

# Climate change, sustainable land management and forestry: Towards a government policy

Honorable Jim Anderton, Minister of Agriculture, Biosecurity, Fisheries and Forestry

Climate change has serious implications for where we live, how we live, how we earn our living, and for many aspects of New Zealand's bio-physical environment.

New Zealand's economic, social and environmental wellbeing is inextricably tied to the sustainable management of our land. Our land based industries of agriculture, horticulture and forestry represent over 60% of everything we earn as a nation. This economic base is under threat. Climate change is quite probably the greatest long-term threat facing our biologically-based and export-orientated economy.

Increasing frequency and severity of adverse weather events, such as droughts, floods and storms will make farming and forestry in New Zealand harder and more costly.

Our fragile hill country, which is prone to erosion and exposed to the weather, is probably most threatened. As a result many communities in lower catchments are also at risk. Recent storm and flooding events in the Southern North Island, Bay of Plenty and on the East Coast have given us an insight into what a future with a more variable climate might mean for New Zealand.

The storage, distribution, and allocation of water will also become increasingly important as droughts become more frequent and intense.

Forestry has an important role to play in helping address climate change; over the next two months there will be widespread consultation on how best to work together to find long-term solutions. The debate will be lively and, at times, controversial but the feedback from the industry will be critical in the development of a preferred policy package.

First, let's take a look at the bigger picture. The effects of climate change will go far beyond the physical environment. Climate change, if left unchecked, has the potential to be globally destabilising. Indeed, the recent report by Sir Nicolas Stern for the UK government concluded that the economic implications of climate change would be greater than for both World wars and the Great Depression. Regardless of the debate over the analytical methods and assumptions employed by Stern, it is clear that climate change may have profound global social and economic effects. The less we do to mitigate climate change now, the greater these effects are likely to be.

There is also the challenge of adapting to how consumers and other jurisdictions decide to respond to climate change and what this means for our exporting industries.

This presents major risks and opportunities for New Zealand businesses. For example, European politicians, including the French President, have been floating the idea



of imposing border taxes on products imported from countries that are not part of a Kyoto Protocol-type regime. In Japan there is talk of 'wood miles', the forestry equivalent of the much talked about 'food miles' campaign being carried out in Europe.

There are also market opportunities. In September 2006, the New Zealand Wine Company announced that its Grove Mill and Sanctuary wines had achieved 'carbon zero' status. They will be marketed as one of the world's first carbon neutral wines, especially to overseas clientele concerned about global warming. In December 2006 the UK government announced a proposal to make all new homes in the UK 'zero carbon' in 10 years.

Around the world, jurisdictions are looking at new policies to encourage renewable energy, use forest offsets, improve energy efficiency, and promote products with low embodied greenhouse gas emissions.

It is against this background that the Government is putting forward a wide range of policy options covering all aspects of climate change and greenhouse gas emissions. All sectors of the economy will be expected to do their part and carry some of the costs of addressing climate change. There will, however, be differences in the way various sectors transition to a low carbon economy. This will reflect the different state of mitigation technologies and measurement capability available for different sectors.

The land management sectors are fundamentally important to how New Zealand responds. They are a major source of emissions, through agriculture and deforestation. They are also a major source of sequestration, through afforestation.

In developing policies, the Government is making some important, though fairly obvious, assumptions.

The first is that climate change as an issue is here to stay - regardless of the Kyoto Protocol or what happens after the Protocol's first commitment period ends after 2012. The science is now compelling enough that virtually no government in the world can ignore it. As a politician, I can tell you that there has been a global sea-change in the politics of climate change.

The second is that there will be an ongoing cost of greenhouse gas emissions and an associated benefit for both increasing carbon sequestration and commercialising technologies that reduce emissions, regardless of the outcome of future Kyoto negotiations. It is interesting to note that even in the few developed countries that are currently outside Kyoto, including the USA and Australia, there is already a price on carbon.

The third is that all of New Zealand's key sources of emissions, including agriculture and deforestation, are likely to face some sort of cost beyond 2012.

The forth is that a degree of climate change is already happening, and New Zealand needs to think about how to respond and adapt.

On the 18 December 2006 the Government launched its proposal for a Plan of Action on Sustainable Land Management and Climate Change. In beginning this process the Government wants to establish an enduring relationship with the land management sectors.

The Plan of Action needs to include measures to help the land management sectors adapt to climate change, and look at how New Zealand can capitalise on the business opportunities emerging from global focus on climate change.

The Plan of Action also needs to include a balance of measures to enable the Land Management sectors to play their part in helping New Zealand move to a low-carbon economy. These potential measures are referred to as 'Pillar 2' of the Plan of Action, and have been the subject of most comment to date.

Under Pillar 2 there is a mixture of voluntary, price-based, and regulatory measures on the table for consultation, covering both forestry and agriculture. For forestry, the Government is proposing major new initiatives to encourage new forest planting and measures to address deforestation.

To encourage afforestation we have included the option to devolve Kyoto-compliant forest sink credits for new plantation forests. No other developed country has proposed such a measure, and it is bound to attract huge overseas interest.

For those investors not wanting to participate in the rapidly emerging carbon market, the Government is also proposing a straightforward cash-up-front option for establishing new forests. We are proposing up to \$100 million over 5 years for this option alone.

Both these measures would build on the Permanent Forest Sink Initiative, announced in August 2006. This initiative allows investors who plant permanent forests to receive sink credits. It has already attracted substantial interest, and just before Christmas Ngati Porou announced a joint venture with British investors to go 'carbon farming' together on erosion prone land in the east coast of the North Island. The partners are looking to establish up to 30,000 hectares of new permanent forest on the most erosion-prone land in New Zealand.

Deforestation is one of the leading causes of climate change globally. In New Zealand increased emissions from deforestation are projected to be similar to increases in emissions from the agriculture and transport sectors. On a proportional basis, deforestation is the most rapidly growing source of emissions in New Zealand. Moreover, deforestation also has other potential negative environmental effects which are currently being met by the environment or wider society, rather than by the investors undertaking the deforestation.

A key issue is that deforestation emissions are unique in that large amounts of emissions can be brought forward to 'beat' any regime signalled to take effect in the future. This

was one of the reasons the review of climate change policy in 2005 recommended that policies to address deforestation be put in place before the commencement of the Kyoto Protocol's first commitment period in 2008.

One key option to address deforestation that the government is keen on is a durable market-based mechanism using tradeable deforestation permits, very similar to the European trading system, which is widely acknowledged as the most sophisticated carbon trading market in the world. The regime would only apply to pre-1990 forests, since the Government has made it clear that where it has retained the sink credits from post-1990 forests it will also retain all future liabilities for those forests, including from deforestation.

Using tradeable deforestation permits would allow the Government to allocate, or 'grandparent', rights to foresters to carry on with some deforestation. This could be based on historic rates of deforestation or some greater or lesser amount.

Landowners not wanting to deforest could sell their deforestation permits to those foresters that do. Trading allows the highest value land to be converted to agriculture, but would also mean that landowners would start factoring-in the cost to the planet, in terms of greenhouse gases, of their decisions. A tradeable deforestation permit regime would be efficient, effective, and durable. It would also allow the Government to meet a level of deforestation liabilities in a transparent way through the grandparenting of tradeable permits.

Such a mechanism would require legislation. The Government has also put forward non-legislative options, in particular under the Resource Management Act.

I am aware that the proposed options are not everything some industry players were asking for.

The Government is not, for example, proposing that payment be made to all foresters who replant, as had been proposed by some in the industry. Such a measure would have had some advantages, including helping to reduce (though not entirely remove) the differing treatment between pre- and post-1990 forests. However, the proposal would also have been tremendously expensive with little effect on replanting, new planting or deforestation rates. Consequently, the proposal did not meet some of the Government's key objectives for climate change policy.

Neither are we proposing to devolve credits (and associated liabilities) to forests planted between 1990 and now. The Government completely rejects the suggestion by some -mostly vested interests - that there is a property right to receive credits. Kyoto sink credits are the result of government-to-government agreements that created both benefits and liabilities, all of which rest with sovereign governments.

Forest owners have no more right to sink credits than car owners have 'rights' for emission liabilities. How the benefits and liabilities created under Kyoto are distributed are matters of domestic policy for governments to decide. There may be significant issues of economic efficiency and equity to consider, but there are certainly no property

right issues.

In terms of equity, it is important to note that no Government has ever committed to devolve Kyoto forest sink credits. Most Kyoto forests were planted before the Kyoto Protocol was even negotiated and certainly well before it came into force in February 2005. The argument by some existing forest owners that they have invested in trees on the basis that they had been promised such credits is not valid.

Devolving credits for trees already planted would therefore have created large, and we believe unjustified, windfall gains for a few forest owners, which would have resulted in large unjustified windfall losses to other parts of society.

Looking to the future, the options provide great opportunities for foresters. The government is looking at implementing one of the biggest replanting programmes New Zealand has seen since the war. New Zealand wood products are sustainable with low embodied energy. These characteristics should give wood a tremendous advantage

over energy-intensive products like steel, concrete and aluminium - provided we have a comprehensive plan to exploit these business opportunities.

As I said earlier, over the next two months there will be widespread consultation on how best to work together to find long-term solutions. No decisions have yet been made on what the policy package will look like but there are some certainties: the rate of deforestation needs to be addressed, climate change is a reality, and doing nothing is not an option.

This applies to all sectors of the community. Everyone will have to play their part in reducing greenhouse gas emissions. The focus needs to be on making sure the solutions are enduring because, like government's all around the world, we're all going to be dealing with climate change issues for decades to come.

The discussion document is available online at [www.maf.govt.nz/climatechange](http://www.maf.govt.nz/climatechange). For more general climate change information including the government's various policy consultations see [www.climatechange.govt.nz](http://www.climatechange.govt.nz)

## Clausewitz on forestry

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New Zealand foresters of the early 1970s had a collective vision of fast-grown pruned pine finding markets all over the world - and this unchanging flow of wood is destined to continue carrying our fortunes beyond 2050. Yet, it is doubtful that those foresters wanted, or expected, radiata pine to account for 90% of our plantations; and they might have been disconcerted to learn that only 50% of these forests have been thinned and pruned in a timely manner (NZFOA, 2006). This has become the ultimate expression of an indistinct concept, and for it to prove to be a success then one must look to the end account. In a sense we have progressed from the dreamtime (The Fatal Conceit) of the 1970s, through the sleepwalk (more of the same) of the 1980s and 1990s, and so to the current hangover (with limited practical vocation for overcoming difficulties and developing new opportunities) or, maybe, the awakening.

Consider a parallel history. The de Havilland Comet commercial jet first flew in 1952. Two years later it was grounded following catastrophic structural failures at altitude. The Cohen Enquiry attributed the failure to metal fatigue arising from stress concentrations in the corners of the square windows - a deliberate innovation to contrast with the portholes of a ship. With redesigned windows and a strengthened airframe the Comet continued to fly. However, others also learnt from the Comet disasters and Boeing came to dominate the commercial jet aircraft market with its introduction of a transatlantic service in 1958. The moral is that a single, foreseeable flaw can devalue an otherwise brilliant design. By analogy, the failure to acknowledge the indifferent intrinsic quality of radiata pine has effectively devalued our entire investment. Forestry will survive but...

...the internal (intrinsic) quality of radiata pine being planted today will be no better than that of the earliest mass

plantings of the 1920s. At best, today's pines are straighter, more vigorous and with lighter branching. Having neglected to improve intrinsic quality of radiata, scientists are now playing up general virtues that can be attributed to any timber... *"wood has a whole bunch of other features that make it very attractive - its appearance and feel, and the fact that it's renewable. I think Kyoto-related issues and sustainability are going to provide another clear value outcome for forestry"* (Marilyn Head, 2006). If forestry was not prospering before it will hardly become so by strengthening a weak hand: the ground for further planting must be new ideas.

It should have been otherwise. In the 1960s Brian Meylan and Mervyn Probine (later to become State Services Commissioner) (1969) and Ian Cave (1968) at the old DSIR (now the CRI Industrial Research Ltd) explained the cellular basis for the mediocrity of young radiata. Sadly our *"trees [were] grown with a sole focus on quickness of growth [and] didn't take account of the underpinning qualities like stability"* (Marilyn Head, 2006). We were not alone. Professor Reg Preston FRS, of the Asbury Department of Biophysics at Leeds, tried to persuade British forestry to improve the intrinsic quality of Sitka spruce by the same means but industry wasn't interested, such that today, according to Macdonald and Hubert (2002) of Forest Research Scotland, two-thirds of production is absorbed in low-valued pallets, packaging and fencing. We both got the wood we deserved although it is not what we wanted.

Healthy, straight, vigorous trees are presumed; otherwise there would be no access to markets. It is the distinctive features of any species that allow it to make it on the world stage. These arise from its intrinsic properties and in this sense GF 2 and 30 are equally unimproved.

Today there are three challenges

First, belatedly, the Wood Quality Initiative Ltd has the task of getting the best out of our unimproved pine. The