About the Author

Helen Plume is a Principal Analyst in the Climate and Risk Directorate at the Ministry for the Environment. She has represented New Zealand at international climate change negotiations since 1992 and in this time has had an influential role in the development of the reporting and review guidelines under the Kyoto Protocol, the establishment of the UNFCCC work programme on impacts, vulnerability and adaptation to climate change, and on the new transparency (i.e. reporting and review) provisions agreed at the Durban meeting (December 2011). During 2008 and 2009 Helen chaired the Subsidiary Body on Scientific and Technological Advice, one of the permanent subsidiary bodies of the UNFCCC. Being a qualified lead reviewer for the annual greenhouse gas inventory review process under the UNFCCC and the Kyoto Protocol gives Helen an excellent working knowledge of the Kyoto Protocol reporting and compliance rules.

International work has also included being a member of the IPCC Task Force Inventories Bureau from 2002 to 2008 during which time Helen was a Review Editor for the Agriculture, Forestry and Other Land-Use volume of the 2006 IPCC greenhouse gas inventory guidelines. Previous roles at MfE include being the national greenhouse gas inventory compiler (1997 to 2003) and Manager of the Science and Inventory team in the New Zealand Climate Change Office (2003 to 2005).

Carbon and conifers - The love hate relationship or another carboniferous period for the coniferous?

David Rhodes

When Piers invited me to contribute an article on where the carbon market stands post-Durban it reminded me of someone at the Blue Greens Conference asking Tim Groser "How are the international negotiations going Minister?" He replied "Quite well" and moved on. Tempting, but I will try to elaborate a little more. That said I will also, inevitably, leave questions unanswered.

I agree with Tim Groser's summation, particularly for the forest sector. Durban provided a satisfactory conclusion to several issues NZ had been prosecuting for years.

The industry's involvement in international climate change negotiations, and as part of the official New Zealand delegation, goes back some distance. Originally the Forest Industries Council (FIC) took the lead on this and involved people like Bruce Chapman from Carter Holt Harvey. Over the last few years the FOA has taken up the cudgels. FOA participation has been assisted by some government funding with the endorsement of other parts of the industry. FOA has taken the lead more recently largely because the half dozen key issues all impact the growing sector.

The industry has not always agreed with the government position. It opposed signing up to Kyoto under rules that effectively divided the forest industry. In more recent times government and sector objectives have been more aligned. The close collaboration within the delegation has included Maori representation, especially on forestry issues.

So why was Durban a good outcome?

The world is not used to dealing with issues that require a global fix and asking 150 countries to agree is going to need more than a quick chat over a cup of tea. Durban could have imploded but it didn't and the Kyoto Protocol was extended, so that's progress. However:

- the time period (5 or 8 years) for a 2nd "Commitment Period" (CP2) is still to be decided:
- quite a few countries (including New Zealand) have yet to decide whether they will be join the EU and sign up to a target under CP2, or pursue alternative courses of action
- Any further commitments will only be through voluntary pledges

So, if we are trying to prevent 2 degrees global warming by 2050 this probably doesn't even rate a C-.

On the other hand this went hand in hand with a compromise between developing and developed countries on a successor to Kyoto. It became clear that although developed countries needed to continue to lead, they were not going to make further cuts

unless developing countries also joined the club. The compromise is that by 2015 a new legal instrument will be concluded to take effect in 2020 and this will include all 197 signatories to the UNFCCC. Between now and 2015 this negotiation – the "Durban Platform for Enhanced Action" - is going to be put to the acid test. An opening question to get things rolling will be – when we all agreed to this in the last hour of the last day in Durban what did we all mean by the term "legal"? As to the chances of it being achieved by 2015? Zero I'd say, but hopefully still in time for implementation by 2020. The takeaway message is that there is agreement the current two track negotiating process has to be replaced by one track and involve commitments by all, including China and the US.

Beneath the big picture we have the technical bits that really interest us – the new rules agreed for forestry, viz:

- how forests are accounted for;
- landuse flexibility (offsetting);
- recognition of carbon in wood products; and
- allowing for carbon lost through natural disturbances

Despite New Zealand's efforts in Durban, one existing rule will not continue post 2012 – specifically the Afforestation/Reforestation Debit/Credit (ARDC) rule which currently limits debits to New Zealand in respect of the nation's post-1989 forests to not more than credits received.

Apart from the omission of the ARDC rule these agreements represent a victory for common sense and a reflection of reality. So what does this new world order mean for New Zealand forestry?

Firstly, New Zealand is not bound to apply any of the international rules domestically despite what we may have been told by governments here previously. It merely has to account at a national level for emissions. We should do what best suits New Zealand's circumstances. Of course in some cases we would be mad not to apply the rules.

Signing up to CP2

As these are the rules for the second commitment period it is natural to next ask - what are the chances New Zealand will sign up, and what happens if we don't?

A decision will be needed by May this year and what our Tasman neighbour decides to do will have a large bearing on New Zealand's decision because of the commitment by both governments to linking our respective emissions trading schemes post 2015.

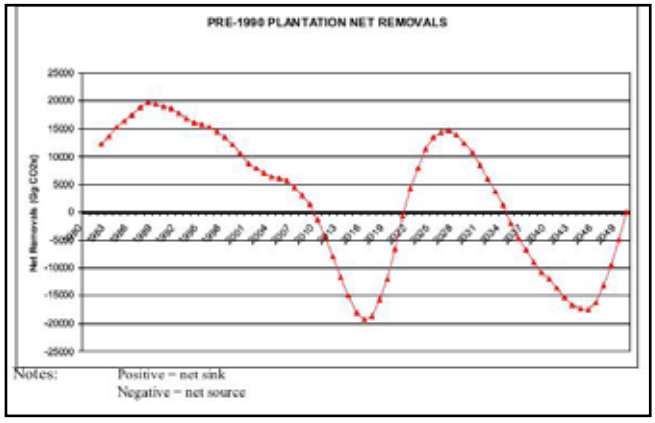
Theoretically it need make little difference. New Zealand can still apply the rules regardless of whether it signs up. Similarly, even if outside the CP2 with Canada, Japan and others, New Zealand will still be pledging a voluntary international commitment and will need to state the basis on which it was making that commitment; i.e. in accordance with rules applying under the Kyoto Protocol or with certain rules but not others.

At the next UNFCCC meeting in December parties involved in CP2 will submit QELROS (Quantified Emission Limitation and Reduction Objectives) - these will include estimates for emission reductions for forestry.

A big point of difference between whether NZ is in or out of CP2 is probably that the level of investment certainty for the forest sector is arguably higher if we are in. The ETS has suffered already from on-going policy changes and these could be much greater in the absence of the Kyoto discipline.

Forest management accounting

Accounting for Article 3.4 forest management emissions (think pre-1990) is now mandatory. Furthermore, instead of basing forestry emissions against an historical level the agreement is that in future commitment periods parties will now use "forward looking reference levels". Essentially this means we are projecting what we expect to happen to our pre-1990 forestry emissions based on age class and anticipated harvesting. New Zealand's past planting cycles mean our future trajectory is something of a roller coaster ride but, so long our actual emissions do not deviate from the expected roller-coaster path (as below) we will be emission-neutral. The alternative is alternating periods of large surpluses and large deficits which New Zealand would have to manage.



Some developing countries and ENGO groups strongly opposed the use of forward estimates, believing it is a way for countries to "write their own ticket" on emissions. Contentious as future reference levels may

be I believe they represent an improvement on what existed previously and in the end the methodology had to be acceptable to those accounting for forestry or they would never have agreed to mandatory reporting. To appease concerns a significant compromise that has been agreed to are "asymmetrical caps". This means that if you reduce emissions below what is expected the amount of credit you can claim is limited to a small percentage maximum no matter what is achieved. Conversely, if a country's emissions exceed what is projected then there is no limit or cap on the liability.

Our agreed reference level "business-as-usual" trajectory will also cover the indigenous estate which should therefore remain carbon neutral. The option of devolving the credit and liability risk for the private pre-1990 estate exists but the compliance costs are likely to outweigh the limited ability to gain credit.

Afforestation/Deforestation Debit/Credits

In the current commitment period there is a rule (previously known as the fast forest fix) that limits liability for post-1989 forest land to the amount of units received. This rule will not be available post 2012.

Potentially this opens up foresters in the second commitment period to the liability associated with all the carbon lost from a forest at harvest if they received any level of credit previously. The government could absorb any liability, but it could also devolve responsibility to landowners. This would clearly adversely impact post-1989 forest owners. A much better and logical approach under CP2 is for New Zealand to adjust its estimates for emissions reductions from land use and forestry. This would mean assessing what additional emissions the country is liable because the ARDC rule has been withdrawn and deduct that from our QELRO tabled in QATAR at the end of the year.

Such a downward adjustment in our target might evoke claims from some that the government is going soft on its international commitment but if New Zealand is suddenly facing liability for emissions because the rules have changed then it is entirely justifiable for New Zealand to adjust its target accordingly. Indeed it would be a concern if we did not. Until the ARDC liability is resolved it will act as a deterrent to participation in the NZ ETS and forest investment generally.

Harvested Wood Products

The wait for international rules that recognise that carbon is stored in wood products well after the tree has been chopped down has roughly mirrored the time delay for a second NZ win at the rugby world cup. Everyone knew that both outcomes were only fair and proper if there was any justice in the world but they still proved very elusive. New Zealand (government negotiators and forest industry) have played a big part in securing this international recognition through advocating a more simplified accounting approach to the complex technical proposals that tried to track every last fibre to its final resting place. Because of the positive story and potential additional benefits these efforts received strong support from the global forest industry notably through the International Council of Forest and Paper Associations.

Recognising the carbon stored in wood products is optional for countries provided they have "transparent and verifiable data". The accounting is of when the emissions actually occur (using decay functions with default half-lives), and based on three broad product categories to keep things simple. It is a measure of the change in carbon stock during the second and subsequent commitment periods. The default half-lives are as follows:

- Two years for paper
- Twenty-five years for wood panels
- Thirty-five years for sawn wood

If a country has data that is more specific than the default data this can be used instead. Wood harvested for energy purposes doesn't get recognition. The accounting applies to domestically produced and consumed products, as well as exports, but excludes HWP's arising from deforestation. The accounting is by the domestic party only and shall not be accounted for by an importing party.

What this means for domestic policy is still to be determined. A range of options, including doing nothing, are possible and need further analysis. Acknowledgement that forestry's carbon storage contribution extends beyond trees is a positive one and there is potential to improve the returns from carbon, particularly for growers. Clearly this needs to be via an approach that does not impose unjustifiable compliance costs or major distortions to wood supply and MAF have commissioned further work to explore the possible approaches which should form the basis of a wider consultation with industry. The November 2010 edition of the Journal contains an article by Manley and Maclaren that provides a more comprehensive look at what such recognition might provide to forestry.

Natural disturbance

Previously referred to as Force Majeure - this prescribes the conditions under which countries may seek absolution for emission sins resulting from acts of God or Devil, but not by man or woman.

Every "party" needs to indicate whether it intends to include a provision for natural disturbances for both afforestation/reforestation and/or for forest management (pre-1990). One, both or neither, can be included. Afforestation is defined as planting of new forests on lands that have not been forested for a period of at least 50 years and reforestation is limited in the first commitment period to those lands that did not contain forest on 31 December 1989.

There is an expectation that inclusion of any natural disturbance allowance will not create any opportunity for credit nor situations of debit. In order to ensure that this is the case it may be necessary for a country to also include a margin. Parties will then only be able to exclude emissions from disturbance where those emissions are above an agreed background level plus any margin if needed.

There are a couple of situations that will not qualify to be excluded in any natural disturbance allowance. These are:

- Any wood salvaged for use after a natural disturbance
- Any emissions where the land use is changed following the disturbance

The key message for forest owners is that this allowance helps NZ at a national level if we suffer a catastrophe. However, the scale of disturbance needed to qualify will not include forest specific events and owners will still need to manage this risk.

Flexible Land Use (FLU)

This issue was widely recognised in Durban as the "New Zealand" text. Permission to allow trees to be relocated without penalty was finally agreed. The wording crafted by New Zealand makes it clear it applies only to plantation forests; any shortfall in carbon from normal will be a penalty; and to keep the Europeans happy and exclude their mature forests, includes an arbitrary cut-off date of 1960.

It's a useful rule we should see made available domestically. That said it is far from being a panacea and offsetting is likely to have limited uptake because:

- It is not a costless exercise, particularly the cost of re-establishing roading infrastructure.
- Any deforestation liability is not discharged; it is simply relocated
- Often suitable alternative land is not available

Forest offsetting will be an important element included in the review of the ETS. The advice government received from the independent review panel led by David Caygill was that offsetting should be provided regardless of international rules. They then linked offsetting with pre-1990 forestry compensation and recommended the second tranche of compensation units should be clawed back but only for that land where offsetting has been utilized. Indications are that, driven by fiscal desperation, the government is considering revoking all of the second tranche of units.

The debate over the second tranche of units is not new. The key reasons why offsetting is not considered by forest owners to be a substitute for the second tranche of compensation units are:

- Compensation was provided in recognition of permanent landuse change liability placed on pre-1990 forests and because there is no ability for carbon sequestration by these forests to be recognised. It was not provided to mitigate the inability to offset.
- The compensation provided is equivalent to approximately 5% of the liability/ha of the cost of deforestation.
- Now that offsetting has been approved internationally the government is in a net benefit position because there are a significant number of forest owners (both post-1989 and pre-1990) who have not taken up their ETS entitlements. By default any credit accrues to the government. Previously this could have been used to defray the cost government would have faced from allowing offsetting where it was not permitted under the international rules. There is now no cost.

Adoption of averaging

While not a Durban-related issue we can expect to see investigation of "averaging" – allowing foresters to receive credits capped at the long-term average level in the forest and in return avoid a penalty at harvest so long as they replant.

What about the future of New Zealand's ETS?

Crystal ball and Ouija board territory but there are clearly two key influences – our ETS rules and the international market.

The above Durban developments will be factored into the government's response to the ETS review that was completed last year. By the time this article goes to press I expect the government's response to be public. A discussion paper will outline options for how government might manage the balance between desired behavioural change and international competitiveness. There will be a truncated consultation period to ensure the policy-makers get new legislation implemented before 2013.

The consultation paper will look at what approach should be taken on the current relief measures for emitters. The government is on record as favouring a longer phase out of these measures than the current transition ending in 2013, particularly for agriculture. On the other hand the government is also aware that at current prices the ETS is not working. The only point in having an ETS is to bring about change. Minister Smith was acutely aware of this dilemma and his resignation will not make resolving this complex issue any easier.

One thing that all participants in the ETS need is a lot less price volatility than at present. Forestry plantings were stimulated by the ETS last year but forestry participation since the price slump has been minimal – mainly limited to some foresters repurchasing credits to discharge any future liabilities - and there is no clarity for anyone going forward.

Another key factor that we can expect to see the government consulting on is just what will be allowed in to the NZ ETS from offshore. CERs from HFC-23 and N_2O industrial gas destruction (adipic acid projects only) were ruled ineligible under the NZ ETS from December 23rd last year. This was a useful step which the industry had been seeking even if watered down slightly by exempting units already registered, or included in forward contracts, for use by June next year. But that still leaves an awful lot of kosher ("green") CERs and other units on tap. A more helpful approach might have been to have introduced a broad quantitative limit on the use of international units, in keeping with the approach taken in the EU and in Australia, and consistent with the view that some of our emissions reduction effort should take place at home.

In order to operate a viable ETS our government also needs to urgently address this and make its position clear to domestic and international ETS participants and the government is aware of this. Again restrictions on international units will need to be balanced with other concerns, for example the need to manage the impact of the carbon cost on the economy measures although if a price cap is maintained this would appear to provide a good safety valve to emitters.

International influence

The other prime influence on our carbon market is the international market. World, and particularly EU, economic activity has fallen dramatically which means so too have carbon emissions. Many companies are therefore well within their target and have no need to purchase offsets. The market has been awash with EUAs, CERs and RMUs and the NZU price slump to a low of NZ$6.40 in January reflects this.

Looking forward, the fall in carbon prices in Europe's cap-and-trade system will not be rectified quickly. That said the problem is recognised and already there has been action to provide underpinning price support. The EU has voted in favour of withholding some European Unit Allowances (EUAs) from the European ETS going forward although implementation will take some time. In a similar move the UK recently announced the introduction of a floor price from 1 April 2013 of around £16/tCO$_2$ on fuels. It will be set annually but is expected to roughly follow a linear path to £30/t in 2020. Australia too will be applying a price floor from next year and through "surrender charges" will ensure international prices fall in to line with this.

There are also signs that the exclusion of forestry from the EU ETS may be reviewed. In line with the Durban agreements the EU has drafted a new law requiring accounting of CO2 emissions from farming and forestry and Connie Hedegaard, the EU Commissioner for Climate Action, describes this as "the first step to incorporate these sectors into the EU's reduction efforts,"

Last month I met with a European delegation which included foresters and ENGO representatives. The comment was made NZ has shown that the view that forestry cannot be successfully included in an ETS is clearly not correct and the group were keen to learn from our experiences and look at what might be possible in Europe. I have also seen a draft copy of a European paper proposing legislation to account for harvested wood products. I view these post-Durban developments as a positive sign for a wider market for forestry.

Of course Europe may have less influence on our market in the future. There is a lot more interest now in bilateral and pluri-lateral negotiations and Asia-Pacific regional initiatives are likely to at least as important as the global discussions but we may have to wait some time for the detail. National's environmental policy paper recently released at the Blue Green conference acknowledges "there is significant interest in a regional carbon market from officials representing Australia, Japan, Korea, Indonesia, China, and the US".

There are numerous examples from these countries of emerging carbon trading platforms and carbon taxes. The California exchange in particular could be very influential both externally and within the US. In China the interest has been driven as much renewable energy technology opportunities and this is unlikely to change.

In Australia the Climate Institute has called for the country to "prioritise building a regional emissions trading coalition that boosts the carbon pollution reduction actions and commitments of neighbouring countries not just focus on linkages to existing markets in the European Union and New Zealand, Given that the Asia Pacific region accounts for more than 50 percent of the world's carbon dioxide output it is not hard to see how both buyers and sellers could benefit from a regional scheme and this might catalyse a lot more emissions reduction progress than simply aligning with already established systems like the EU ETS.

It appears the days of NZ being an ETS outpost in the Pacific are numbered. How influential our ETS is for forest investment will be determined to a considerable extent by the outcome of the review consultation but we may have to wait some time for the detail.

David Rhodes is the Chief Executive of the New Zealand Forest Owners Association. A specialist in public policy, David represents the Association's 250+ members and their associated forests' interests with local and central government. David provides support and strategic direction in key areas such as transport, the natural environment, fire management, health and safety, research and biosecurity.

Previous industry experience has been as the New Zealand Head of Delegation to UN Forum on Forests, including work on the New Zealand national focal point for Food and Agriculture Organisation including Asia-Pacific regional activities and FAO Committee on Forestry. He has also been an executive member of the New Zealand Institute of Forestry and economic advisor on establishment of 2020 plantation forest project in Canada. Areas of forestry expertise include climate change, plantation economics, nutrient trading, certification and water quality.

David holds a BSc and MSc specialising in Zoology and Economics.