' (such as China's) develop. Thus the two for one subsidy should be removed with free allocations reduced for the high intensity sectors first since this will drive the largest positive impact in terms of emissions reduction.

12. What impact would it have on your investment decisions over the next few years if there was a clear pathway or criteria for phasing out of free allocation after 2020?

It would encourage Scion to accelerate its continuous improvement of organisational environmental performance (as outlined in Question 9). Scion believes its own behaviour and performance as an organisation should be consistent with the renewable low emissions technology it is developing and the management advice it is providing to the forest industry and biomaterial sectors. As well, sectors with high emissions are more likely to adapt technologies Scion is developing if the new policy and legal environment results in the phase out of the "free" allocation of units.

An ETS that is used to address New Zealand's obligations under the Paris 21 Climate Agreement will give impetus to increasing the use of renewables based on wood and wood fibre in the construction, transport, energy and primary land use sectors. An effective ETS, as we comment later, will encourage afforestation and reforestation. Indeed, as per our first submission, one of the most positive ways New Zealand can achieve its 2030 NDC is to increase afforestation and use of energy (fuel and industrial heating) from forest biomass.

Other issues: managing unit supply - forestry

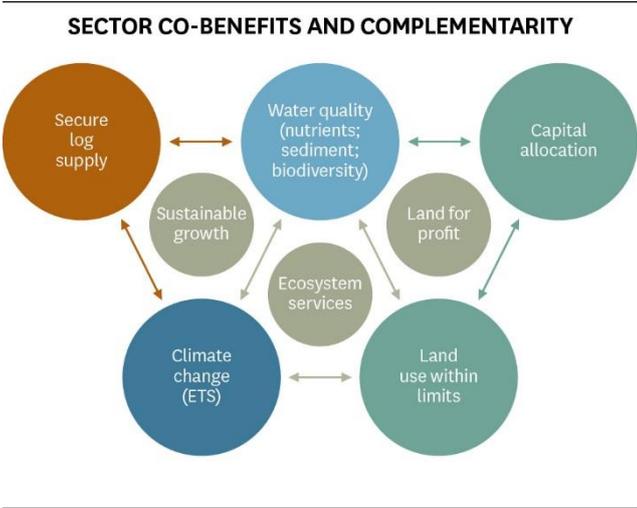
13. How does the carbon price impact your forestry investment decision-making?

In your answer, we are interested in the:

- a) extent to which the NZU price impacts decisions, compared to other factors
- b) impacts of the current price, and of your expectations for future prices.

Scion works closely with the forestry sector and understands the factors that drive confidence and investment in forestry. The main drivers of profitability of afforestation (other than the cost of capital) are land price, log returns, harvest costs and transport. Low carbon prices (less than \$5/tonne) make relatively little difference to the Net Present Value of a forest investment but at prices above \$15/tonne this becomes an important positive influence on profitability through its impact on cash flow and interest costs. Thus, as other forest industry submitters will have indicated, a carbon price in the range of \$15-20/tonne will definitely encourage afforestation.

As noted above, current high land prices are a significant barrier to afforestation. Present policy settings have resulted in land values which are high relative to their ability to generate post-tax profit (i.e. many land based businesses operate to secure capital gains rather than free operating cash flows). High land prices are a significant impediment to the commercial investment approach typically brought by forest growers to achieve a specified rate of return (typically >7% RoA). As noted by the Westpac Bank and a Scion study of dairy and forestry value chains in the Central North Island¹, leaving agriculture out of the ETS risks continuing this distortion of land values and thus lessens the likelihood of the required rates of afforestation being achieved. The important factor here is that afforestation triggered by a higher ETS carbon price will also contribute to enhanced water quality, land stability and enhanced biodiversity. The inter-dependency between the ETS price and other environmental outcomes and the enhancement of log security is illustrated in the diagram below.



14. Are there opportunities for the NZ ETS to increase incentives for forestry investments, outside of NZU price? Yes/No/Unsure

Yes, through lower compliance costs, cheaper monitoring, certainty around rules, accounting rules that minimise risk, and the incorporation of Harvested Wood Product accounting to delay emission liabilities. With respect to the latter, Scion supports The New Zealand Wood Council’s (Woodco) submission on deferring liabilities from harvesting through harvested wood products accounting.

¹ Monge, J.; Velarde, S.; Yao, R.; and Pizzirani, S. 2016. Identifying Complementarities for the Dairy and Forestry Industries in the Central North Island. Scion report to Oji Fibre Solutions and Waikato Regional Council (April).

15. What are your reasons for the above answer? If you answered yes, we would be interested in comments on:
a) any barriers to participating in the NZ ETS that could be reduced

Unequal treatment of different sectors and uncertainty about accounting rules has led to a level of distrust in the ETS. This needs to be overcome with clear signals from government if significant afforestation is to be part of New Zealand's plan to achieve its 2030 NDC and 2050 emission reduction targets.

b) other factors.

Efforts need to be made to reduce compliance costs and minimise risk. The optional adoption of accounting to a long-term average is one way of reducing risk for participants. In other cases participants may want their units earned to more closely reflect the level of sequestration they have achieved, for example through the adoption of harvested wood products accounting or the extension of the field measurement approach to owners with less than 100 ha.

There may also be an opportunity to use remote sensing technologies (as discussed later) and/or plots established by the field measurement approach to determine productivity at a sub-regional scale and hence provide an alternative to lookup yield tables, making it easier for forest owners to participate in the ETS.

More work needs to be done to determine how these approaches could be incorporated within the ETS and how these measures could encourage increased confidence and investment into both plantation and permanent forests.

Other issues: managing unit supply – international units

16. If international units are eligible for NZ ETS compliance in the 2020s, should any of the following restrictions be placed on their use?

a) restrictions on where units can be sourced from (location of and/or types of projects)

Units must be credible and verifiable. There is a need to restore confidence in the quality and dependability of credits acquired for use in New Zealand as the track record to date is not good. Credits must only be able to be purchased from verified sources – e.g. REDD+, CDM or other bi-lateral or multi-lateral instruments that provide certified credits. International and national unit credentials must be equivalent.

b) restrictions on how many units can be surrendered

c) others (please explain).

If the ETS is to drive domestic gross emissions reductions and a transition to a low-carbon economy, then it may be necessary to limit the purchase of international units. Paris 21 Climate Agreement signatories will expect countries to “not short cut” on domestic efforts. Scion anticipates access to markets will be increasingly difficult for producers who are not reducing their greenhouse gas footprint and as low greenhouse gas product substitutes (e.g. synthetic milk and meat) cost competitiveness continues to improve.

Other issues: managing unit supply – auctioning

17. Should auctioning be introduced in the NZ ETS? Yes/No/Unsure

If yes, when?

- a) in the next two to three years
- b) within five years (before 2020)
- c) after five years (post 2020).

The discussion document acknowledges that there is no need for auctioning in the short term, but in general auctioning of units would give a more economically efficient outcome than free allocations.

18. What should be the role or purpose of an auctioning function in the NZ ETS, if one were introduced?

- a) to align supply in the NZ ETS more closely with our international target
- b) to more actively manage NZU prices
- c) other (please explain).

19. How should auctioned NZUs relate to other sources of unit supply in the NZ ETS, especially NZUs generated through forestry removals and/or international units?

Other issues: managing price stability

20. What impact has carbon price volatility in the NZ ETS had on your business?

- a) minor
- b) moderate
- c) significant.

Carbon prices strongly influence company enquiry and investment into research into fossil oil replacement technologies that Scion is developing. This has been particularly notable for New Zealand-based companies who, other than via their corporate social responsibility agenda, have in recent years had negligible incentive or policy frameworks to change. In general Board room leadership in New Zealand on climate change implications for the businesses they steward, as confirmed by international surveys², has been modest. Fortunately Scion also works with companies operating in the international arena who have been more foresightful and persistent in their strategy to reposition their businesses and supply chains for the future by investing in renewable forest biomass based technologies.

The lack of a clear carbon price and changes in the ETS policy has slowed the rate of development and adoption of low carbon technologies such as those under development at Scion. It has also dissuaded the increased use of wood in commercial buildings and resulted in limited progress in tree breeding for special purpose bioenergy and wood fibre forests, e.g. short rotation forests for the production of industrial chemicals and higher density products.

Forest investors currently manage significant fluctuations in the exchange rate, log prices and supply costs. Thus it is not volatility per se but rather the low carbon price and inconsistency in applying the policy that is problematic for the forest industry and its associated value chains.

² <http://www.pwc.co.nz/nz-ceo-survey-2015/> and <http://www.pwc.com/gx/en/ceo-agenda/ceosurvey/2016.html>

21. Do you think measures should be in place to manage price stability? Yes/No/Unsure

Yes – a lower bound

22. What do you consider are important factors for managing price stability?

a) upper price limits (eg, fixed price option, or a price ceiling implemented through an auctioning mechanism)

b) lower price limits (eg, price floor)

Scion believes that a minimum price is necessary in order to ensure New Zealand's trajectory towards its 2030 NDC is achieved. We acknowledge that once there is a formal adoption of the Paris Climate Agreement, the risk the market will operate below this minimum price will diminish. The New Zealand experience for forestry indicates that allowing the carbon price to fall below a minimum threshold, while providing some short term benefits for high emitting companies, more seriously imposes longer term costs which ultimately have to be borne by the New Zealand economy. Thus short term market fluctuations below a minimum are unhelpful. In contrast, an upper threshold is not required because it serves to illustrate the urgency with which companies need to adjust their business models and de-carbonise.

c) other (please explain).

23. What should the Government consider when managing price stability?

As per Question 22 the main consideration is that businesses need to adopt a long term view and understand that a minimum carbon price will be in place which will encourage them to progress towards greenhouse gas reduction and also adapt technologies. Managing price volatility above the minimum threshold should not be necessary.

Other issues: operational and technical matters

24. Are you aware of ways the administrative efficiency of the NZ ETS could be improved? Yes/No/Unsure

Simplifying forestry accounting rules

25. Can you provide further information to support your answer? We would be interested in comments on:

a) complexities involved in NZ ETS participation

b) penalties for breaching NZ ETS obligations

c) any technical or operational changes that could be made to the NZ ETS to improve efficiency.

Advancement in remote sensing technologies delivered by fixed wing aircraft, UAV (drone) and hand held devices are rapidly increasing the accuracy of biomass and therefore carbon estimates across all scales of forestry. This is also significantly lowering costs and enables auditing of compliance with the supply of NZUs to be achieved more cost effectively than at present. Scion is at the leading edge of development of forest mensuration using remote sensing technology and forest companies are increasingly using this as part of their routine management.

There is substantial scope to adapt LiDAR and other remote sensing technologies into other forms of forest cover in order to expedite measurement and improve auditing.

Other issues: addressing barriers to the uptake of low emissions technologies

26. Are there any barriers or market failures that will prevent the efficient uptake of opportunities and technologies for reducing emissions?

As commented earlier, Scion (and many others) believes the exclusion of agriculture from the ETS is a mistake for the farming community. The arguments presented regarding relative GHG efficiency in food production and inability to take action are readily challenged. Also as the cost of carbon increases for those inside the ETS, the farming sector already is and will inevitably invite further negative publicity and erosion of their brand image (such as that which was experienced in relation to water quality and the “dirty dairying” campaign). Agriculture would be better to be inside the ETS (with an appropriate abatement pathway), contributing to its success and bearing its reasonable share of the burden. It is naïve to consider that markets and social media savvy consumers will continue to accept higher greenhouse gas emitting food products from New Zealand whilst other countries are continuing to reduce their emissions.

27. If so, is there a role for the Government in addressing these barriers or market failures and how should it do this?

Government can take a lead role in rebuilding confidence in the ETS and its credibility. Options include:

Using ETS revenue to assist in the transition to a low emissions economy. Public understanding and support of carbon accounting and trading will be increased if government revenues from it (e.g. arising due to non-participation of some forest growers) are visibly used for purposes consistent with an optimal transition to a low emissions economy. These could include assistance to households disproportionately affected, promotion of and incentives for renewables and green technologies, adaptation.

Focus of domestic policy goals. Develop options that diverge from international accounting in order to achieve domestic policy goals, such as allowing riparian forests of less than 30m width to qualify under the ETS.