

# New Zealand Emissions Trading Scheme review 2015/16 Consultation

## SUBMISSION BY NZ FARM FORESTRY ASSOCIATION.

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### **1. Do you agree with the drivers for the review?**

These are:

- a. Improving performance of the ETS against its objectives<sup>1</sup>.
- b. Preparing for a more carbon constrained future.
- c. Increasing certainty about future policy settings.
- d. Managing banked emission units.

**Answer:** Yes; and if they were prioritized we would rank them c, b, a and d.

### **2. What other factors should the Government be considering in this NZ ETS review?**

**Answer:** The Government should be seriously looking at including the agricultural sector. A further driver should be: “Avoid economic distortions by ensuring every sector makes a fair contribution to achieving emissions targets.” More detail is given in the answer to question 28 below.

### **3. Should the NZ ETS move to a full surrender obligation for the liquid fossil fuels, industrial processes, stationary energy and waste sectors?**

**Answer:** Certainly.

**3A. Explanation:** The effective impact of our ETS has been delayed by 8 years through allowing emitters to use cheap international credits, the “two for one” provision, and the slow phase out of free emissions units from the Government. As a result we now face a steeper adjustment curve to control climate change. We believe that full surrender obligations and a faster decline in the allocation of free

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<sup>1</sup> The objectives of the ETS are assumed to be as per S1.2 of MFE’s consultation document i.e.

- i. Ensure the ETS helps NZ to meet its international obligations to reduce emissions by 2030 to 11 per cent below 1990 levels, from today's level of about 25 per cent above 1990.
- ii. Ensure the NZ economy is well-prepared for a strengthening international response to climate change, and potentially higher carbon prices.
- iii. Allow the ETS to evolve with these changing circumstances, and particularly with respect to the framework provided by the climate change agreement.

emission credits are necessary in order to catch up with our “fair share” contribution to global GHG reductions.

The relevant sectors of the economy have already had ample warning and (we believe) have been passing on the anticipated costs of full surrender to customers for years. The 2011 ETS review recommended full phase in by 2014, but nothing was done. Full phase-in will increase the demand for NZUs, bring an overdue sense of urgency to the market, encourage emitters to adopt new practices and encourage forest planting that will absorb CO<sub>2</sub> emissions for the next 30 years. The wider benefits of this are discussed more fully in the answers that follow.

**4. *What impact will moving to full surrender obligations have on you or your business?***

**Answer:** The business of NZFFA members is farming and forestry. Higher carbon prices will inevitably reduce farm profits, firstly through the rising cost of purchased goods and services; and secondly, to the extent that on-farm emissions cannot be reduced or offset, through farmers buying NZUs to meet obligations. While eventually new technology might solve the problem of on-farm emissions, we believe there is real scope to reduce the cost now through best practice and through the companion planting of trees.

Stable or rising carbon prices above \$15 per NZU will encourage new planting. Appendix 1 models the carbon balance for one hectare of new plantation forest registered under the ETS. It assumes that credits for sequestered carbon are sold in years 7, 14, and 20 and then repurchased in year 28 for surrender when the forest is harvested. Even if carbon starts at \$15 per NZU and rises to \$75 per NZU over that period, at a discount rate of 5% pa the model shows a positive net present value from the investment.

Farmers have identified that they own over 700,000 hectares of land that could be usefully planted in trees to reduce erosion and store carbon. What they currently lack is any good reason to bother.

**5. *If full surrender obligations are applied, when should this be implemented?***

**Answer:** 2016, as soon as possible.

**6. *If the NZ ETS moves to full surrender obligations, should potential price shocks be managed?***

**Answer:** Yes.

**6A Explanation:** Over the last 8 years NZU prices fell by a factor of 10 (from \$20 to \$2) then rose again by a factor of 5 (from \$2 to \$10). These price shocks confused investors and suggested that the Government either did not know, or did

not care, what it was doing. If as a result of moving to full surrender obligations NZU prices now double from \$10 to \$20 that is hardly a price shock. Compared to what has happened to date, it's just a twitch.

The real risk of 'price shock' is delay. We are all aware that the pressure for climate change action is rising, and anything that delays carbon prices rising with it will create the need for a more savage adjustment in the future. That future 'price shock' is the real concern. From a forestry perspective, steadily rising carbon prices – ramping up to \$75 per NZU by 2045 - can be accommodated.

**7. *If potential price shocks associated with moving to full surrender obligations should be managed, how should this be done?***

**Answer:** Maintain the fixed price option at \$25.

**7A Explanation:** We do not believe that an increase in the price of NZUs from present levels to \$25 constitutes a 'price shock'. In 2007 the Government set a fixed price option of \$25, and emitters priced in the possible need for buying Government-issued credits at that cost. Apart from delaying their obligations nothing has changed, and in the interests of confidence and certainty, nothing should change. Should there be a need to increase the price from \$25 in the future the Government could do so, with adequate notice.

**8. *If the \$25 fixed price surrender option value should change, what should it change to and why?***

**Answer:** No change is required until a higher price becomes necessary to encourage or enforce appropriate behavior.

**9. *Do you consider the future cost of emissions in your business planning?***

**Answer:** Of course. Climate change mitigation and adaption are critical to the future of both farming and forestry.

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

**Answer:** Confidence and certainty would improve everyone's ability to take into account the future cost of emissions, including that of farm foresters. Unless this review achieves that as a minimum, it's a waste of time. Up until now low carbon prices, supported by the Government, have given everyone in New Zealand the belief that nothing needs to be done. That belief has to be replaced with the knowledge that change is necessary and we can handle it. We need to aim for Confidence and Certainty.

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

**Answer:** Originally, free allocation rates were meant to start reducing in 2013 and be totally phased out in 2025. If linear phasing out is not to start until 2020, then it should conclude in 2030 subject to:

- Adopting a more gradual phase out if carbon prices appear to be rising too quickly bringing the ETS out of line with international markets;
- Some level of continued (but reduced) free allocation for emissions intensive and trade exposed industries if they would otherwise be ‘unfairly’ penalized in relation to similar industries in competing countries.

The NZFFA believes that agriculture should not be exempt from these provisions.

**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?**

**Answer:** A clear pathway or criteria for phasing out free allocation after 2020 would improve confidence and certainty for everyone in the market. A faster phase out of free allocations would lift carbon prices, encouraging farm forestry investment and planting that would give eco-system benefits to the country.

Carbon sequestration is just one example of eco-system benefits. Research is underway to quantify other benefits arising from afforestation, such as improved water quality and erosion control. A wider discussion is given in Appendix 2.

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

**Answer:** Over the last 8 years low carbon prices have discouraged forestry investment, as evidenced by the new planting rates recorded by MPI. At the same time land prices have risen as the agricultural sector, being exempt from the ETS, has continued to pass its environmental costs on to NZ taxpayers.

A relatively high NZU price that created some confidence and certainty would help boost forestry investment by mitigating high land prices. Going further, including agriculture in the ETS would encourage farmers to plant their own land to help offset their emissions and reduce their environmental footprint, avoiding the need for others to buy their land at inflated prices in order to restore those benefits.

**14. Are there opportunities for the NZ ETS to increase incentives for forestry investments, outside of NZU price?**

**Answer:** Yes, through regulatory certainty, and administrative efficiencies as described in the answer to question 24. Outside the ETS, forestry investments could be encouraged by better Government forest policy.

## **15. What are your reasons for the above answer?**

**Answer:** In 2013 the Wood Council of New Zealand published a Strategic Action Plan entitled “Prosperity from Forestry and Wood Products.” The intention was to increase the forest sector’s export earnings from \$5 billion to \$12 billion by 2022, by securing a sustainable supply of wood, shifting the emphasis away from commodities, and investing in jobs, skills, R&D and high value products made in New Zealand.

The Wood Council wants to deliver:

- A boost to the Business Growth Agenda;
- Increased economic diversification and resilience;
- Regional development and jobs;
- Waterways that cost effectively meet national standards and public and Iwi expectations;
- Greater primary sector resilience to a changing climate and more frequent extreme weather;
- Improved biodiversity and a reduced environmental footprint;
- Iwi land development consistent with cultural aspirations;
- Construction materials that are energy efficient, earthquake tolerant and an established form of carbon capture and storage.

Changes to public policy settings are required to get the full benefits. The Strategic Plan outlines the Government toolkit that needs development to make the plan a reality. This plan, including the ‘toolkit’ with its detailed recommendations, is attached as Appendix 3. Assisting the Wood Council the NZFFA has done substantial policy work to progress one item of that ‘toolkit’ that it considers particularly important (refer answers to questions 26 and 27).

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

**Answer:** Certainly, restrict both source and volume.

**16A Explanation:** In determining whether international units will be eligible at all, the Government will obviously consider both source and volume. We would recommend restricting the use of eligible imported credits in order to maintain:

- The credibility of NZ emissions reductions (no ‘hot air’ credits);
- The integrity of NZ emissions reductions (no accounting fudges);
- Confidence and certainty in the NZ carbon market.

## **17. Should auctioning be introduced in the NZ ETS?**

**Answer:** No.

**17A Explanation:** Refer to the answers to questions 7 and 8. If sufficient

Government-supplied NZUs are available at \$25 there is no need to provide units through an auction. Indeed, some might regard the auction suggestion as a means of avoiding transparency. It would be more honest for the Government to publish the price of its NZUs, rather than to control supply and then argue that the price was actually set by “the market.” We need confidence and certainty, not covert intervention.

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

**Answer:** Auctioning appears to provide no useful role.

**18A Explanation:** The Government can control the flow of NZUs into the market through supply at a fixed price to achieve its goals of aligning supply in the NZ ETS more closely with our international target, or to more actively manage NZU prices. This approach is honest, open and stable.

Auctions inherently reduce certainty, make investment decisions more risky, and potentially delay implementing GHG reductions. New Zealand will only meet its emissions targets if investors have sufficient confidence in the scheme to make long-term commitments (30 years in forestry). If an auctioning system is considered, it must be designed and operated to give this level of certainty.

**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?***

**Answer:** NZUs sold into the market by the Government should rank *pari passu* with other credits available. All interventions need to be aimed at maintaining a high and stable carbon price that will encourage real emission reductions through investment in processes, technologies and/or afforestation.

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

**Answer:** Significant.

**20A Explanation:** MFE’s discussion document of 24 November 2015 acknowledges that low carbon prices played a major part in New Zealand’s dismal afforestation rates and high deforestation rates in recent years. The drop in carbon prices was a result of the Government deliberately allowing emitters to surrender cheap carbon credits, and thereby avoid responsibility for reducing their emissions.

Over the years while emitters could surrender cheap credits NZU prices crashed from \$20 to \$2, and since cheap credits have been banned they have rebounded to \$10. This is *extreme* volatility. It has been impossible to plan any forest programme that relied on carbon credits for its commercial success and many forest

owners have in fact chosen to leave the ETS.

**21. *Do you think measures should be in place to manage price stability?***

**Answer:** Yes.

**21A Explanation:** As in 6A above, the real risk of ‘price shock’ is delay. We are all aware that the pressure for climate change action is rising, and anything that delays carbon prices rising with it will create the need for a more savage adjustment in the future. That future ‘price shock’ is the real concern.

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

**Answer:** We favour an upper price limit that rises steadily, in line as far as possible with international carbon prices. We also strongly recommend the Government adopt rational and transparent policies that are clearly aimed at achieving real emissions reductions.

**22A Explanation:** A fixed price upper limit clearly signals to emitters the Government’s assessment of the costs of GHG emissions. This enables emitters to make rational investment decisions in an atmosphere of confidence and certainty. Logic suggests there should be no need for a price floor as those who hold credits have no wish to sell them cheaply and push prices down. However, the threat of a price floor could be retained to reduce volatility and provide investors with more confidence should the market prove to be irrational.

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

**Answer:** Emissions reductions will only be achieved if investors believe it is safer and more economic to proceed than to delay. The Government must aim for high carbon prices that rise in an atmosphere of confidence and certainty.

**24. *Are you aware of ways the administrative efficiency of the NZ ETS could be improved?***

**Answer:** Yes. One improvement would be to do away with, or ameliorate, the requirement to use the Field Measurement Approach (FMA) in forestry. It is complex and expensive, and a charge against commercial forestry that is not matched by similar charges on other sectors.

**25. *Can you provide further information to support your answer?***

**Answer:** Certainly. All participants with 100 ha or more of post-1989-forest land registered in the ETS are currently required to use the FMA to determine carbon stocks for emissions returns. This generally obliges the forest owner to employ a

forest consultant, apply to MPI for the number of plots required, define their locations, get the plots established, collect the relevant information, submit it to MPI and fund the creation of participant-specific tables. The process is expensive: a forest owner with 100 ha would have to pay over \$10,000 to get this done. However an owner with 99 ha would be allowed to use MPI's free 'look-up' carbon sequestration tables. The 100 ha cut-off is arbitrary, and the compliance cost imposed by the FMA is not imposed on any other sector.

The FMA process does not need to continue. MPI should now have received more than enough plot data - at no expense to the Government - to generate adequately reliable regional look-up tables for owners with medium sized forests who wish to register or re-register under the ETS.

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

**Answer:** Yes.

- a) Depressed or volatile carbon prices discourage investment in both opportunities and technologies for reducing emissions.
- b) An important barrier to investment in new forests (and therefore to sequestration) exists in the current treatment of income tax on the sale of immature forests.
- c) The Government assumes that all stored carbon is lost when trees are harvested. This is an accounting simplification that penalizes forestry.

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

**Answer:** Absolutely.

- a) Emissions reductions will only be achieved if investors believe it is safer and more economic to proceed than to delay. The Government must aim for high carbon prices that rise in an atmosphere of confidence and certainty.
- b) Under the Income Tax Act 2007 the value of immature standing timber to a seller is very different from its value to a buyer. The seller must declare the sale of standing timber as income when it occurs but the buyer cannot deduct the cost as a matching expense at the time. Instead, the buyer must carry the 'cost of timber' in an account until he 'disposes of the timber' by sale or harvesting. If the purchaser harvests the trees in the same year he buys them, the rule is fine. However if harvesting is unlikely to happen for decades, it creates irreconcilable differences between the buyer's and seller's estimates of forest value. This illiquidity dissuades people from investing in forestry. Further, it is an obstacle to the consolidation of small, immature and otherwise uneconomic forests. If such owners could consolidate their holdings it would allow them economies of scale in managing, harvesting and marketing their

standing timber. These productivity gains would deliver better returns to growers and improved tax revenues from the sector.

The New Zealand Farm Forestry Association advocates that standing trees be treated as a 'going concern' with no tax payable on transfer, as with GST. The person who planted and managed the trees would get a tax deduction; the person who harvested them would get a tax liability; and it would not matter if they were different people. Other options are possible. A background paper describing these alternatives in more detail is attached as Appendix 4.

- c) If carbon storage (embodied emissions) in harvested wood products were recognized, it would increase NZ's net removals by 10 MtCO<sub>2</sub>/yr from 26.8 to 36.8 MtCO<sub>2</sub>e [MAF technical Paper No 2011/27 i.e. "Forestry Accounting Options" by J Ford-Robertson and K Robertson]. Currently the ETS does not recognize embodied emissions in wood and related products. A legacy policy from the Kyoto Protocol CP1 rules deems that once harvested, wood becomes 'instantly oxidized.' Under COP21 New Zealand is not obliged to follow CP1 rules and this policy should be updated.

Up to half of the carbon in harvested logs is retained in processing as solid wood in buildings, furniture, fittings and paper products. This generally lasts years before being lost through fire or decay. In many applications wood products substitute readily for steel and concrete, and avoid the emissions that would be released during the manufacture and transportation of these heavy materials. The other half of the harvested log is generally used as biofuel, reducing the need for fossil fuels.

Recognizing embodied emissions in 30-50% of the harvest would reduce an owner's liabilities at harvest time encouraging forest investment, harvesting and replanting. The status quo acts as an incentive to avoid harvesting. Over-mature forests do not significantly increase carbon stocks.

## ***28. Other comments related to issues set out in the discussion document***

**Answer:** We believe it is wrong to continue to exclude agriculture from the ETS on the grounds that farmers cannot easily mitigate on-farm emissions. Many farmers are in a position to plant trees to offset emissions with relatively little impact on farm productivity. The single biggest cost to growing trees is land, and the land cost to the farmer is simply the profit foregone by taking the land out of pasture. Profits can actually improve when poorer parts of farms are planted. Treasury advice in March 2015 released under the Official Information Act put the fiscal cost of exempting agriculture through the 2020s at \$4.5 billion. This direct and environmentally irresponsible subsidy inflates pastoral land values, discourages erosion control and reduces fresh-water quality. The country suffers as a result.

## APPENDIX 1

### *The carbon balance for one hectare of new plantation forest*

The following table for one hectare of new plantation forest registered under the ETS assumes that the owner cashes up the sequestered carbon progressively in years 7, 14 and 20; and then pays back his carbon liabilities in year 28 when he harvests the block. The figures come from MAF's look-up table for the Southern North Island.

**Table 1: Carbon volumes by year**

Age in years	Tonnes of sequestered CO <sub>2</sub> /ha from 'look-up tables' for the Southern North Island	Tonnes of sequestered CO <sub>2</sub> cashed-up during the relevant year.
1	0.5	
2	3	
3	9	
4	34	
5	71	
6	113	
7	155	155
8	185	
9	197	
10	210	
11	233	
12	260	
13	291	
14	325	170
15	361	
16	398	
17	436	
18	473	
19	510	
20	547	222
21	582	
22	617	
23	650	
24	681	
25	712	
26	741	

27	769	
28	797	250

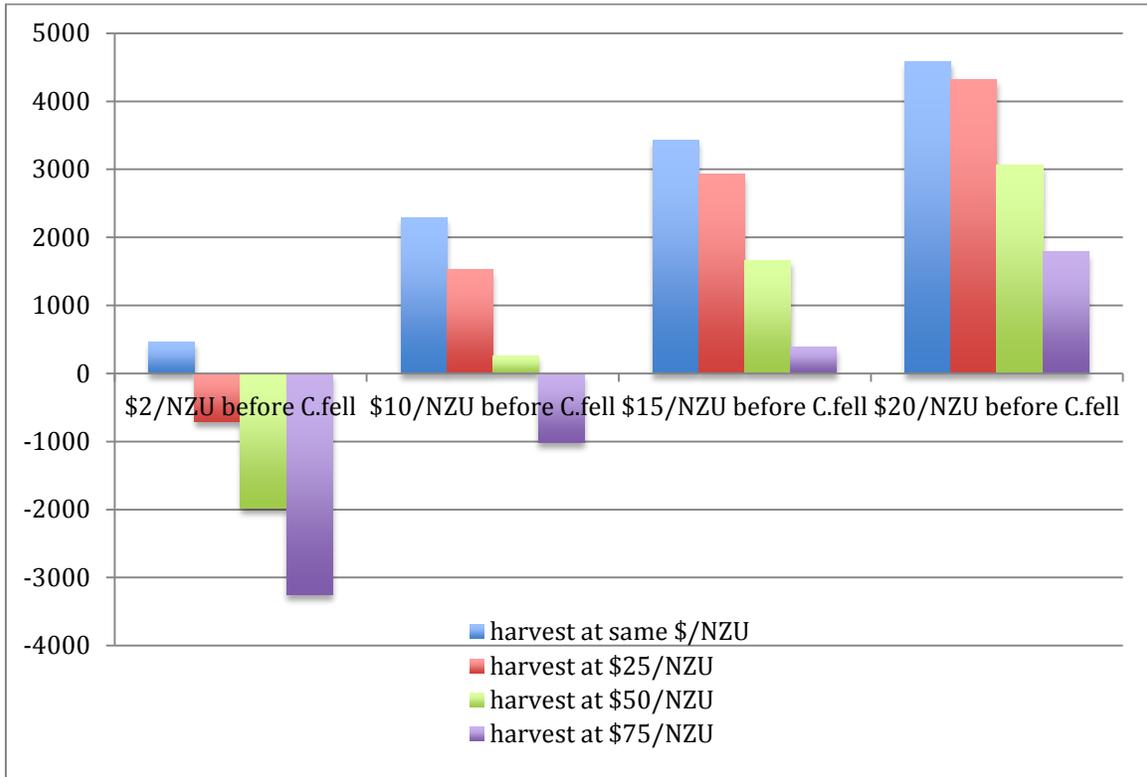
At rotation end the grower will receive a final 250 credits. After allowing for 348 tonnes/ha of CO<sub>2</sub>e that will remain in the stump, roots and slash the grower must surrender 449 credits (=797-348). With 250 credits in hand, he must therefore buy 199 credits to meet his surrender obligations.

From the carbon flows above it is possible to determine the net present value to the grower assuming constant values for NZUs sold in years 7, 14, and 20 and different values at age 28 when he harvests the crop. The table below shows 16 different scenarios to illustrate the effect of rising carbon prices using a 5% discount rate.

**Table 2: Grower NPVs.**

Case	NZU sale price \$, years 7, 14, 20	Accumulated income \$ by year 28 at 5% interest	NZU buy price at year 28	Cost of buying 199 credits	Net income at year 28	NPV at year 0 at 5% discount
1	2	2193	2	398	1795	458
2	2	2193	25	4975	-2782	-710
3	2	2193	50	9950	-7757	-1979
4	2	2193	75	14925	-12732	-3248
5	10	10964	10	1990	8974	2289
6	10	10964	25	4975	5989	1528
7	10	10964	50	9950	1014	259
8	10	10964	75	14925	-3961	-1010
9	15	16446	15	2985	13461	3434
10	15	16446	25	4975	11471	2926
11	15	16446	50	9950	6496	1657
12	15	16446	75	14925	1521	388
13	20	21928	20	3980	17948	4578
14	20	21928	25	4975	16953	4325
15	20	21928	50	9950	11978	3056
16	20	21928	75	14925	7003	1786

**Histogram 1: The NPV of the 16 scenarios in Table 2 above in \$NZ.**



These scenarios suggest that at prices of \$15 per NZU or higher, growers can expect positive returns from the ETS component of growing production forests.

## APPENDIX 2

### *The environmental co-benefits of forestry*

Scion has recently made impressive strides in quantifying the ecosystem benefits of plantation forestry (“Ecosystem Services In The Ōhiwa Catchment” Richard T. Yao and Sandra J. Velarde ISBN: 978-0-478-11033-3 SCION publication number S0011, 31 October 2014). The table below from the Ōhiwa report demonstrates a large positive ecosystem service value from exotic forestry of \$5,551 per hectare, each year.

**Table 1: Indicative values in dollars per hectare per year of key ecosystem services in the Ohiwa catchment without including carbon sequestration.**

	<b>Dollars per hectare/year</b>
Avoided erosion and flood/disturbance regulation	\$121
Regulating nutrient supply by avoiding leaching	\$2,800
Pollination	\$206
Water regulation	\$6
Waste treatment	\$244
Pest and disease regulation/biological control	\$11
Water supply	\$8
Recreation	\$900
Species conservation	\$257
Nutrient cycling	\$994
Soil formation	\$14
<b>Net ecosystem services value in dollars per hectare each year</b>	<b>\$5,551</b>

This eco-system benefit is a public good that directly arises from private commercial investment. Contrast most sectors, where environmental damage and public cost usually arise from private commercial investment.

## APPENDIX 3

### *The toolkit Government needs to use to maximize the net benefits from New Zealand’s forestry sector.*

The Wood Council of New Zealand’s 2013 publication “*Prosperity from Forestry and Wood Products*” [ [www.nzffa.org.nz/system/assets/.../industry\\_manifesto\\_060314pdf.pdf](http://www.nzffa.org.nz/system/assets/.../industry_manifesto_060314pdf.pdf)] includes a description on page 3 of the steps that Government needs to take, or rather the ‘toolkit’ it needs to use, to implement its Strategic Action Plan. To summarize these are:

1. Encourage security of supply. [This includes the need to change tax policy to enable woodlot owners to aggregate wood supply without penalty (Appendix 4)]
2. Encourage investment and modernization of plant and equipment.
3. Streamline regulations and building standards.
4. Facilitate greater R & D to facilitate innovation.
5. Support a safe and skilled work force.
6. Develop regional infrastructure to raise productivity
7. Establish policies to encourage the sustainable use of land.
8. Improve international markets and trade terms.
9. Encourage wood use domestically.

## **APPENDIX 4**

### **The Cost of Bush: Options for changing the 'Cost of Standing Timber' provisions of the Income Tax Act 2007.**

Prepared by H B Moore for the NZ Farm Forestry Association 23/11/2015.

#### **1. Introduction**

Members of the NZ Farm Forestry Association are concerned that one section of the Income Tax Act 2007 acts as a barrier to the aggregation of, small forests. Aggregation would allow coordinated harvesting, continuity of supply and economies of scale, all of which would improve forestry sector returns, investment, tax flows, resource consent processing and environmental control. At present the Act treats standing trees as inventory, heedless of the fact that crop rotations in forestry occur over decades rather than the weeks or months of common items. Acting over such long periods, inflation and the time cost of money badly distort tax equity.

#### **2. Background**

When standing trees are sold the vendor must pay tax on the sales income while the buyer cannot claim a matching tax credit until the trees are harvested or resold (Sections CB 25 and EA 2 of the Act respectively). When immature standing trees are sold several years before harvest, inflation and the time cost of money combine to erode the benefit of the buyer's tax credit. The erosion of value creates a different expectation between the buyer and the seller. Calculations suggest that depending on the age of the forest, the buyer's offer

might be 40% lower than the seller's expected price<sup>2</sup>, meaning there is little likelihood of agreement. While immature forests do sell the market is thin, illiquid and not necessarily rational. This discourages fresh investment and forest aggregation, which is not good for the sector or for the country.

### 3. The problem

About 14,500 different entities own forests in New Zealand. Around 90% of these (13,000) have forests of less than 100 ha. Because forestry is not really the focus or main source of income for these owners their blocks are scattered, of mixed quality, and often planted on poor country. Despite this, their trees are worth \$15 billion<sup>3</sup> if they can be harvested.

At present however each of the 13,000 owners has to apply for his own resource consent, pay for his own roading, engage his own contractors and then take legal responsibility for their health and safety. After managing the stress of learning about and then actually doing this, he may find that his total costs outweigh his income from log sales leaving him with no return.

Poor returns from small forests have been widely experienced and are becoming common knowledge through research published by the University of Canterbury. New forest establishment has almost ceased. Equally importantly, unless grower returns improve many small forests may not be cut, and New Zealand would not realise the \$15 billion of value and potential cash flow that is now growing on marginal land. The carbon benefit of letting those forests get older and older, rather than harvesting and replanting, is a tenth of that<sup>4</sup>.

- To improve returns growers must reduce costs. They cannot lift international prices.
- The best way to reduce costs without compromising wages and safety is to seek economies of scale.
- Economies of scale can be obtained by aggregating small forests to operate them as a single estate.
- Aggregation is discouraged by the Income Tax Act 2007.

### 4. Options for change

There are at least four options for improving the situation. These are presented in a sequence that follows the logical development of the argument, although our order of preference would be 2,1,3,4.

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<sup>2</sup> For a forest 15 years from harvest with inflation 2% pa and real cost of funds 3% pa.

<sup>3</sup> For 265,000 ha of small forests yielding 600 tonnes/ha at an average price of \$95/tonne.

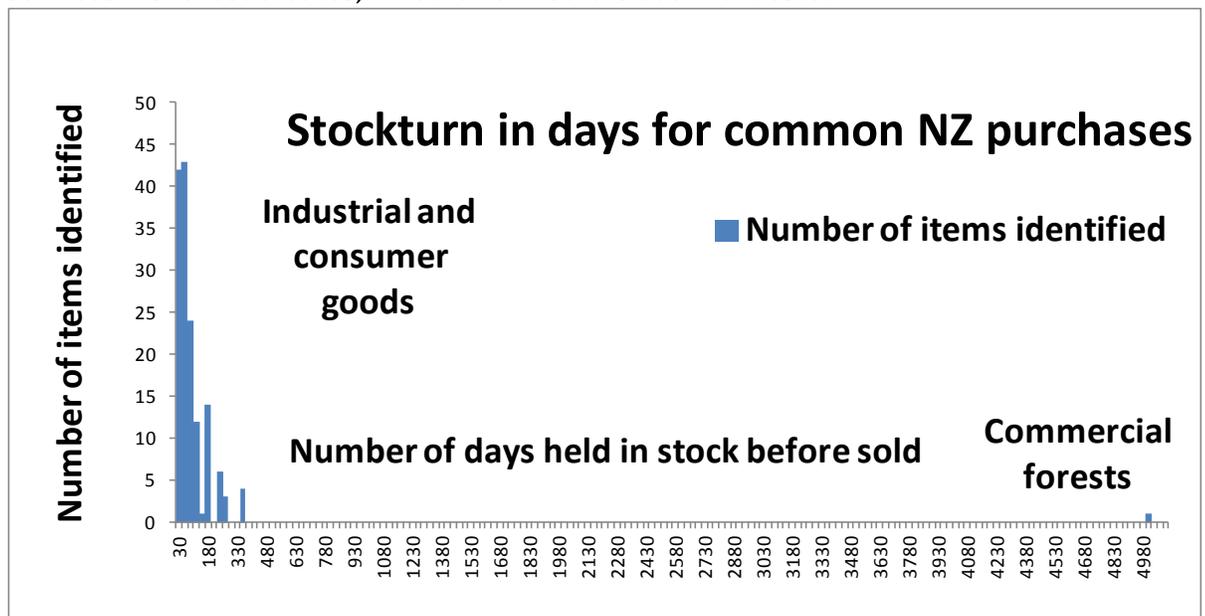
<sup>4</sup> Allowing for windthrow and fire, long-run CO<sub>2</sub> storage of 800 NZU/ha @ \$7/NZU for 265,000 ha.

#### 4.1 Allow the buyer of standing trees immediate deductibility

The buyer and seller of standing trees would be treated equally if the buyer could immediately deduct the cost from his assessable income. IRD is opposed to this because it would treat standing trees as different from other inventory; and it would allow someone to claim a credit on the purchase of trees he never intended to harvest, and so avoid tax. These are both really weak arguments.

Standing trees *are* different from other inventory. On a US survey in 1998<sup>5</sup> the average time stock was held before resale was 30 days for retailers, 33 days for wholesalers and 45 days for manufacturers. For an immature forest sold after 14 years, the time is 5,110 days. A local analysis was done of 150 common items sold in New Zealand and as the graph below shows, in statistical terms forests sold after 14 years fall 60 standard deviations from the mean and clearly *do not* belong to the population of objects called 'inventory'.

IRD already recognises this to some extent, and has bent its 'inventory' rules to allow the immediate deductibility of most costs associated with growing a forest. That variation, which IRD admits is grudgingly allowed, is intended to encourage planting and management which would not otherwise occur. It is not offered or taken as a handout. The grower still pays 72c in every dollar and the tax deduction is returned many times over from the ecosystem services his forest creates, whether or not it is ever harvested.



<sup>5</sup> "Warehouse Inventory Turnover," T Speh, director of the Warehousing Research Center at Miami University, Oxford, Ohio, and J Evans Rees, professor of distribution at Miami University  
[[http://www.industryweek.com/articles/inventory\\_report\\_1928.aspx](http://www.industryweek.com/articles/inventory_report_1928.aspx)]

Few people buy and sell trees they never intend to harvest, but it can happen in estate planning, where assets are bought and sold amongst family members. In such circumstances one might think it important to prevent someone from claiming a tax credit against a forest 'inventory' they never intended to sell (i.e. when their role was in fact a consumer buying a 'finished product' rather than a retailer buying 'trading stock'). Here the Act more or less works, as it seems reasonable for IRD to charge tax on the transfer of inventory and allow the buyer a deduction on its resale. If no resale happens, then the buyer was obviously a consumer after all, and his deduction is worthless. If the buyer chooses to wait years to resell and his tax benefit is eroded, that's his choice.

However, this 'inventory' approach ignores two important things. First, it costs money to maintain standing forest. The owner must protect it from fire, windthrow and trespass, keep fence lines and power lines clear, and pay the rates. No-one willingly takes on these costs for years without expecting some assessable return. Consequently, the likelihood that the buyer of standing trees will prove to be a 'consumer' and not harvest them is actually remote.

Second and more importantly, the 'inventory' approach ignores ecosystem services. While most of these are not monetised, privately owned or taxable, they still exist and are widely recognised. The owner of a forest holds an asset that prevents soil erosion, avoids pollution and creates habitat while improving water quality and landscape values. These benefits to the country have been estimated as worth over \$5,000 per ha per year<sup>6</sup>. So, while the owner of a 100 ha forest will get few benefits from his standing trees, the taxpayer may receive the equivalent of \$500,000 a year in services!

That wealth transfer, from private investment to public good, is recognised under the Emissions Trading Scheme, the Afforestation Grant Scheme and the Sustainable Land Use Initiative. Here both MPI and IRD encourage growers to establish and manage forests that might not be harvested. Not only does IRD allow the growers to deduct the costs of these, but MPI offers incentives by way of grants and carbon credits.

Given that, how can anyone buying a forest that will not be harvested (such as a protection forest) be regarded as a 'consumer' of the trees? Seen in this wider perspective, the Act's 'inventory' approach looks simplistic, clumsy and badly out of step with today's realities.

Allowing immediate deductibility on the sale of standing timber might result in some people claiming tax breaks for forests they did not intend to harvest; but that would not be evil. In effect, it would treat them exactly the same as if they were the ones who had planted the trees in the first place. A fully equitable policy would be that the one who held the trees and provided the benefits got the tax deduction; and when he sold, he paid. This policy is simple, workable and updates the Act by explicitly recognising the benefits to the country of standing forests.

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<sup>6</sup> "Ecosystem Services in the Ōhiwa Catchment" Scion S0011, Rotorua, 31 Oct 2014.

A variation of this approach was suggested by G Copeland in 2012, when he proposed that the buyer might apply for the seller's tax payment as a refund, once that payment had been received and processed by IRD. That would give IRD an opportunity to request and scrutinise the details of the sale, and decide whether or not it agreed to the refund.

#### **4.2 *Charge no tax on the sale of standing trees***

Following from the above, one might eliminate income tax on any sale of standing timber, so that neither seller nor buyer had to declare the transaction. The deduction for planting and management would remain, together with tax on the income from harvesting, but any intermediate transaction that did not affect the forest (like simply changing the name on the title) would be ignored. In this case standing trees would be treated as a special category of 'inventory,' with no regard for changes of ownership during 'work in progress'. He who planted the trees would get a tax deduction; he who harvested them would get a tax liability, and it would not matter if they were different people. This is not a radical idea; it is how IRD treats GST in the sale of a going concern business.

IRD might argue against the idea on fiscal grounds, as it would lose tax revenue on the intermediate sale of standing trees. However this is an unpredictable windfall that is not budgeted, and IRD would lose nothing but timing gains made at the growers' expense. If it did try to quantify this, its calculation would have to acknowledge that the income tax lost would be offset by reduced deductions available to the owners on harvest, and even if it did forego some cash flow it would not lose tax over the forest rotation. Its calculation should also take into account the costs of enforcing the present Act to ensure that standing trees are sold at fair market valuations.

#### **4.3 *Charge no tax on the sale of standing trees if there is no change in beneficial ownership***

As a variation on the above, it could be argued that IRD would lose nothing if it allowed forests to be aggregated tax free when beneficial ownership was preserved - for example, when a group of owners formed a company or cooperative to buy their forests at valuation for shares, or exchanged partnership shares for company shares. They could then run their forests as a single estate and achieve economies of scale without any third party. Viewed from a distance such an operation might look like the owners were simply cooperating, rather than legally combining their assets. Indeed, the purpose of adopting a legal structure would be to formalise cooperation amongst members (setting common goals, timetables and protocols for resolving disagreement) rather than to drive cooperation by using a central manager to impose decisions. Since the owners could achieve aggregation and cooperation without a legal structure, why should they incur the 'cost of standing timber' provisions for making it formal, and adopting an

enforceable set of rules? It is not the intention of the Act to discourage transparency and good business practice.

#### **4.4 *Proxy sale that avoids passing title***

If none of the above were acceptable to IRD forest owners might use a fourth option, which is to avoid the 'cost of standing timber' provisions altogether by selling a proxy for the trees rather than the trees themselves. As the proxy is simply a financial instrument, it falls under a different section of the Act.

Still under discussion, the proxy would work like this:

- A buyer wishing to aggregate forests for economies of scale approaches the owner of an immature forest.
- Assessing the forest, he offers to buy the cheque that he believes the owner will receive when he sells his trees at harvest.
- The price of the cheque is the owners' expected net return at harvest discounted back to the present day, i.e. calculated in the same way as if valuing the forest. Obviously the price of the cheque is similar to the sale price of the standing timber.
- Along with the promise of the future cheque, which is based on the sellers' nominated harvest date, the buyer obtains the right to determine when the trees are cut, within an acceptable period either side of the nominated date. This gives him some flexibility in harvest scheduling.
- The buyer secures the promise of the future cheque and harvest flexibility with a contingent Forestry Right. Being contingent, the Right does not incur the 'cost of standing timber' unless and until it is exercised on default of the forest owner.
- After completing a number of such purchases the buyer then holds the paper until the first forest matures.
- The forests are harvested by their owners on a schedule determined by the buyer, who receives the harvest proceeds from the owners as agreed.
- The forest owners are responsible for their own income tax following harvest. The buyer, who has taken the market risk that log prices have risen or fallen over the period, is responsible for income tax on the profit he has made on his receivables.

With suitable contractual arrangements, each preserving the owner's title to the trees, the aggregate forests might be managed as an estate and achieve economies of scale.

We are told that this 'forestry derivative' would fall under the accruals regime of the Act. The buyer would pay tax annually on the appreciation of his receivables, which would rise in value as harvest approached.

Conversely, the seller (forest owner) would claim a matching annual loss, which would reduce his final tax bill on the full net harvest revenue. These matching tax streams would of course cancel each other.

## 5. Conclusion

The author fully supports the idea of a robust, simple and fair tax system that applies equally to all sectors. The provisions for the 'cost of standing timber' in the Income Tax Act however do not deliver these values. They are clumsy, unfair and now out of step with the Government's approach to land use. At present they act as a barrier to investment in and the aggregation of small forests, reducing grower returns, tax flows and national benefits.

Small and logical changes to these provisions might remove this barrier allowing the sector to make a greater contribution to national well being. The author would like these changes considered, perhaps under the IRD's current programme for "Making Tax Simpler."