Kyoto capers continue....

Piers Maclaren*

New Zealanders may not notice the effects of man-made global warming within the next 10 years. But, ironically, they could soon reel under the impact of the policy initiatives designed to combat it. Foresters should take the Kyoto Protocol very seriously indeed.

First, there is the matter of carbon credits. Some forestry companies feel that Government have "stolen" their credits, Mugabe-style, and then are using the money to inflict damage on their industry. To add insult to injury, the postulated $1-2 billion in credits are to be used mainly to shield the competitors of wood – aluminium, concrete, and steel. You could, however, argue that the forestry companies' reaction is somewhat ingenuous – the Government created the credits in the first place, whereas at the time of planting most investors were unaware of this potential windfall gain.

Then we must consider deforestation. The Protocol attempts to apply brakes to both consumption of fossil fuels and to deforestation, given that both add carbon to the atmosphere. In exchange for taking the credits from sinks, the New Zealand Government will take the rap for deforestation up to a certain level – equivalent to about 6000 ha/year. Presumably, if deforestation exceeds that cap any additional responsibility will be passed back to growers – but I can't imagine how these excess liabilities are to be allocated or enforced.

To understand the seriousness of the situation, it is essential to quantify the costs of deforestation. A mature stand of radiata pine contains something like 230 tonnes of carbon per hectare in biomass – which equates to 843 tonnes CO_2. Using the Government's own top-of-the-range figure of $25/tonne CO_2, the liability could be in excess of $21 000 per hectare – in the same ballpark as the value of the standing timber, and considerably more than the land is usually worth. In effect, anyone who plants a tree loses part of their property rights – they can no longer choose a non-forest alternative without a horrendous penalty.

Is this over-reacting? Surely, the level of deforestation is not likely to exceed 6000 ha/year? That depends on what you call deforestation. A Kyoto-defined "New Zealand forest" is anything that exceeds one hectare (maybe a long, skinny hectare), with a canopy cover greater than 30%, and which contains woody vegetation with the potential to reach 5 metres or more. Deforestation is the conversion of forest to permanent non-forest, as opposed to harvesting which is just a stage in a crop cycle. Who can state categorically that in 5-10 years' time there will not be a massive exodus from olives, manuka or shelterbelts? Just the possibility is sufficient to reduce investor confidence in acquisition of land for forestry.

The only solution to the deforestation conundrum is for Government to create and maintain an investment climate where New Zealanders are happy to establish and preserve forests, so that the possibility of exceeding the cap is not a realistic consideration.

Deforestation is one thing, harvesting is another. While all deforestation is discouraged, for Kyoto forests (ie those established on farmland after 1990) the Government must accept debits for harvesting as well as for deforestation. In other words, the losses from harvesting are deducted from the carbon gains. No problem, up to about 2017 – because this is when the first post-1990 forests are scheduled for felling.

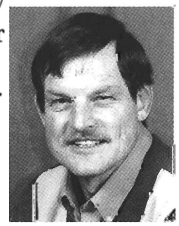
Not only can New Zealand no longer rely on forest sinks in the third "commitment period" (2018-2022), to prop up the economy, to subsidise profligate users of fossil fuels, and to finance climate-friendly research, but these same sinks become sources and compound the problem. There are only two ways out of this mess: first, Government should not sell all the credits it receives in the first and second commitment periods, but should keep some in reserve for the third. Second, rates of new-land planting must continue at 60 000 ha/year or more because their sequestration will then swamp the carbon losses from harvesting older trees.

New-land planting rates have dropped to 23 000 ha and appear to be trending downwards. For the sake of the nation's carbon budgets in 15 years' time, it is imperative that this decline be arrested and reversed, starting now.

In another twist, the Government has released a draft proposal for the strange concept of "permanent (non-harvest) sinks". The atmosphere doesn't care if large groups of trees (ie stands) are physically removed from a forest and decay in the form of buildings, or individual trees collapse and decay on the forest floor. All forests are sinks in their establishment phase, and all forests are permanent reservoirs (albeit fluctuating ones) in their maintenance phase. Harvested forests at least produce a sustainable resource that continuously substitutes for energy-intensive alternatives. The expression "carbon farming" should be outlawed – it implies ongoing sustainable production, whereas "mining" is a more suitable term for a one-off movement of resources.

Participants in this scheme should be vigilant. They may receive some credits in the short and medium term for allowing land to revert, but they face ongoing reporting and administration costs, and face huge liabilities if their carbon stocks decline for any reason – including natural senescence. The price of carbon may also rise between receiving credits and paying liabilities.

In subsequent issues, I'll continue my reports from inside Kyoto's Never-Never land.



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