

Submission to

The Productivity Commission

On

The Low Emissions Economy Issues Paper 8/17

From

Geoff Thompson

Introduction

This paper is submitted in the writer's personal capacity and is directed at the contribution plantation forestry can make to neutralise Green House Gas Emissions (GHG) in New Zealand.

The writer has a long-standing interest in both forestry and climate change issues.

- He has been involved in small-scale forest establishment, silviculture and management, harvesting and replanting for nearly 50 years
- He is Chair of the industry organisation body, the Forest Growers Levy Trust, since establishment
- He was a Ministerial appointment to the 2011 Emissions Trading Scheme Review Group and wrote much of the forestry commentary in the final report
- He is currently co-chair of the NZ National Party Bluegreens Policy Advisory Group, which provides input on environmental and conservation issues for the Party.

1. Background to Carbon Emission issues

- 1.1. In the mid to late 2000s the main political parties addressed the issues of GHG emissions and a decision was made to introduce an emissions trading scheme (ETS) incorporating all sectors and all gases as New Zealand's principal emissions control instrument. The Labour Government's design was modified by the new National Government after the general election in 2008.
- 1.2. The purpose of the ETS was to put a price, established by the market, on carbon emissions and through price/cost encourage changes in behaviour to low emission options. The 2011 Inquiry found the scheme to be fit for purpose and recommended introduction of changes over time; mainly to remove free allocations and introduce as a sector the biological emissions of farming. These recommendations were not acted upon and the scheme was seriously undermined by emitters being allowed to buy Kyoto approved foreign carbon credits to satisfy New Zealand carbon obligations. From a steady market price of about \$20 per unit, their value dropped by over 90% and suppliers of units, largely the forestry sector, become very disenchanted with the ETS.
- 1.3. Forestry was one of the first industries to be a participant in the ETS, operating under rules mandated by the Kyoto Protocol. Considerable effort had gone into the establishment of those rules and they were strictly binding on those nations signed up to Kyoto. The rules included a requirement to return or surrender carbon units (NZUs) allocated to participants in the ETS upon harvesting of the tree other than an allowance for "tree-carbon" being that which was retained in the trunk and roots of the tree after harvest. This was estimated at some 30% of the carbon calculated, and therefore the allocation of units. Interestingly, this was an early recognition of the post-harvest retention of carbon now being discussed again.

2. Plantation Forestry

- 2.1. Little attention has been given to a particular advantage New Zealand enjoys in respect of forestry, which should be exploited more vigorously.

Since the introduction of *Pinus radiata* trees for trialling in Wellington's Botanic Gardens in the early 20th century, this tree variety has thrived to the point that New Zealand has probably the best plantation forest industry in the world.

The reasons are various and cumulative:

- We have long experience and success with the particular species
- We have a temperate climate and good soils to support rapid and clean growth
- We have over a century of forest management experience
- We have a long-standing commitment to targeted research to improve forestry - Scion, and formerly a government forest service, and large players committed to improvement

New Zealand can grow trees fast and well. We should encourage more.

2.2. The current constraint on new planting is the availability of land at acceptable cost.

Plantable land has lifted in price / value because of two main factors:

- Competition especially from those wishing to grow manuka for a honey business; and
- A price drag caused by the ripple effect of high-prices paid for land suitable for dairying

Also, there is insufficient incentive to replant within small-scale investment syndicates. Approximately one-third of forestry is in blocks under 1,000 hectares, much of which was planted in the 1990s by investment syndicates. These plantations have now commenced harvest and on a long-term basis, the scale and wait for returns is not sufficient attraction to replant or new plant, so the area of total plantation forestry is slowly declining. The major forest companies, which are largely foreign owned, do undertake replanting.

2.3. An answer to the small-scale grower is to improve the financial returns from the investment. This is available in two ways, at least:

- Continue to promote the economics and benefits of growing timber – the end harvest and co-benefits such as environmental gains which might eventually be monetised and added to the net returns – for example a rates rebate from regional and local councils for the value of erosion control or use of the forest as a public recreational space
- Improve the long term returns available from participation in the ETS

The balance of this submissions will deal largely with the latter point.

3. The Gains

3.1. The basic premise of this submission is that New Zealand would benefit substantially from the expansion of its carbon sinks- its plantation forestry. Through photo-synthesis, pine trees absorb carbon from the atmosphere and from age 25 this can amount to around 800T of carbon per hectare of trees This is recognised by many carbon commentators and was the centrepiece of the well-received report prepared for GLOBE-NZ by the London-based Vivid Economics group and presented on 21 March 2017 at Parliament. This effort resulted from a cross-party dialogue and proposed net zero emissions by 2050 based on a substantial increase in tree planting.

3.2. This was proposed as a one-off gain but this is not necessarily the case. While much carbon is lost to the atmosphere on harvesting, for instance, if the log is pulped the lost carbon can be quickly replaced through replanting immediately after first rotation harvesting. In other words, forestry with different planting intervals can be a perpetual carbon sink. The

economics of plantation forestry improve with each rotation as after the first harvest as infrastructure – roads, loading spaces and access, are in place for subsequent use with little additional cost needed.

The investor would be encouraged by a more flexible ETS. The current review of the ETS appears to be running in parallel with the Productivity Commission's enquiry. It would be sensible if the work on both was merged.

- 3.3. The ETS needs to be updated now that New Zealand has not committed to a Kyoto Mark II. New Zealand has the unfettered ability to design rules for forestry that are in our best interests and which can meet international standards for integrity. Relying on the proven science of photo-synthesis, the measurement of the carbon sequestered in our plantation forests is not an issue.

4. Reforming the ETS

- 4.1. Several rule changes have been proposed and I urge the Productivity Commission to support them as a mechanism to make the ETS more attractive to foresters:
- Introduction of "averaging" in the earning of NZUs has been described and is worth supporting
 - Introducing the netting off of carbon loss at harvest by developing a table of likely uses of the timber produced and crediting the end result against the total carbon sequestered in the harvested wood product apart from "free carbon", is worthy of support. The point of these changes is to give the forester greater certainty about what will be earned from carbon and units sold with income retained by the forester through the life of the tree; maybe claiming and selling credits every 5 years

It should be noted that a tree does not stop growing after 28 years but keeps expanding and earning carbon well beyond 40 years of age.

If this sort of income can be certain the establishment for investment of permanent forests is an option for areas difficult to economically access.

Thus basically an update of the ETS and a positive recommendation to plant more trees is the desired outcome of this exercise.

5. Land for Planting

- 5.1. Finally, dealing with the issue of available land, I propose that the government take a lead:
- a. Reactivate the forestry section of MPI to become a Crown Forest Agency to identify Crown land that is suitable for planting – Landcorp, other departmental surpluses;
 - b. Direct Department of Conservation to plant pines on low conservation-value land for the purposes of climate change control. The objections of the DoC idealist should be overcome by arguing that a greater public good is achieved through the carbon sequestration than by leaving the land empty.
- 5.2. If there is any wish to discuss any of these suggestions the following contacts are available:

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Handwritten signature of Geoff Thompson, dated 29/9/17.