CLIMATE CHANGE WORKING PAPER

Mäori Issues

This document provides additional information on Mäori issues to support the consultation on climate change policy options. This is an officials' working paper and is not Government policy.

New Zealand Climate Change Programme
Te Hōtaka Rerekētanga Āhuarangi ō Aotearoa

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Options for managing New Zealand's greenhouse gas emissions are discussed in the working papers: *Domestic Emissions Trading, Emissions charges, The Use of Projects, Negotiated Greenhouse Agreements and Levies to Reduce Greenhouse Gases,* and *Land Use and Forests (Sinks) Sector.* Other working papers that are also available are: *Legislation to Ratify the Kyoto Protocol* and *Assessment of Economic Modelling Work to Date.*

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Introduction

The Government has recently released a climate change consultation document: *Kyoto Protocol: Ensuring Our Future*. This working paper looks in more detail at the implications for Mäori of the issues and policy options, and considers how the principles of the Treaty of Waitangi are relevant to the policy choices. It has been prepared by officials in the Climate Change Programme.

The decision on whether to ratify the Kyoto Protocol is ultimately for the Government to make. It reflects the responsibility of the Government to make decisions on behalf of all New Zealanders. The Government is consulting before it takes a final decision, in order to ensure that it is well informed about the implications for Mäori of this decision.

The paper considers the substantive issues raised by climate change, and the policy options for New Zealand's domestic responses, in terms of the relevant Treaty principles of:

- **partnership** (the obligation for the Treaty partners to treat each other reasonably, honourably and in good faith)
- **active protection** (the obligation to seek to protect taonga)
- **redress** (the need to preserve the Crown's capacity to give redress for past breaches of the Treaty).

The responses to consultation will be used to help the Government develop a preferred policy package for meeting Kyoto Protocol obligations. That package will then be put forward for further public consultation in mid-March 2002, before final decisions on policy measures are taken.

Background

What is climate change?

The temperature of the Earth's surface has risen over the past 100 years. A small part of this increase has probably been caused by natural climate variations, but there is strong evidence that most of the warming over the past 50 years is a result of greenhouse gas emissions caused by human activity. This effect is frequently called global warming.

The effects of climate change are already measurable – the world's temperatures and sea levels are rising, and most glaciers are retreating. Changes in regional rainfall patterns have already been observed and are expected to alter more strongly as climate change continues. The frequency of some extreme weather and climate events, such as heat waves, droughts and floods, is also expected to increase in some places.

These changes are likely to influence our native ecosystems, coastlines, what we can grow and harvest, infrastructure, society and economy.

Greenhouse gases include methane (e.g. emissions from cows/sheep), carbon dioxide (e.g. emissions from burning fossil fuels such as in the energy sector, industry and vehicles) and nitrous oxide (e.g. fertilizers).

The international response

The effects of greenhouse gas emissions do not stay within the borders of individual countries. The international community has recognized that the issue of climate change is a global problem that needs a global response. For the last decade, countries have been working through the United Nations to agree on a way to limit the growth of greenhouse gas emissions now, in order to reduce the expected effects from future global warming.

That work has produced two important international agreements: the United Nations Framework Convention on Climate Change (UNFCCC), which was adopted at the Rio Earth Summit in 1992; and the **Kyoto Protocol**, which sets targets for reduced greenhouse gas emissions. The rules for the Kyoto Protocol are near completion, and it is expected that the final legal texts for the Protocol will be agreed by December 2001.

The Kyoto Protocol sets target levels of greenhouse gas emissions for developed countries to stay within during 2008–2012. The Protocol is only the first step in the reduction of greenhouse gases world-wide. It is likely that stricter targets will be set in the future. New Zealand signed the Protocol, signaling a good faith intention to consider becoming legally bound to the Protocol, but has not yet ratified it. Ratification is the formal act by which New Zealand will become bound under international law to comply fully with its obligations under the Protocol.

The Protocol will only enter into force for New Zealand if:

- we **ratify** the Protocol; and
- 54 other countries ratify the Protocol, including developed countries that were collectively responsible for at least 55% of developed country carbon dioxide emissions in 1990.

It appears that there are enough countries moving towards ratification to bring the Protocol into force sooner rather than later. Japan, Russia and the European Union are moving towards ratification and, if they ratify, the Protocol will become operative.

Last year, the Government signaled its intention to ratify the Kyoto Protocol by September 2002. However, the formal decision to ratify will not be made until the Government has listened to the views of all New Zealanders.

Process for ratification

In New Zealand, it is the Government that signs and ratifies international agreements like the Kyoto Protocol. The convention is that the Government does not ratify an international agreement until it has the law in place to enable New Zealand to meet the obligations it is taking on. The Government must also present a National Interest Analysis to Parliament, looking at the impact of ratification on New Zealand's social, cultural, environmental and economic interests.

The Government has decided that the legislation required can be developed in two parts: the first, needed before ratification, will cover minimum requirements for New Zealand to meet international obligations. The second will set out actual domestic policy options.

Consultation process with Mäori

Mäori have been involved in discussions on climate change with Government for over a decade. Initially, in 1990 a Mäori working party was formed. Over the past year, the Ministry for the Environment has led two series of regional hui with the intention of informing Mäori about the science of climate change and the implications of the Kyoto Protocol, and to give a tentative overview of the range of policy responses available. These dialogues have given Mäori an opportunity to voice issues of concern and have enabled the Government both to hear the concerns raised by Mäori and to take these in to consideration in policy development.

Now that the Government is approaching decisions on ratification and the domestic policies to be developed as a result, it is undertaking a formal process of widespread public consultation. The first phase of consultation is taking place between mid-October and mid-December 2001 and includes consultation on:

- the implications of ratification on New Zealand, including the social, economic, environmental and cultural implications; this will inform the National Interest Analysis that will be introduced into Parliament and considered by select committee.
- the legislation that needs to be introduced and enacted to give effect to the international obligations we enter into under the Kyoto Protocol (Part I of the legislation)
- the range of policy options available to New Zealand to meet its Kyoto Protocol obligations.

Feedback gained from this consultation will be used to:

- finalise the National Interest Analysis to be presented to Parliament. This will include an assessment of Mäori and Treaty interests
- complete the drafting of the Bill on ratification for Parliament's approval (the Climate Protection Bill: Part I). This Bill, which will be passed by September 2002,

will cover the minimum requirements for New Zealand to meet our international obligations under the Protocol. It will cover setting up a national inventory of greenhouse gas emissions and a registry of emission units, as well as giving the Government clear authority to buy and sell emission units in the international market established by the Protocol

- develop advice for the Government on the preferred mix of policy options that will make up the domestic policy response to climate change.

Once the Government has taken decisions on the preferred mix of policy options, it will undertake a second round of consultation with New Zealanders starting in March 2002. This will contribute to the development of the final form of the Climate Protection Bill: Part II, setting out the domestic policies New Zealand will use to meet our obligations under the Protocol. This is likely to be passed in 2003.

Through these processes, Mäori will have an opportunity to formally participate in the issues of ratification and also have direct input into the range of policy options available to give force to New Zealand's obligations under the Protocol.

What is New Zealand proposing to do to meet its obligations?

New Zealand's obligation under the Kyoto Protocol is to reduce our greenhouse gas emissions to 1990 levels between 2008-2012 (the "commitment period") or to take responsibility for any emissions over these levels. Under the Protocol, taking responsibility for excess emissions in practice means offsetting New Zealand's emissions above 1990 rates by:

- buying extra emission units on the international market
- using emission units acquired under the clean development mechanism or the joint implementation mechanisms of the Kyoto Protocol
- using sink credits gained through Kyoto forests (post-1990 forests). (For explanations of these terms, see box on page 8.

Our emissions are projected to be around 14-20% above 1990 levels between 2008 and 2012 – totalling up to 75 million tonnes of emissions. On the other hand, we are expected to have up to 110 million tonnes of carbon sinks, so we will be in credit. One option is simply to use our sinks to offset our emissions, which would mean that we would not have to buy any extra emission units. However, our emissions are growing, and there are likely to be more commitment periods after 2012, so this approach would be shortsighted.

Our emissions tend to be from sources such as transport and agriculture where reductions are not easily achieved. Current policies designed to reduce emissions, such as the National Energy Efficiency and Conservation Strategy (NEECS), are unlikely to reduce emissions right back to 1990 levels. This means that New Zealand will need to put in place additional policies to reduce emissions or to provide revenue to meet the costs any excess emissions.

We will also need to have an inventory of all our greenhouse gas emissions and a registry of emission units, so that we can record trading transactions and the amount of units held in accounts.

Some definitions

Emission units
Under the Kyoto Protocol, each developed country will be assigned a certain amount of greenhouse gas emissions that it can emit between the years 2008 – 2012. These emissions are divided up into units – one tonne of carbon dioxide emissions (or the global warming equivalent in other greenhouse gas) equates to one emission unit. Countries can buy these units on the international market to offset emissions beyond the national level. If a country has a surplus, it can sell its extra units to another country.

Sink credits
A sink is any natural or man-made system that absorbs greenhouse gases from the air. Because sinks remove greenhouse gases, the Kyoto Protocol allows countries to take credits for them (to offset emissions). One sink credit will be allocated for every tonne of carbon dioxide equivalent absorbed after 1 January 2008. The value of the credits will be determined by the trading market. Only forests planted from 1990 onward will be eligible for sink credits. These forests are called Kyoto forests.

Emissions trading
This is a market system that allows those who own more emission units than they need to trade them to those who need more. If adopted within New Zealand, emissions trading would mean that people who can reduce their emissions by putting in more efficient processes or better technologies could sell the emission units they do not need to people who do not have enough emission units to cover their emissions.

Joint Implementation (JI)
This is a mechanism under the Protocol that allows developed countries to share costs and credits for projects that reduce greenhouse gas emissions or enhance sinks.

Clean Development Mechanism (CDM)
This mechanism allows developed countries to earn emission credits for greenhouse gas emissions reduction projects and some sink projects that are undertaken in developing countries.

Policy options

The policy options outlined in the main consultation paper *Kyoto Protocol: Ensuring our Future* explore the range of options available to implement these obligations and responsibilities domestically. The key issues explored are:

- who should take responsibility for managing emissions and sinks?
- how should this responsibility be divided up?
- when, and with what transition arrangements, should policy options be introduced?

The range of specific policy options that may be used to manage emissions include:

- Government retaining full responsibility for emissions
- charges on all emissions or all activities leading to emissions, e.g. a carbon charge
- emissions trading
- levies on activities that are not directly related to emissions
- project-based initiatives including project-based trading
- hybrids of the above, or the above plus other programs

In the full climate change consultation paper, all of the options are fully outlined, with an assessment of the efficiency, equity, feasibility, environmental integrity and competitiveness of each option. Each of the options presented are further examined in working papers that are available on the web site at www.climatechange.govt.nz or 0800 WARMING (0800 927 646).

Issues for Mäori relating to climate change

If there is no international action to reduce greenhouse gases, the effects of climate change may be significant, although, like any weather forecast, difficult to predict with certainty. In New Zealand, possible effects include:

- more droughts, high winds or flooding in some areas
- increasing water shortages in some areas
- erosion of our coastal habitats from rising sea levels
- growing pest and disease problems for our agriculture and indigenous species
- the introducion of new human diseases as the climate warms, such as Dengue fever and Ross River Virus
- a slowing of the recovery of the ozone layer, increasing the period New Zealanders will be exposed to high levels of ultraviolet radiation, leading to more skin cancers
- changes in the use of land as the climate changes.

These changes will affect everyone, not just Mäori. However, in some cases, Mäori may be more, or differently affected than other groups, as discussed below. If the Kyoto

Protocol comes into force, the international community will begin to reduce greenhouse gas emissions, with a subsequent reduction in the effects of climate change.

Environmental and spiritual issues

From an environmental and spiritual perspective, Mäori have indicated that they see the world as a unified whole, where all elements, including tangata whenua, are connected. Emphasis is placed on maintaining the balance of cultural and spiritual values in the environment while using resources for social and commercial purposes. The changes brought on by a warming climate caused by human interference directly affect this balance.

In previous discussions, Mäori have generally acknowledged that greenhouse gas emissions are a global issue and that there is a need to change and/or modify activities that contribute to climate change. This has been seen as intrinsic to the kaitiakitanga role Mäori have in relation to the environment and its general wellbeing. This interest is reflected in the fact that a number of hapu/iwi have included climate change in their hapu/iwi management plans. However, concern has also been expressed that New Zealand, and in particular Mäori, are not significant contributors to the current state of world-wide environmental degradation caused by emissions of greenhouse gases.

Effects of climate change on Mäori land

The Mäori asset base is predominantly land, land-based activities and fisheries. A large proportion of Mäori earnings depends on the export of primary commodity and processed products. Mäori-owned land tends to be concentrated in areas with less productive land types, which may be more prone to erosion and invasion of subtropical grasses. Some of the less productive areas in the country, such as Northland and East Cape region, tend to have larger populations of Mäori. With climate change, these areas may be affected more by droughts or extreme weather events, and so these changes may disproportionately affect Mäori.

Not all effects will necessarily be negative: for example warmer temperatures and increased levels of Carbon dioxide may increase the speed of tree and other vegetation growth, although, as warming speeds up, these benefits may not be able to be captured.

Effects on coastal areas

Coastal areas are of traditional importance to Mäori. Many areas are significant for cultural, historical, social and economic reasons and are intrinsic to Mäori identity. In addition, the coastal environment is an important food resource. Coastal erosion and changes to the productivity of inshore fisheries could therefore have significant social, cultural and economic impacts on Mäori in some regions. The extent of this effect is highly uncertain at present.

Indigenous flora and fauna

Climate change has the potential to change the indigenous flora and fauna that Mäori consider as taonga. Apart from inshore fisheries, particular areas of concern are changes in the habitat of regionally distinct plants used in traditional medicine or art (Kauri, for example, could be under threat from climate change). Although climate change is not likely to affect species that are not affected by temperature shifts, those that are already under pressure may be unable to cope with the additional changes wrought by a change in climate, possibly leading to extinctions of some indigenous species.

Health and social impacts

Mäori are likely to be vulnerable to the health impacts of climate change. Many Mäori communities may become prone to new diseases that are normally found in warmer climates, such as Ross River Virus or Dengue Fever.

Lower levels of labour force participation, under-representation in higher paying occupations, and higher rates of unemployment also imply that changes in regional employment and prices of essential goods due to climate change may have a bigger impact on Mäori. This will vary depending on the region.

The effect on Maori of ratification

All of this background is relevant to the Government's decision on whether to ratify the Kyoto Protocol and be part of the attempt by the international community to reduce the effects of climate change.

The decision on whether to ratify is ultimately for the Government to take. It reflects the responsibility of the Government to make decisions on behalf of all New Zealanders. The Government is consulting before it takes a final decision, so that it can be properly informed of Maori and other views. This consultation will inform the development of a National Interest Analysis, which will include the assessment of Maori and Treaty interests.

It is clear that taking no action in relation to the problems of climate change could have significant consequences for New Zealand. As discussed above, Maori could be particularly affected by some of the health, social and economic consequences. Expected changes to the environment could detrimentally affect many things regarded by Maori as taonga. The principle of active protection under the Treaty could be seen as encouraging the Government towards participation in the international effort to combat climate change and so to ratification of the Kyoto Protocol.

The Government must also consider the obligations that ratification will bring, and the effect of those on Mäori. Much will depend on the detail of the policy mix that is finally chosen. The possible implications for Mäori are discussed below in relation to each of the policy options presented in the main consultation document: *Kyoto Protocol, Ensuring our Future.* Further information on each of these policy options is available in the working papers on the different policy options, which can be downloaded from www.climatechange.govt.nz or requested from 0800 WARMING (0800 927 646)

One general and important point, which is often missed, is that ratification will create significant opportunities, as well as obligations. In the past, people have been able to release greenhouse gases without bearing any of the costs of the effects they create. On the flipside, people who act to reduce emissions, such as the developers of technologies that reduce emissions, have not been given the benefit of their climate friendly actions. In a climate-conscious world, this will no longer be the case. Such a change in the way that we look at greenhouse gas emissions will inevitably lead to new opportunities. Some of these opportunities are summarised on page 16 of the main consultation document.

The Climate Change Programme will shortly be undertaking work on the business opportunities that might become available to Mäori as a result of domestic climate change policies.

Legislation Part I

The initial piece of legislation will create:

- Crown powers to issue emission units, including sink credits, into a Crown account, and to trade units on the international market if necessary in order to meet New Zealand's emissions obligations
- a national inventory to record and report data on New Zealand's emissions and removals of greenhouse gases
- a national registry of emission units to record trading transactions and the amount of units held in accounts.

This legislation is concerned simply with setting up the core Government structures to enable New Zealand to meet its international obligations to collect and report information on emissions within New Zealand and to participate at a national level in the international system for managing emissions levels. The structures being created are therefore unlikely, in themselves, to raise significant Treaty issues or concerns about their effect on Mäori.

Legislation Part II

A second piece of legislation will be required to implement policy measures to enable the country to meet its obligations under the Protocol. Before introducing the Part II legislation to Parliament, the Government will need to consider how to encourage New

Zealanders to manage emissions and sinks in order to meet the national emissions targets. There is a range of ways in which it might do this. The consultation paper discusses these options in detail.

Some involve devolution of responsibility, costs and benefits either to particular sectors, or businesses or property owners. Others use less direct means of encouraging changes in behaviour, including levies or targeted taxes. These different options will have different implications for Mäori. A key task for the Government is to ensure that it has considered how each of the options will affect Mäori and whether any disproportionate effects can be managed in the way the option is developed and implemented. Consultation with Mäori during the consultation process will help the Government to assess these effects.

Policy options – general considerations from a Mäori perspective

In general, policies that involve an allocation of responsibility for emissions and sinks (i.e. emissions trading) are likely to raise specific issues for Mäori, including questions about the effect the principles of the Treaty of Waitangi might have on the form of those policies. Fewer issues arise in the policy options involving the Government retaining responsibility for New Zealand's emissions, funding the cost of any emission units that need to be purchased on the international market in order for New Zealand to comply with its Protocol obligations, and encouraging reduction of emissions through different means.

If the Government seeks to fund the cost of purchasing emission units and encourage behaviour changes, implications for Maori will depend on the types of policy used. Options include carbon charges, levies, general taxes or project-based initiatives. Implications will also depend on how different sectors are treated, as Mäori are more affected in some sectors than others (such as forestry, agriculture, and geothermal energy).

In previous discussions, Mäori have raised general concerns about the ability to absorb any additional costs that may arise from commitments to reduce greenhouse gas emissions. This has been raised in regard to impacts both generally on Mäori and specifically in relation to the effect on Mäori land-based activities. Mäori landowners have identified that many Mäori land ventures are marginal and may not be able to incur additional costs. Issues relating to rangatiratanga have also been raised, in relation to the possible effects of policy on the use of Mäori land.

Mäori have also raised concern about how they will be able to absorb any general price increases, especially on basic commodities such as food and energy, which could increase as a consequence of ratification of the Protocol. Concern was raised in regard to lower income households and their potential to be more significantly affected by increased prices, particularly in the case of their limited discretionary income. Concern was also expressed as to the impact on small to medium size business.

The ability to absorb cost increases is, of course, of concern to the general population as well as Mäori. But Mäori tend to be disproportionately represented among the lower income households. The Government has, through other policies, been working to encourage Mäori and other business development in rural areas. It will be important to ensure that the effect of climate change policies does not have the effect of undermining those efforts, or of creating an undesirable level of social hardship.

There are three sectors in which Mäori are particularly active: farming, geothermal electricity production and forestry. The implications of the first two from a Mäori perspective are discussed below. Forestry issues are discussed in relation to the sinks section.

Mäori Land and Farming

Mäori farmers are generally aware that the farming sector contributes substantially to greenhouse gas emissions. Agricultural emissions of Methane and Nitrous oxide contribute 45% of the total emissions in New Zealand This has raised concerns as to the likelihood of that sector being penalised or charged. No decisions have been taken about what policies will be put in place for the farming sector, although the Minister has indicated that carbon taxes are not a preferred option. In general, should the cost of production increase or decrease as a result of a policy, Mäori farmers are unlikely to be affected differently from non-Mäori farmers. The exception is cases where land is held in multiple ownership. In these situations, the landowners may find it more difficult to change land use.

Mäori producers may face costs not borne by competitors from countries that have not ratified the Kyoto Protocol. While international competitiveness is an issue faced by all parts of the farming sector, the export dependence of Mäori assets is considerably higher than the national average. Therefore, any increased costs in production and its ripple effects may mean that Mäori could face a burden of costs disproportionate to that of other New Zealanders.

Geothermal and Electricity Production

Mäori are particularly active in the geothermal energy production sector. Technical dialogue sessions between government and stakeholders in this sector were held earlier this year. Although geothermal energy produces greenhouse gases, it is less intensive than other areas of the energy sector, such as the oil, gas and coal industries. This means that geothermal energy may become more competitive as a generation source than thermal electricity generation in the future.

Policies where Government retains responsibility

Under one set of policy options, the Government could decide to continue to hold all of New Zealand's emissions units and sink credits at national level. It would then need to consider how it funded any costs in meeting New Zealand's obligations (for example if it

needed to buy additional emissions units on the international market) and how it would encourage New Zealanders to reduce emission levels and maintain sinks.

Cost recovery and incentive-based options for Government

Funding mechanisms might include general taxation, or a more specific levy on particular industries or businesses or activities, or a targeted tax such as a carbon charge. Funding out of general taxation would raise no particular issues for Mäori, other than the general social and economic consequences of changes to levels of taxation.

The effect of more targeted levies or taxes would depend on how the cost recovery policy is implemented, and what sector or part of society it targets. Mäori have significant interests in sectors such as agriculture and forestry. The government will need to consider the overall effect of increased costs on the viability of particular sectors and land uses. If there is likely to be a disproportionate effect on any group, such as Mäori, there would be a need to consider whether those effects can be reduced or managed in any way, for example by an extended implementation period.

A study looking at the effects on household incomes of a universal carbon charge showed that the effects on income depended on how the income from the carbon charge was used. If the revenue from the charge was used to pay off Government debt, then higher income people were better off. If it was used to offset other taxes, then lower income groups are favoured – depending on which taxes were offset. If the revenue were used to buy additional emissions units for New Zealand on the international market, the effect might be different again.

Similar issues would arise in relation to any mechanisms used to encourage a reduction in domestic emission levels such as projects. Levies or a carbon tax could, of course, also be designed to encourage changes in behaviour. The same need to consider the effect of particular design options on Mäori would arise.

If, as a result of the current consultation process and the analysis that follows, these cost recovery and incentive-based mechanisms are the preferred policy direction, then more detailed analysis will be done to develop the mechanisms and their application to particular sectors. At that point it will be necessary to consider in detail how the proposals will affect Mäori who are participating in those sectors. There will be a further consultation period on the details of the proposals before legislation is introduced into Parliament.

Policies where Government devolves responsibility

Policies on emissions – emissions trading

The other main policy direction being considered is the establishment of an emissions trading regime within New Zealand. Under an emissions trading system, all or some of New Zealand's national allocation of emissions units and sink credits would be allocated

to relevant sectors or businesses operating in New Zealand. These businesses and other organisations would become "points of obligation" and would have a legal obligation to monitor emissions and hold a corresponding number of emissions at the end of each reporting period. Full details of emissions trading are contained in the climate change working paper entitled *Domestic Emissions Trading*.

The ability of Mäori land trusts to participate fully in an emissions trading regime, both domestically and internationally, has been raised by both the farming and forestry sectors. Some Mäori land trusts are already operating businesses in such a way that they could participate fully, while others have stated that their governance structures under Te Ture Whenua Maori Act 1993 may inhibit their full participation. To give effect to the principles of partnership and active protection, consultation combined with continued analysis of governance structures/models under which Mäori land is managed will be undertaken to provide a clearer picture of what barriers to effective participation in emissions trading Mäori may face.

Policies for sinks and the land use and forests sector

Sinks are any natural or man-made systems that absorb and store greenhouse gases, mainly carbon dioxide. A forest sink is a growing or expanding forest. Sinks are beneficial because carbon dioxide is removed from the atmosphere, where it would otherwise contribute to global warming. New Zealand will have a significant number of sinks, because of its forestry industry and its indigenous forests. A significant amount of forest is on Mäori-owned land, and there is increasing Mäori participation in the forestry industry. Mäori will therefore have a strong interest in the rights and obligations that New Zealand might create in relation to carbon sinks.

Two articles of the Kyoto Protocol deal with sinks. Under Article 3.3 of the Protocol, New Zealand's forests established since 1990 will generate substantial sink credits for New Zealand. At a national level, these credits could be used to offset New Zealand emissions and/or generate income through sale on the international emissions trading market. If forests are removed (whether planted before or after 1990), New Zealand would have to account for the emissions that would result from their harvesting (without replanting) or conversion to a non-forestry use.

Article 3.4 of the Protocol provides a basis for New Zealand to claim further sink credits associated with the *management* of pre-1990 forests, cropland management, grazing land management and revegetation. This part of the Protocol is optional. New Zealand will need to decide whether it is practical and in our interests to include these activities in our sinks system. At this stage, the difficulty in measuring the absorbtion of greenhouse gases as a result of a land management system, and the high uncertainty in the figures obtained means that the Government is not likely to take this option. These issues are discussed in more detail in the working paper entitled *Land use and forests (sinks) sector*, which can be requested from 0800 WARMING (0800 927 646) or www.climatechange.govt.nz

The Kyoto Protocol allocates emission units and sink credits on a national basis. The total of our post-1990 forests will entitle New Zealand to a certain amount of credits, in accordance with the Kyoto Protocol rules. At a national level, New Zealand will also have to account for the emissions that result if any forests are harvested. The Government, as the signatory to the Protocol, is ultimately responsible for any emissions units and sink credits allocated to New Zealand under the Protocol, so in the first instance, these will be held in the national accounts. This set of obligations will obviously create a new national interest in keeping or replanting forests. The policy question for the Government will be what sort of domestic regulatory system to introduce to encourage behaviour in the management of forests that will support the country meeting its international obligations.

As with emissions units, there are a range of policy options for sinks. The Government could retain responsibility for all sink credits, and introduce direct forms of regulation or levies to encourage the retention of forests. It could devolve a proportion of New Zealand's sink credits to industry sectors, or to individual land or forest owners, and enable them to trade. Or it could devolve all of New Zealand's credits and leave New Zealand's obligations to be managed entirely through market mechanisms.

When deciding between these mechanisms, the Government will need to assess what sort of incentives it wants to create to get people to plant or maintain forests. It will also need to consider the impact of the various mechanisms on particular sectors and particular groups of land and forest owners. In particular it will need to consider the impact of any market based mechanisms on Mäori participants in the forestry industry and on Mäori land with forests on it. Issues will include the economic impact of additional responsibilities or costs and the effect of new responsibilities or regulation on existing property rights.

A particular question that will need to be considered is where the point of responsibility for accounting for emissions and holding credits would be. It could be the Government, or the land owner, or the forest owner. One important point is that the Government does not have to allocate only to forest or land owners – it has the option to allocate to any part of society, because the Kyoto Protocol does not dictate how countries should use their allocations of sink credits and emission units. This decision will be informed by consultation and is discussed in more detail in the working paper *Land Use and Forest (Sinks) Sector*.

Some Mäori, along with other pre-1990 forest owners have raised concerns that pre-1990 forests will not entitle New Zealand to receive carbon credits, unless article 3.4 is utilised by New Zealand. A great majority of Mäori forests, including the South Island Landless Natives Act (SILNA) forests, are pre-1990 forests, and more than a third of privately owned indigenous forest is on Mäori land. Land reversion (land use changing from pasture to scrub) started occurring after the Government removed subsidies in the 1980s for land development activities. Therefore, some Mäori landowners contend that reversion should be treated as a human-induced activity and the forests (or scrub) that have reverted post-1990 should be eligible for carbon credits.

A key distinction here is that the definitions of forests that will attract carbon credits in the Protocol affect only the way in which New Zealand's national entitlement is calculated. Those rules will not automatically equate to the way in which a domestic regime would be designed, although they may well provide the starting point. There is little, if any, capacity for New Zealand to change the rules that have been agreed through international negotiation in the Kyoto Protocol. But the Government will need to consider carefully the extent to which it uses the same rules in its domestic regime. The effect of the 1990 cut-off on Mäori land and forests will be an issue to be considered here. It will need to be balanced against the difficulties that might be created from inequity with other forest owners, and problems for New Zealand's participation in the international market, if its allocation mechanisms differ from the international standard.

Conclusion

This working paper sets out some preliminary issues about the effect on Mäori of the climate change policies currently under development. It outlines the areas in which policies may be likely to have a significant practical effect on Mäori, and the areas where the principles of the Treaty of Waitangi may be relevant to the policy choices that the Government will face.

The main issues canvassed in this paper are:

- the ways that climate change will specifically affect Mäori
- the basic decision on whether or not to ratify the Kyoto Protocol and participate in the international mechanisms being established to reduce the effects of global warming
- the policy options being developed as ways of encouraging the reduction of emissions within New Zealand and of funding any liability New Zealand might have for its national emissions totals, and
- the policy options being developed to encourage the development and retention of carbon sinks in New Zealand.

These issues will require careful consideration of the economic and social effects on individual sectors and population groups, and on Mäori in particular. The Government is keen to encourage discussion and obtain comment on the implications of these issues for Mäori. People who want to make a submission on these issues can fill out the feedback form set out on pages 37-40 of the main consultation document, *Kyoto Protocol; Ensuring our future*. This is available on the internet www.climatechange.govt.nz, or can be requested on 0800 WARMING (927 646). If you would like an electronic version of this form, you can e-mail consultation@climatechange.govt.nz.