

## **Briefings for the incoming Minister for the Environment and Minister for Climate Change Issues**

This document contains the following four briefings which were provided to the Minister for the Environment and Minister for Climate Change Issues in November 2008:

- A 'Briefing about the Environment Portfolio and the Ministry for the Environment' - covering note for the briefings
- B 'Environmental stewardship for a prosperous New Zealand'- Ministry for the Environment briefing
- C 'Briefing to the incoming government 2008: Environmental sustainability' - prepared by government agencies with an interest in natural resources and the environment
- D 'Briefing for incoming Ministers: All-of-government climate change programme'

08-B-1074

18 November 2008

Minister for the Environment  
Minister for Climate Change Issues

## **Briefing about the Environment Portfolio and the Ministry for the Environment**

### **Purpose**

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1. The purpose of this briefing note to present our post-election briefing to the incoming Minister for the Environment, an all-of-government briefing on climate change work programmes, and a briefing on environmental sustainability developed by natural resources agencies. The briefing note also provides some additional information about the Ministry, including key contacts.

### **Environmental stewardship for a prosperous New Zealand**

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2. Our post-election briefing to the incoming Minister for the Environment is enclosed. This briefing, 'Environmental stewardship for a prosperous New Zealand', provides an introduction to the Environment Portfolio and the Ministry for the Environment. Our perspective on 'a prosperous New Zealand' encompasses social, cultural, economic and environmental well-being.
3. The Ministry's briefing provides information about the state of New Zealand's environment, the sustainability issues facing New Zealand, the environmental management systems, the Ministry for the Environment, and your statutory responsibilities as the Minister for the Environment. It also notes a small number of issues that may need your attention before the end of the year.
4. A separate briefing for incoming climate change Ministers on the all-of-government climate change work programme has been prepared by the relevant departments. A copy of this briefing is also enclosed. We recommend that you forward copies to your colleagues who have climate change interests.
5. In addition, government agencies with an interest in natural resources and the environment have collaborated to prepare a joint paper on critical issues for environmental sustainability, some of the choices to be made in addressing environmental sustainability, and the capability

improvements needed in central government. This paper is also enclosed.

6. The briefings are supported by the Ministry's *Statement of Intent 2008 – 2011*, which gives an overview of our current work programmes. A copy is enclosed.
7. We recommend that you provide copies of all of this material to the Associate Minister for Climate Change Issues (International Negotiations), Hon Tim Groser.
8. We will provide more detailed information on specific issues and work programme priorities through oral and written briefings, as required to meet your needs.
9. We will also provide a weekly 'status report' on the Ministry's activities. This will cover issues you need to be aware of that week, Cabinet papers due to be sent to your office or considered by Cabinet, and briefings notes and speeches that you can expect to receive during the week.
10. We would welcome an early opportunity to meet with you to discuss your priorities in the portfolio and how we can help you to address them.

### **Key people and contacts**

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11. The key people and roles in the Ministry's Senior Leadership Team are as follows:
  - Dr Paul Reynolds, Chief Executive  
[withheld under s9(2)(a)]
  - Lindsay Gow, Deputy Chief Executive
  - Prue Densem, Acting General Manager, Central Government Policy Group
  - Sue Powell, General Manager, Local Government Group
  - Martyn Pinckard, Acting General Manager, Sustainable Business Group
  - Todd Krieble, General Manager, Reporting and Communications Group
  - Andrew Crisp, Acting General Manager, Corporate and Community Group
  - Chappie Te Kani, Tumuaki Māori.
12. A copy of the Ministry's organisational chart is attached. It shows the current structure of the Ministry and the teams that comprise each business group.

## Recommendations

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### We recommend you:

- (a) Note the Ministry for the Environment's post-election briefing 'Environmental stewardship for a prosperous New Zealand', which will provide the basis for more detailed briefings and discussions on particular issues
- (b) Note the briefing about the all-of-government climate change work programme that has been prepared for incoming climate change Ministers
- (c) Note the paper on environmental sustainability prepared by government agencies in the natural resources network
- (d) Agree to forward copies of these briefings to the Associate Minister for Climate Change Issues
- (e) Agree to forward copies of the briefing on the all-of-government climate change programme to the Minister of Finance and Minister for Infrastructure, Minister of Energy and Resources, Minister of Agriculture and Minister of Forestry, Minister of Foreign Affairs, Minister of Conservation, and the Minister of Research, Science and Technology
- (f) Advise the Ministry of anything in these briefings that you wish to discuss further with us or to receive more detailed information about in the near future
- (g) Note the contact information for the Chief Executive of the Ministry for the Environment.

Dr Paul Reynolds  
**Secretary for the Environment and Chief Executive**

Date:

Date:

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Hon Nick Smith  
**Minister for the Environment**

**Minister's Comments**

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## Administration

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	Action Sought	Deadline
<b>Minister for the Environment</b>	Note contact information for the Ministry's Chief Executive.  Forward copies of all briefings to the Associate Minister for Climate Change Issues (International Negotiations)  Forward copies of the all-of-government climate change briefing to other climate change ministers.	None

## Ministry for the Environment Contacts

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### Principal Author

Name	Position and Unit	Telephone Work	Cellphone
Kathy McNeill	Team Leader, Strategic Business Unit	[withheld under s9(2)(a)]	

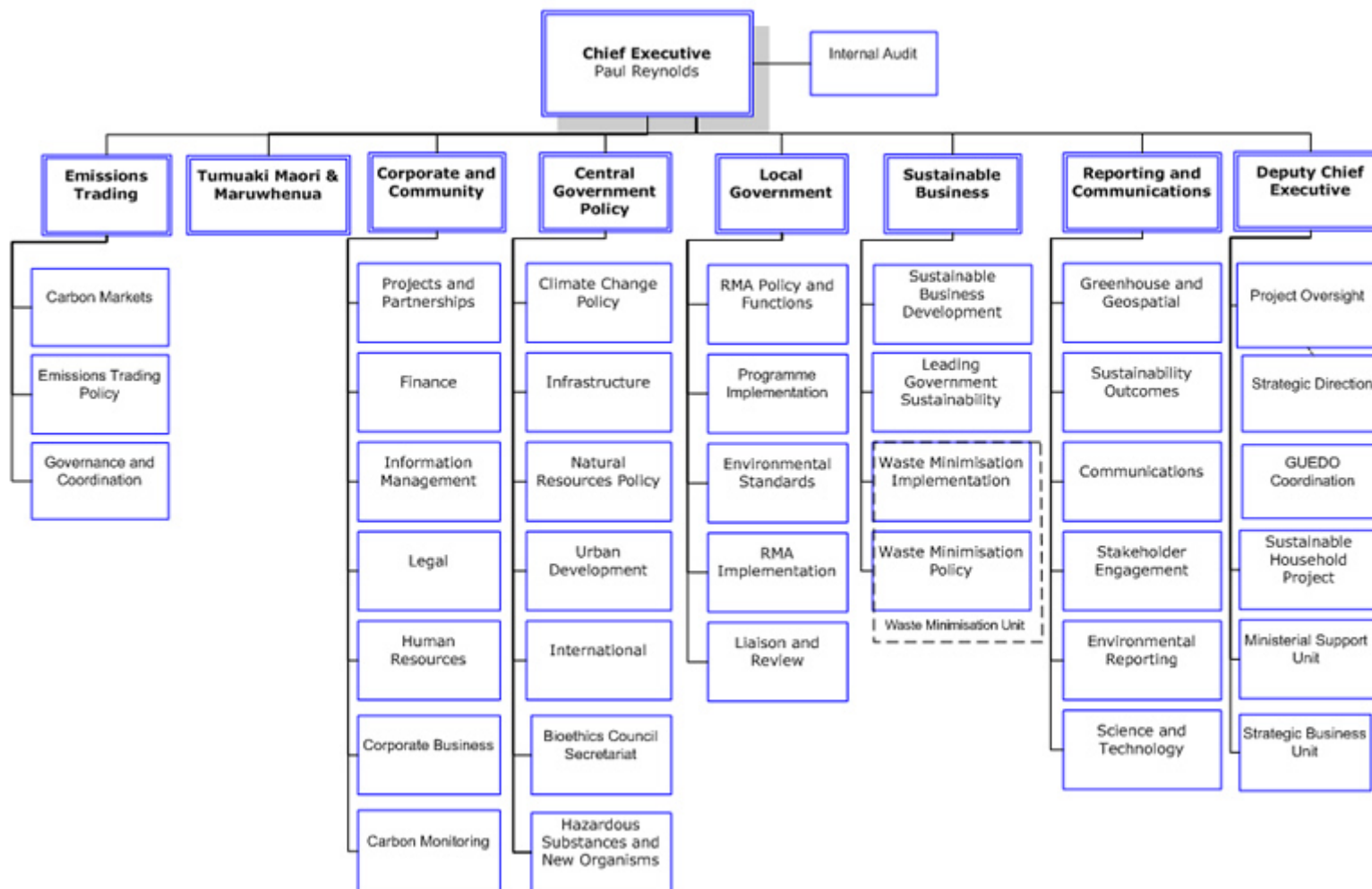
### Responsible Manager

Name	Position and Unit	Telephone Work	Cellphone
Lindsay Gow	Deputy Chief Executive	[withheld under s9(2)(a)]	

### Responsible Group Leader

Name	Position and Unit	Telephone Work	Cellphone
*Paul Reynolds	Chief Executive	[withheld under s9(2)(a)]	

\* Suggested first contact





Ministry for the  
**Environment**  
*Manatū Mō Te Taiao*

# Environmental stewardship for a prosperous New Zealand

Briefing for incoming Minister for the Environment  
November 2008



Seen by Hon Dr Nick Smith

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Date \_\_\_\_\_





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# 1. The state of New Zealand's environment

Having an environment that is among the best in the world is an integral part of New Zealand's identity and competitive advantage.

The environment supplies our needs for food, fuel, water, recreation and cultural connections. A polluted or degraded environment has public health and social consequences.

New Zealand's biologically based export economy means that we depend more on high environmental standards for our long-term economic well-being than most other OECD countries. Much of our international competitive advantage lies in the quality and quantity of our natural resources and in our 'clean green' image.

Internationally New Zealand ranks very favourably when compared against the major sustainability indicators (an exception being the Ecological Footprint). From this perspective New Zealand is globally competitive and in a position to capitalise on its environmental sustainability credentials. However, international expectations about the environmental sustainability of products and services are rising.

At home, New Zealanders have high expectations of environmental quality and a desire for better management of New Zealand's natural resources. Against their expectations, the overall state of the environment is mixed: New Zealand is doing better at some things and getting worse in others as our population increases, our economy grows and our lifestyles change.

In December 2007 the Ministry for the Environment produced *Environment New Zealand 2007*. This presents our most recent evidence on the current state of the environment and trends in pressures and environmental outcomes. The main findings and trends from that report are summarised in the table on the next two pages, which identifies where New Zealand is performing well against national or international benchmark data and where performance is mixed or poor.

Aspects that appear to be improving include air quality in managed airsheds, hill country erosion in some areas, stratospheric ozone levels over New Zealand, some types of pollution in our fresh waters, and recovery of some endangered species. Estimates of waste disposed of to landfill have stabilised. Recycling rates, pest management activity and the areas of protected land and ocean have increased.

Of most concern, because New Zealand risks hitting environmental limits or effects that are irreversible or costly to remedy, are:

- greenhouse gas emissions
- land use intensification, especially in agriculture
- water demand/allocation in some regions
- water quality in some regions.

Not all human activities are inherently damaging to the environment and the intensity of many pressures could be substantially reduced or even removed. Under a 'business as usual' approach, however, we expect many of the current trends to continue.






# Environmental Sustainability Highlights for New Zealand

This document is intended to be a useful summary of the key environmental issues for New Zealand. It presents information on selected environmental indicators for each topic and is not an exhaustive summary of indicators and data related to environmental sustainability. For more detailed information, see *Environment New Zealand 2007* (Ministry for the Environment, 2007).







The information in this document is assessed from an **environmental perspective**, and impacts on social and economic well-being are not considered.




The 'benchmark' meters presented in the left column compare the latest information on each indicator against national standards, where possible. In the absence of a national standard to compare against, New Zealand's performance has been benchmarked internationally (eg, against our OECD peers). The 'trend' meters presented in the right column show whether that aspect of the environment is getting better or worse over time. There is no value judgement attached to the metering, eg, if New Zealand scores highly relative to other countries, it does not necessarily mean that we are performing to the standard to which we aspire.







## Key

-  Performing well against national or international benchmark data (for the latter, NZ is one of the top 10 ranked OECD countries, ie, it ranks 1-10).
-  Mixed or performing averagely against national or international benchmark data (for the latter, NZ is in the middle ranking OECD countries, ie, it ranks 11-20).
-  Performing poorly against national or international benchmark data (for the latter, NZ is one of the bottom 10 ranked OECD countries, ie, it ranks 21-30).
- No national or international benchmark against which we can compare the current state, not enough data to determine a national trend, not able to be measured, or no data available.







## Elements of the environment

	BENCHMARK/STATE	TREND
AIR QUALITY	 <p>NZ has good air quality in most locations for most of the time. However, air quality is affected in a number of locations around NZ. Problems stem from high winter concentrations of <i>PM<sub>10</sub> particulates</i> from coal and wood used for home heating. Auckland also has high levels of <i>PM<sub>10</sub></i> from road transport.</p> <p>In 2007, 68% of airsheds monitored had maximum 24-hour average concentrations of <i>PM<sub>10</sub></i> above the national air quality standard of 50 µg/m<sup>3</sup>. 58% breached the standard by having more than one exceedence in the year.</p> <p>In 2007, 90% of airsheds for which data was reported met the annual mean <i>PM<sub>10</sub></i> ambient air quality guideline.</p>	<p><b>Getting better</b></p> <p>In 2007, complying airsheds increased by 15% from 2006 with 17 out of 40 airsheds meeting the national standard for <i>PM<sub>10</sub></i>.</p> <p>In the decade to 2007, there were no clear nationwide trends in annual mean levels of <i>PM<sub>10</sub></i>. Levels have started increasing again at the Auckland and Wellington monitoring sites in 2006, been steady at the Hamilton site, fluctuated at the Dunedin site and decreased at the Christchurch sites.</p> <p>In the decade to 2007, annual mean <i>PM<sub>10</sub></i> levels at one selected monitoring site in Auckland, Hamilton and Wellington met the NZ ambient air quality guideline, while levels at the Christchurch and Dunedin sites commonly exceeded it. In 2007, annual mean levels for these five sites were all within the guideline for the first time.</p>
	 <p>In 2005, <i>carbon monoxide</i> levels in four main centres met the national environmental standard for ambient air quality.</p> <p>In 2005, <i>ozone</i> levels in Auckland met the national environmental standard for ambient air quality.</p>	<p><b>Getting better</b></p> <p>In general, levels of air pollutants <i>carbon monoxide, sulphur dioxide, nitrogen dioxide and benzene</i> have improved or stabilised over time in NZ, probably reflecting changes to transport fuels and improved controls on industrial emissions.</p>
	 <p><i>Sulphur oxide (SO<sub>x</sub>)</i> emissions per unit of GDP: NZ ranked 19<sup>th</sup> out of 29 OECD countries in 2005, ie, we had the 11<sup>th</sup> highest SO<sub>x</sub> emissions per unit of GDP.</p> <p>In 2005, <i>sulphur dioxide</i> levels in Auckland and Christchurch met the national environmental standard for ambient air quality.</p>	
	 <p><i>Nitrogen oxide (NO<sub>x</sub>)</i> emissions per unit of GDP: NZ ranked 25<sup>th</sup> worst of 30 OECD countries in 2005, ie, we had the 5<sup>th</sup> highest NO<sub>x</sub> emissions per unit of GDP.</p> <p>In 2005, <i>nitrogen dioxide</i> levels in Auckland breached the national environmental standard for ambient air quality, while levels in Wellington and Christchurch met the standard.</p>	
ATMOSPHERE	BENCHMARK/STATE	TREND
	 <p><i>Greenhouse gas emissions</i> per capita: Although NZ produces less than 1% of global greenhouse gas emissions, in 2000 we were the 12<sup>th</sup> highest emitter per capita in the world.</p> <p>In 2004, we were the 5<sup>th</sup> highest emitter per capita out of 36 Annex 1 (ie, developed) countries.</p> <p>In 2005, NZ ranked 25<sup>th</sup> out of 29 OECD countries, ie, we had the 5<sup>th</sup> highest greenhouse gas emissions per capita.</p>	<p><b>Getting worse</b></p> <p>As our population, economy and energy use have grown, <i>greenhouse gas emissions</i> have also grown. Between 1990 and 2006, NZ's total greenhouse gas emissions increased by 26%. Between 1991 and 2006, greenhouse gas emissions per capita increased by 4%.</p>
	 <p>Kilograms of <i>ozone-depleting substances</i> per capita: In 2003, NZ ranked 6<sup>th</sup> out of 14 OECD countries, ie, we had the 6<sup>th</sup> lowest level per capita.</p> <p>In 2006, the average yearly <i>stratospheric ozone</i> concentration over NZ was one of the five lowest, ie, worst, since records began. This was due to unusual stratospheric weather in that year.</p>	<p><b>Getting better</b></p> <p>In general, <i>stratospheric ozone</i> levels over NZ have stabilised since the late 1990s, reversing decreases in the 1980s and early 1990s. Between 1995 and 2006, use of ozone-depleting HCFCs decreased by 50%.</p>




	BENCHMARK/STATE	TREND
LAND USE	 <p><i>Livestock densities:</i> NZ ranks 20<sup>th</sup> out of 30 OECD countries, ie, we have the 11<sup>th</sup> highest livestock densities.</p> <p><i>Nitrogen fertiliser</i> use per km<sup>2</sup> of agricultural land: NZ ranks 4<sup>th</sup> out of 29 OECD countries, ie, we had the 4<sup>th</sup> lowest intensity of nitrogen fertiliser use.</p> <p><i>Phosphate fertiliser</i> use: In 2005, NZ ranked 22<sup>nd</sup> out of 29 OECD countries, ie, we had the 8<sup>th</sup> highest phosphate fertiliser use.</p> <p><i>Pesticide</i> use per km<sup>2</sup> of agricultural land: NZ ranks 1<sup>st</sup> out of 28 OECD countries, ie, we have the lowest intensity of pesticide use.</p> <p>In 2004, <i>pastoral land use</i> was NZ's largest human land use at just over 37% of NZ's total area.</p>	<p><b>Getting worse</b></p> <p>Between 1990 and 2005, NZ had the largest percentage increase in <i>agricultural production</i> in the OECD.</p> <p>Although the total area of pasture in NZ has been decreasing since 1972, the area of land in <i>dairy pasture</i> has increased.</p> <p>Between 1996 and 2006 the national <i>dairy herd</i> grew by 24% (see also Freshwater Demand).</p> <p>Between 1990 and 2005, NZ's percentage increase in <i>nitrogen fertiliser</i> use was the highest in the OECD.</p> <p>Between 1990 and 2005, NZ's percentage increase in <i>phosphate fertiliser</i> use was the 2<sup>nd</sup> highest in the OECD.</p> <p>Between 1997 and 2002:</p> <ul style="list-style-type: none"> <li><i>Human settlements</i> increased by 2.5%</li> <li><i>Horticultural land</i> area increased by 1%</li> <li><i>Exotic forest cover</i> increased by 8%, although rates of new plantings are low and replanting rates have tailed off</li> <li><i>Native forest and native vegetation</i> decreased by 0.15%.</li> </ul>
	<p><b>Soils</b> under cropped (horticultural) land and agricultural land are generally in poorer condition than under other land uses, with higher levels of compaction, build up of nitrogen and phosphates, and lower levels of organic carbon.</p>	<p><b>Getting worse</b></p> <p>Over the last decade, the <i>health of soils</i> under NZ's predominant land uses have shown:</p> <ul style="list-style-type: none"> <li>Widespread moderate <i>compaction</i> of soils under pastures and horticultural land</li> <li>A loss of <i>organic matter</i> and <i>soil structural stability</i> under cropping land</li> <li><i>Nitrogen</i> build-up under some dairy pastures, coupled with high levels of available <i>phosphate</i>.</li> </ul>
EROSION RISK	<p>10% of NZ is classed as severely <i>erodible</i> (ie, prone to erosion). Much of this land is on pasture in hill country.</p>	<p><b>Getting better</b></p> <p>Between 1997 and 2002, there was a 36,400-hectare reduction in pasture on <i>erosion-prone</i> hill country at the national level. 36,300 hectares were converted to exotic forestry or retired and left to revert to scrub.</p>
RIVER, LAKE AND GROUND WATER QUALITY	 <p>In 2003, NZ's <i>freshwater quality</i> was rated first out of 149 countries. The water quality index consisted of five parameters: dissolved oxygen, electrical conductivity, pH, total phosphorus and total nitrogen.</p>	<p><b>Mixed</b></p> <p>No overall trend in NZ's <i>freshwater quality</i> can be identified from monitoring data available. Some aspects are getting worse – <i>nutrient enrichment</i> has increased in some water bodies in catchments that are subject to intensive land use. Some aspects are getting better – <i>organic pollution</i> levels from point sources have improved.</p>
	 <p>Nutrients in NZ's most polluted <i>rivers</i> are less than half the OECD average.</p> <p>Rivers in natural or near-natural catchments make up about half the total length of NZ rivers, and have good river water quality. Water quality is generally poorest in rivers and streams in urban areas, followed by farmed areas.</p>	<p><b>Getting worse</b></p> <p><i>Nutrients:</i> Average levels of total nitrogen and dissolved reactive phosphorus increased in NZ <i>rivers</i> by 0.5 to 1% per year during 1989–2003. For the same period, nitrate levels increased relatively quickly in NZ rivers that already had high levels of this nutrient.</p> <p><b>Getting better</b></p> <p><i>Biological oxygen demand</i> and <i>visual clarity:</i> Levels in NZ <i>rivers</i> have improved over the past two decades. This is consistent with reductions of organic pollution from point sources.</p>
	<p>Two thirds of all <i>lakes</i> in NZ are estimated to have relatively low concentrations of nutrients and good to excellent water quality. This is because they are in natural, or only partially developed, catchments.</p> <p>The remaining third of all lakes in NZ are estimated to have high levels of nutrients and poor water quality.</p>	<p><b>Mixed</b></p> <p>Between 1990 and 2006, there were no clear nationwide trends in <i>lake</i> water quality. Of the 49 lakes monitored for trends, 6 lakes improved, 33 lakes showed no signs of change, and 10 lakes showed possible or definite signs of deterioration.</p>
	<p>Between 1995 and 2006, 39% of monitored <i>groundwaters</i> in NZ had nitrate levels indicating some degree of land use impact (including 5% with nitrate levels that make the water unsafe for an infant to drink). However, it is not known how many of these monitored groundwaters are used to supply human drinking water.</p> <p>Between 1995 and 2006, 22% of monitored groundwaters in NZ had bacteria levels that make the water unsafe to drink.</p>	<p><b>Mixed</b></p> <p>Between 1995 and 2006, there were no clear nationwide trends in <i>groundwater nitrate</i> concentrations. 13% of sites had increasing nitrate concentrations, while 11% of sites had decreasing nitrate concentrations.</p>

FRESHWATER DEMAND	BENCHMARK/STATE		TREND	
		<p><i>Water withdrawals</i> as a percentage of gross annual availability: NZ ranked 6<sup>th</sup> out of 30 OECD countries, ie, we had the 6<sup>th</sup> lowest water withdrawals as a share of total water available.</p> <p><i>Water abstractions</i> per capita: In 2005, NZ ranked 28<sup>th</sup> out of 30 OECD countries, ie, we had the 3<sup>rd</sup> highest water consumption per capita.</p> <p><i>Irrigation</i> uses nearly 80% of all water allocated in NZ. In 2006, several eastern regions had highly allocated surface water catchments. Rivers in these catchments are likely to be under pressure during drier parts of the year.</p>	Getting worse	<p><i>Demand</i> for freshwater is increasing, particularly in drier parts of the country, mainly as a result of increases in the area of irrigated land. Between 1999 and 2006, the <i>allocation</i> of water in NZ increased by 50%.</p>
FRESHWATER RECREATIONAL WATER QUALITY	BENCHMARK/STATE		TREND	
	—	<p>Over the 2006/07 summer, water quality at 60% of the 230 monitored <i>freshwater swimming spots</i> met the NZ guidelines for contact recreation almost all the time.</p>	—	<p><i>Bacteria levels</i> appear to have improved at swimming spots in our rivers and lakes in recent years.</p> <p>More swimming spots met the guidelines in the 2006/07 summer season than in previous summer seasons for which we have national data (2003/04, 2004/05 and 2005/06).</p> <p>While this is encouraging, only 4 years of monitoring data is available at the national scale. This is not long enough to show whether the improvements in recreational water quality are a trend, or merely annual variations.</p>
COASTAL RECREATIONAL WATER QUALITY	BENCHMARK/STATE		TREND	
	—	<p>Over the 2006/07 summer, water quality at 80% of the 380 monitored <i>beaches</i> met the NZ guidelines for contact recreation almost all the time.</p>	—	<p><i>Bacterial levels</i> at our beaches appear to have improved over recent years.</p> <p>More beaches met the guidelines in the 2006/07 summer season than in previous summer seasons for which we have national data (2003/04, 2004/05 and 2005/06).</p> <p>While this is encouraging, only 4 years of monitoring data is available at the national scale. This is not long enough to show whether the improvements in recreational water quality are a trend, or merely annual variations.</p>
MARINE PROTECTED AREAS	BENCHMARK/STATE		TREND	
		<p>NZ has high levels of <i>marine protected areas</i> by international standards.</p> <p>Marine reserves now cover just over 7% of NZ's territorial sea. In 2008, NZ has 33 gazetted marine reserves, 17 of which have been established since 2000.</p>	Getting better	<p>Between 1997 and 2007, the area designated as <i>marine reserve</i> increased from 7,602 to 12,764 square kilometres (an increase of 68%).</p> <p>However, 97% of the total area protected by marine reserve is found in two offshore marine reserves, and some key habitats remain unprotected.</p>
FISHERIES	BENCHMARK/STATE		TREND	
		<p><i>Fisheries production</i>: In 2006, NZ had the 13<sup>th</sup> highest fisheries production in the OECD.</p> <p>In 2006, the commercial fishing industry caught 525,000 tonnes of fish in NZ waters.</p> <p>65% of this catch was from assessed fish species.</p> <p>Of these assessed species, 85% were sustainably fished and 15% were overfished.</p>	Getting worse	<p>Between 1979–81 and 2005, NZ had the highest percentage increase in total <i>fish catches</i>, approximately 3 times the OECD average.</p> <p>In 1997, 10% of assessed <i>fish stocks</i> were overfished.</p> <p>While not directly comparable with the 1997 figure, in 2006, 15% of assessed <i>fish stocks</i> were overfished.</p>
		<p><i>Fisheries production</i>: In 2006, NZ had the 13<sup>th</sup> highest fisheries production in the OECD.</p> <p>Between 1990 and 2005, large commercial vessels conducted about 970,000 <i>seabed trawls</i>.</p> <p>The <i>area trawled</i> in 2005 was around 50,000 km<sup>2</sup>.</p>	Mixed	<p>Between 1979–81 and 2005, NZ had the highest percentage increase in total <i>fish catches</i>, approximately 3 times the OECD average.</p> <p>Between 1998 and 2005, the <i>area trawled</i> by large commercial vessels reduced from about 68,000 to about 50,000 square kilometres.</p>
BIODIVERSITY	BENCHMARK/STATE		TREND	
	—	<p>In 2002, <i>native land cover</i> was NZ's largest land cover at 50% of NZ's total area.</p> <p>In 2002, <i>native vegetation cover</i> accounted for 44% of NZ's land area, most of which is in hill country and alpine areas.</p>	Little or no change	<p>Between 1997 and 2002, an estimated 16,500 hectares equating to 0.12% of <i>native land cover</i> (including vegetative and non-vegetative native cover, such as sand and gravel) have been either converted to other uses or changed as the result of natural processes.</p>
		<p><i>Major protected areas</i>: NZ ranks 1<sup>st</sup> out of 30 OECD countries, ie, we have the highest proportion of protected areas as a percentage of total area.</p> <p>By international standards, a very high proportion of NZ is <i>legally protected</i> for conservation purposes (32%).</p>	Getting better	<p>Between 2004 and 2007, the area of <i>public conservation land</i> increased by 4.6%, to 8.43 million hectares.</p> <p>Between 2004 and 2006, <i>private land under legal protection</i> increased by 51% to 221,473 hectares.</p>
		<p>Threatened birds as a percentage of <i>species</i> known: NZ ranks 20th out of 30 OECD countries, ie, we have the 11th highest percentage of threatened birds: 21% of NZ's known bird species are threatened).</p> <p>NZ ranked worst out of 130 countries as having the highest percentage of threatened <i>species</i> as a percentage of total mammal, bird and amphibian species.</p> <p>NZ's native biodiversity is unique. With an estimated 80,000 <i>species</i> of native animals, plants, and fungi, NZ makes an important contribution to global biodiversity.</p>	Getting worse	<p>The seven monitored <i>native species</i> (the lesser short-tailed bat, kiwi, kokako, kaka, mohua, wrybill, and dactylanthus) have all decreased in range since the 1970s, probably due to pest activity rather than habitat loss.</p>

## Pressures on the environment

	BENCHMARK/STATE	TREND
HOUSEHOLD CONSUMPTION	 <p>The consumption of goods and services can affect the environment. As consumption increases, so does natural resource use, energy use, waste generation (from manufacturing/production and packaging), transport (eg, in moving goods), and greenhouse gas emissions associated with increases in transport and energy use.</p> <p>In 2006, NZ had the 8<sup>th</sup> lowest <i>household consumption expenditure</i> per capita out of 29 OECD countries.</p> <p>Since 1997, housing (which excludes mortgage repayments and house purchases), transport, and food and beverages have consistently appeared as the top three consumption categories for households.</p>	<p><b>Getting worse</b></p> <p>Between 1997 and 2007, NZ's household consumption expenditure increased by 43%.</p> <p>On average, each New Zealander spent 28% more on consumer goods and services in 2007 than they did a decade before, and each household spent 22% more.</p>
TRANSPORT	 <p><i>Road traffic volumes</i> per capita (vehicle kilometres/capita): In 2002, NZ ranked 29<sup>th</sup> out of 30 OECD countries, ie, we had the 2<sup>nd</sup> highest road traffic volumes per capita.</p> <p>In 2007, New Zealanders travelled 40.2 billion <i>vehicle kilometres</i> on NZ roads. The car was the largest contributor, accounting for 78% of the vehicle kilometres travelled.</p>	<p><b>Getting worse</b></p> <p>New Zealanders' use of transport is intensifying. On average, we are driving further, we own more cars, they are getting older and their engines are getting bigger.</p> <p>Between 1980 and 2000, annual vehicle kilometres travelled in NZ more than doubled. Between 2001 and 2007, annual vehicle kilometres travelled increased by 12% and travel per person increased by 3%.</p> <p>However, use of public transport increased by 32% increase nationwide between 2000/01 and 2006/07.</p>
ENERGY	 <p><i>Primary energy supply</i> per capita: In 2006, NZ ranked 17<sup>th</sup> out of 30 OECD countries.</p> <p>In 2007, NZ's <i>primary energy supply</i> was 752 petajoules and NZ's <i>consumer energy demand</i> was 508 petajoules.</p>	<p><b>Getting worse</b></p> <p>As our population and economy have grown, NZ's energy supply has grown to meet consumer demand. Between 1995 and 2007: NZ's <i>primary energy supply</i> increased by 11.5% NZ's <i>consumer energy demand</i> increased by 25%.</p>
	 <p>Share of <i>primary energy supply from fossil fuels</i>: In 2005, NZ ranked 7<sup>th</sup> best out of 30 OECD countries, ie, we had the 7<sup>th</sup> least fossil-fuel intensive energy supply.</p> <p>In 2007, 69% of our primary energy supply came from fossil-fuel-based oil, gas, and coal.</p> <p>Contribution of <i>renewables</i> to electricity production: In 2004, NZ ranked 2<sup>nd</sup> best out of a sample of 13 OECD countries.</p> <p>In 2007, 67% of our electricity was generated from <i>renewable</i> resources. This is high by international standards.</p>	<p><b>Getting worse</b></p> <p>Between 1995 and 2007, the contribution of <i>renewables</i> to electricity production fell from 85% to 67%.</p>
	 <p><i>Energy intensity</i> (primary energy supply per unit of GDP): In 2006, NZ ranked 19<sup>th</sup> equal out of 30 OECD countries.</p>	<p><b>Getting better</b></p> <p>From 1990 to 2005, NZ's economic growth exceeded energy demand. GDP increased by 56% while energy demand increased by 37%. This indicates that the economy has reduced its reliance on energy to some degree, ie, relative decoupling has occurred.</p>
SOLID WASTE	 <p><i>Municipal waste</i> generated per capita: NZ ranked 7<sup>th</sup> best out of 30 OECD countries.</p> <p>Waste management in NZ has continued to improve through strengthened controls on landfills. Good progress has been made in minimising the amount of waste we throw away.</p>	<p><b>Little or no change</b></p> <p>The amount of <i>solid waste</i> disposed of to NZ landfills annually has stabilised: it was estimated that 3.18 million tonnes of waste was disposed of to landfill in 1995 and 3.16 million tonnes in 2006.</p>
		<p><b>Getting better</b></p> <p>When expressed in terms of thousands of tonnes per real dollar of GDP, this represents a 29% decrease.</p> <p>On average, each New Zealander disposed of 13% less <i>solid waste</i> to landfill in 2006 than they did a decade before.</p> <p><i>Recycling rates</i> are increasing. In 2006, 73% of New Zealanders had access to kerbside recycling, up from 20% in 1996, and 97% had access to either kerbside recycling or drop-off centres.</p>

### Key

-  Performing well against national or international benchmark data (for the latter, NZ is one of the top 10 ranked OECD countries, ie, it ranks 1-10).
-  Mixed or performing averagely against national or international benchmark data (for the latter, NZ is in the middle ranking OECD countries, ie, it ranks 11-20).
-  Performing poorly against national or international benchmark data (for the latter, NZ is one of the bottom 10 ranked OECD countries, ie, it ranks 21-30).
- No national or international benchmark against which we can compare the current state, not enough data to determine a national trend, not able to be measured, or no data available.



## 2. Sustainability issues facing New Zealand

Environmental sustainability has become a central issue for New Zealand, reflecting a change in public and global opinion. But there is also increasing recognition that we are hitting environmental limits in some areas (e.g. water allocation in dry provinces) and the full consequences of many 'legacy' issues (such as land contamination) are becoming evident.

The links between environmental sustainability and economic growth are now better understood, indicating that a 'business as usual' approach will not deal with the increased threats and opportunities. If New Zealand takes the wrong path, we risk damage to our domestic well-being and international reputation.

The Ministry for the Environment and other government agencies with interests in natural resources and the environment have jointly identified the critical issues for New Zealand's move towards environmental sustainability. These issues are of particular significance because of their implications, in terms of both risks and opportunities, for New Zealand's prosperity.

### ***What is environmental sustainability?***

*A useful working definition of environmental sustainability is: 'A healthy environment, based on healthy functioning ecosystems, that provides for the well-being of society, now and in the future'.*

*Three elements are regarded as fundamental to environmental sustainability:*

- *Healthy and functioning ecosystems, including natural and human-altered ecosystems*
- *Human health and well-being, including safety, enjoyment and amenity, and valued cultural practices*
- *Sound resource management, including availability of resources for sustainable uses, efficient use of resources, and appropriate structures for management of resources.*

### 2.1 Critical issues for environmental sustainability

The critical issues are complex and interconnected, with environmental, economic, social and cultural dimensions. They are significant because they involve risks and unrealised opportunities to improve national well-being, and because New Zealand is not yet performing as well as it could in these areas. The critical issues have proved difficult to address in the past because potential solutions are complex, costly and/or contentious, due to the public and private interests that will be affected.

Some underlying themes have emerged from examining these issues:

- Lack of clarity about outcomes and the role of central government can lead to deferral of difficult but necessary decisions, which tends to magnify problems over time.
- There are challenges in applying national direction, and balancing national and local costs and benefits, within a highly devolved resource management system. Councils are required to make many difficult decisions but have not always had appropriate central government guidance on how to approach these.
- While there is a need for greater national strategy or direction, responses and solutions should be appropriate for local circumstances – though too many special purpose regional arrangements can detract from national strategy.

- Increased resource competition and environmental pressures are stressing existing resource allocation mechanisms. There has been little trialling or implementation of alternatives to a 'first-come-first-served' approach, though these are provided for in legislation.
- Addressing the roles and interests of Māori is critical to developing robust policy and well-functioning environmental management systems.

The critical issues are:

1. Meeting New Zealand's international climate change obligations, reducing greenhouse gas emissions and adapting to climate change
2. Freshwater quality decline, demand pressures and allocation
3. The role of the Resource Management Act in providing for environmental and socio-economic outcomes and allocating scarce resources
4. Developing natural resources policy and management arrangements that better reflect the Treaty of Waitangi relationship and managing some emerging issues with the use of natural resources in Treaty settlements
5. Pressures on biodiversity and ecosystems
6. Environmental pressures and allocation issues for New Zealand's oceans, particularly the near-shore marine environment.

### **Greenhouse gas emissions and adapting to climate change**

New Zealand must both adapt to changes in climate and contribute to a coordinated international response to reduce greenhouse gas emissions in the atmosphere. The Kyoto Protocol commits New Zealand to reducing its greenhouse gas emissions to 1990 levels, on average, over the period 2008 to 2012 or to take responsibility for any emissions above this level if it cannot meet the target. Emissions are currently about 25 per cent above 1990 levels. The consensus scientific advice is that emissions reductions of between 25 and 40 percent below 1990 levels by 2020, and 80 to 95 percent below by 2050, will be required of developed countries if dangerous climate change is to be avoided.

New Zealand has favoured the introduction of an Emissions Trading Scheme as a key mechanism to reduce emissions. This will introduce a price for greenhouse gas emissions to provide an incentive for New Zealanders to reduce emissions. Legislation for this purpose was passed in September 2008. The cross-government work to implement the Emissions Trading Scheme is now based in the Ministry for the Environment.

By demonstrating appropriate leadership through reducing our own emissions, New Zealand aims to influence major emitting countries in post-2012 negotiations. The pace and intensity of international climate change negotiations has increased over the past year. The Ministry has a full and active programme of work related to international negotiations and meetings

New Zealand also has an international obligation to report annually on its greenhouse gas emissions and removals, with the first report, on the 2008 year, due by 15 April 2010.

A Land Use and Carbon Analysis System is being developed as New Zealand's tool for estimating and reporting on greenhouse gas emissions and removals. To gain credits under the Kyoto Protocol for removing greenhouse gases, New Zealand's national inventory and reporting system must comply with international requirements. The Land Use and Carbon Analysis System is being designed to ensure this.

Climate change is likely to bring about rising sea levels, an increase in floods and droughts, changing wind and rainfall patterns, increased temperatures, reduced frosts, ocean acidification, more pressure on our ecosystems, and an increased threat of pest species becoming established here. New Zealand must become more resilient to the future economic and social impacts of climate change, while ensuring that we can take advantage of the opportunities.

A separate briefing for incoming climate change ministers on the all-of-government climate change work programme has been prepared.

### **Freshwater quality decline and freshwater allocation and demand**

Fresh water is fundamental to the present and future environmental, cultural, social and economic well-being of New Zealand – and these values can easily come into conflict. Our ecosystems, primary producers, community health and cultural values depend on water. Abundant fresh water – if not always when and where we want it – gives New Zealand a competitive advantage in primary production, energy generation and tourism. But having abundant, relatively good quality water by international standards may not be enough for New Zealand's long-term prosperity and quality of life.

Freshwater quality is declining, particularly in rural lowland rivers and streams and groundwater. Nutrient enrichment has increased in some water bodies in catchments where there is intensive land use; for example, one-third of New Zealand lakes have high nutrient levels and poor water quality. Because of the time lags in hydrological systems, water quality in some catchments will get worse before it gets better, even if action is already being taken.

In some regions of New Zealand water catchments have been over-allocated or are close to being fully allocated. A lack of mechanisms for re-allocating water and prompting efficient use (including lack of appropriate urban and rural demand management) means that water is not necessarily going to its highest value uses and this will constrain economic growth.

New Zealand is at grave risk of further environmental damage and squandering the natural advantages of our water resources. Several factors amplify the risks:

- There is not yet a wide public understanding of how critical water issues are for New Zealand's long-term well-being.
- Restoring water quality is expensive and takes a long time (as demonstrated by work on Lake Taupo and Rotorua lakes and the Waikato River).
- Changes in land use, particularly from forestry or dry stock farming to dairying, are being made before there are effective plans to address additional impacts on water.
- There is increasing international scrutiny of New Zealand's environmental performance. Our trade may be affected if overseas consumers react to real or perceived issues about poor water quality, waste, or over-allocation.
- Climate change will increase the frequency and intensity of droughts and floods.
- In some parts of New Zealand, we have captured or allocated the readily accessible water. Further economic development will require re-allocation to higher value uses and/or more water storage and distribution systems to deal with variability in when and where water is available.

- Relevant science research capacity has declined by 35–40 percent over the past decade, and it is difficult for central and local government to get access to science that will support good decision making on water issues.

Inertia by some local authorities in developing water management plans and tackling non-compliance with consents has accentuated problems. In the case of Environment Canterbury, we are concerned that a series of successful challenges to its approach to water allocation create a risk of system failure and loss of authority as the resource manager for the region. Some of the inertia, however, arises from lack of direction from central government. National policy development has been hampered by delays in dealing with Māori rights and interests in water. In general, community resistance to anything seen as moving towards 'privatisation' of water has created a disincentive to trialling new approaches to allocation.

We consider that further action on both quality and allocation issues is vital to make better use of water in ways that increase growth without compromising environmental outcomes. Such action could build on existing work programmes by putting more focus on central government leadership, support for local government and interventions tailored to local issues, and development of new models for allocation and re-allocation of water.

### **Resource Management Act**

The effective and efficient operation of the Resource Management Act 1991 (RMA) is crucial to both environmental and socio-economic outcomes. The RMA is frequently criticised for delays and unnecessary compliance costs that hinder economic growth and infrastructure development, and for failing to protect environmental or community values. While some common complaints are not supported by evidence, there are still some real practical issues.

Devolved RMA decision-making has exacerbated capacity issues in local government and led to variability in planning controls and consent processing. It is often difficult (both practically and politically) for councils to factor national benefits, priorities and strategies into planning and decision making when the costs of decisions fall locally. Central government is now making more use of the RMA instruments that offer greater national direction, involvement and guidance. Because there is no overall strategy for use of these powers, there is a lack of certainty about when and how central government will intervene.

Under current RMA practice, effective and efficient resource allocation is not occurring, and new or expanding high-value uses are not being provided for. Problems are most keenly felt where resources are approaching or at full allocation in some areas: fresh water, coastal space, and air-sheds. The current 'first-come-first-served' system evolved from case law in the absence of central government direction, in a period of less resource competition. The 2005 RMA amendments enables councils to develop alternative forms of resource allocation, but it is still too early to determine how councils are responding.

A number of process and implementation problems with the RMA can increase costs and cause delays without improving the quality of decision making. Key areas for improvement are outlined in section 3 of this briefing, which also provides background information about the Act.

### **Reflecting the Treaty of Waitangi relationship in natural resources policy**

Iwi/Māori have close interests in management arrangements and policy related to natural resources, arising from their various roles as Treaty of Waitangi partner, tangata whenua, kaitiaki, land owners, rights holders, resource users, and prospective developers.

Māori expect to be engaged early in natural resources policy development, and expect that policy will appropriately reflect Māori understandings and world views. Working with

Māori is a key area of opportunity for sustainability and some useful new engagement processes are emerging (such as in the context of the Sustainable Water Programme of Action). Nevertheless, further progress in this area is being held back because the government sometimes lacks clarity on its overall objectives, the nature and extent of Crown interests, and the nature and extent of the rights and interests to which Māori may aspire.

Natural resources are also an increasingly significant focus of negotiations for historical Treaty of Waitangi claim settlements and foreshore and seabed agreements. Iwi often see these negotiations as an opportunity to pursue aspirations that are not currently being provided for through central government policy development or local government processes. Recent Treaty claim settlements have resulted in innovative redress using mechanisms which are well tailored to regional needs – but some of those tools may potentially be inconsistent with the national natural resource management framework. This creates some risks and costs which need to be better managed.

It may be time for central government to review the current approach to use of natural resources in Treaty claim settlements, and to place more emphasis on addressing the matters that affect all iwi through national policy processes. The deadline for settling historical Treaty settlements adds to the tension between negotiated regional solutions and national policy on natural resources and the environment.

One way to maintain the current progress is to continue engagement and wide-ranging dialogue with iwi leaders on major policy areas like climate change and water, and natural resources generally. A greater alignment between natural resources policy and treaty settlement processes is also needed.

### **Pressures on ecosystem integrity and biodiversity**

Biodiversity is of economic, social and cultural value to society, Māori and non-Māori. Much of the national economy is underpinned by farming, forestry and commercial fishing. Native species and ecosystems contain New Zealand's globally unique biological heritage and are part of our identity and way of life, as well as forming the backdrop to the '100% Pure' image and attracting overseas tourism. Other 'ecosystem services' provided by biodiversity include water and soil conservation, carbon storage and sequestration, and habitats for fish and game.

All of these values are under threat, mainly from pests and weeds, and development and use. All New Zealanders are potentially affected. A whole-of-government approach is required.

The New Zealand Biodiversity Strategy 2000-2020 has an over-arching goal of 'halting the decline' in biodiversity. This goal is currently not being met, although improvements to some species and habitats have been made, and better ways of managing native biodiversity have been found. By improving prioritisation and the alignment of agencies with biodiversity outcomes, more biodiversity gains could be made more cost-effectively, where most needed.

### **Marine environment**

New Zealand administers the sixth largest marine area in the world and our marine habitat ranges from subtropical to subantarctic. At more than 4.4 million square kilometres, our marine environment is about 14 times larger than our terrestrial landmass. This presents challenges in terms of both information about the environmental issues in our marine environment and what policy options are best to address these.

The ocean is a large interconnected ecosystem, but much of the relevant legislation deals with specific sectors (such as fisheries) or divides management across arbitrary

boundaries (such as between the territorial sea out to 12 nautical miles and the Exclusive Economic Zone beyond). The current management system is incomplete and not well integrated, with a lack of overall strategy and outcomes to guide decision making. It is difficult to manage cumulative environmental effects, and consistent standards or restrictions are not applied across all activities. These factors could constrain further economic growth from New Zealand's extensive marine resources.

Management under the RMA (which applies in the territorial sea) is generally poor at factoring adverse effects on fishing and marine ecosystems into 'upstream' consents and plans. This can result in sedimentation and pollution caused by land use. There are management gaps outside the 12 nautical mile limit in the Exclusive Economic Zone, where we lack a comprehensive biodiversity protection tool and legislation to manage the environmental effects of some activities.

With increasing demand for coastal marine space and resources across a range of activities and values, the allocation difficulties are intensifying. It can be hard to establish new uses such as aquaculture, even if they are the highest value use, if they will affect other values or existing uses. Other interests can be squeezed out by activities such as marinas and marine farms that require exclusive use of space. These allocation difficulties can discourage investment and economic growth and can result in unnecessary costs.

Lack of comprehensive information about the marine environment can exacerbate risks and delay decisions. The collection, management and use of information by government agencies can be uncoordinated and overlapping. Significant knowledge gaps mean that we should manage the marine environment in a precautionary manner.

Oceans policy work since 2006 has focused on filling the gap in regulation of the environmental effects of activities in the Exclusive Economic Zone. Policy proposals have been developed for new legislation and the Parliamentary Counsel Office has begun drafting an Exclusive Economic Zone and Continental Shelf (Environmental Effects) Bill.

Any review of RMA provisions and implementation could also look at how to improve the management of environmental effects in coastal waters, improve resource allocation in the coastal marine area, and assist local government to control land-based effects on the sea more effectively.

## **2.2 Other significant issues**

In addition to the critical issues above that were collectively identified by natural resource agencies, the Ministry for the Environment considers that several other issues will require government attention.

### **Urban environments**

As New Zealand's population lives mainly in cities and towns, environmental sustainability in urban environments is important for New Zealand. Building and housing, and the goods and services used by households, are key elements of this.

There are challenges in aligning the role of the government as the promoter of environmental outcomes and its role as provider of a large proportion of the nation's infrastructure (such as roads, schools and hospitals). This means that a consistent environmental lens may not be applied to infrastructure planning and decisions and infrastructure's contribution to sustainable urban form. Ineffective integration between various planning frameworks compounds the issue.

Auckland, where governance issues are currently being examined by a Royal Commission, has some particular challenges as the major urban centre in New Zealand.

These include a multiplicity of decision-making bodies, the implications of rapid growth for urban form and infrastructure, and previous under-investment in essential infrastructure.

A separate briefing on Auckland issues has been prepared by the Government Urban and Economic Development Office, of which the Ministry for the Environment is a member.

## **Resource efficiency**

To date waste policy and management has tended to focus on 'end of pipe' solutions by dealing mainly with disposal rather than prevention. The challenge we face is to break the link between the waste and New Zealand's rate of economic growth by learning to produce more with less and to minimise environmental impacts.

Integration of waste and other environmental considerations from production to consumption and the whole of product life cycle is the focus of the Ministry's strategy. Avoiding waste, and making it easier to divert or manage manufactured products, requires changing the way products are designed and the sustainability of the whole supply chain, including the value of diverted goods.

The Ministry works with government and business to make sustainability standard business practice. We do this by engaging with those sectors with the biggest impact or influence on the environment. We work across a range of industries, including building, tourism and agriculture sectors, with design and innovation industries, and across government to support and move business towards becoming more sustainable through better resource efficiency. This is a fast-moving area with huge potential for New Zealand businesses to profit in a carbon-constrained world.

According to *Environment New Zealand 2007*, the combined impact of the patterns of consumption of many households is an important contributor to environmental problems such as air pollution, waste generation, and climate change. Engaging with households about resource efficiency provides an opportunity to raise awareness about the resource intensity of products (eg, water and carbon footprints associated with their production and transport) and the loss of these resources when they are thrown away.

## **2.3 The importance of environmental sustainability**

The pursuit of environmental sustainability is not an optional extra for New Zealand. There are strong economic, social and cultural reasons for seeking to achieve high environmental standards.

Environmental sustainability is critical to New Zealand's overall well-being because of the biological basis to our export earnings. The primary production (land and marine) and tourism sectors equate to about 17% of New Zealand's GDP. The export earnings of the various sectors (in 2006 or 2007 figures) are: agriculture \$16.1 billion, tourism \$8.3 billion, forestry \$3.6 billion, fisheries \$1.3 billion.

The services that people draw from the environment, such as food, fresh water, fibre, fuel, and recreation, are very important to our quality of life. The health effects of poor environmental quality are well-established; for example, about 1100 New Zealanders die prematurely each year from exposure to air pollution, and lack of safe clean drinking water is a risk to community health.

New Zealanders value the environment highly as a crucial part of our national identity. It is central to Māori cultural identity and mana.

Much of New Zealand's global competitive advantage lies in the quality and quantity of its natural resources, particularly fresh water and renewable energy, as well as its 'clean green' image. Because of this favourable image, natural resource endowment and related

capabilities, New Zealand is well-placed to take advantage of the opportunities from the primary production and tourism sectors. But running down New Zealand's natural capital will eventually damage the economy.

The big economic issue at the heart of many environmental issues in New Zealand is not resource use in itself. The issue is ensuring that resources are used efficiently by those who value them most (in an economic, social or cultural sense) and that resource users face the costs they impose on others or the environment. New Zealand is having to confront these issues for the first time as we approach, or have reached, resource limits in some areas.

While the cost of meeting higher environmental standards may constrain economic growth in the short-term, over the longer term a higher standard of performance and efficiency could support New Zealand's prosperity and well-being.

New Zealand (particularly business) will need to be vigilant about the current and likely effects of changing consumer preferences, rising prices for raw materials, energy and food security concerns, a carbon-priced global and domestic economy and other emerging issues. There is a growing international trend towards the use of environmentally focused technical barriers to trade and it is likely that we will see more consumer attention being given to water footprints and biological diversity as well as to carbon footprints.

## **2.4 Addressing environmental sustainability**

Environmental sustainability cannot be addressed in isolation from socio-economic and cultural concerns. It is in New Zealand's best interests to achieve high environmental standards while maintaining economic growth and social and cultural values. This will require a more strategic approach, better articulation of the national interest, a willingness to tackle the difficult issues, good governance, good information, and partnerships outside central government. A dynamic approach is also needed to anticipate and respond to major or sudden changes in circumstances.

The need for change in how we consider and set policy for environmental sustainability, within the paradigm of sustainable development, will put greater demands on public policy processes and the government agencies involved. The agencies in the natural resources sector have already begun to adopt a more networked approach intended to raise the quality of advice and effectiveness of implementation, and to ensure that interventions target the government's priorities.

Strong sector leadership will ensure that environmental outcomes are well articulated and inform decisions across government. The Chief Executives of agencies with an interest in natural resources have decided to establish new governance arrangements for a formalised Natural Resources Network to improve strategic leadership and collaboration across agencies. Further information is provided in section 4.3.

A separate briefing has been prepared by these agencies on the critical issues in the environmental area (as outlined in section 2.1 of this briefing), the importance of environmental sustainability for New Zealand's overall well-being, some of the choices to be made in addressing environmental sustainability, and the capability improvements needed within central government.



### 3. Environmental management systems and issues

#### 3.1 Overview

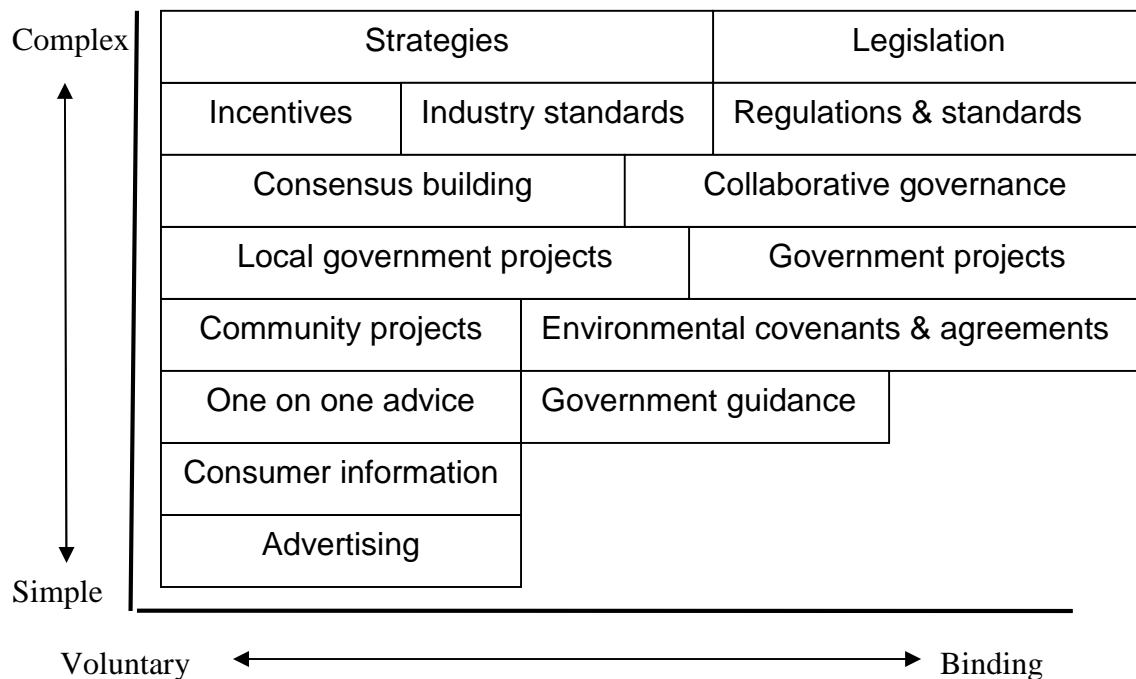
Environmental sustainability is at the heart of New Zealand’s environmental management systems: the concepts of sustainability, sustainable management, and sustainable development are found in legislation covering resource management, local government, land transport, civil defence, energy efficiency and conservation, fisheries and building.

Outside of the conservation estate, local authorities hold the primary responsibility for the day to day management of New Zealand’s environment. Under the Resource Management Act (RMA), the regional councils are responsible for air, water and soil quality, while district and city councils have responsibility for land use (including subdivision and development).

Iwi and hapū authorities and community groups undertake practical actions to protect and enhance the environment through sponsorship, voluntary programmes and participation in statutory processes. Business and industry groups are also taking an increasingly active role in environmental management. Today more than 77 percent of New Zealand companies have an environmental policy in place.

Although environmental management is highly devolved, central government still has a strong role. In recent years there has been increasing demand for the government to exercise its leadership and intervention powers under the Resource Management Act.

#### 3.2 Environmental management systems



Environmental management systems in New Zealand vary from the simple to the complex and from voluntary programmes to direct regulation, as shown in the diagram above. Experience suggests that the best policy outcomes are achieved when a range of these

tools is applied to encouraging change. The challenge is to apply the most efficient combination.

The Ministry for the Environment plays an important role in environmental management by:

- providing direction, guidance and support to central and local government, business and the wider public on environmental issues
- administering the Resource Management Act, the Hazardous Substances and New Organisms Act, the Ozone Layer Protection Act, the Climate Change Response Act, the Climate Change (Emissions Trading) Amendment Act, Waste Minimisation Act and other environmental legislation
- influencing resource management decisions through the use of tools such as regulation, education, assistance, guidance, partnerships, agreements and incentives.

### 3.3 Environmental legislation

#### Resource Management Act

The Resource Management Act sets out the general framework for the management of air, water, soil, biodiversity, the coastal environment, noise, subdivision and land use. It is the principal legislation through which New Zealand's land and coastal environment is managed.

##### ***Key facts about the Resource Management Act***

- *Approximately 52,000 resource consents are processed by councils each year, about 73% of them within the statutory timeframes*
- *4.1% of resource consent applications are publicly notified (open to public submissions), and about 1.5% served on affected parties only*
- *1% of consents are appealed to the Environment Court, generally those for large projects*
- *About 60 prosecutions are made under the RMA each year.*

Making decisions under the Act is generally the responsibility of local authorities. This is based on the philosophy that decisions about the use of resources should be made by the community most closely affected. At times, for example with a wind farm, local decision making will require weighing up the costs and benefits of both national and local interests.

The Act provides for the Minister for the Environment to set national direction through national environmental standards (regulations) and national policy statements.

Now in force are national environmental standards covering air quality and toxic emissions, sources of human drinking water, and telecommunications facilities, a national policy statement on electricity transmission, and the coastal policy statement. A range of other national standards and policy statements are in various stages of the development and approval process.

The RMA also provides for the Minister for the Environment to intervene on proposals of national significance through use of call-in and other powers. Four major energy-related resource consent applications were called in during 2007 and 2008.

The Ministry contributes to the development, administration, monitoring and implementation of the RMA by providing direction, guidance, advice and assistance to all levels of government and the community. In addition to advising on and implementing national policy statements and national environmental standards, the Ministry provides best practice advice, training for decision makers and practitioners, and targeted assistance programmes.

### **Hazardous Substances and New Organisms Act**

The purpose of the Hazardous Substances and New Organisms (HSNO) Act 1996 is to protect people and the environment by preventing or managing the adverse effects of hazardous substances and new organisms (including genetically modified organisms). The Environmental Risk Management Authority (ERMA New Zealand) is responsible for the operation and implementation of the Act. The Ministry for the Environment administers the Act and monitors the performance of ERMA New Zealand.

There are still many operational challenges to improve industry understanding of, and compliance with, the hazardous substances regime. There is a need to improve the capability and capacity of enforcement agencies, particularly the Department of Labour. Some additional resources for this were proposed through an amendment to the Health and Safety in Employment levy on businesses, but the HSE Amendment Bill (No 2) has lapsed and will need to be re-instated by a resolution of Parliament.

The Ministry is reviewing the test certifier regime established under the HSNO Act, as there are concerns about their qualifications and training, regional distribution and the long-term viability of the regime. Test certifiers issue location and equipment certificates, and grant 'approved handler' status to specialist operators of hazardous substances.

The HSNO Act is said to be one of the toughest regimes in the world for managing new organisms, particularly as it applies to genetically modified organisms. There has been no approved release of a genetically modified organism in New Zealand. Since the Act was amended in 2003 to allow conditions to be placed on release, there has been only one application for conditional release of a genetically modified organism (for an equine vaccine, still under consideration) and one for conditional release of a non-GM new organism.

A wide range of amendments to the HSNO Act are included in the Regulatory Improvement Bill introduced in September 2008, which has now lapsed and will need to be re-instated by a resolution of Parliament.

The Treasury has suggested that a major review of the HSNO Act be undertaken within the next 12 months. The Ministry has some concerns about the rationale for this proposed review.

### **Ozone Layer Protection Act**

The purpose of the Ozone Layer Protection Act 1996 is to protect human health and the environment from adverse effects resulting from human activities that may deplete the ozone layer and to phase out ozone depleting substances as soon as possible. The Act also gives effect to New Zealand's obligations under the Montreal Protocol.

The Ministry of Economic Development implements the regulations associated with the import and export of ozone depleting substances while the Ministry for the Environment administers the Act.

The main focus of our activity is phasing out of hydrochlorofluorocarbons (HCFCs) and reducing reliance on methyl bromide for quarantine and pre-shipment purposes.

Methyl bromide can now be imported only for quarantine and pre-shipment fumigation. Over 70 percent of use in New Zealand is to treat timber – China and India require a large proportion of our timber exports to be treated with methyl bromide.

ERMA New Zealand has begun a process to reassess the risks, costs and benefits of the use of methyl bromide in New Zealand but a decision is unlikely before 2010.

### **Waste Minimisation Act**

The aim of the Waste Minimisation Act 2008 is to encourage waste minimisation and a decrease in waste disposal in order to protect the environment from harm and to provide environmental, social, economic and cultural benefits.

The Waste Minimisation Act was passed in September 2008 and the Ministry has begun the significant work required on implementation. This legislation provides new tools to encourage waste minimisation. The Act:

- establishes a Waste Advisory Board to provide independent advice on waste policy and some other matters
- provides a regulatory framework for ensuring that producers and others in the supply chain take responsibility for end-of-life products through product stewardship schemes
- provides for a levy on waste disposal of \$10 per tonne from 1 July 2009 to supply funding for waste minimisation. Half of the levy funding will be spent by councils to implement local waste minimisation plans and half (minus administration costs) will be allocated to waste minimisation projects on a contestable basis
- transfers the waste provisions of the Local Government Act 1974 into the Waste Minimisation Act
- strengthens the role of the New Zealand Waste Strategy in local government planning
- provides for powers to require territorial authorities and others to report on waste, to improve information on waste management and minimisation.

New functions for the Ministry for the Environment include collecting the waste levy and allocating the funds from the levy, implementing product stewardship regulations, accreditation of product stewardship schemes and enforcement. While it is possible for some of this to be delegated to others, responsibility would still reside with the Ministry.

*Section 5 outlines the statutory responsibilities of the Minister for the Environment under the Resource Management Act 1991, Hazardous Substances and New Organisms Act 1996, Soil Conservation and Rivers Control Act 1941, Fiordland (Te Moana o Atawhenua) Marine Management Act 2005, and Waste Minimisation Act 2008.*

### **Climate Change Response Act 2002**

The Climate Change Response Act 2002 puts in place a legal framework to allow New Zealand to ratify the Kyoto Protocol and to meet its obligations under the United Nations Framework Convention on Climate Change.

The Act includes powers for the Minister of Finance to manage New Zealand's holdings of emission units. It enables the Minister of Finance to trade and otherwise deal with those units.

The Act also establishes:

- a registry to record holdings and transfers of units; and
- a national inventory agency to record and report information relating to greenhouse gas emissions in accordance with international requirements.

The Climate Change Response (Emissions Trading) Amendment Act 2008 amended the Climate Change Response Act to establish the New Zealand Emissions Trading Scheme. The Scheme will create incentives for New Zealanders to develop and apply carbon-friendly techniques and technologies. Schedule 3 of the Climate Change Response Act specifies the activities that are automatically included in the Emissions Trading Scheme and Schedule 4 those that are optional.

*Section 5 outlines the statutory responsibilities of the Minister for Climate Change Issues under the Climate Change Response Act and 2008 Amendment Act.*

### **3.4 Aspects that will need attention**

There are some aspects of New Zealand's environmental management regime that need attention, either because the regime is not complete or because it does not work as originally intended.

#### **Resource Management Act processes**

The Resource Management Act (RMA) is now 17 years old. Though often criticised, in some respects it works well; for example, it has provided the tools for regional councils to manage point source discharges to water and reduce water pollution.

The RMA also provides a means for communities to resolve clashes in values – any legislation that deals with how people and their neighbours can use their land is likely to be controversial. The decisions made under the RMA are generally accepted, with only one percent taken to appeal.

While amendments have been made to the RMA on at least 13 previous occasions, we consider that there are opportunities to make further improvements so that it is more attuned to today's issues and concerns.

These would lessen compliance costs and offer greater national consistency without risking further environmental pressures or poor decision making. The key areas we see for improvement are in relation to:

- improving resource allocation mechanisms
- streamlining decision making for priority projects
- strengthening the role of central government
- streamlining the plan and plan change preparation process
- simplifying resource consent processes and decision making considerations
- rationalising objection and appeal rights
- strengthening enforcement powers.

The Ministry has work under way to investigate potential options for improvement of the Resource Management Act.

#### **Aquaculture**

Provision of space for aquaculture development has proved to be very difficult, with communities deeply divided on the issue.

Reforms to aquaculture legislation to address these pressures came into force at the end of 2004. Under this legislation, areas for aquaculture are to be established in regional coastal plans (made under the Resource Management Act). Fisheries interests are protected by an assessment of new areas in plans under the Fisheries Act prior to application. The legislation also provided for an allocation of space to iwi equivalent to 20 percent of space allocated since the fisheries settlement of 1992.

The reform legislation is complex and progress on identifying new aquaculture management areas in plans is very slow – no new space has yet been identified under this process.

A number of specific problems have been identified with the legislation, and also with the lack of provision for experimentation outside of established aquaculture management areas. Other problems concerning transitional provisions in Tasman District which were highlighted by litigation have been addressed through amendments enacted in September 2008.

A second Bill (the Aquaculture Legislation Amendment Bill No 2) was introduced in July 2008 to remedy problems with the legislation not related to the Tasman coastal plan. This Bill had its first reading in September 2008 but has now lapsed. It is important for this to be re-instated by resolution of the House so that it continues through the legislative process.

If the Bill does not proceed, there will be very limited development of proposals for new areas for aquaculture because of blockages in the process and there will continue to be a lack of information from experimentation. In addition, some areas currently farmed may be affected, because of problems with the transitional provisions.

An aquaculture implementation programme established to give guidance and some funding to the industry and councils is well supported. In addition, the Ministry is leading six priority non-legislative projects to advance opportunities for aquaculture under the current legislative framework. These projects are supported by industry, iwi and councils.

There are, however, still underlying issues with the effectiveness of the legislation and the incentives for councils and industry to work through a complex and expensive process. Further work is under way to consider options for improving the development of aquaculture in a way that recognises other uses and protects the environment.

### **Minimum performance standards and labelling for consumer products**

New Zealand lacks a straightforward regulatory framework for minimum performance standards and labelling for the environmental impacts of consumer products. At present this is being done only for electrical appliances, through specific enabling legislation.

For other products the only option available at present is trying to use legislation which was not designed for this purpose. Water efficiency performance labelling, for example, is now being introduced under consumer affairs legislation. This will divide the responsibility of managing the labelling programme among different agencies. Additional features, such as minimum performance standards would be likely to require specific new legislation.

While there is a consumer protection element to minimum performance standards (ensuring that people are not sold products which will be unnecessarily expensive to run), there is also a need to ensure that products are fit for purpose and do not put an undue stress on the environment by consuming excessive resources or producing excessive waste or pollution.

### **3.5 Iwi/Māori involvement in environmental management**

Iwi and Māori are formally involved in environmental management through provisions in the Resource Management Act, and in Treaty of Waitangi settlements such as the Central North Island Forestry and Waikato River agreements.

The Resource Management Act provides for iwi/Māori involvement in the preparation of:

- national policy statements and national environmental standards
- local authority plans and policy statements
- iwi management plans or cultural impact assessments, which inform plan development and resource consent processes.

Provisions under existing settlements include formal opportunities for the settled group to give feedback to the Ministry for the Environment, particularly on the monitoring of local authorities and their implementation of the RMA.

Treaty of Waitangi settlements and foreshore and seabed agreements now often contain provisions which allow for Māori involvement in natural resources management. Recent settlements and agreements have included tools such as relationship protocols with Ministers, requirements for the Minister to engage with iwi when using his/her Resource Management Act powers, and provision for co-management or transfer of powers from local authorities to iwi authorities (particularly in the Waikato River settlement).

Eleven existing settlements place obligations on the Ministry. Future agreements are likely to have further significant natural resource components. These settlement provisions will require the Ministry to provide staff time and resources in support of these arrangements.

Funding has been provided to establish a new whole-of-government unit within the Ministry for the Environment to coordinate delivery of agencies' responsibilities under the Waikato River settlements. During the pre-settlement period the unit, through the Ministry, will report to the Minister in Charge of Treaty of Waitangi Negotiations. Advice will be provided to you about the aspects of the settlement related to RMA or environment. Ministerial accountabilities for the post-settlement (implementation) phase are yet to be decided.

### **3.6 International environmental agreements**

New Zealand has obligations under a range of multilateral environmental agreements, including the United Nations Framework Convention on Climate Change, the Kyoto Protocol (greenhouse gas emissions), the Montreal Protocol (substances that deplete the ozone layer), the Basel Convention (transboundary movement of hazardous waste), Stockholm Convention (persistent organic pollutants) and Cartagena Protocol on Biosafety (transboundary movement of living modified organisms). The Ministry for the Environment has work programmes connected with these agreements.

The Ministry also leads the negotiation and implementation of environmental agreements under the 2001 Framework for Integrating Environment Objectives in Trade Agreements.

New Zealand currently has environmental cooperation agreements with Thailand, China, and with Brunei, Singapore and Chile under the Trans-Pacific Strategic Economic Partnership. In the near future there are likely to be others with Philippines, Indonesia, Malaysia, Korea, United States, and the Gulf States. This is creating an increasing work load for the Ministry, both in terms of negotiations and in implementing the cooperation agreements.

## 4. About the Ministry for the Environment

The Ministry for the Environment is the government's primary adviser on the New Zealand environment and international matters that affect the environment. The Ministry's focus is on environmental stewardship for a prosperous New Zealand.

The Environment Act, under which the Ministry was established, defines 'environment' widely to include ecosystems, people and communities, and natural and physical resources. Our work programme reflects this broad focus on the natural and built environment, human health and well-being, and sound resource management that supports economic development.

As we noted in previous sections of this briefing, environmental issues are strongly connected to many areas of the economy and quality of life. Environmental outcomes are affected by policy and practices in other portfolio areas. There has been an increasing need for the Ministry for the Environment to contribute to issues that are led by other agencies and Ministers, including energy and transport policy, building and housing, environmental components in trade agreements, and Treaty of Waitangi settlements.

As a consequence of this and other new responsibilities, the Ministry's role has become more complex and diverse. In addition to providing policy advice to the government, we are increasingly involved in policy implementation. This can mean working with local government to implement national environmental standards, managing a call-in process under the Resource Management Act, advising business or households on how to reduce their environmental impacts, collecting and allocating a waste levy, and coordinating implementation of the deeds of settlement for the Waikato River.

### 4.1 Building our capability

These increasing demands and expectations have been challenging for a relatively small agency. In addition, several investigations by the State Services Commission and other well-publicised problems in the 2007/08 year highlighted areas of organisational weakness that we have started to address.

The Ministry clearly recognises the need for a significant step up in its performance.

We want to ensure that we provide timely and professional support for our ministers in carrying out their portfolio responsibilities. Following an internal review, we have established a special unit with responsibility for improving the quality of services and products provided to our Ministers and supporting your private secretaries.

While we have considerable expertise and experience among our staff, particularly in technical and scientific areas, we will need to strengthen our capability and our systems to meet current and future demands and expectations. We are now implementing a plan to help us do this.

#### Strategies for change

Our 2008 strategic business plan, *Towards 2013*, sets out the broad direction we will follow in building capability and improving performance. This is supported by six strategies for change and a series of projects that will improve our effectiveness. The strategies for change cover:

**Developing our people:** Good people are the Ministry's greatest asset. We are focusing on how we attract, retain and develop appropriately skilled staff and managers, who will uphold the high level of professional and ethical standards expected of public servants.



**Developing quality operating systems:** We are undertaking a series of projects to ensure that our operating systems are professional, efficient, user-friendly and support our business. These systems also must provide useful information to inform organisational development and decision making.

**Setting and achieving longer term goals:** Work is under way on ensuring that the Ministry has a clear strategic direction and is more strongly outcome-driven, so that we can concentrate resources on priority issues, projects and policy interventions. This must be underpinned by a strong evidence and evaluation base and aligned to the goals of the government. We also need to identify how we can better measure our performance.

**Working effectively across the Ministry and government:** Achieving better environmental outcomes depends on the interface between environmental, economic, social and cultural development. The Ministry aims to develop strategic relationships and integrated ways of working internally and with other central and local government agencies.

**Improving our engagement with Māori:** Māori and iwi have strong interests in management arrangements and policy related to natural resources and expect early involvement in policy development. Our aim is to achieve consistent and coordinated early engagement with Māori that will contribute to smooth development and implementation of national policy.

**Working effectively with other sectors:** Reducing pressures on the environment is a shared responsibility, requiring contributions from many sectors. We will work strategically to build and maintain relationships with sectors, decision makers and individuals who are fundamental to achieving high environmental standards, so that we can understand their views and influence decision making that affects the environment.

## 4.2 Work programme priorities

The Ministry for the Environment has been working with other agencies in the natural resources / environment sector to identify priorities across the sector. We have also begun reviewing our own work programmes, with the intention of aligning resources more effectively with priorities and the environmental outcomes we need to achieve. We are keen to discuss priorities with you.

The Ministry has limited capacity to take on new work or reprioritise resources without a significant reconsideration of our current work responsibilities.

In recent years our funding profile has included a substantial proportion of short-term funding (one to three years) for specific projects, for example sustainability initiatives. This funding is now decreasing and will cease over the next three years. Without this short-term funding, the Ministry's baseline funding for policy advice and implementation is approximately \$31 million in Vote Environment and \$8 million in Vote Climate Change. (This amount does not include specific appropriations for administering government funds, supporting the Bioethics Council, managing call-in processes, and developing the Land Use and Carbon Analysis System.)

Vote Environment also includes government funds that the Ministry administers to assist with external programmes such as community environmental initiatives, remediation of contaminated sites, aquaculture planning, environmental legal assistance, environment centre grants, Rotorua lakes restoration, and Waikato River clean-up and co-management.

## **4.3 Collaborating with other government agencies**

### **Natural resources agency network**

Natural resource issues such as water, oceans and greenhouse gas emissions are important to many government agencies and areas of policy.

The chief executives of government agencies that work in the natural resources / environmental sustainability sector have been considering how best to work more closely together. They have agreed to establish a formal natural resources inter-agency network, comprising the Ministry for the Environment, Ministry of Agriculture and Forestry, Department of Conservation, Ministry of Fisheries, Ministry of Economic Development, Land Information New Zealand, Te Puni Kōkiri, Treasury, Department of Prime Minister and Cabinet, and the State Services Commission.

The network will enable central government to take an integrated approach to natural resource policies and management – from advice to service delivery – in relation to both long term issues and the priorities of the government of the day.

Working this way will involve some significant shifts from current thinking and will require a major investment in making sure that it works effectively. A governance group of chief executives, chaired by the Chief Executive of the Ministry for the Environment, will lead and oversee the operation of the network.

### **Government Urban and Economic Development Office (GUEDO)**

The Ministry for the Environment is a member of the Government Urban and Economic Development Office network of agencies in Auckland. The network now incorporates nine agencies which have recognised that collaboration provides the best opportunity to understand the issues facing Auckland, engage with the stakeholders, and recommend solutions to cross-cutting and often complex issues.

GUEDO has been designed to improve the effectiveness of central government actions that affect Auckland and New Zealand. Its key functions include:

- providing an informed Auckland-specific perspective on the development of central government policy (within the context of Auckland's key role in New Zealand's economy and society)
- identifying and developing Auckland-specific policy initiatives that will make a significant impact on Auckland and national economic growth
- managing and working with a collaborative network of Auckland partners/stakeholders
- coordinating a collaborative approach for central government engagement in key regional development forums
- offering a source of intelligence for government about Auckland stakeholders and issues.

A separate briefing on Auckland issues and the work of GUEDO will be provided.

## **4.4 Other important partnerships and relationships**

In addition to collaborating with other government agencies, the Ministry has a number of other important partnerships and relationships.

Implementation of much environmental policy and national reporting on the state of the environment relies on partnerships with local government. We work with councils to develop national policy, standards and guidance and to support consistent practice at the local level.

In recent years there has been a shift towards a more strategic partnership with local government at a senior level. Through the Chief Executives Environment Forum, we bring together regional councils and central government departments that have strong interests in environment and resource management. This provides a regular opportunity for exchanging information, agreeing on complementary activities and resolving problems

Māori interests cut across the priorities for the Ministry and other natural resources departments, particularly our work on water and climate change. This means that Māori are a key relationship for the Ministry. Working with Māori offers valuable opportunities for the Ministry, as Māori have a cultural responsibility to manage resources sustainably. Realising these opportunities will rely on the continual improvement of the Ministry's relationships with Māori.

Our engagement with iwi leaders and Māori environmental managers on natural resources policy and management is in addition to our involvement in negotiating and implementing Treaty of Waitangi settlements.

Environmental policy is also a focus of attention for a wide range of sectors and interest groups. The activities of the primary production and business sectors are critical to making progress on environmental sustainability. The Ministry must understand the views of these sectors and the issues facing them in adjusting to higher environmental standards. We also have a role in funding, on behalf of the government, community projects that will deliver long-term environmental benefits.

## **4.5 Public sector environmental performance**

The Ministry for the Environment is leading two work programmes aimed at improving the environmental performance of the public sector. In addition, the Ministry is working to improve its own environmental performance as a participant in both of these programmes.

The Govt<sup>3</sup> programme seeks to reduce the environmental impact of government operations, focusing on sustainable transport, buildings and procurement as well as waste minimisation, and energy consumption. Applying good business practices requires paying close attention to the use of all their resources. Our work focuses on enabling behaviour change and sustainable practices within government agencies by increasing their capability and knowledge, identifying best practice, promoting practical solutions and providing tools and guidance.

The Carbon Neutral Public Service programme is aimed at reducing net greenhouse gas emissions in government agencies. A lead group of six agencies – of which the Ministry for the Environment is one – have carbon neutral plans in place and are expected to be carbon neutral by 2012. The remaining 28 agencies must be on a path to carbon neutrality by 2012.

# 5. Responsibilities of Minister for the Environment

## 5.1 Specific responsibilities in law

### Resource Management Act 1991

The Resource Management Act 1991 is the primary legislation in New Zealand for managing our environment. Most decision-making under the Act is devolved to local authorities. Under the Resource Management Act, the Minister for the Environment is responsible for:

- recommending the making of national policy statements and national environmental standards
- deciding whether a matter is of national significance, and deciding whether to use any of the ministerial powers of intervention, which include the power to call in proposals of national significance and referring such proposals to a Board of Inquiry or the Environment Court for decision
- recommending that an applicant be approved as a requiring authority or as a heritage protection authority
- deciding whether an application to make or amend a water conservation order be referred to a special tribunal, and deciding whether or not to recommend that a water conservation order be issued
- monitoring the effect and implementation of the RMA (including any regulations in force under it), national policy statements and water conservation orders
- monitoring the relationship between the functions, powers and duties of central government and local government
- monitoring and investigating matters of environmental significance
- considering and investigating the use of economic instruments.

The Minister for the Environment has additional powers to:

- investigate and make recommendations on the exercise or performance of local authorities' functions, power or duties
- direct a regional council to prepare or change a regional plan to address a resource management issue in a region or direct a territorial authority to change its district plan to address a resource management issue
- request a local authority, a heritage protection authority or a requiring authority to supply information at no cost to the Minister, if they hold that information and it is related to their functions, powers or duties under the RMA.

You also have limited powers to:

- appoint people to carry out the functions of a local authority if you consider that it is not performing to the extent necessary to achieve the purpose of the Act
- make grants and loans to assist in achieving the purpose of the RMA (several funds exist for this purpose).

## **Hazardous Substances and New Organisms Act 1996**

The Hazardous Substances and New Organisms Act 1996 (HSNO) aims to prevent or manage the adverse effects of hazardous substances and new organisms, including genetically modified organisms within New Zealand. Under the HSNO Act, there is a specialist decision making body, the Environmental Risk Management Authority, which is a Crown entity (see section 4.2). Under this Act, the Minister for the Environment has responsibility to:

- appoint members to the Environmental Risk Management Authority
- direct the Authority to have regard to government policy that relates to the Environmental Risk Management Authority's functions and objectives
- decide whether an application fits the limited circumstances, in respect of specified significant effects, that would justify calling in the application to be decided by the Minister rather than the Authority, using ERMA as advisers.

## **Soil Conservation and Rivers Control Act 1941**

The Minister for the Environment also has powers (though no obligation) under the Soil Conservation and Rivers Control Act 1941 to make grants and loans for fencing, planting and other work to prevent soil erosion.

## **Fiordland (Te Moana o Atawhenua) Marine Management Act 2005**

Under the Fiordland (Te Moana o Atawhenua) Marine Management Act, the Minister for the Environment has the following functions:

- to appoint the Fiordland Marine Guardians
- to provide direction to the Fiordland Marine Guardians relating to management of the area
- to initiate reviews to determine the effectiveness of the management of the area.

## **Waste Minimisation Act 2008**

Under the Waste Minimisation Act, the Minister for the Environment has the following powers, functions and responsibilities:

- to review the effectiveness of the waste levy in 2011 and subsequently every three years
- to determine, in consultation with the Waste Advisory Board, priority products that will be subject to mandatory product stewardship schemes
- to develop guidelines about the contents and expected effects of product stewardship schemes for priority products
- to grant government accreditation to voluntary and mandatory product stewardship schemes
- to approve funding of projects that promote or achieve waste minimisation
- to appoint a person to collect the waste levy from landfill operators
- to set performance standards for the implementation of waste management and minimisation plans prepared by territorial authorities and recommend, through an order in council process, that territorial authorities amend their waste management and minimisation plans

- to set the terms of reference for the Waste Advisory Board, request nominations for members and, in consultation with the Minister of Maori Affairs, appoint between four and eight members to the Board
- to seek the advice of the Waste Advisory Board on various matters including developing guidelines about product stewardship schemes
- to recommend to the Governor-General the making of various regulations relating to priority products, accredited product stewardship schemes, the operation of the waste levy and waste minimisation schemes (for instance, container deposit schemes and take-back services for products)
- to recommend to the Governor-General the making of regulations relating to the collection of records, information and reports regarding waste management and minimisation, to enable, for instance, statistics to be compiled, the waste levy to be accurately calculated and to monitor territorial authority spending of levy money.

### **Delegation of powers under these Acts**

Under section 28 (1) of the State Sector Act, ministers can delegate statutory powers under an Act to a chief executive of a ministry for which they are responsible. The Minister for the Environment has delegated to the Chief Executive of the Ministry for the Environment a number of statutory powers under the Resource Management Act, Soil Conservation and Rivers Control Act, and the Hazardous Substances and New Organisms Act. The Minister for the Environment agreed to these powers being sub-delegated by the Chief Executive.

### **Climate Change Response Act 2002**

The Minister for Climate Change Issues has responsibilities under the Climate Change Response Act 2002, which was amended by the Climate Change Response (Emissions Trading) Amendment Act 2008.

The Minister for Climate Change Issues has the following powers, functions and responsibilities under the Climate Change Response Act which *must* be exercised in relation to the Emissions Trading Scheme:

- to ensure that an allocation plan in respect of pre-1990 forest land is in force from 1 January 2008 and make determinations for the free allocation of New Zealand Units in accordance with the plan
- to appoint a person to apply for and hold in trust New Zealand Units to be freely allocated in relation to Crown forest licence land that has not been transferred to iwi as part of a Treaty of Waitangi settlement by the date on which the allocation plan is issued
- to ensure allocation plans are in force at the appropriate times for the industrial, agriculture and fisheries sectors and make determinations for the free allocation of New Zealand Units in accordance with those plans
- to establish the Innovation Fund for the purpose of facilitating deployment of innovation technology that significantly reduces greenhouse gas emissions from the industrial sector. The Minister *may* then make grants of New Zealand Units from the Innovation Fund
- to ensure that at the end of the true-up period Crown holdings of Kyoto units equal the number of New Zealand units issued into a Crown holding account (and not subsequently transferred offshore or cancelled) during the relevant Kyoto commitment period

- to initiate, and appoint a panel to conduct, a review of the operation and effectiveness of the Emissions Trading Scheme.

The Minister for Climate Change Issues also has the following powers, functions and responsibilities which *may* be exercised in relation to the Emissions Trading Scheme:

- to move the agricultural sector point of obligation for participating in the Emissions Trading Scheme from the fertilizer manufacturers and dairy/meat/wool processing companies to individual farmers
- to bring into force provisions enabling farmers to choose to become participants (but only if the mandatory agriculture sector point of obligation remains at the processor level)
- bring the forestry offsetting provisions into force if satisfied that an international agreement permits offsetting in relation to pre-1990 forest land
- to exempt any person listed in Schedule 3 from being a participant
- to direct the issuance of New Zealand Units into a Crown holding account in consultation with the Minister of Finance
- to notify the Crown's intention to issue and sell, or allocate freely, New Zealand units
- to direct the Chief Executive in relation to Chief Executive's exercise of power, and performance of functions, under Parts 4 and 5 of the Act
- to add further removal activities to Schedule 4, and activities relating to fishing and coastal shipping to Schedule 3
- to make regulations relating to a wide range of matters related to the Emissions Trading Scheme
- to Gazette targets.

Finally, the Minister for Climate Change Issues has the following powers, functions and responsibilities which *may* be exercised in relation to the inventory agency:

- to direct the inventory agency in its function of providing reports under the Kyoto Protocol on New Zealand's emission profile to calculate our liability
- to authorise suitably qualified and trained persons to exercise inspection powers in relation to inventory agency functions
- to recommend to the Governor-General the making of regulations requiring persons to keep and provide information to the inventory agency on emissions and removals of greenhouse gases (if necessary to assist New Zealand to meet its obligations under the Convention or Protocol).

For completeness please note that under Part 6 of the Climate Change Response Act the Minister of Energy *must* determine criteria for the use of the Household Fund.

## **5.2 Obligations arising from Treaty of Waitangi settlements**

A number of obligations will also arise as a result of the deeds of settlement in relation to the Waikato River. The Bill giving effect to the Deed of Settlement with Waikato-Tainui (the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Bill) had its first reading on 25 September 2008, and is expected to take effect around the end of 2009.

The Minister for the Environment will have a number of specific obligations arising from the Waikato-Tainui settlement, including making recommendations to the Governor-

General on any required changes to the vision and strategy for the river (which has the status of a national policy statement under the Resource Management Act).

The Minister will also have a number of other obligations set out in an Accord between the Minister and Waikato-Tainui, which is likely to be agreed by 31 March 2009.

Further Bills giving effect to future deeds of settlement with Raukawa, Maniopoto and Te Arawa will confer additional obligations on the Minister for the Environment.

### **5.3 Obligations arising from Foreshore and Seabed Agreements**

No foreshore and seabed agreements have yet entered into law. The first agreement was, however, signed by the Crown and Ngāti Porou on 31 October 2008. When enacted, this agreement will give the Minister for the Environment a number of responsibilities in the agreement area. The responsibilities are as follows:

- If the Minister for the Environment and Minister of Conservation jointly call in a matter in the agreement area, and decide to refer this matter to a Board of Inquiry, the Ministers must give due regard to the views of the Ngā Hapū o Ngāti Porou management entity about the terms of reference for the board, and must include on the board a person nominated by the management entity.
- The Minister for the Environment is required to participate in the 'Minister's forum', which will meet annually with representatives of Ngā Hapū o Ngāti Porou to discuss matters relating to the agreement.
- The Minister must engage with the management entity and consider the environmental covenant when preparing a national policy statement or national environmental standard that relates to the agreement area.
- The Minister must consider any request from a hapū to investigate the performance of the Gisborne District Council, and must engage with the management entity if he or she decides to intervene in council operations.

These obligations, and the obligations of the Ministry for the Environment, are set out in the Deed of Agreement. They will become binding once the Deed has been ratified by Ngāti Porou and signed by both parties (31 October 2008), the Ngā Rohe Mana Moana o Ngā Hapū o Ngāti Porou Bill has been passed and Ngā Hapū o Ngāti Porou has established a management entity, as required by the Deed of Agreement.

### **5.4 Ministry support in carrying out your responsibilities**

The Ministry will support you in carrying out your statutory responsibilities, as well as informing and supporting your decision making on all aspects of environmental and climate change policy and administration.

As Minister for the Environment you are responsible for directing and overseeing the work of the Ministry for the Environment. The broad direction of our work over the next few years is set out in our *Statement of Intent 2008 – 2011*. We will discuss with you the activities under way and proposed for 2008/09.

### **5.5 Environmental Risk Management Authority**

The Environmental Risk Management Authority is a Crown entity for which you have responsibility. The Authority makes decisions about the introduction to New Zealand of hazardous substances and new organisms, including genetically modified organisms.



The Ministry for the Environment monitors the Authority's activities and performance on your behalf and also provides advice on appointments to the board of the authority.

The Environmental Risk Management Authority will provide a separate briefing about its activities.

## **5.6 Bioethics Council**

The Bioethics Council was set up as a Ministerial Advisory Committee, in response to the recommendations of the Royal Commission on Genetic Modification. It reports to the Government through the Minister for the Environment. The Council's role is to:

- provide independent advice to government on biotechnological issues involving significant cultural, ethical and spiritual dimensions
- promote and participate in public dialogue on cultural, ethical and spiritual aspects of biotechnology, and enable public participation in the Council's activities
- provide information on the cultural, ethical and spiritual aspects of biotechnology.

The Minister for the Environment appoints the members of the Bioethics Council, which is supported by a secretariat in the Ministry for the Environment. The terms of the chair, Dr Martin Wilkinson, and member Dr Waiora Port, expire on 17 December 2008. Both have agreed to remain in their current roles until they are reappointed or replaced. We will provide a briefing soon outlining the next steps in the appointment process.

The Minister also chairs the Ad Hoc Ministerial Co-ordination Group on Bioethics. Core members of the group are the Ministers of Health, Research Science and Technology, and Maori Affairs. Other ministers are invited on an as-needs basis.

Since it was established the Council has published reports on pre-birth testing, using human embryos for research, animal to human transplantation, use of human genes in other organisms, and nanotechnology.

The Bioethics Council will provide a separate briefing about its activities.

## 6. Issues that need consideration by the end of 2008

Issues for the Minister for the Environment to make decisions on:

- Central government involvement in water management issues in Canterbury
- A request, made in August, by Mighty River Power for the Minister for the Environment to intervene and call in the resource consent application for the company's Turitea wind farm project near Palmerston North
- Report to Cabinet on genetic modification by 1 December 2008 – work arising from July 2008 Cabinet decisions regarding management of genetic modification in New Zealand.
- Appointments to Toi Te Taiao: the Bioethics Council. The terms of the chair, Dr Martin Wilkinson, and member Dr Waiora Port, expire on 17 December 2008.
- A letter to your Indonesian counterpart seeking assistance in scheduling a meeting to conclude an environmental co-operation agreement. New Zealand plans to sign the ASEAN–Australia–New Zealand Free Trade Agreement on 17 December 2008 in the context of the East Asia Summit Leaders Meeting in Singapore. Labour and Environment cooperation agreements have been signed with the Philippines, but it has been difficult to conclude agreements with Indonesia.

Issues that might require a response from the Minister for the Environment:

- Re-instatement of the Aquaculture Legislation Amendment Bill (No 2), which had its first reading in September 2008 but has now lapsed
- Release of reports about the clean-up of New Zealand's most contaminated site, at Mapua near Nelson. These will include site status, potential health implications for residents of the area, and an independent review of the Ministry's management of the project. The reports are likely to generate significant public interest, particularly in Nelson
- Consideration of the draft business plan and accountability document of New Zealand Fast Forward Fund Ltd (due to shareholding Ministers by 5 December 2008.) Cabinet agreed that the Ministers for Economic Development; Research, Science and Technology; Environment; and Fisheries should be consulted as appropriate
- Release of the Dairying and Clean Streams Accord: Snapshot of Progress (Industry stakeholders expect it to be publicly released by December 2008.)
- Request to the Prime Minister to host and present the Govt<sup>3</sup> awards on Thursday 28 May 2009 at Parliament.

Issues for the Minister for Climate Change Issues:

- Confirmation of New Zealand's negotiation mandates for international climate change negotiations by the end of November 2008. Officials are preparing briefings for the Poznan UN climate change conference to be held 1–12 December 2008. Officials will provide a separate note that outlines the New Zealand negotiation mandate for this conference, as endorsed by Cabinet in May 2008.
- Decision about your attendance at the high-level segment of the Poznan UN climate change conference, to be held 10–12 December 2008.

# BRIEFING TO THE INCOMING GOVERNMENT 2008: ENVIRONMENTAL SUSTAINABILITY

## Purpose and introduction

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1. This paper focuses on several critical issues in the environmental area, as New Zealand is not yet capitalising on significant opportunities or managing significant risks as well as we could in those areas. The paper also sets out the importance of environmental sustainability for New Zealand's overall wellbeing, and discusses (at a high level) some of the choices to be made in addressing environmental sustainability and the capability improvements needed within central government.
2. Environmental sustainability has moved from the periphery to a central issue for New Zealand. The reason for this shift is not just a change in public or global opinion, but recognition that we have reached a crossroads: some environmental limits have been reached, and the full consequences of many legacy issues (like land contamination) are now becoming clear. The links between environmental sustainability and economic growth are now better understood, and a 'business as usual' approach will not deal with the increased threats or new opportunities. If New Zealand takes the wrong path, we risk lasting damage to our domestic wellbeing and international reputation.
3. This paper has been developed jointly by government agencies with an interest in natural resources and the environment, led by the Ministry for the Environment. Working collaboratively across the relevant agencies, Chief Executives have decided to establish new governance arrangements for a formalised Natural Resources Sector<sup>1</sup> to improve strategic leadership and collaboration. This has delivered better identification of the priority issues and alignment of good environmental outcomes with economic, social and cultural considerations. This paper complements other cross-departmental briefings on climate change and Auckland issues, as well as departmental briefings.

## Environmental sustainability and sustainable development

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4. A working definition of environmental sustainability is: "*A healthy environment, based on healthy functioning ecosystems, that provides for the wellbeing of society, now and in the future.*" Ecosystems include natural and human-altered ecosystems, and societal wellbeing includes social, cultural and economic wellbeing.
5. Environmental sustainability is pursued for more than environmental reasons. As in other policy areas, government policies relating to environmental sustainability should aim to maximise New Zealanders' overall wellbeing. Environmental, social, cultural and economic goals should interact in a way that delivers 'sustainable development', or as many benefits as possible across all objectives.
6. The aim of this approach is to maximise the overlaps and 'win-wins' between the various goals, rather than treating all decisions or interactions as trade-offs between values or outcomes. This will not always be possible, however, particularly at local levels, and so as a nation we will increasingly need to make difficult choices between values in order to maximise overall national benefit.

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<sup>1</sup> Comprising the Ministry for the Environment, Ministry of Agriculture and Forestry, Department of Conservation, Ministry of Fisheries, Ministry of Economic Development, Land Information New Zealand, Te Puni Kōkiri, Treasury, Department of Prime Minister and Cabinet, and the State Services Commission.

## **Environmental sustainability's importance to overall wellbeing**

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7. Environmental sustainability is crucial to New Zealand's overall wellbeing because of the biological basis to our export earnings. Primary production and tourism equate to about 17% of New Zealand's gross domestic product, and generate roughly \$29 billion in export earnings (2006 to 2007 figures). Running down New Zealand's natural capital would eventually damage the economy.
8. The ecosystem services people draw from the environment, such as food, fuel, water, and cultural connections, are also very important. Sometimes an economic value can be calculated for these – for example, the water supply services (drinking water, hydro-electricity and agricultural irrigation) of Te Papanui Conservation Park in Otago were valued at \$11 million a year in 2005 dollars. Other ecosystem services cannot be easily quantified in this way, yet are highly valuable.

### ***Social and cultural values***

9. The environment is central to New Zealand's national identity. Most New Zealanders value the environment highly and gain pleasure and recreation from it. This value is reflected in the groundswell of action on sustainability and climate change outside government. Environmental performance also has social consequences. For example, about 1,100 New Zealanders die prematurely each year from exposure to air pollution, and lack of safe drinking water is a risk to community health.
10. The environment and natural resources are also central to Māori identity and mana. Many Māori value an holistic relationship with the environment, balancing economic aspirations with their cultural values, and maintaining healthy natural resources for the benefit of present and future generations.

### ***Importance of environmental sustainability for economic growth***

11. The big economic issue at the heart of many environmental issues in New Zealand is not resource use in itself. The issue is ensuring that resources are used efficiently by those who value them most (in an economic, social or cultural sense) and that resource users face the costs they impose on others or the environment (i.e. pricing of externalities). New Zealand is having to confront these issues for the first time as we approach, or have already reached, some resource limits.
12. In the longer run, higher environmental standards and efficiencies are consistent with – and are likely to be essential for – economic growth. Higher standards will be needed to gain market premiums for our exports, and probably even to maintain market access. For some individual businesses, meeting higher standards in the short term may limit growth. Despite the current economic difficulties, however, it is important to keep a focus on New Zealand's longer-term interests.
13. Globally, environmental issues are driving fundamental changes in business conditions and creating new opportunities. Much of New Zealand's international competitive advantage lies in the quality and quantity of our natural resources and in our 'clean green' image. Because of our favourable image, reputation for integrity, natural resource base and related capabilities, New Zealand is well placed to take advantage of these opportunities, but the benefits could be squandered if we degrade the environment in pursuit of higher short-term production.
14. To take up the opportunities, New Zealand (particularly business) needs to be vigilant about the current and likely effects of changing consumer preferences, rising world prices for raw materials, energy and food security concerns, carbon pricing in the global and domestic economy, and other emerging issues. The growing international trend towards the use of environmentally focused technical

barriers to trade could affect our exports. Already, more consumer attention is being given to water footprints and biodiversity impacts as well as to carbon footprints.

### **The most critical issues for New Zealand**

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15. Departments in the natural resources sector have identified a short-list of critical issues related to New Zealand's move towards environmental sustainability. These issues are significant because they come with risks and unrealised opportunities that could affect national wellbeing, and because New Zealand is not yet performing as well as it could in these areas. The critical issues have proved difficult to address in the past because potential solutions are complex, costly and/or contentious, due to the public and private interests that will be affected.
16. The short-list includes both pressures on the environment, and issues arising from the policy or management arrangements for addressing those pressures:
  - a. The role of the Resource Management Act in providing for environmental and socio-economic outcomes, and allocating scarce resources
  - b. Developing natural resources policy and management arrangements that better reflect the Treaty of Waitangi relationship, and managing some emerging issues with the use of natural resources in Treaty settlements
  - c. Fresh water quality decline, demand pressures and allocation
  - d. Pressures on biodiversity and ecosystems
  - e. Environmental pressures and allocation issues for New Zealand's oceans, particularly the near-shore marine environment, and
  - f. Meeting New Zealand's international climate change obligations, reducing greenhouse gas emissions and adapting to climate change (dealt with in the briefing on climate change).
17. The Ministry for the Environment's reporting on the state of the environment suggests that the most significant issues are freshwater consumption and land use intensification in some regions, water quality in many catchments, and greenhouse gas emissions. The trends indicate that, if we do not change current paths, we risk hitting environmental limits or effects that are irreversible or very costly to remedy.
18. The critical issues are all complex and interconnected. Several underlying themes have emerged from examining these issues:
  - a. Central government has multiple interests and roles in any environmental issue, but is often not clear (or strategic) about the high-level outcomes it is seeking or the role it is exercising. This lack of clarity about outcomes can contribute to deferral of difficult but necessary decisions and failure to prioritise issues or problems, which tends to magnify problems over time.
  - b. New Zealand has a highly devolved resource management system, which makes it difficult to apply national direction and balance national and local costs and benefits. Many councils are leaders in sustainable development, but others face challenges in resourcing, capability and leadership. Councils are required to make many difficult decisions, but have not always been well provided with central government guidance on how to approach these.
  - c. The need for greater national strategy or direction does not detract from the need for environmental management responses and solutions to be appropriate for – and adaptable to – local circumstances. Too many special-purpose regional arrangements can, however, detract from national strategy and create cumulative effects and costs.

- d. Increased resource competition and environmental pressures are stressing existing resource allocation mechanisms. A 'first-in first-served' approach does not provide well for efficient allocation of scarce resources or management of competing uses. Legislation already enables the development of alternatives to first-in first-served, but there has been little trialling or implementation of these – with the notable exception of fisheries.
- e. Addressing the role, rights and interests of Māori and iwi, particularly at the regional level, is critical for robust policy and well-functioning environmental management systems.

### **Issue A: Resource Management Act**

19. The Resource Management Act 1991 (RMA) is the principal legislation for managing New Zealand's environment and allocating most natural resources. Effective and efficient operation of the RMA is critical for both environmental and socio-economic outcomes. The RMA is, however, frequently criticised both for unnecessary delays and compliance costs that hinder economic growth and major infrastructure development, and for failing to protect the environment, given the negative trend in several key environmental indicators.
20. This raises a question as to whether there are problems with the RMA's implementation, its decision-making processes, or its fundamental principles. Some common complaints about the RMA are anecdotal and not supported by evidence. Departments do, however, consider that there are some real practical issues with both the provisions of the RMA and its implementation by central and local government.
21. Devolved RMA decision-making has exacerbated capacity issues in local government, and led to variability in planning controls and the speed and quality of consent processing. It is often difficult, both practically and politically, for councils to factor national benefits, priorities and strategies into planning and decision-making when the costs of decisions fall locally. Central government has recently started to make more use of the RMA instruments that offer greater national direction, involvement and guidance (including those added in 2005). There is, however, no overall strategy for the use of these powers, which creates a lack of certainty for all parties about when and how central government will intervene.
22. Good RMA implementation relies on high quality statutory plans. Quicker final decisions are needed on both statutory plans and resource consents, especially for major infrastructure projects (although the interface with other legislation can also be a factor in delays). Cumbersome planning processes make it harder for councils to respond quickly to changing conditions or new evidence. Broad rights of public participation and multiple appeals on consents and plans can cause considerable delays in RMA decision-making. This suggests a need for reassessment of the balance between public participation and appeal rights on the one hand, and efficiency, effectiveness and responsiveness on the other.
23. Under current RMA practice, effective and efficient resource allocation is not occurring and new or expanding high-value uses are not being provided for. Problems are most keenly felt where resources are at or approaching full allocation in some areas: fresh water, coastal space and air-sheds. The current first-in first-served system evolved from case law at a time when there was less resource competition and no explicit central government direction. The 2005 RMA amendments enabled councils to develop alternative forms of resource allocation, but it is still too early to determine how councils are responding.

24. There is little evidence that decision makers routinely make skewed decisions because of the balance of the sustainable management purpose and principles of the RMA. It is, therefore, uncertain whether some economic concerns could be addressed by re-evaluating the principles of the RMA and giving more weight to economic factors and the benefits of infrastructure. Any alterations could range from minor changes to a more fundamental review, which would be contentious and create a period of uncertainty as new case law developed.
25. Improvements to the operation of the RMA could be achieved by strengthening the role of central government and being more strategic about the use of central government's powers, especially on matters of national importance such as major infrastructure projects. Gains would also be made from streamlining the processes for planning and consenting, and from more leadership by central government on alternatives (including market-based approaches) to current allocation models. Further process efficiencies might also be gained from improving alignment between the RMA and related legislation such as the Local Government Act, Building Act, Public Works Act, Conservation Act, Electricity Act and Fisheries Act.

### ***Issue B: Reflecting the Treaty relationship in natural resources policy***

26. The Crown-Māori relationship, based on the Treaty of Waitangi, is important for New Zealand's social cohesion and prosperity. Iwi and Māori have a strong interest in environmental policy, and natural resources are an increasing focus in historical Treaty settlements and foreshore and seabed negotiations. This reflects the importance of natural resources to Māori economic and cultural wellbeing. Many Māori are also dissatisfied with the roles available to them in resource management (including setting outcomes) and the level of recognition of their rights and interests.
27. The process of engagement with iwi and Māori on significant areas of natural resource policy has sometimes created challenges. The Crown does not always have an established position on sensitive matters like the appropriate management role for iwi and the nature and extent of Māori rights and interests. The government's objectives and interests are not clearly articulated in some major policy processes. This lack of clarity can sometimes make it difficult to engage effectively with Māori, who operate across a number of issues as Treaty partner, rights holders, kaitiaki, resource users, prospective developers, and/or litigants.
28. These uncertainties have contributed to delays in some policy areas where difficult decisions are needed, like fresh water. Delay could be turned into opportunity for progress, through a consideration of the nature and extent of Māori rights and interests alongside exploration of the full range of policy tools (such as market mechanisms) and the interests of others. To date, this has often been deferred because of perceived Treaty and litigation risks.
29. These risks and delays in policy development can encourage the parties to try to resolve contemporary issues through the settlement of historical Treaty claims. Some recent Treaty claim settlements and foreshore and seabed agreements have included new forms of redress, including mechanisms to include iwi in aspects of local decision-making. The suite of new tools has many benefits, but recent negotiations have tested – and at times moved beyond – the policy framework for use of natural resources in Treaty settlements established in 1997-98.
30. Negotiations create an opportunity for solutions tailored to local circumstances and iwi aspirations. Flexibility is important for development of appropriate redress, but mechanisms negotiated on a case-by-case basis may conflict with or undermine existing national policy objectives, or pre-empt the development of national policy. The case-by-case approach can also increase the risk of high implementation

costs, unintended precedents and cumulative effects, inconsistent and complicated management regimes, and equity concerns between iwi. The deadline for settling historical Treaty claims adds to the tension between maintaining the current momentum on settlements and developing national policy on natural resources.

31. Councils are often left to handle, with limited central government support, the difficult questions (such as allocation) which the Crown has not yet resolved – yet local government's Treaty obligations are limited. Local government performance and RMA implementation with regard to Māori interests has improved over the years, but the concerns of some iwi can push local issues into a Treaty settlement or foreshore and seabed context.
32. Progress is being made on resolving some outstanding issues, but we may well be at a crossroads. There is an opportunity to deal with issues through high-level dialogue in a more proactive and coherent way while maintaining flexibility in the relationship, which could result in a more strategic pursuit of shared outcomes for New Zealand. On the other side there is a risk that, if we lose momentum or fail to deliver on expectations, we could revert to a more adversarial climate that diverts resources and energy away from a collaborative relationship.
33. One way to maintain the current progress is to continue engagement and wide-ranging dialogue with iwi leaders on major policy areas like climate change and water, and on natural resources generally. Some senior iwi leaders are likely to seek early engagement on these matters. A greater alignment between natural resources policy and Treaty settlement processes is also needed, to support the timely settlement of remaining historical Treaty claims in a coherent and consistent way. The Natural Resources Sector considers that more use of national direction and policy development (including policy on the roles, rights and interests of iwi and Māori, and further support for local government) to address resource management issues common to all iwi would smooth the settlement process for all parties.

### ***Issue C: Fresh water***

34. Fresh water is fundamental to the present and future environmental, cultural, social and economic well-being of New Zealand – and these values can easily come into conflict. Our ecosystems, primary producers, community health and cultural values depend on water. Water gives us a competitive advantage in primary production, energy generation and tourism. By international standards, our water supplies are abundant and of relatively good quality, but performing better than most of our peers may not be enough for New Zealand's long-term prosperity.
35. Freshwater quality is declining, particularly in rural lowland rivers, streams and groundwaters (with consequent negative effects on the near-shore coastal environment). One-third of our lakes have poor water quality, and 40% of monitored groundwaters have nitrate levels raised by land use. Water is unsafe for stock to drink at 75% of sites in the Waikato region. Because of the long time lags in hydrological systems, water quality in some of our catchments will get worse before it gets better, even if we introduce best practice management now.
36. Addressing water quality is not simple, because environmental deterioration is closely linked to urban and rural land use intensification, and so to economic growth. Poor water quality is much more than an environmental problem – it will be a constraint on economic opportunities, create additional costs (e.g. for treatment of drinking water), and be a continuing focus of community concern. Nevertheless, the decisions needed to improve water quality in the long term may have costs for primary producers in the short to medium term.



37. In some regions, catchments have been over-allocated or are close to full allocation, resulting in potential users being denied access to water and foregone economic opportunities. Limited use of the mechanisms for re-allocating water and promoting efficient use (including urban and rural demand management) means that water is not necessarily going to its most valued uses, and this constrains economic growth.
38. New Zealand is at grave risk of further environmental damage and squandering our natural advantages if this situation does not change. Several factors amplify the risks:
- a. There is not yet a wide public understanding of how critical water issues are for New Zealand's long-term wellbeing.
  - b. Restoring water quality is expensive and time-consuming (as demonstrated by work on Lake Taupo, Rotorua Lakes and the Waikato River).
  - c. Changes in land use, particularly from forestry or dry stock farming to dairying, are being made before there are effective plans to address additional impacts on water.
  - d. There is increasing international scrutiny of New Zealand's environmental performance. Our trade may be affected if overseas consumers react to real or perceived issues about poor water quality, waste or over-allocation.
  - e. Climate change will probably increase the frequency and intensity of droughts and floods.
  - f. In some parts of New Zealand, we have already captured or allocated the readily accessible water. Further economic development will require re-allocation to higher value uses and/or more water storage and distribution systems to deal with variability in when and where water is available.
  - g. Relevant science research capacity has declined by 35-40% over the last decade or so, and it is difficult for central and local government to get access to science that will support good decision-making on water issues.
39. Inertia by some local authorities in developing water plans and tackling non-compliance with consents has accentuated problems. In the case of Environment Canterbury, officials are concerned that successful challenges to its approach to water allocation create a risk of system failure and loss of authority as resource manager for the region. Some of the inertia, however, arises from lack of direction from central government. National policy development has been hampered by delays in dealing with Māori rights and interests in water. In general, disquiet in parts of the community about anything that looks like 'privatisation' of water has created a disincentive to trialling new approaches to allocation.
40. Officials consider that it is imperative to take further action to address both quality and allocation issues, so that we make better use of our water in ways that increase growth without compromising environmental outcomes. Such action could build on existing work programmes by putting more focus on central government leadership and powers; development of interventions tailored to local quality, allocation, efficiency or governance issues; support for local government through development of coherent national outcomes and policy, and 'off-the-shelf' management tools; and development of new models (including economic instruments) for allocation and re-allocation of water. As noted above, the Natural Resources Sector also recommends keeping up the momentum of engagement with iwi leaders on water issues.

#### ***Issue D: Biodiversity***

41. Healthy functioning ecosystems, both natural and human-altered, underpin our economy and are essential to social and cultural wellbeing. New Zealand has a

responsibility to maintain our unique and globally important genetic and environmental resource. Indigenous biodiversity is also a draw-card for overseas tourism, and a major element of New Zealand's '100% Pure' marketing image.

42. These critical resources are, however, under significant pressure and are challenging to manage. New Zealand is the last major habitable landmass to be settled by humans, so the rate of decline of our indigenous biodiversity is high compared to most countries – and some level of decline has, perhaps, been unavoidable.
43. In 2000, the New Zealand Biodiversity Strategy set an ambitious goal of halting the decline of indigenous biodiversity. Substantial progress has been made in some areas, including intensive management in mainland islands, eradication of pests on offshore islands, creation of marine reserves and benthic protection areas, and gains on private land.
44. But the goal of 'halting the decline' is not being met. There have been serious declines in the status of many threatened species and ecosystems, continuing spread of pest fish and aquatic weeds, growing numbers of weed species, and ongoing loss of rare and threatened biodiversity on private lands. Significant modification and pollution of harbours and estuaries (which are important breeding grounds for many species, including some harvested fish stocks) is likely to be having a major impact on coastal marine biodiversity.
45. Exotic animal pests and weeds are a significant threat to indigenous and primary production systems, especially on land. It takes a lot of resources to manage pests and weeds, and to stop them from entering the country. Biosecurity is an issue of permanent urgency. If potential incursions are not stopped at the borders and threats are not addressed as soon as they become apparent, the costs soon escalate. Additional pressures on biodiversity include conversion of native habitat to other uses; water pollution, over-abstraction and disruption of natural water flows; terrestrial runoff and sedimentation of coastal waters; impacts of fishing; climate change; and the effect of land use on soils and slope stability.
46. The complexity and scale of the biodiversity management challenge requires a collaborative approach across government and society and a systems approach. Yet the governance structures for policy-making, decision-making and implementation are sometimes disconnected and incoherent, and responsibilities can be split across several local and central government agencies.
47. Effective implementation may be hampered by inadequate capacity and capability within agencies. This is particularly apparent in the different responses by local authorities to their responsibilities to manage biodiversity on private land, and disparities in the effectiveness of their programmes. Lack of information about ecosystem functioning, particularly in the marine environment, hampers development of adequate responses.
48. Officials consider more action is needed if we are to halt or slow the decline in the health and functioning of indigenous ecosystems and ensure the continuing health of productive systems. Intensive management is not necessary or justified for all places or species. More effort and resources may, however, be needed to achieve particular thresholds of restoration and protection. Greater prioritisation and national direction would help to focus effort. Better approaches, including incentives, would encourage biodiversity conservation outside government.

### ***Issue E: Marine environment***

49. New Zealand's marine environment is an integral part of our national identity and contributes significantly to our economy (through ecosystem services, tourism,

fishing and aquaculture, oil and gas, transport, and telecommunication links). A lack of outcomes or strategy to guide how the marine environment is managed compromises our ability to ensure environmental integrity while providing for different uses and values.

50. The ocean is a large interconnected ecosystem but different activities and values are managed under different laws and approaches, which are not always well integrated. In particular, the disconnected management of environmental effects in the ocean risks damage to the environment – especially near to shore. It is difficult to effectively manage cumulative environmental effects, and consistent standards or restrictions are not applied across all activities. These factors could also constrain further economic growth from New Zealand's extensive marine resources.
51. Management under the RMA (which applies out to 12 nautical miles from shore) is generally poor at factoring adverse effects on fishing and marine ecosystems into 'upstream' consents and plans. As a result sensitive fisheries habitats, ecosystems and some activities suffer from sedimentation and pollution caused by land use, and poor management of other coastal activities like dredging. Fisheries management also needs to better address adverse effects on the environment. There are management gaps outside the 12 nautical mile limit in the Exclusive Economic Zone (EEZ), where we lack a comprehensive biodiversity protection tool and legislation to manage the environmental effects of some activities.
52. There is an increasing demand for coastal marine space and resources across a range of activities and values, but some of our tools to manage demand are not adequate. Allocation difficulties are intensifying – illustrated most strongly by poor progress in aquaculture development in recent years. These development pressures will also grow in EEZ 'hotspots' as more oil and gas exploration and seabed mining is proposed. In addition, competition between the recreational, customary and commercial sectors is difficult to manage in some fisheries.
53. It can be hard to establish new uses such as marine reserves or aquaculture, even if they are the highest value use (in either a national or local sense) if they will affect other values or existing uses. At the same time, other interests such as recreation, amenity values and fishing can get squeezed out by activities that require exclusive use of space, such as marinas and marine farms. These allocation difficulties discourage investment and economic growth and can also result in unnecessary cost, with people using the courts, consent processes and political lobbying to defend their real or perceived entitlements.
54. New Zealand's marine area is the sixth largest in the world, and about 14 times bigger than our land mass. This makes it difficult and expensive to obtain information. The lack of comprehensive information is a major impediment to good decision-making in the marine environment, and can exacerbate risks and delay decisions. These gaps in our knowledge mean the marine environment should be managed in a precautionary manner, with the ability to make adaptive management decisions, but this can conflict with economic drivers. The collection, management and use of information by government agencies can be uncoordinated and overlapping. Information available about fish stocks is limited, and even less is known about the impacts of extractive use or some land based activities on the marine environment. A lack of comprehensive monitoring and reporting means that government and stakeholders cannot effectively analyse management performance, reducing the ability to learn from experience.
55. A suggested first step in addressing these issues is to elaborate some national outcomes for New Zealand's marine environment and its uses. These outcomes would form the basis for reviewing the overall approach to marine management,

particularly the alignment between different regimes and the new tools needed to address identified problems and achieve the outcomes. Drafting of legislation to regulate the environmental effects of activities in the EEZ was well advanced under the previous government; progressing that policy would fill a large management gap. Any review of RMA provisions and implementation could also look at how to improve the management of environmental effects in coastal waters, improve resource allocation in the coastal marine area, and assist local government to control land-based effects on the sea more effectively.

## Addressing environmental sustainability

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56. Addressing environmental sustainability (and particularly the critical issues) requires a more strategic approach, better articulation of the national interest, a willingness to tackle difficult issues, good governance, good information, and partnerships outside central government. The approach must also be dynamic, so it is able to anticipate and respond to major or sudden changes in circumstances.
57. The need for change in how we consider and set policy for environmental sustainability, within the paradigm of sustainable development, will put greater demands on public policy processes and the government agencies involved. Recognising this, the agencies in the natural resources sector have begun to adopt a more collaborative approach, to raise the quality of advice and effectiveness of implementation, and to ensure that interventions target the government's priorities.

## Outcomes and Targets

58. As part of a move to take a more strategic and networked approach, officials have developed a set of potential outcomes for New Zealand. These describe a desired 'state of the environment' rather than attempting to capture all relevant values:
  - a. *Atmosphere*: Air is fit to breathe and greenhouse gas and ozone depleting substance emissions meet international agreements.
  - b. *Land*: Healthy and productive soils, contamination avoided or mitigated, and erosion by human activities minimised.
  - c. *Fresh water*: The quality of fresh water meets the range of needs and values for which it is required while supporting healthy and functioning ecosystems; water levels and flows are sufficient to support healthy and functioning ecosystems and meet the range of needs and values for which it is required.
  - d. *Marine*: The state of the sea floor and quality of marine waters supports healthy and functioning ecosystems.
  - e. *Biodiversity*: Ecosystem composition and processes are maintained or enhanced, human-induced extinctions are avoided and human-induced declines are minimised; genetic resources of introduced species are maintained to meet the range of needs and values for which they are required.
59. Outcomes can be given life by setting achievable but ambitious targets, but poorly chosen targets can push policy in the wrong direction. Targets reflect high-level choices among economic, social, cultural and environmental values. They need to be revisited from time to time, to maintain a fit with overall goals and compatibility with other targets. An initial assessment suggests that the current target package is patchy, and developed mostly to meet sectoral rather than broader outcomes. There would be benefit in re-examining New Zealand's current targets to assess whether they and their associated policies will deliver on New Zealand's environmental sustainability goals.

### **Policy frameworks and considerations**

60. In addition to the principle of maximising overall wellbeing for New Zealand, we see some other important considerations or principles that should underpin environmental policy:
- a. Environmental systems and issues are highly interdependent and complex, which mandates a more sophisticated policy approach.
  - b. Effective and efficient policy responses tend to be based on a combination of different interventions.
  - c. Economic incentives – particularly pricing of externalities (the negative effects of resource use that fall on others or the environment) or ‘polluter pays’ – create a strong incentive for more sustainable behaviour.
61. Approaches to environmental management can be placed on a spectrum, from a strategic or systems approach to a more ad hoc approach. Because the critical issues are complex and interconnected, New Zealand’s approach needs to be more strategic and seek more integrated outcomes. There will always need to be a reactive response to some issues, but doing so too often can polarise economic and environmental values, and encourage adversarial positioning and pursuit of short-term opportunities.
62. New Zealand has struggled with difficult decisions requiring value judgments or potential trade-offs partly because we lack high-level national outcomes, strategies, bottom lines, standards or planning frameworks to inform those decisions. (These factors also make it hard to manage cumulative effects on the environment.) Decisions involving value judgments will always have a political element, but it is important for these decisions to be constrained by bottom lines (environmental, economic, social and cultural) which protect overall wellbeing, and to be informed by national objectives and strategies, advantages, costs, and risks.
63. The government can use a wide range of tools such as legislation, regulation, markets, incentives, rents or user charges, verification services, standards, information, voluntary mechanisms and co-management. No single tool will suffice; the challenge is to apply the combination which is most efficient at getting the greatest overall value (usually a mix of economic and non-monetary values) from resources while also providing for the environment, managing equity issues, and not creating excessive transaction costs. The critical issues suggest a need for a better combination of regulation and market settings to manage natural resources, as this combination has often been most effective at managing resource pressures and promoting efficient use.
64. Generally speaking, putting a price on resources that reflects the cost to society of their use increases overall wellbeing. Use of ‘public’ resources like water and the atmosphere (as a sink for pollutants) has been underpriced in the past. Users who do not face the costs of their impacts on others or the environment lack an economic incentive to change their behaviour. The response of firms and individuals to economic incentives like the pricing of externalities and scarcity-driven price increases can drive reduced consumption and the development of alternative technologies.

### **Strengthening government capability**

65. A strategic approach to policy requires greater performance, information and resources from central government. A more collaborative approach is needed across central government to ensure that existing capability and information is used effectively, and that greater capability is developed. Stronger sector leadership will ensure that environmental outcomes are well articulated and inform decisions

across government. As mentioned above, Chief Executives have decided to establish new governance arrangements for a formalised Natural Resources Sector to improve strategic leadership and collaboration across agencies.

66. Unlike economic and social policy, environmental decision-making in New Zealand is not well supported by a strong evidence base. In particular, we lack the integrated environmental and economic information needed to systematically assess the effects of policy on resource efficiency, the environment, economic activity and productivity. This makes it difficult to demonstrate New Zealand's environmental sustainability at a national or sectoral level. To support good decision-making, we need to strengthen the existing environmental-economic accounts and other related data, and build capability across government to use that information. The evidence base should be a key component of the official statistics system, shared across government, and focused on the current and future priorities for New Zealand.
67. Research, science and technology is central to good environmental management. Science provides much of the data, information and tools needed to manage the environment effectively. There has been a decline over the last ten to twelve years in environmental science capacity based in science institutions and working on research related to some of the critical issues, largely because funding has stayed flat over that period (for example, research staffing on freshwater science has declined by 35-40%). Further, research and information management in some areas is not well coordinated and departments and councils have found it difficult to engage with the environmental part of the science and research sector. These factors hinder evidence-based policy and informed discussions.
68. The government cannot achieve outcomes on its own. Central government also needs capability in change management, to help to develop public understanding of the importance of environmental sustainability for New Zealand's wellbeing, and the significance of some of the challenges we face. If New Zealand is to maintain economic growth without worsening our environmental performance (at both the macro level and within businesses, farms and households) this will require a change in attitudes and practices. Change will take time, encouragement, information and incentives. This message may be harder to convey in a time of economic stress, when attention is focused on socio-economic concerns and capital for investment in new technologies is harder to come by – but the current climate may also support a constituency for change. Community acceptance of new sustainable technologies (such as the shift from largely 'invisible' thermal generation to much more visible wind or hydro power) will also require buy-in to a longer-term national goal.

## Conclusions

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69. Our analysis has identified six critical environmental pressures and management issues (see paragraphs 15-18): climate change, fresh water, the Resource Management Act, the Treaty of Waitangi relationship, biodiversity and marine. Some common elements are seen across these issues – downward environmental trends, tensions caused when trying to articulate national direction or national interest in our highly devolved resource management system, the inability of 'first-in first-served' allocation systems to deliver scarce resources to their most valuable or valued uses, and the need to further consider the role of Māori in resource management. Another theme is the need to explore the use of economic tools and incentives, within regulated environmental limits, to encourage efficiency and reallocation. Investigation of such tools creates an opportunity to further explore the role, rights and interests of Māori.

70. For some of these issues (such as management of certain water-bodies) we do not have much time before environmental pressures start to hurt the economy. While there is a need for greater urgency, the issues are probably not best addressed by hastily developing separate solutions for each. Rather, New Zealand's long-term interests are likely to be served by a more strategic approach to the environment and its intersections with our economic, social and cultural wellbeings. Decisions will be much better informed, and the inevitable value judgments will be much more transparent, when we have a process for setting clear outcomes, targets and standards. In order to protect our overall wellbeing, we also need more robust bottom-lines which deliver for economic, social and cultural needs as well as environmental values.
71. This need for a strategic approach presents a challenge for departments to work at a higher level, and for the government to build a constituency around the real value of New Zealand's environment and the need for change.

## Recommendations

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72. We recommend you:
- a. **Note** the information in this briefing about the importance of environmental sustainability and the critical issues in the environmental sector.
  - b. **Note** that the portfolio and overview briefings of the departments in the sector provide further relevant information, and will also canvass issues beyond the environmental dimension of sustainability.
  - c. **Advise** Chief Executives of any further information you require.

Minister for Climate Change Issues and Minister for the Environment  
Minister of Finance and Minister for Infrastructure  
Minister of Energy and Resources  
Minister of Agriculture and Minister of Forestry  
Minister of Foreign Affairs  
Minister of Conservation  
Minister of Research, Science and Technology

## **BRIEFING FOR INCOMING MINISTERS: ALL-OF-GOVERNMENT CLIMATE CHANGE PROGRAMME**

### **Purpose**

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1. To provide an overview of the climate change work programme, including issues and decisions Ministers must consider in the near future. Detailed information on individual areas of the climate change programme will be provided through individual departmental briefings.

### **Executive Summary**

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2. Human-caused emissions of greenhouse gases are causing the atmosphere to warm at an unprecedented rate. The consequent climate change will have significant impacts on the environment and our way of life.
3. New Zealand must both adapt to climate change and contribute to international efforts to reduce greenhouse gas emissions.
4. Climate change policy is inherently complex, difficult and contentious. It requires long term and significant changes to behaviour across the economy, with some sectors being affected more than others.
5. The current global financial crisis will have implications for international and domestic climate change policy. This issue will be examined at coming international negotiations, and through the current review of New Zealand's domestic work programme.
6. New Zealand produces only a small proportion of global greenhouse emissions (0.2 per cent), although our per-capita emissions are high by international standards. New Zealand's emissions profile is different from other developed countries, with almost half of our emissions coming from agriculture.
7. The Kyoto Protocol commits New Zealand to reducing its greenhouse gas emissions to 1990 levels, on average, over the period 2008 to 2012, or to take responsibility for any emissions above this level if it cannot meet the target. Emissions are currently about 25 per cent above 1990 levels.
8. Climate change policy is developed through a cross-government process, led by the Ministry for the Environment. The cornerstone policy is the New Zealand Emissions Trading Scheme (NZ ETS), which has recently passed into law.



9. This legislation provides a sound framework for the NZ ETS that can be adapted and changed as needed. Ensuring all major-emitting sectors pay at least some proportion of the cost of their emissions creates a strong incentive to reduce emissions.
10. Key implementation challenges are to make the NZ ETS fully operational, keep it as simple as possible, and to be responsive if and when problems arise. Other key work areas in the climate change programme include:
- international negotiations and reporting
  - adapting to the effects of climate change
  - delivering the Sustainable Land Management and Climate Change Plan of Action
  - transitioning to a more renewable and efficient low carbon energy sector (including transport)
  - research to assist the identification and understanding of climate change impacts on New Zealand
  - technology development to assist our response and to capitalise on opportunities.
11. The future shape of climate change policy will be influenced by:
- the outcome of international negotiations on post- 2012 global emissions reduction targets
  - increased understanding of the science and socio-economics of climate change
  - the policy settings for the implementation of the NZ ETS
  - the best mix of the NZ ETS with other complementary measures to reduce emissions
  - decisions on the future objectives and scope of the climate change work programme.
12. The Ministry for the Environment is coordinating a cross-government review of the climate change programme to ensure it is well co-ordinated, appropriately resourced, able to deliver the expected benefits to New Zealand, and minimises adverse impacts. The review will consider priorities for the climate change programme and the best mix of initiatives within it. The review will also take into account the effects of the NZ ETS.
13. The next milestone is a report to Cabinet in February 2009 with the proposed cross government climate change objectives and the review plan, so Ministers can consider the scope and timing for the rest of the review process.

## **Background**

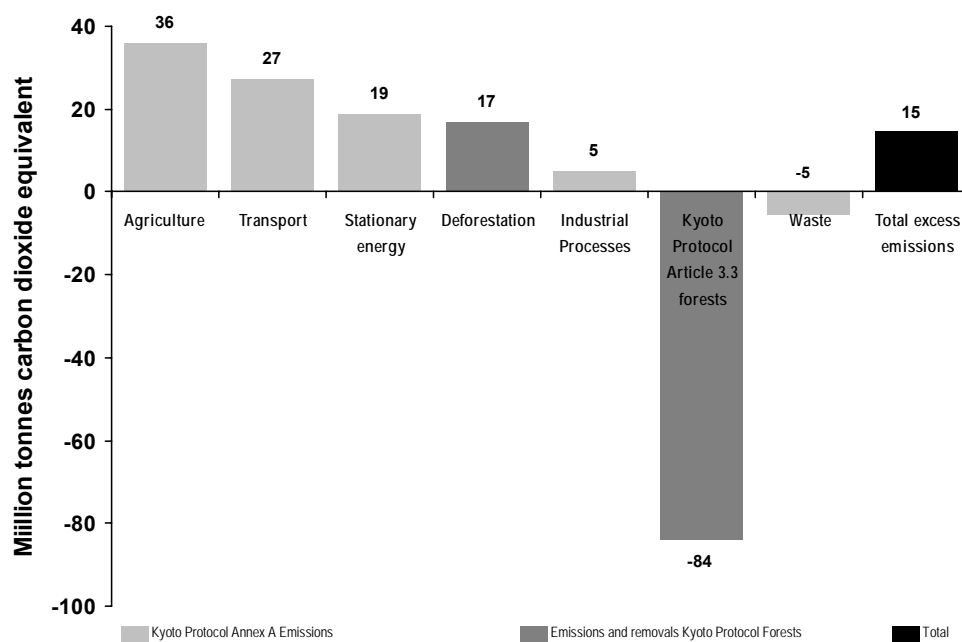
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14. Human-caused emissions of greenhouse gases are causing the atmosphere to warm at an unprecedented rate. New Zealand average surface air temperature has already increased by 0.9°C since early last century. It is projected to increase, compared to 1990 levels, about a further 1°C by around 2040 and about 2°C by around 2090.

*Why do we need to take action?*

15. If global greenhouse gas emissions are not reduced significantly, the impacts of climate change are likely to get worse, and the costs more severe. The costs of taking action now are less than the costs of responding later.
16. Deciding on what level of greenhouse gas emissions, and the consequent temperature effects, represents "dangerous climate change" is a political and societal judgment.
17. International scientific advice has produced a range of emission reduction scenarios with different global warming outcomes. United Nations negotiations have recognised that deep cuts in global emissions will be required, and have gravitated towards the lowest of the current scenarios for developed countries<sup>1</sup>; but this has not yet been agreed.
18. The chart below shows the projected change in emissions by sector from 1990 to the first commitment period of the Kyoto Protocol (2008-2012). The change is the total change for the five years of the first commitment period relative to emissions during 1990. The chart also shows removals by Article 3.3 Kyoto Protocol forests and projected emissions from deforestation during the first commitment period.

Projected change in emissions and removals from 1990 to the first commitment period of the Kyoto Protocol (2008-2012)



19. New Zealand is unusual amongst developed nations in the share of greenhouse gas emissions that comes from agriculture. Nearly half of New Zealand's total

<sup>1</sup> This scenario has emissions reductions by developed countries in aggregate of between 25 and 40 percent below 1990 levels by 2020, and the growth in aggregate developing country emissions held to 15-30 percent below baseline at 2020. Followed by subsequent deeper emission reductions, this would set a course over the longer term for atmospheric concentrations to stabilise at 450 ppmv, with a corresponding 'best estimate' global temperature change of 2.0 to 2.4 degrees.

emissions are produced by agriculture, predominantly methane from farm animals and nitrous oxide from soils and fertilisers.

20. However, the principal growth in New Zealand's emissions comes from increased carbon dioxide, primarily from the energy sector which has grown by almost 45 per cent relative to 1990 emissions. Most of this increase has come from transport (65% increase in emissions) and electricity generation (138% increase in emissions).
21. Even with current and future actions to reduce emissions, we also need to adapt to the effects of emissions that have already occurred.

#### *Environmental impacts*

22. The projected environmental impacts of climate change in New Zealand include:
  - sea level rise – leading to increased coastal erosion and inundation, additional flooding from storm surge, salination of groundwater and drainage problems
  - more extreme weather events, including droughts, heavy rainfall, severe winds and storms, and floods
  - changed rainfall patterns – more rain in the west and south of New Zealand and less in the east and north
  - significant impacts on components of New Zealand's natural heritage and biodiversity, such as valley glaciers and snowfields, and extinction or reduction in the numbers and range of indigenous plants and animals
  - increased risk from tropical pests and diseases that thrive in warmer temperatures and further spread of existing exotic pest species.

#### *Economic and social impacts*

23. While there is significant uncertainty about the precise costs of inaction, climate change will have significant implications for the New Zealand and global economies.
24. Climate change will affect our society and way of life. For example, changing weather conditions may make some areas more or less attractive to live, or change patterns of economic production. Changing rainfall patterns and droughts may affect the water supplies of some communities, or make water-intensive land use marginal in some areas. The cost of energy (electricity and fossil fuels) may increase, and transport services and some consumer products may rise in price.
25. New Zealand's economy is strongly dependent on natural systems. For example, our agricultural, forestry and horticultural sectors are supported by ample water supplies, a temperate climate, fertile soils, and a protective cover of vegetation on steep slopes. Climate change may mean growing seasons increase, or vary from the current norms, and extreme weather events will have direct effects on the primary production sector.
26. New Zealand's biodiversity and landscapes underpin our international brands of "100% Pure" and "clean and green", and our natural environment is a primary attraction for international visitors. Many elements of New Zealand's natural heritage, such as alpine areas and the coast, are particularly vulnerable to the effects of climate change.

27. Climate change will affect “ecosystem services” provided by the natural world. For example, changed rainfall patterns may alter the capacity of New Zealand rivers to supply freshwater and disperse pollution. Extreme climatic events such as floods, droughts and storms, which are expected to increase in intensity and frequency, also have a direct economic cost on the primary sector and infrastructure.
28. Climate change will also affect New Zealand industries and occupations, through changing conditions for sectors such as agriculture, fisheries and forestry, or the effects of mitigation policies and technological changes. The cost of energy (electricity and fossil fuels) may increase, and transport services and some consumer products may rise in price. This may affect New Zealand’s international competitiveness in either a positive or negative way, depending on the impacts and policies in other countries.
29. New Zealand is also unlikely to escape the consequences of climate change in other parts of the globe. This includes the likely inundation of Asian mega-deltas, severe water scarcity in parts of Asia, or, closer to home, the possibility of environmental refugees from low-lying Pacific islands.

#### *Impacts on Māori*

30. The natural environment is central to Māori values, beliefs and identity. For centuries Māori have had a strong connection to the natural world through their resource management practices. Climate change is now affecting these practices and the relationship of Māori with the environment and their use of natural resources.
31. Māori are seeking to achieve environmental and sustainability aspirations through the development and management of natural resources. The Māori asset base is concentrated in primary production and processing and is dependent on the natural resources of land, water and fisheries. For Māori, the development and management of these resources requires a balance between their economic and cultural sustainability aspirations.

#### *Opportunities*

32. A changing climate creates opportunities as well as risks. These include opportunities resulting directly from a changing climate, for example, the ability to grow new kinds of commercial crops. Opportunities also will arise from the policy framework to address climate change, for example there is a rapidly growing market for technology that is energy efficient or produces less greenhouse gas emissions, or products that are produced with a low “carbon footprint”.

#### *Global financial crisis*

33. The current global financial crisis will have implications for international and domestic climate change policy. This issue will be examined at the December 2008 informal Finance Ministers' meeting on climate change, to be held in Warsaw (New Zealand has been invited), and at December 2008 UN climate change negotiations in Poznan. The likely implications of the crisis will also be considered through the current review of New Zealand’s climate change work programme.

## **International commitments**

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34. New Zealand has a broad range of commitments under the United Nations Framework Convention on Climate Change (UNFCCC). In 2002 New Zealand also ratified the Kyoto Protocol to the UNFCCC, which sets legally binding emission reduction commitments for developed countries.
35. New Zealand has committed under the Kyoto Protocol to reducing greenhouse gas emissions back to 1990 levels, on average, over the period 2008 to 2012, or to take responsibility for any emissions above this level. New Zealand can take responsibility for excess emissions in a number of ways, such as purchasing emission units on the international market.
36. New Zealand is in the process of negotiating future responsibilities under the UNFCCC and the Kyoto Protocol. The growing global expectation for action on climate change, and consumer demand for sustainably derived products, means there are multiple and increasing demands for New Zealand to take on greater responsibility for greenhouse gas emissions.

## **New Zealand's response to climate change**

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37. Climate change policy is inherently complex, difficult and contentious. It requires long term and significant changes to behaviour across the economy, with some sectors being affected more than others.
38. In 2002 the government launched a Climate Change Policy package, including development of a carbon tax on energy, industrial, and transport emissions. The government cancelled the introduction of a carbon tax in 2005, and considered other options through a review of climate change policy.
39. The review focused on climate change as a long term strategic issue for New Zealand within the broader context of economic transformation, sustainability, national identity, and issues such as energy, water quality and flood control. The review concluded climate change policy needs to consider a far longer period than the five years of Kyoto Protocol commitments, and must:
  - be long term and strategic
  - balance durable efforts to reduce emissions with preparations for the impacts of a more variable climate
  - engage with and inspire the wider public and business to energise willing, effective and long term involvement
  - involve international engagement that advances our national interests.

### *Current climate change programme*

40. In 2006 the government approved a new whole-of-government climate change programme, involving multiple policy areas and initiatives managed by a wide range of government agencies. The programme applied a broad mix of instruments to tackle climate change relevant to our national circumstances (e.g. our relatively high proportion of agricultural emissions).
41. The programme's cornerstone policy is now the NZ ETS, which over a period of time will introduce a price on greenhouse gas emissions and provide incentives to

reduce emissions and enhance forest sinks. The Climate Change (Emissions Trading) Amendment Act achieved Royal Assent on 25 September 2008. This Act creates the legislative framework for an emissions trading system. Annex I summarises the main features of the NZ ETS.

42. The Electricity (Renewable Preference) Amendment Act also received Royal Assent on 25 September 2008. This Act creates a preference for renewable electricity generation through a 10 year restriction on new baseload fossil fuelled thermal electricity generation capacity, except where an exemption is appropriate (for example, to ensure security of supply). Considerations for Ministers in relation to this matter will be signalled in the Ministry of Economic Development's Vote Energy departmental briefing.

#### *Governance arrangements for climate change programme*

43. The diagram at Annex II summarises governance arrangements for climate change policy. Annex III lists all current projects in the work programme.

#### *Ministers*

44. Under the previous government, the Minister of Finance and the Minister Responsible for Climate Change Issues took joint responsibility for the development of the NZ ETS, while the Minister Responsible for Climate Change Issues coordinated climate change policy in general. The Minister of Agriculture and Forestry is responsible for climate change policy affecting the land based primary sectors.
45. The Minister responsible for Climate Change Issues has a wide range of statutory powers under the Climate Change Response Act 2002, which are listed in the departmental briefing to the incoming Ministers for the Environment and Climate Change Issues. The Ministers of Finance and Energy also have statutory powers under the Climate Change Response Act.

#### *Government agencies*

46. Climate change policy is coordinated through an all-of-government structure, led by a *Climate Change Governance Group* of chief executives across the core agencies with climate change responsibilities. This group provides strong governance, oversight and high level strategic direction to the work programmes.
47. A *Strategic Advisory Group* of deputy secretaries and senior managers supports the Governance group and provides strategic and operational guidance to the various working groups.
48. Policy work on climate change is led by the Ministry for the Environment and coordinated through cross-agency working groups, with the exception of policy relating to the land based sectors which is led by the Ministry of Agriculture and Forestry. The emissions trading legislation was developed by an Emissions Trading Group on secondment from different agencies, based at the Treasury. This group is now permanently located at the Ministry for the Environment, and is focused on implementation of the NZ ETS. The Ministry of Economic Development provides the administration functions for the ETS, including the unit register.

### *Consultation on policy development*

49. Climate change policy has involved considerable dialogue with sectors, the public, Māori and interested groups. Consultation since 2007 has focused on development of the NZ ETS.
50. The *Climate Change Leadership Forum* was established in September 2007 to facilitate communication between the government and the broader community. *Technical Advisory Groups (TAGs)*, including representatives from relevant sectors and government agencies, have been established to contribute to technical design elements and regulations. TAGs were established for the following sectors:
- transport fuels
  - stationary energy and industrial processes
  - forestry
  - agriculture.
51. The Ministry of Agriculture and Forestry has established a *Peak Group* of leaders in the land based sectors to provide strategic direction for implementing the Sustainable Land Management and Climate Change Plan of Action. The group is supported by three technical working groups on research and technology transfer, adaptation and business opportunities. An Agriculture Technical Advisory Group has also been convened to provide advice on the point of obligation for agriculture and allocation issues.
52. Stakeholder sessions are held by the Ministry of Foreign Affairs and Trade and the Ministry for the Environment ahead of the major international negotiating meetings. The Ministry for the Environment is currently designing a consultation plan for pending international negotiations.

### *Māori involvement*

53. Māori have been involved in the development of climate change policy, through an Iwi Leaders Group (2 members sit on the Climate Change Leadership Forum), the Māori Reference Group Executive (MRGE) and the Māori Reference Group (13 members nominated by Māori across the country).
54. Officials work with the MRGE who provide feedback from both the Iwi Leaders Group and Māori Reference Group. Maori issues are also represented on the Ministry for Agriculture and Forestry's Peak Group and on some of the technical working groups under the Ministry's climate change work programme. A MRGE representative also attended the international negotiations in June 2008 and will attend the upcoming December meetings in Poland.

## **Key issues and decisions for climate change policy in the coming months**

### *Implementation of the Emissions Trading Scheme*

55. The Climate Change (Emissions Trading) Amendment Act establishes the legal architecture for an emissions trading scheme. Further regulations will be developed to support implementation. For example, regulations will provide more detailed information on sectoral methodologies for calculating and reporting emissions.

56. To allow a smooth transition across the economy, the NZ ETS will be phased in across sectors between 2008 and 2013. Key decision points and priorities (given the current design of the ETS) for implementation over the next few months are:

- January 2008 - forestry application processes and forest land recording systems “go live”
- February 2009 - a draft of the regulations for the purchase and surrender of Assigned Amount Units will be issued for consultation
- March 2009 - the Final Forestry Allocation Plan will be prepared after consideration of submissions received on the Draft Plan
- March 2009 - promulgation of stationary energy and industrial process regulations
- March 2009 - promulgation of forestry regulations for indigenous post-1989 forests.

#### *Complementary measures*

57. Complementary measures are those which can deliver cost-effective emission reductions over and above the NZ ETS. The current programme of complementary measures is under review in light of the introduction of the NZ ETS. Key work areas that we expect the government to make decisions on in the coming months include:

- decisions on the best mix of policies over and above the NZ ETS
- research to assess the sectoral impacts of the NZ ETS on competitiveness and productivity
- assessing the nature and quantity of cost effective emissions abatement that may be left untapped by the NZ ETS. This includes gaps in the coverage of the NZ ETS or the inability of emerging emission reducing technologies to attract suitable investment
- initiatives within the New Zealand Energy Strategy and New Zealand Efficiency and Conservation Strategy to encourage renewable energy and energy efficiency
- energy and transport policies and initiatives that interact with climate change and the NZ ETS objectives. Considerations for Ministers in these sectors will be signalled in the relevant departmental BIMs.

#### *International negotiations*

58. The international climate change negotiations under the UNFCCC and its Kyoto Protocol will pose major diplomatic and policy challenges to New Zealand over the coming year. This already very complex negotiation has been made more difficult by the international financial crisis. As well as the UNFCCC negotiations, New Zealand pursues its interests through bilateral climate change partnerships with key countries, and participation in high level climate change discussions.

59. The Ministry of Foreign Affairs and Trade leads New Zealand’s international climate change negotiations. Close alignment of international positions with domestic policy is ensured through interdepartmental officials’ processes. Ministerial involvement in international negotiations is essential to ensure New Zealand maintains the ability to influence negotiations where we have key



interests to advance, such as the treatment of agriculture and forestry, and in respect of developing countries, especially the major emitting economies  
**[withheld under s9(2)(j) Official Information Act]**

60. The first commitment period of the Kyoto Protocol expires in 2012. International negotiations under the Kyoto Protocol and the UNFCCC are under way to determine further emission reduction commitments for developed countries beyond 2012, mitigation action by developing countries, steps to address adaptation, and the financing and technology needs to deliver these.
61. Negotiations are scheduled to conclude at a meeting in Copenhagen in December 2009. There is a large amount of technical work required, and it is unclear at this stage whether all details of a comprehensive international agreement could be delivered at Copenhagen, or whether more time would be needed to achieve this.
62. New Zealand's key goal in climate change negotiations is to seek a comprehensive, environmentally effective international agreement. This requires climate change action by major emitters, including the United States and major developing countries (which do not have emissions reduction targets in the current commitment period), and fair effort-sharing of emission reduction commitments.
63. The international negotiation process will intensify in 2009. The UN climate change conference in December 2008 in Poznan, Poland will evaluate progress toward Copenhagen. Between these major meetings there will be several negotiating sessions for officials, and likely opportunities for Ministers to engage in formal and informal meetings to progress key issues.
64. Key issues for Ministers in the near future are:
  - approval (or reconfirmation) of a negotiating position for the December 2008 Poznan United Nations Climate Change Conference meeting
  - consideration of attendance by the Minister for Climate Change Issues at the Poznan conference, and attendance by the Minister of Finance at a concurrent, informal meeting of finance ministers
  - work on New Zealand's further commitments under the UN framework, including a further emissions reduction target, the tools that may be used to meet our commitments (including forest sinks), and financial/technology contributions to assist developing countries with emission reductions and adaptation.

#### *International reporting*

- March 2009 – New Zealand is required to report its 5th National Communication under the UNFCCC, which will document progress in meeting our international climate change commitments
- New Zealand's national inventory submission is due on April 15, 2009, this is the first annual inventory to include tables on our Kyoto Units holdings and transfers.

## *Adaptation*

65. The Ministry for the Environment is coordinating central government work on adaptation to climate change, with the exception of the Ministry of Agriculture and Forestry's work with land based sectors. Current adaptation work includes:

- water/coastal issues – e.g. guidance to help local government address increased flooding and coastal hazards
- infrastructure – e.g. guidance on adapting urban stormwater and wastewater systems to deal with extreme weather events
- work with the land based sectors – e.g. developing adaptation solutions, raising awareness, providing good practice tools and delivering the Community Irrigation Fund.

66. Key issues for the adaptation programme in the coming months include:

- Ministry for the Environment scoping of future work on managing flood risks, and a possible Resource Management Act National Environmental Standard on sea level rise
- Ministry of Agriculture and Forestry development of a Five Year Adaptation Programme to address the effects of a changing climate in the land based sectors. The Programme has been considered by the Peak Group and will be presented to Ministers in early 2009.

## *Land based sectors*

67. Climate change and climate change policies will have significant effects on the land based primary sector. New Zealand has an unusual emissions profile, with over half of emissions attributable to land based sectors. This presents both challenges and opportunities for climate change policy.

68. The Ministry of Agriculture and Forestry, together with land based sectors, Maori and local government, is implementing a programme to ensure sectors can respond to the challenges. Key projects include:

- reducing emissions, including work on the agriculture and forestry components of the NZ ETS
- creating carbon sinks, including the Permanent Forest Sink Initiative and the Afforestation Grant Scheme
- greenhouse gas foot printing and life cycle analysis work to ensure access to higher value international markets
- a five year adaptation programme
- ongoing research to reduce emissions and adapt to climate change
- programmes to increase land managers' awareness of climate change issues.

69. Upcoming issues for the land based work programme include:

- developing regulations and an allocation plan for the forestry component of the NZ ETS
- seeking Ministerial agreement on the point of obligation for agriculture into the NZ ETS

- seeking Ministerial approval in early 2009 of the Adaptation and Business Opportunities Programmes.

70. The Department of Conservation is also investigating mechanisms to maintain and enhance carbon reservoirs and sinks on public conservation land.

### **Decisions on the future of climate change policy**

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71. The future shape of climate change policy will be influenced by decisions on the following issues.

#### *The international response to climate change*

72. New Zealand is a small contributor of greenhouse gas emissions globally. We need other countries to take effective action to reduce global emissions if we are to avoid dangerous climate change here. New Zealand can best contribute by taking on our fair share of emissions reductions as part of an international agreement.

73. New Zealand's international commitments drive the need for the NZ ETS and other mitigation policies, which are an economic response to the commitments rather than environmental policies per se. This means that the future direction of international commitments will significantly affect our domestic policy response.

74. We can expect the international community over time, and in response to climate science, to progressively broaden and deepen emission reduction efforts. What remains unknown is the pace, shape or framework for this change. There could be comprehensive or only partial coverage of global emissions in the next international agreement, a time gap in the international framework, and/or some form of regional or sectoral commitments. The pace and shape of New Zealand's mitigation response, and the priority given to adaptation policies, will need to consider this.

#### *Future decisions on implementation of the Emissions Trading Scheme*

75. International obligations place a domestic cost on the NZ economy, and the implementation of an equitable and effective NZ ETS is the most efficient and fair way to distribute those costs. The objective of the NZ ETS is to minimise the long-term costs to the New Zealand economy of meeting international obligations, while maintaining economic flexibility, equity and environmental integrity.

76. A sound and valuable framework for the NZ ETS is now in place that can be adapted and changed as required. Ensuring all major-emitting sectors pay at least some proportion of the cost of their emissions creates a strong incentive to reduce emissions.

77. A major challenge is to make the NZ ETS fully operational and responsive to issues that arise in implementation. Because the NZ ETS will contain much operational detail in instruments such as regulations and allocation plans, there is considerable scope to adjust and finetune the implementation.

78. Key future policy settings for the NZ ETS include the methodologies and plans for allocation of emissions units, and the regulations on obligations. Decisions on these instruments will determine the overall effects of the NZ ETS on the economy, and also the equity of effects across different economic sectors.

79. There will be pressure to complicate the ongoing design of the NZ ETS to provide for the special circumstances of individual firms or sectors. It is important, however, that the system be kept as simple as possible to keep the policy clear and workable.

#### *Policy mix of the broader climate change programme*

80. Decisions on the best mix of policies over and above the NZ ETS (complementary measures) are yet to be taken. The pre-NZ ETS absence of a strong price signal for greenhouse gas emissions resulted in a diverse climate change programme which delivered a range of outcomes and benefits to both climate change and a range of other portfolios e.g. health, energy and social wellbeing.

81. Complementary policies may be justified where the NZ ETS alone is ineffective in dealing with a particular sector – for example due to a lack of information. A risk with complementary measures, however, is that they may distort the economic signals of the NZ ETS, and inhibit the long-term minimisation of costs to the economy, for no environmental gain.

82. We need to consider the most efficient and effective policy mix to both reduce emissions and achieve other non-climate change goals. This will be informed by the current climate change review (see below).

#### **Review of the climate change programme**

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83. In July 2008, as part of the all-of-government climate change annual report, Cabinet agreed that the Ministry for the Environment would lead a review of the climate change programme.

84. The purpose of the Review is to ensure that the all-of-government climate change programme is well co-ordinated and appropriately resourced, is able to deliver the expected benefits to New Zealand, and minimises adverse impacts. The review will consider the priorities for the climate change programme and the best mix of initiatives within it. The Review will also take into account the effects of the NZ ETS.

85. In August 2008, the Climate Change Governance Group agreed terms of reference for the review:

- identifying any gaps or overlaps in the current programme
- ensuring that the current work programme complements and adds value to the NZ ETS
- assessing the priorities for the work programme
- identifying any work areas that are no longer needed or need to be significantly re-shaped
- identifying any new work areas that are needed, including resource implications, institutional arrangements and delivery mechanisms
- developing a comprehensive monitoring and evaluation framework for the programme (which includes identification of, and responses to, structural adjustments).

86. The review is at an early stage with departments recently agreeing to proposed high level objectives. These will be presented to Ministers in due course. The next stage is to conduct a stock-take of the cross government work programme, develop assessment criteria for individual departments to assess their work programmes and to develop an assessment methodology, all by January 2009.
87. The Ministry for the Environment will as soon as practical brief the Minister with responsibility for the climate change work programme on progress and seek input to the review process. A Cabinet paper will then be submitted in February 2009 with the climate change objectives and the review plan, so Ministers can consider the scope and timing for the rest of the review process. It is proposed the review start in earnest in early March 2009.
88. The proposed outcome of the review is recommendations to Cabinet by July 2009 on the shape and direction of New Zealand's climate change response.

## **Recommendations**

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89. We recommend you:

- a. **Note** the information in this briefing about the current cross-government climate change work programme
- b. **Note** that further detail on individual parts of the climate change programme are available either in departmental portfolio and overview briefings, or through briefings at your request
- c. **Advise** Chief Executives of any further information you require.

Paul Reynolds  
**Secretary for the Environment**  
**On behalf of the Climate Change Governance Group**

Date:

## Annex I: Summary of the Emissions Trading Scheme

1. The objective of the New Zealand Emissions Trading Scheme (NZ ETS) is:

*That a New Zealand Emissions trading Scheme support and encourage global efforts to reduce greenhouse gas emissions by:*

- *reducing New Zealand's net emissions below business as usual levels and*
- *complying with our international obligations, including our Kyoto Protocol obligations*

*while maintaining economic flexibility, equity, and environmental integrity at least cost in the long term.*

*What is emissions trading?*

2. Emissions trading is a market-based approach for achieving environmental objectives, where “emission units” are traded between participants. Those emitting greenhouse gases have to pay for increases in emissions and are rewarded for decreases.
3. Emissions trading enables a flexible approach to reducing emissions, as participants are able to either reduce emissions, purchase units, or use some combination of the two.

*Coverage and obligations*

4. The NZ ETS has an all-sectors, all-gases approach that takes advantage of all available emission-reducing activities, and results in the fairest approach to the sharing of costs.
5. The emissions trading scheme covers the following sectors of the economy: forestry, liquid fossil fuels (largely transport), stationary energy, industrial processes, synthetic gases, agriculture and waste.
6. Participants are required to:
  - monitor, record and report activities that lead to greenhouse gas emissions in New Zealand, some of which will be the indirect result of their activities. For example, a coal producer would be required to surrender units for the coal it sells domestically, even though the actual emissions will occur when the coal is burned
  - surrender emission units equal to the amount of emissions associated with their activities in each compliance period.
7. Participants may acquire emission units by receiving a free allocation from the government. In addition, participants and secondary market traders can acquire emission units by:
  - buying them from approved overseas sources
  - buying them from another participant or secondary market trader, either by entering into a direct bilateral contract with the other party, or trading through a broker or trading exchange

- buying them from the government (although the government has no surplus units to auction at present).
8. Participants may receive emission units for eligible removal activities including, but not limited to, owning eligible post-1989 forests, producing specified products with embedded emissions, or exporting synthetic gases contained in goods

#### *Implementation of the NZ ETS*

9. The emissions trading scheme will be phased in across sectors between 2008 and 2013. There will be transitional assistance in the form of free allocation of units to the forestry, industrial, fishing and agriculture sectors and through funding for household energy efficiency to support their adjustment to emissions pricing.
10. The emissions trading scheme will be linked to the international market in units accepted under the Kyoto Protocol, and will be able to support bilateral linkages to other domestic trading schemes in the future. The scheme is designed to be flexible to accommodate New Zealand's future international climate change obligations.
11. Further regulations will be developed to support implementation of the emissions trading scheme. For example, regulations will provide more detailed information on sectoral methodologies for calculating and reporting emissions and management of transactions under the New Zealand Emissions Unit Register.
12. Implementation will involve some significant challenges and the operation will not be perfect from the outset. There are no international examples for an all-sectors, all-gases ETS. Wide consultation and working closely with stakeholders in each industry sector will be critical for successful implementation.

#### **Key features of the ETS model**

##### *Open access to international markets*

13. Allowing open access to international carbon markets – both on the buy and sell side – means that the price in the NZ ETS will be driven by the international price. This will result in an efficient level of abatement occurring in New Zealand vis-à-vis international abatement, and treats carbon and emission reductions in the same way as other products are treated in the New Zealand economy.
14. This feature of the NZ ETS is a key part of ensuring that we can meet New Zealand's international climate change obligations at least cost in the long term. Placing a cap on the amount of abatement that can occur internationally (as others are doing) would increase the cost of meeting the obligations set up by Kyoto – and its successors – for very little environmental gain.

##### *Reflecting international policy settings in domestic policies*

15. Underpinning the key design elements is a philosophy of reflecting (as much as possible) international climate change settings in domestic policy. Even if those international policy settings are not entirely suitable for New Zealand conditions, there is significant downside in moving significantly away from them.
16. This is most obvious in the area of the treatment of pre-1990 forests (deforestation). Even though the international policy settings are not entirely appropriate from a New Zealand perspective, reflecting different policy settings in the domestic economy would come at significant cost for the taxpayer in particular, and for the New Zealand economy as a whole.

*Allocation of emissions units reflects the context in which the New Zealand ETS is developed*

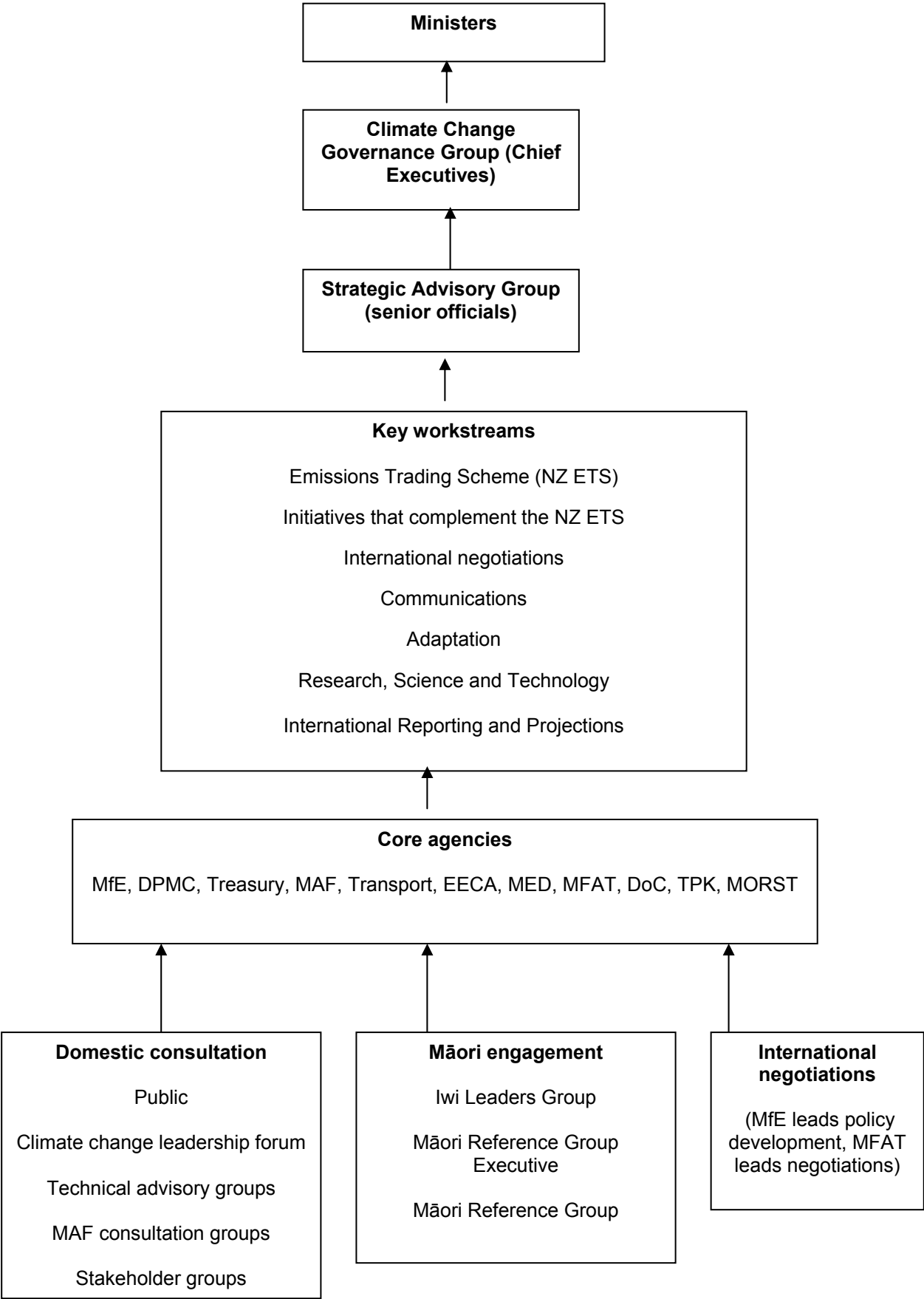
17. The provision of free allocation is the most complex area of NZ ETS design, and it is also the most controversial. Rules on free allocation have significant effects on both the equity (who pays and how much) and also the efficiency (the strength of incentives to reduce emissions) of the NZ ETS.
18. There are strong reasons for keeping the current approach in the legislation to free allocation. Providing free allocation comes at a significant opportunity cost. Increasing the level of free allocation is the equivalent of raising taxes, other things being equal, to provide assistance to particular parts of the economy.
19. Further, the existing legislation sets out a balance between sectors (inter-sectoral equity) as industry and agriculture are treated in the same manner. Adjusting that balance of generosity between sectors in any major way runs a risk of unravelling the balance that is currently built into the legislation.
20. The overall approach in the legislation reflects the context of New Zealand's emissions profile. Slightly over 70% of New Zealand's emissions are related to trade-exposed activities and New Zealand is likely to face increasing stringency in terms of international commitments into the future. It is not in our long term interest to shelter particular sectors of the economy from the economic pressures that New Zealand faces, regardless of whether that sector's competitors face the same price of carbon or not.
21. The system is designed to reduce the risk of economic regrets (the loss of economic capacity that we may regret if there is a fuller international climate change agreement in the medium term) while retaining an incentive to reduce emissions.
22. The allocation of emissions units is critical in terms of the incentives that are created, and in ensuring that New Zealand does not suffer economic regrets as a result of the NZ ETS. The allocation plans are the relevant vehicle for doing this – especially the allocation plans around industry and agriculture. It will be very important not to try to over-engineer these allocation plans; free allocation is not designed to be a full or a perfect compensation and nor should it be. The goal is to change behaviour.

*Keeping it simple*

23. There are a number of areas in the NZ ETS implementation process where there will be pressure to complicate the ongoing design of the NZ ETS. This is understandable; firms will want design to reflect their particular circumstance as much as possible.
24. The NZ ETS design should, however, be kept as simple as possible. This is critical to build in as much clarity and workability to the processes going forward. Areas where simplicity will be particularly important are in the allocation methodologies and plans, in the settings of the regulations on obligations.



**Annex 2: Governance and operation of the climate change programme**



## Annex III: Projects in the cross-government climate change programme:

Theme-based work programmes							
	International reporting and negotiations	NZ ETS	Initiatives that complement the NZ ETS	Communications	Impacts and Adaptation	Research Science and Technology	Kyoto Balance Reporting
<b>Policy/ programme</b>	<p><b>Negotiations</b></p> <ul style="list-style-type: none"> <li>Active engagement in the key discussions and negotiations on the future international framework.</li> <li>Development of New Zealand positions on key issues in the negotiations, including future emission reduction targets</li> </ul> <p><b>Science</b></p> <ul style="list-style-type: none"> <li>New Zealand input to the IPCC</li> </ul> <p><b>Reporting</b></p> <ul style="list-style-type: none"> <li>Managing New Zealand's annual inventory of greenhouse gas emissions and removals to meet UNFCCC and Kyoto requirements</li> <li>Development of the LUCAS (land-use and carbon analysis system) to meet Kyoto and UNFCCC reporting requirements and other "all of Government" benefits</li> <li>Producing New Zealand's 5th national communication under the UNFCCC to be submitted 1/1/2010</li> </ul>	<ul style="list-style-type: none"> <li>Climate Change Response Act</li> <li>Near-term development of regulations for forestry, liquid fossil fuels, stationary energy and industrial process sectors, and unit register regulations, and regulations on surrender of imported assigned amount units; longer-term development of regulations for agriculture, waste and synthetic gases sectors</li> <li>Near-term development of allocation plans for forestry, stationary energy and industrial process sectors; longer-term development of allocation plans for fishing and agriculture sectors</li> <li>Ongoing engagement with Technical Advisory Groups</li> <li>Development of framework for monitoring and review</li> <li>Emission unit register and ETS administration</li> </ul>	<p>Please also refer to sector specific information below.</p> <ul style="list-style-type: none"> <li>Coordinating central government agencies</li> <li>Managing the implications of structural change</li> <li>Co-benefits of mitigation policies</li> <li>Cost-effective mitigation that will not be tapped by the NZ ETS</li> <li>Socio-economic impacts of the NZ ETS and wider climate change policies to 2028</li> <li>41 Projects to Reduce Emissions (PRE) and 2 Negotiated Greenhouse Agreements</li> <li>Enhanced eco-verification</li> <li>Carbon Neutral Public Service</li> <li>Pilot projects to establish and enhance forest carbon sinks on public conservation land</li> <li>Business opportunities</li> <li>Purchasing strategy for Kyoto credits to ensure New Zealand achieves its commitments</li> <li>Sustainable Land Management and Climate Plan of Action</li> <li>Permanent Forest Sink Initiative</li> <li>Energy efficiency fund (\$1b over 15 yrs)</li> <li>Trade exposed technology innovation contestable fund (150,000 NZU per annum)</li> </ul>	<ul style="list-style-type: none"> <li>Public awareness campaigns: <ul style="list-style-type: none"> <li>Ecowise Travel Guide</li> <li>EnergyWise</li> <li>Choke the Smoke</li> </ul> </li> <li>Roll-out of the Climate Change Bill – seminars and workshops in development</li> <li>Relaunch of <a href="http://www.climatechange.govt.nz">www.climatechange.govt.nz</a> in August 08</li> <li>All-of-government Climate Change Communications Plans.</li> <li>Communications Plan for Forestry in the NZ ETS – developed and being implemented</li> <li>Climate Change Plan of Action Communications Strategy for the primary sector – developed and being implemented</li> <li>Climate Change Leadership Forum</li> </ul>	<p><b>Impacts</b></p> <ul style="list-style-type: none"> <li>Update of Local Government and Climate Change guidance</li> <li>Update of Coastal Hazards and Climate Change guidance</li> <li>Climate Change and Flooding guidance 'Flow Box' techniques for climate change and flooding</li> </ul> <p><b>Adaptation</b></p> <ul style="list-style-type: none"> <li>MAF 5-year adaptation programme in partnership with the land-based sector</li> <li>Community Irrigation Fund</li> <li>Update of Quality Planning guidance on climate change (<a href="http://www.qp.org.nz">www.qp.org.nz</a>)</li> <li>National Environmental Standard (Sea Level Rise)</li> <li>Adaptation toolbox items</li> <li>Online resource for adaptation</li> <li>Urban adaptation</li> <li>Adaptation in education</li> <li>Stakeholder engagement</li> </ul>	<ul style="list-style-type: none"> <li>Fast Forward –\$700million</li> <li>Marine Energy Fund – \$8 million</li> <li>Low carbon energy technologies fund – \$12million</li> <li>Wild Animal Control for Emissions Reduction (WACEM) Programme</li> <li>Understanding and Adapting to Global Process and Change – \$2.6 million per annum for 3 years to 4 programmes on: Reducing Impacts of Climate Change on the Urban and Built Environment; Enhancing Human Health Resilience to Climate Variation and Change; Community Vulnerability and Resilience; Wave and Storm Surge Projections.</li> <li>Geothermal funding: \$0.5 million over 3.25 years on Low Enthalpy Geothermal Energy</li> <li>Livestock Emissions and Abatement Research Network (LEARN)</li> </ul>	<ul style="list-style-type: none"> <li>Projecting and reporting New Zealand's balance of units over the first commitment period of the Kyoto Protocol</li> <li>Projecting and reporting revenue flows resulting from the NZ ETS</li> <li>Projecting New Zealand emissions to calculate the impact of negotiation positions for the second commitment period</li> </ul>

**Sector based work programmes**

Sustainable Energy	Transport	Land-based Sectors	Waste	Industry	Households	Government
<ul style="list-style-type: none"> <li>• New Zealand Energy Strategy</li> <li>• New Zealand Energy Efficiency and Conservation Strategy</li> <li>• New Zealand Energyscape – bioenergy and hydrogen economy</li> <li>• Forestry Industries Development Agenda</li> <li>• Minimum energy performance standards</li> <li>• Energy Star</li> <li>• Proposed national policy statements on renewable electricity generation</li> <li>• National policy statement on transmission</li> <li>• Regulations for the connection of distributed generation</li> <li>• New guidance on quality planning website for renewable energy</li> <li>• RMA call in and Crown Submissions on renewable projects</li> </ul>	<ul style="list-style-type: none"> <li>• New Zealand Transport Strategy</li> <li>• Government Policy Statement</li> <li>• Emissions from international aviation and maritime fuels Government Policy Statement</li> <li>• Biofuels sales obligation</li> <li>• Mandatory rule for collection of fuel economy information</li> <li>• Electric vehicle programme</li> <li>• Vehicle Energy and Renewables Group</li> <li>• Vehicle fuel economy standard</li> <li>• Fleet commitment programme</li> <li>• Heavy vehicle weight limits</li> <li>• Public transport, walking and cycling funding review</li> <li>• Domestic sea freight</li> </ul>	<p>Sustainable land management and climate change plan of action:</p> <ul style="list-style-type: none"> <li>• Adaptation                             <ul style="list-style-type: none"> <li>- 5-year adaptation programme in partnership with the land-based sector</li> <li>- Community Irrigation Fund</li> </ul> </li> <li>• Reducing emissions and creating carbon sinks                             <ul style="list-style-type: none"> <li>- Afforestation grant scheme (AGS)</li> <li>- Farm-scale greenhouse gas reporting programme</li> <li>- Mitigation policy development for forestry and agriculture including the NZ ETS</li> </ul> </li> <li>• Business opportunities                             <ul style="list-style-type: none"> <li>- 5-year programme to capitalise on business opportunities from climate change</li> <li>- Greenhouse gas footprinting strategy for the primary sector</li> <li>- Carbon market and trading opportunities</li> <li>- Sustainable building strategy to promote the greater use of wood</li> <li>- Bioenergy and biochar research</li> <li>- Research and implementation of an international strategy for avoided deforestation</li> </ul> </li> <li>• Research and innovation                             <ul style="list-style-type: none"> <li>- Strategic Research Framework and funding programme</li> <li>- National inventory research</li> </ul> </li> <li>• Technology transfer                             <ul style="list-style-type: none"> <li>- 5-year joint technology transfer programme with the land-based sector</li> <li>- Sustainable Farming Fund – Climate Change</li> </ul> </li> <li>• East Coast Forestry Programme</li> <li>• Sustainable Land Management and Eroding Hill Country Scheme</li> </ul>	<p>New Zealand Waste Strategy:</p> <ul style="list-style-type: none"> <li>• National Environmental Standard for landfill gas</li> <li>• Reduce your rubbish campaign</li> <li>• Packaging Accord</li> <li>• Waste Minimisation (solids) Bill</li> <li>• Simply sustainable – eco-efficiency toolkit for business</li> </ul>	<ul style="list-style-type: none"> <li>• Business Partnership for sustainability</li> <li>• Emprove programme</li> <li>• Energy Intensive Business Programme</li> <li>• 41 Projects to Reduce Emissions (PRE) and 2 Negotiated Greenhouse Agreements</li> <li>• Existing MOUs between the Crown and users of sulphur hexafluoride</li> <li>• Trade exposed technology innovation contestable fund (150,000 NZU per annum)</li> </ul>	<ul style="list-style-type: none"> <li>• Household sustainability programme – <a href="http://www.sustainability.govt.nz">www.sustainability.govt.nz</a></li> <li>• EnergyWise Homes package including public awareness and financial support for householders – <a href="http://www.energywise.org.nz">www.energywise.org.nz</a></li> <li>• Smarterhome website offering advice on sustainability – <a href="http://www.smarterhomes.org.nz">www.smarterhomes.org.nz</a></li> <li>• Building code review</li> <li>• Solar water heating programme</li> <li>• Energy efficiency fund (\$1b over 15 yrs)</li> </ul>	<ul style="list-style-type: none"> <li>• Sustainable government procurement project</li> <li>• Carbon Neutral Public Sector</li> <li>• Govt<sup>3</sup></li> <li>• Communities for Climate Protection</li> <li>• Quality Planning website updates and new guidance</li> <li>• Using the Minister's powers under the RMA</li> </ul>
MED, EECA, MfE	MoT, MED	MAF	MfE	MfE, MED, EECA	MfE, DBH, EECA	MfE and core public service agencies