

Kyoto Protocol - carbon sequestration rights

Carrie Follas¹

Abstract

This article gives a brief overview of the United Nations Framework Convention on Climate Change and the Kyoto Protocol and New Zealand's obligations under the Protocol should it ratify the Protocol and the sections of the Protocol that relate to forestry. In particular, the article looks at carbon sinks and the creation of a carbon credit trading system and state legislation in New South Wales and Victoria creating legal carbon sequestration rights. This article does not in any way address whether New Zealand should or should not ratify the Protocol or whether this is a good or bad thing for the forestry sector but rather sets out a couple of examples of different legal structures dealing with carbon sequestration rights already in existence which New Zealand may or may not follow.

Background

The United Nations Framework Convention on Climate Change (UNFCCC) was entered into following the Rio Summit on Sustainable Development in 1992. The objective of the UNFCCC (Article 2) is:

to achieve in accordance with the relevant provisions of the Convention, stabilization of greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a timeframe sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner.

In 1997, the parties to the UNFCCC met in Kyoto, Japan and as a result signed the Kyoto Protocol (**Protocol**). The Protocol set GHG emission reduction targets and a timetable for the developed nations to meet those targets. The Protocol provides a legally binding commitment by those nations to reduce their collective emissions of the six main GHGs during the first commitment period, being 2008-2012 (**First Commitment Period**). In this article, we generally only consider CO₂ emissions as this GHG has direct relevance to forestry. However, methane (one of the GHGs) emissions in particular are very relevant to New Zealand given the size of our agriculture sector. The developed countries, known as the Annex 1 Countries (including New Zealand), are required to reduce their emissions of GHGs to an 'assigned amount' that must be equal to or less than a percentage of the 1990 base year gross emission levels. New Zealand's cap on GHG emissions limitation or reduction commitment is a 0% increase on 1990 levels. To put this in context, MAF's recent information paper entitled 'Forest Sinks and the Kyoto Protocol (June 2001)' states that the increase in CO₂ emissions in New Zealand by 2000 was about a 20 percent above the 1990 level and is projected to be 40 percent above the 1990 level by 2010. On this basis, reducing emissions to 1990 levels is a big

obligation.

The Protocol does not become legally binding on the parties to it until such time as it has been ratified by at least 55 countries to the Protocol, which countries must represent at least 55% of the 1990 CO₂ emission levels from industrialised countries. The New Zealand Government has announced that it proposes to ratify the Kyoto Protocol by the Rio + 10 World Summit on Sustainable Development in Johannesburg in September 2002. Following on from the COP6.5 meeting in Bonn in July this year and the unexpected progress that was made at that meeting, ratification by New Zealand now appears to be a reality. The provisions of the Protocol are now sufficiently finalised, that the New Zealand Government believes it is capable of ratification.

It is acknowledged in the Protocol that in many cases it will not be possible for countries to meet their required reduction levels by the First Commitment Period by reduction of emission levels alone. The Protocol provides a number of flexible mechanisms to assist countries in their GHG abatement. One such mechanism is carbon sinks. Article 3.3 of the Protocol states:

The net changes in GHG emissions from sources and removals by sinks resulting from direct human-induced land use change and forestry activities, limited to afforestation, reforestation and deforestation since 1990, measured verifiable changes in stocks in each commitment period shall be used to meet the commitments in this Article of each party included in Annex 1...

Growing trees sequester or absorb CO₂. The Protocol contemplates that the CO₂ sequestered by trees will be measurable in units called 'carbon credits' or emission reduction credits (as opposed to emission units which are used to measure GHG emissions). A credit is equivalent to one metric tonne of CO₂ sequestered and will be tradable on an international trading system.

Crudely, how the system is likely to work is that an emitter (the emitter may not always be the 'point of obligation' for reduction of emissions e.g. vehicle users are unlikely to be required to reduce emissions but may pay a carbon tax) will be allocated (allocation of units is currently undecided) a number of emission units which is its allowable level of emissions of GHGs. If its output of emissions exceeds its allowance, it must reduce its GHG emission levels to the allowable or permitted level. If the emitter is unable to reduce the GHG emissions to the required levels by practical reduction solutions alone, it is contemplated by the Protocol that the emitter may be able to reach its required level of emissions by purchasing credits to offset its emission liability. It can purchase emission units from other emitters who hold surplus emission units (but we will not discuss these in this article) or it can buy carbon credits.

It is contemplated that these carbon credits will be allocated to qualifying carbon forests or sinks and the carbon credits will be tradable at a domestic or international level. In some countries such as Australia, we are already seeing some trading in carbon sequestration rights (credits) with the New South Wales State Forests being particularly progressive in this area in conjunction with the Sydney Futures Exchange. Other

¹ Carrie Follas heads up the Forestry Group at Phillips Fox Lawyers, contact: carrie.follas@phillipsfox.com

countries such as the United Kingdom and Canada are setting up Emissions Trading Systems. Many of you will be aware of the option granted by a Western Australian plantation company, Australian Plantation Timber, to a Japanese 'emitter' to acquire carbon sequestration rights in anticipation that Kyoto will be ratified. Unfortunately that transaction did not have the desired outcome but this was as a result of the forestry company getting into difficulty and was not related to trading in carbon credits.

The carbon credit trading system is not viewed by many in the industry as the panacea for all the forestry industry's ails which may have been the initial reaction of many forest owners to the prospect of obtaining additional income from a growing forest (see NZ Institute of Economic Research Inc's Report on the Effects of New Zealand's climate change policies on the forestry sector - October 2001). Presently, the provisions of the Protocol relating to sinks and carbon credits only applies to certain forests. The rationale behind limiting sinks is to ensure that there is a positive obligation on emitters to reduce GHG emissions and not to just rely on purchasing credits to meet reduction targets.

The Protocol defines a forest and in particular the afforestation, reforestation and deforestation of land. A forest must comprise a:

... minimum of area of land of 0.05-1.0 hectares with tree crown cover (or equivalent stocking level) of more than 10-30 percent with trees with the potential to reach a minimum height of 2-5 metres at maturity in situ

(See definition of 'Forest' under Annex A of the draft decision on Land use, land use change and forestry agreed at COP 6.5 in Bonn).

The key component of a 'Kyoto qualifying forest' is a forest planted after 1990 on land that was not previously in forest. These 'Kyoto Forests' do not include forests in existence on 1 January 1990 that are subsequently harvested and then replanted, i.e. a large percentage of New Zealand's plantation forests. Also, it does not include existing indigenous forests.

The definition of 'afforestation' agreed at Bonn is:

... the direct human-induced conversion of land that has not been forested for a period of at least 50 years to forested land through planting, seeding and/or the human induced promotion of natural seed sources.

The definition of 'reforestation' agreed at Bonn is:

... the direct human-induced conversion of non-forested land to forested land through planting, seeding and/or the human-induced promotion of natural seed sources, on land that was forested but that has been converted to non-forest land. For the first commitment period, reforestation activities will be limited to reforestation occurring on those lands that did not contain forest on 31 December 1989.

Neither of these definitions covers natural regeneration of scrub or forest on marginal pastoral land where that land is intentionally left and allowed to regenerate. However, this appears to have been contemplated by the inclusion of a definition of 'Revegetation', which is:

a direct human induced activity to increase carbon stocks on sites through the establishment of vegetation that covers a minimum area of 0.05 hectares and does not meet the definitions of afforestation and reforestation.

This could capture the EBEX 21TM project by Landcare

Research promoting native bush/ forest restoration on marginal pastoral land on the basis that the land has been left to intentionally regenerate for the purposes of increasing carbon stocks. This requires some management of the regenerating forest to meet the 'direct human induced activity' requirement.

From New Zealand's perspective a large part of our plantation forests will not be Kyoto compliant. Nor for that matter will New Zealand's indigenous forests notwithstanding that they do sequester carbon. A lot has been written about the limited nature of a Kyoto qualifying forest and will continue to be written regarding the wider ramifications for the forest industry if the Protocol is ratified. In particular, the liability arising under the Protocol from deforestation which will fall not just on Kyoto Forests but also on pre-1990 forests if the forest is not replanted. It appears from the Bonn agreement that further reporting is to be undertaken on how harvesting or forest disturbance that is followed by the reestablishment of a forest is distinguished from deforestation (see B5 of the Annex to the Draft decision land use, land use change and forestry from Boom). We do not deal with deforestation to any degree in this article.

We do not propose to discuss such issues in this article nor express an opinion one way or another. Rather we wish to discuss some of the possible legal structures for capturing carbon sequestration and some of the legal impacts and issues that may arise if New Zealand was to create carbon sequestration rights for the carbon sequestered by Kyoto compliant carbon sinks or forests.

In many ways this article is a little premature. Although the Government has announced its intention to ratify (sign) the Protocol next year and to announce ratification by New Zealand at the Rio + 10 World Summit on Sustainable Development in Johannesburg in September 2002, presently there is no legislation in place and no specific policies have been formulated to date regarding the implementation of the agreements under the Protocol.

The next meeting of the parties to the Protocol, COP7, is due to take place at the end of October in Marrakech and we do not know what impact that meeting will have and what further changes may be made to the Protocol.

What we do know is that notwithstanding any final changes to the Protocol, before ratification, the Protocol requires the government to put in place certain framework legislation. It now has less than a year to put this in place. At this stage, the Government is entering into the consultation process with a number of interested parties such as the forestry industry (see Forest Sinks and the Kyoto Protocol information paper issued by the Ministry of Agriculture and Forestry in June 2001). In the next 12 months, we will see these policies and some initial legislation supporting the policies come into play as the consultation process is completed. At that stage, we will have a better idea at both a domestic and hopefully, at an international level, of how the Protocol is to be implemented.

Carbon sequestration rights

In order to consider how a legal interest or estate may be created for the carbon credits, we need only look across the Tasman where a number of States have taken

it on themselves to put in place State legislation dealing with carbon sequestration rights in the hope of shaping a national (Commonwealth) emissions trading system. The State level legislation is not necessarily reflective of the approach that may be taken by the Commonwealth Government.

The House of Representatives Standing Committee on Environment, Recreation and the Arts has previously recommended that no property rights should attach to instruments creating emission units and carbon credits. The tradable permits would be a mere licence to emit. If the Commonwealth Government adopted a licence or permit structure, carbon sequestration rights would not be property rights and would not be registrable at the Land Registry. The rationale behind the licence/permit approach may be to protect the Commonwealth Government from being required to compensate holders of permits if the value of the permits diminish as the national entitlement to emit is decreased over time. This approach differs from a number of State level approaches.

New South Wales

The New South Wales State Government passed the Carbon Rights Legislation Amendment Act 1998 which amended the Conveyancing Act 1919 (similar to our Land Transfer Act 1952). The preamble to the Act states that the intention of the Act is to:

... recognise that rights associated with carbon sequestered by trees and forests from the atmosphere may be a species of forestry right and be the subject of a forestry covenant; to amend the Forestry Act 1916 to enable the Forestry Commission to acquire and trade in such rights and to confer additional powers on the Commission, to amend various other Acts to enable electricity generators and distributors to trade in such rights ...

The Act creates a separate legal property right in the carbon sequestered in Kyoto qualifying trees which property right is distinct from the right created in the tree itself by a forestry right. One of the other major changes in this Act was that it also made it clear that the ownership of the trees vested in the holder of the forestry right not the landowner (a statement which is not in our own Forestry Rights Registration Act 1983). The Act goes on to define 'Forestry Right' as being the traditional forestry right similar to a forestry right created pursuant to the provisions of the New Zealand Forestry Rights Registration Act 1983 or a carbon sequestration right in respect of the land or a combination of both. This has the effect that 3 separate legal interests, owned potentially by 3 separate parties, could exist at the same time in:

- the land;
- the trees;
- the carbon sequestered in the trees.

The Act defines Carbon Sequestration Right:

... in relation to land means the right conferred on a person by agreement or otherwise to the legal commercial or other benefit (whether present or future) of carbon sequestration by any existing or future tree or forest on the land after 1990.

The Act (like the New Zealand Forestry Rights Registration Act – section 3) at section 88B deems a forestry right to be a profit à prendre (**Profit**). A Profit is a very old legal concept that essentially gives one party

the right to go onto another party's land to take something from that land for a payment (eg a cutting right). The Act declares that a carbon sequestration right is a Profit and the right or profit taken from the land is:

... to be the legal, commercial or other benefit (whether present or future) of carbon sequestration by any existing or future trees or forest on the land that is the subject of the carbon sequestration right.

And it goes on to say:

... the right to take something from the land, is taken to be the right to the benefit conferred by the carbon sequestration right.

So instead of the right to take something from the land such as rocks, minerals, crops, as is usually covered by a Profit, the right created by statute is the carbon sequestered in the trees (as distinct from the tree itself) including the right to carbon sequestered in the future.

The relevance of declaring the forestry right a Profit is that a Profit is an interest in land and is capable of registration at the Land Registry against the title to the land in the same way as a forestry right can be registered in New Zealand. In New Zealand, this means that it is also capable of being used as security by a lending institution and the holder's interest in the Profit is capable of being charged by way of mortgage, again registrable at the Land Registry. In New Zealand, a Profit/forestry right is also capable of supporting a caveat to protect the holder's interest where for one reason or another the Profit/forestry right is not yet registered against the title to the land at the Land Registry. A Profit/forestry right is also registrable in the Maori Land Court registers in respect of Maori land and if similar legislation was passed in New Zealand declaring a carbon sequestration right to be a Profit, section 90 of the Land Transfer Act 1952 permits registration of the Profit.

Accordingly, under New South Wales legislation, a carbon credit may take the legal form of a carbon sequestration right which creates a property right in the carbon sequestered in the trees. This is capable of being transferred to a third party in the same way as a forestry right and is binding on successive land and tree owners. It is likely that any such registration at the Land Registry would be coupled with an obligation to register the carbon sequestration right on a national register of emission units and carbon credits which is necessary in order for a country to meet its obligations under the Protocol.

Victoria

In Victoria, the Forestry Rights Act 1996 also recognises and defines a 'carbon sequestration right' which means:

... a right to commercially exploit carbon sequestered by trees.

The Act primarily deals with forest property agreements between a landowner and other parties.

The Act defines forest property as meaning:

... all parts of trees ... the products of trees ... and carbon sequestered by trees.

Under this Act (Section 5), the owner of land can enter into a forest property agreement to grant to a person:

... a right to plant, maintain and harvest forest property and to grant to that person a carbon sequestration right to the forestry property on the land and to vest ownership of the forestry property in that person ...

This Section splits the right to the tree and the right to the carbon sequestered by the trees. The landowner may agree to grant carbon sequestration rights in the trees or it can retain these rights itself. If it does not retain the carbon sequestered, the carbon sequestration right must be granted to the owner of the forest property, not a third party. Section 15 of the Act deems that all forest property agreements in force immediately before the commencement of the Forestry Rights (Amendment) Act 2001 are deemed to include the carbon sequestration rights in the trees unless these rights are retained by the landowner. Accordingly, specific provision in the agreement must be made by the landowner if it wants to retain the carbon sequestration right in the trees.

Under the Act, a forestry property agreement is capable of registration against the title to the land and is treated similarly to restrictive and positive covenants in New Zealand. That is the forest property agreement is enforceable by the holder against subsequent owners and the obligations (both positive and negative) can be enforced against any subsequent landowner. However, the forest property agreement, unlike the New South Wales provisions, is not a *profit à prendre* and does not create an interest in land. On this basis, a mortgage would not be capable of being registered against the holder's interest in the agreement in the traditional manner at the Land Registry. Some other security regime may apply, and the agreement may not be capable of supporting a caveat. The carbon sequestration right remains with the tree owner (unless it has been retained by the landowner) unless Section 12 of the Act comes into play.

Section 12 of the Act grants to the forest property owner (on the presumption the landowner has not retained the carbon rights), the right to enter into an agreement with another party to grant a right to the forest property owner's carbon sequestration right to that party. This is a contractual arrangement only.

Section 14 of the Act specifically states that a carbon rights agreement is not a forest property agreement and is not an interest in land.

On this basis, it is not capable of registration against the landowner's title and a separate property right is not created.

Flowing on from that, in New Zealand such an agreement could not support a caveat or a registrable charge against the title to the land. It is a contractual arrangement between the parties.

The above are two different examples of how carbon credits or carbon sequestration rights have been treated at State level in Australia.

How they will be treated in New Zealand remains to be seen. Although the Government has indicated that some of the carbon credits will be made available to the forest owners, at this stage there has been no indication of the percentage of carbon credits that may be made available or whether credits will in fact be retained by the Government in order to meet our national emission reduction targets.

New Zealand Forestry Interests - who owns the carbon

In New Zealand, under our current ownership structure of forests and subject to any retention by the Government of carbon sequestration rights, if:

Freehold

You are the owner of the land and the trees on the land (on the basis that the trees are Kyoto compliant) then you will own the carbon sequestered in the trees. Subject to appropriate legislation, you will have the right to trade the carbon sequestered in trees during the first commitment period of 2008-2012. An acceptable measurement methodology will need to be agreed to calculate the amount of carbon sequestered. This will be dependent on tree species, age class, location, etc. There will need to be put in place an internationally accepted measurement system in order for the carbon credits to be traded internationally. Currently, substantial research is being undertaken by bodies such as the New Zealand Forest Research Institute and the Australian Greenhouse Office to measure levels of CO₂ sequestered by trees and to create an acceptable accounting system for measuring the carbon sequestered. This is a vital part of any internationally acceptable carbon credits trading system.

Leasehold/Forestry Rights

If you are the lessee under a lease or a holder under a forestry right and the lessor/proprietor has elected to take rent only in lieu of stumpage, the landowner has no right or ownership in the trees but merely the right to the rental. If the lessor/proprietor has elected to take a share of stumpage, there is an argument that their interest under the forestry right/lease is the right to a share of the income on harvesting the trees and not ownership of any interest in the trees themselves. On this basis, the holder/lessee would be entitled to the carbon sequestered in the trees unless specific provision was made in the document to the contrary.

Owners of land wishing to retain the right to the carbon sequestered in the trees should include a specific reservation to this effect in the documentation. Conversely, for the avoidance of doubt the holder/lessee should include a statement that they retain all rights to the carbon sequestered in the trees.

However, beware of the converse liabilities under the Protocol for deforestation in the event that a forest is not replanted after harvesting.

Who has the emissions liability? If a party has reserved the right to the carbon then conversely they should be responsible for any liabilities on deforestation. A statement should be included making it clear where the liability falls, should it arise.

Crown Forestry Licence

Pursuant to Section 11(1) of the Crown Forest Assets Act 1989, the Crown can transfer Crown forestry assets, which includes the trees, to any person.

On the granting of the Crown Forestry Licences the Crown, contemporaneously transferred the trees to the licensees.

Any subsequent change of licensee should have included the contemporaneous transfer of the ownership of the trees.

On this basis, ownership of the trees vests in the licensee and the rights (and liabilities) regarding carbon sequestration apply to the licensee as the owner of the trees as referred to above.

Some questions to ponder

There are a number of yet unanswered questions that arise the more you consider carbon sequestration rights and a carbon credits trading regime.

Some questions to ponder

- If the ownership of the land, the tree and the carbon sequestration right is separate, each party should insure their own separate interests. However, what happens if the trees are destroyed. What should the insurance cover? Will it cover just the value of the carbon sequestered? Will it cover any liability arising as a result of deforestation and the emission of carbon back into the atmosphere? What proceeds of an insurance claim will any security holder be entitled to?
- What impact will the ratification of the Protocol and the creation of Kyoto Forests have on land values? Will it create a separate class of forest for valuation purposes? In which case, what impact will this have when setting land values by looking at comparables, for the purposes of determining rating values, rentals, licence fees including Crown Forest licence fees etc. The Courts and Arbitration rooms are already crowded with parties arguing land values of forestry land (with the pastoral land v forestry land comparable argument). Is it just going to get worse?
- How will this impact on the Resource Management Act and the already overburdened Councils having to deal with an influx of applications to plant Kyoto Forests and the downstream impact of harvesting these forests?
- How will income from trading carbon sequestration rights be treated for tax and accounting purposes? Conversely, how will any liability arising on deforestation be treated?
- How will the acquisition of a carbon sequestration right by an overseas person be treated under the Overseas Investment Act 1973? Will it be an "interest in land" requiring ministerial consent?

Conclusion

We are at the beginning of the journey, not the end and the next 12 months will see the initial steps being

taken to implement the provisions of the Protocol. In another year it will be a lot easier to write about the possible implications of the Protocol once the basic legislative framework is in place and the Government has had the chance to undertake extensive consultation with all interested parties. Watch this space.

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technical notes

What is Armillaria costing the forest industry?

Ian Hood, Hamish Marshall, and Mark Kimberley¹

Armillaria root disease has been around for a long time. Remember the sight of whole hillsides of young radiata pine stands dotted with yellow, red or brown trees among charred logs and stumps of tawa and other native hardwoods? In those days forest managers needed no convincing about the impact of these native root-infecting fungi!¹

But management systems change, and few plantations today are established directly onto land cleared of cutover indigenous forest. Armillaria continues to kill young pine trees, but it is now a rare sight to see mortality as extensive

as once occurred in the past (though in certain situations this still happens).

So is Armillaria no longer a problem? What really is the impact of this disease?

Even in the bad old days, the problem seemed to disappear once stands got through the vulnerable early years up to about age five, or slightly later. Older plantations looked green and healthy, even if closer inspection might reveal gaps filled with tree ferns or weed growth of wineberry or pampas grass.

However, early mortality was only part of the story. It was also found that growth was reduced on older residual crop trees that continued to survive despite infection in

¹ Forest Research