

Submission on the Environment Canterbury Pest Plan

My submission is that references to wilding conifers be removed from the plan.

I have argued that the reasons provided by Ecan to include them in the plan have grotesquely overstated the negatives and completely ignored the many positives of wilding conifers.

The Ecan Officer's report has rejected my submission but has not refuted any of my arguments.

My views are in the minority so I wish to give you some background to the reasons I have reached the conclusions that I have.

I am forestry consultant and have been practicing for 35 years. I have a Bachelors Degree in Forestry Science, which in effect, is a double major in Applied Ecology and Applied Economics. My views are based on years of observation, reading, measurement, and study of forestry both in NZ and many other parts of the World.

Forestry is a large industry run by very few people. There are about 700 members in the Institute of Forestry and about 70 forest consultants.

In 2005 and 2006 when the matter of the Kyoto Protocol was looking like it was going to affect forestry, I decided that I needed to be clear in my own mind about the underlying physics of climate change. I studied the matter until I had an "Oh Shit" moment when I realised that the world was in deepest trouble.

Consequently, I mastered the complexities and mechanics of the Emissions Trading Scheme and how it was going to impact on forestry and today I believe that possibly only about a couple of dozen people in the country really understand both forestry and the ETS.

Most of those people who do understand forestry and the ETS are not submitting because they have ~~both~~ submission fatigue and are too busy and the matter of wildings is peripheral to their other concerns.

Mr Lambie you are a dairy farmer and Federated Farmers representative.

Each of your cows produce green house gas emissions, in round numbers, of around 3 tonnes of CO2 equivalent per year. The current market price for NZUs is \$18/NZU. So if we assume a round number of \$20/NZU (for ease of mental calculation) then each cow has an emission cost of \$60/year.

Your cows are producing in round numbers 400 kg milk solids/cow/year. So the emissions cost of your cows is about \$0.15/Kg milk solids. I would like you to hold that number in mind.

Until now, that cost has been covered by, the initial Kyoto allowances, the import of shonky Emission Reduction Units from Russia and the Ukraine, and the forestry sector.

In 2015, NZ signed the Paris Climate accord where NZ has undertaken to reduce net emissions from around 78 million tonnes per year to 55 million tonnes per year for the period 2020-2030.

There is a thesis in what the consequences may be for the country if we do not meet those targets so for this argument I assume that we, the country, have made the commitment, we will live up to the commitment.

The Environmental Protection Agency (EPA) project that there will be a deficit of 230 million tonnes for 2020-2030 period. As practically, no new forest has been established over the last 9 years and harvesting the Post 89 forests planted in the 1990s is well underway, it is now no longer possible for the forestry sector to cover that deficit.

Problem 1.

EPA is aware that NZ will have to go to the world emissions markets to satisfy the short fall, but those emissions markets do not yet exist.

Problem 2

EPA is anticipating international prices in the range \$80-180/tonne for the 2020-2030 period. So for illustrative purpose if we assumed a price of \$100/tonne (to make the mental calculations easy) then NZ could be looking at bill with a magnitude of \$23b over the period 2020-2030.

Problem 3

Why will it be acceptable to the taxpayers of NZ to subsidise dairy farming to the tune of \$0.75/kg ms? So, if dairy farmers have to pay that cost then surely, the economics of dairy farming will be put at risk and value of dairy farms may fall significantly.

The average pine forest sequesters around 30 NZUs/ha/year. I have measured wilding pine forests that have sequestration rates much higher than that.

However, if NZ wants to avoid having to go the international markets for emissions units then it must either severely restrict the use of both fossil fuels and livestock farming or establish in the order of a million ha of new forest. Under current land ^{market} prices, land costs are in the range \$5-10k/ha plus \$1.5k/ha to plant. So, to plant the necessary forest will cost in the order of \$7-9 billion.

Even if forest owners, could get hold of the land, they would need price levels of around \$30-50/NZU to be interested in investing. Even then, if these forest were established, they could only come on stream beyond 2030. The problems of NZU supply intensify beyond 2030 as well as greater emissions reductions targets have been foreshadowed. However, we have around a million ha of land that has wilding pines growing on it, which is obviously one of the subjects of this Management Plan.

Therefore, the wilding conifer estate represents a prodigious "Get out of Jail Free Card" for the farming sector and dairying in particular. These forests have been painted as being a worthless scourge, just as kauri, rimu, and manuka/kanuka forests were regarded in the past, but nothing could be further from the actuality. Some of these forests are currently netting \$1k/ha/year already.

But I am not here to help the dairy industry save itself from itself, I am interested in the other side of the equation

So Mrs Roberts

You are an ecologist and therefore are fully aware that our forests and birds have are threatened by a range of mammalian predators. From my experience and reading, I believe it is necessary to spend around \$50/ha/year to keep those predators at sufficiently low levels to allow the nation's forest ecosystems to function as they once did.

Given that there are about 8 million ha of native forest in public and private ownership this means we need to be spending around \$400 million/year on predator control. (Currently over 80% of these forest are subject to abject neglect). The problem is that the Government's ever pressing other priorities means that this quantum of money will never be available for predator control from consolidated revenue.

I believe that if we sustained expenditure at this level for 10 years or so we could actually reach a permanent solution with regards to the issue of predator control in the light of rapidly changing technology.

So assuming a million ha of wilding sequestering 30 NZUs/ha/year at price of \$20/NZU could produce \$600m/year-more than enough to look after our native forests. Mr Lambie should be happy to pay 15c/kg ms compared to the alternative of 75c/kgms.

And the eventual fate of the ^{could} pine forests? In all my observations in pine and other forests, I believe that by the process of natural succession those forests will eventually turn into native forests. This process will be accelerated if the native forests are carrying healthy native bird populations or for beech forests the conifer forests are aerially seeded at the right time.

Weeds and pests are only weeds and pests because of the disruption to the underlying ecology. We have depleted the mountain land soils by burning and over grazing making the land only suitable to ecological pioneer species such as hieracium, sweet briar, thyme, gorse, broom, conifers, manuka kanuka etc. Un-grazed and unburnt, all of these species slowly change the environment and allow the next stage of ecological succession to develop and ultimately, as NZ forest species are highly evolved to NZ conditions, they will prevail, but with the caveat that a two degree rise in mean world temperature could change everything.

We foresters are acutely aware of the problem in North America where global warming allowed mountain pine beetle, previously checked by sub 40 degree winter temperatures, to kill billions of trees throughout the Rocky Mountains. I wonder if climate change could be the culprit with Kauri dieback.

With respect to Ecan's proposed treatment of wildings, Ecan has no endgame in view. Declaring these species as pests reduces the possibility and ability of managing them in a profitable way and directing the development of the forests towards the restoration of climax native forest. In that process the wilding forests will produce all the non-market products and services that any other forest produce (oxygen, CO2 sequestration, soil structure and fertility enhancement and protection, erosion reduction, harbour for native biodiversity, production of clean, clear water and attenuation of flood flows etc.)

In Greek mythology, King Sisyphus was a cruel, unscrupulous nasty tyrant. He so annoyed Zeus that Zeus condemned him for eternity to roll a huge boulder from the valley of Hades to top a distant mountain only to have it roll back again.

This could be the fate for Ecan if it dictates rules with respect to wildings without considering the underlying forces of ecology and economics. The consideration of these forces is conspicuously lacking from the Pest Plan

My submission therefore is to remove any reference to wildings from the Pest Plan.