



Ministry for the
Environment
Manatū Mō Te Taiao

Healthy Environment – Healthy Economy

**Briefing for the Incoming
Minister for the Environment**

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Contents

Executive Summary	v
Some challenges for environment and economy	v
Systems to underpin environmental management	v
A change of emphasis	vi
1 Introduction	1
The themes of this briefing	2
2 Influencing Hearts and Minds	4
Mapping out the path to change	5
Developing transition paths	6
Tools and methods for change	7
3 Economic Development Without Environmental Pressure	8
Waste	8
Energy and transport	9
Oceans	10
Agriculture, horticulture and forestry	11
Urban development	12
Tourism	14
4 Protecting the Foundations	15
The laws	15
Monitoring and reporting	16
Biodiversity	16
Biosecurity	18
5 The Emphasis of our Work	19
6 Urgent Issues that the Minister will Need to Consider in His/Her First Month of Office	20

Executive Summary

Government and business have progressed beyond a perception of competition between the environment and development to an expectation that development will happen – but it must happen in a way that is socially and environmentally responsible.

The conventional view of the environment has been about dealing with pollution and other effects on the environment. To support growth and innovation, especially when New Zealand's economy is so dependent on nature, we must place sustainable development at the core of decision making.

Some challenges for environment and economy

New Zealand export and tourism businesses trade explicitly or implicitly on our 'clean green image'. Yet some of the environmental issues we are dealing with are a risk to international perceptions of 'the New Zealand brand'. While visitors and international consumers will accept that New Zealand is not '100% Pure', they expect that we are acting to address our environmental issues.

Agriculture and horticulture, which use more than 50% of our land, are major players in the environment-economy interface. The 'dirty dairying' campaign over recent months has highlighted only one of the pressures. Mechanisms to ensure that these industries can get the clean water they need while maintaining the life in our waterways are also urgently needed.

International visitors, who are increasing at 6% a year, are looking outside the well-trodden routes for their New Zealand experience. But in many small communities, water supply, sewerage systems and other services are not up to modern standards and these communities have inadequate resources to upgrade them. The Ministry could facilitate a central government approach to dealing with such urban issues.

To move 'towards zero waste and a sustainable New Zealand', as suggested in the national waste strategy, we need to promote greater efficiency in materials and energy use rather than just dealing with effects.

Systems to underpin environmental management

We may also need to re-orient our environmental management systems so that we can better anticipate and manage development rather than respond to effects. This will need Ministry leadership. The Resource Management Act has attracted criticism that has proved to be more about the way the Act is implemented than its substance. We are acting to improve practice and, more importantly, aiming to improve the Act's delivery of environmental results.

We need to be able to measure our environmental performance within the wider framework of sustainable development to better determine the relationships between the economy, environment and social wellbeing. This will also help measure the success of existing or emerging policy and enable us to refine policy when necessary. Good reliable information is needed by both the Government and export businesses to move from 'I believe' statements to those based on 'I know'.

A change of emphasis

The big environmental issues for the first decade of the 21st century are also economic and public health issues. More sustainable use of water, managing marine resources, reducing waste, improving our energy efficiency, are all essential for creating wealth and quality of life as well as for environmental sustainability.

Now is an opportune time to consider the future direction of the Ministry. We believe that the emphasis of our work needs to change. We want to operate in ways that support the creation of wealth and quality of life for New Zealanders while ensuring that activities are carried out in an environmentally sustainable way.

To move towards a more sustainable future for New Zealand, we see an increasing emphasis on partnerships between central government, business and local government that create a climate in which economic activity can be expanded while we maintain and improve the quality of our environment. We also see a different emphasis in the Ministry's work, towards facilitating whole-of-government positions on issues where environment is key.

1 Introduction

In this briefing we will outline our views on the key challenges in relation to the environment and development over the next three years. We will set out our ideas about effective ways to tackle the challenges.

We see two major challenges ahead:

- We need to persuade the large majority of New Zealanders who say that they want a cleaner environment to take action in practical ways that will turn their dreams into reality. At the same time we need to win the hearts and minds of those yet to recognise that a clean and healthy environment is essential for our future development.
- We need to tackle the big development issues on land and in our oceans, for tourism and for transport, and for our major cities in creative ways that involve central government, local government, business and communities.

Today it is the community's expectation that we have both development and a healthy environment. Today we have the technology and the opportunity to have both. We want to help make that happen.

The work we have done over the past 15 years has put down the foundations for good environmental management. We have worked hard to get environmental management into the mainstream of central government activity.

Our work to date has focused mainly on limiting the damage caused by previous practices that were not environmentally sound, such as careless handling of toxic chemicals at timber treatment sites. We have also put in place measures to encourage people to act in more environmentally friendly ways, such as reducing dairy shed runoff. And we have had some real successes.

Now, while maintaining these foundations, we want to build on them as they provide the basis for economic development that does not damage our environment. We want to operate in ways that support the creation of wealth and quality of life for New Zealanders, while ensuring that activities are carried out in an environmentally sustainable way.

The most important building blocks in our foundations are the Resource Management Act 1991, the Hazardous Substances and New Organisms Act 1996, our framework for collecting information about the state of our environment and the pressures on it, and improved systems for managing the effects of production on land, water, air and biodiversity. These foundations will help to support our agriculture, horticulture, forestry, fishing, and tourism as well as to maintain the health of our towns and cities.

While good progress has been made, securing New Zealand's long-term prosperity and wellbeing requires us all to do more. Prosperity and growth will continue only if we are innovative in the way we use opportunities and face challenges. Some of the big challenges ahead include the 'carbon shock' as the world moves away from carbon-based energy sources, the risks and opportunities of biotechnology, and the wise development of our marine resources.

Most of us know intuitively that there is a strong relationship between the health of our economy and the health of our environment – even if we sometimes behave as if we have forgotten it. Our international trading markets and visitors are not in any doubt – they strongly associate New Zealand with a scenic, clean and healthy environment. While visitors and international consumers will accept that New Zealand is not ‘100% Pure’, they expect that we are acting to address our environmental issues.

The decisions New Zealand makes over the next few years about economic development will help or harm our quality of life and our environmental quality. We know that we need a thriving economy to improve our standard of living. We know that this will require innovation. Now is the time to channel innovation in a sustainable direction.

We can choose, for example, to modernise our energy systems bit by bit, following the leaders overseas, or we can harness innovation to pioneer some exciting new technologies in the areas of wind, biomass, solar and mini-hydro. We can then sell technologies that we have adapted and improved back to a rapidly growing world market.

We can choose to drift along with fossil fuels. Or we can set challenging ‘stretch’ targets for use of renewable energy and energy efficiency, making cost savings along the way. And we can design our cities with innovative solutions to improve both our ability to get around and the essential services such as water, waste disposal, energy supply, and amenities.

The themes of this briefing

In the chapters that follow, we will argue that the environmental game is no longer just about regulation and cleaning up pollution at the ‘end of pipe’. It is about influencing hearts and minds – tapping into people’s willingness to act responsibly and their desire to live in a healthy environment. Most New Zealanders support protecting the environment – but they want to know how far and fast we are going, and how to take action more easily. We can help them, by developing transition paths, which have clear goals and plans of action.

A second major theme in this briefing is that the growth of our economy and our quality of life depends on a healthy environment. We will look closely at how we can break the shackles that bind environmental pressure to economic development. We want the economy to grow without pollution also growing. Other countries have succeeded in achieving growth without increasing pollution. New Zealand has made some progress, but we could do much better.

Many activities draw on our natural resources (such as water, energy, minerals, and our atmosphere) but pollute our water, air and land through the ways they dispose of waste and emissions. If businesses and households learn to use resources more efficiently and to produce less (or no) waste, we will reduce the pressures on the environment and save money too. Internationally, and now in New Zealand, business is recognising that ‘eco-efficiency’ matters. We need to help businesses grow in ways that minimise adverse impacts on the environment and reduce costs.

There are huge economic opportunities from using our natural resource base wisely and well – and economic risks if we do not. We see these opportunities not only on land, but also in our oceans. While land-based industries will continue to be the mainstay of our economy in the short term, the oceans within our exclusive economic zone could be a major new ‘prosperity frontier’. But there are gaps in our knowledge about marine resources and their potential. This means thinking about the environmental risks, but also working at the synergies – the areas where better environmental outcomes are part-and-parcel of smarter economic development.

We also see a strong connection between the health of our environment and human health. By ensuring that we have clean air to breathe, clean water to drink and swim in, and soils free of toxic chemicals, we can improve people’s health and quality of life.

2 Influencing Hearts and Minds

Many New Zealanders want to live in a clean, green country and they want to know how they can help to keep New Zealand in good shape. They also understand that, as a small trading nation in a large global marketplace, we rely on a strong New Zealand 'brand'. They see that continued growth in our national income – at least in the core export sectors of dairy, tourism, meat, fish and forestry, as well as the rapidly growing sectors such as organic produce – turns on preserving and enhancing our 'brand'. A central part of that 'brand' is unquestionably our clean, green image. And this, in turn, rests on the real quality of our environment – a core strategic asset that needs to be protected.

Public awareness of environmental issues

- 90% value clean air and clear unpolluted water in lakes, rivers and the sea*
- 82% think our natural environment is good or very good compared to other developed countries#
- 68% think that the environment is seriously endangered by pollution of rivers, lakes and streams*
- 60% agree that air pollution caused by cars is very dangerous for the environment*
- 42% say that economic progress will slow down unless we look after the environment better*
- 36% think their knowledge of environmental issues is good or very good.#

Sources:

* Massey University, International Social Survey Programme 2001

Lincoln University, Perceptions of the State of New Zealand's Environment, 2001

Our distinctive New Zealand brand also helps us to bring back from overseas (and retain) skilled people. Many New Zealanders and immigrants choose to live here for the quality of life. They are proud of our environment as a key element of our lifestyles. We need to tap into that pride, so that people can learn to protect and enhance what they value.

There is an increasing acceptance in the community, including the business sector, that while economic growth is important it must be environmentally responsible. And many people see that the responsibility should be widely shared – it is not something that central and local government alone can achieve.

The past decade has seen the formation of groups such as the Business Council for Sustainable Development and debate about the concept of corporate social responsibility. The Business Council and many others see economic growth and environmental quality not as alternatives, but as interdependent. Sustained economic growth depends on a healthy and resilient environment.

However, while there has been a change of hearts and minds, attitudes do not always translate into everyday reality. Many smaller businesses, both rural and urban, are preoccupied with the pressing issues of making a living (though there is a growing group of smaller 'environmental' businesses, e.g. Seresin Estate winery in Marlborough and Auckland's Eco Store that are making an effort to operate in environmentally responsible ways).

In the wider community, the same gaps between attitudes and action exist. Auckland Regional Council, for example, in planning its Big Clean Up Campaign has taken the view that 20% of the population is highly motivated and already changing their behaviour, about 60% willing to change to some extent, and a further 20% are unlikely to change unless forced to by regulation.

Mapping out the path to change

Given that many individuals and businesses aspire to behave in a more environmentally responsible manner, what stands in the way? What causes the gap between attitudes and action?

It's generally easier for people to change their behaviour if they have a clear idea of what they ought to do differently, if they can see how to do things differently (i.e. what they have to change), and if they have the means or 'tools' to make these changes. In particular, they need to see some simple and non-threatening first steps – steps that will help them make a difference.

In many cases, people know what they what they want to achieve – the end result. But they don't always know how to get there and they don't always have the means to make the changes. Sometimes they aren't sure if what they might do will really make a difference. Most people are also interested in making changes that initially don't require a huge change in behaviour and that are cost-effective – they want to see that the benefits of making the change are greater than the costs to them.

So, two things we can do to help people change their behaviour are finding 'pathways' for cost-effective change and providing tools and methods to help them. We've called this 'developing transition paths' to convey the idea of moving from one behaviour or set of behaviours to another. Where changes have been made, we want to reinforce them so that the gains or improvements are not lost as people shift their attention to other issues.

Developing transition paths is proactive and constructive. It looks forward 20–30 years to where we want to be and draws a map for getting there. Underpinning this, providing tools, information, and motivation to change has a shorter-term focus to help people move a step at a time.

Protecting the foundations, is aimed at consolidating, strengthening and protecting the laws and decision-making systems that protect us from and limit environmental damage.

The other key theme we've called 'protecting the foundations'. This is about making sure that our laws and decision-making systems are effective and continue to protect us from environmental damage.

Both developing transition paths and protecting foundations rely on building and enhancing partnerships and networks. Central government can rarely achieve results alone – most government action is about influencing people to change their behaviour. Working with people to promote new ideas, to encourage them to change, and show them how to do this is usually more effective than simply telling them the rules.

The Government's objectives for the environment will largely be achieved by working in partnership with local government and businesses. This approach is more fruitful than telling

them what to do, although the threat of sanctions is always needed in cases of non-compliance with agreed rules and regulations.

Developing transition paths

We see the potential to work with particular sectors and stakeholder groups to map out long-term transition paths for their sector. Focusing on environmental and social sustainability will require New Zealand to make some big changes. We will need to take a different approach to key elements of the economy such as energy, water, waste and transport.

Mapping out transition paths concentrating on these areas will require central government leadership in a process of constructive engagement with stakeholders. Over the past two years, for example, we have engaged with the forestry industry and local government in shaping the Wood Processing Strategy. This is a strategy to deal with the so-called ‘wall of wood’ that will be ready for harvesting over the next 5–10 years from planted forests. We have worked with the wood processing industry to develop a code of practice under the Resource Management Act which will standardise resource consent applications to meet all council requirements. The plan is to avoid the need for each council to set differing requirements for resource consent applications.

By ‘mapping out transition paths’ we mean doing things differently to achieve our aim of economic and social development and environmental quality. To do this we need everyone to work together, so it also means extending and formalising the partnerships with key sectors. We would expect a conscious attempt to set goals for sustainability, explore transition paths, and consider policies that will help the transition take place. The central government role would be to provide information and facilitation, including information about social and policy innovations in other countries (e.g. measures to promote energy transitions in the European Union).

We need to discuss which parts of the economy we should focus on. However, energy, waste, water and transport stand out as ‘systems’ where an effective transition to sustainability will affect the lives and livelihoods of everyone in New Zealand.

The New Zealand Waste Strategy, for example, maps out an ambitious path towards a sustainable New Zealand by seeking to break the links between economic development and the creation of waste. Simply improving the ways we treat and dispose of waste will not take us there. Stronger action is needed to reverse the rate at which we create waste and move this toward zero. Designing and implementing a path to achieve zero waste over 20 years or so is a good example of transition management.

Part of the ‘transition path’ process would be for central government to engage with local government, the business sector and the wider community to explore the implications for key sectors such as tourism and agriculture.

Tools and methods for change

Even if 94% of New Zealanders agree that we need to make more effort to avoid waste (as Massey University's research in 2001 indicated), simply encouraging people to reduce waste or providing information will not result in changed behaviour. The same applies to reducing energy and material use, or conserving water. Unless people have practical tools, including easy-to-follow steps, and believe that it will make a difference, little will happen.

Techniques such as 'social marketing' can be used to influence the behaviour of a wide range of people who are concerned but not yet motivated. The Auckland Regional Council is using these techniques in its Big Clean Up campaign, which is supported by the Ministry for the Environment. The Council has done the research necessary to understand the barriers and motivations of different segments of the community in regard to environmental behaviour. Their ongoing research will help both the Council and the Ministry learn how people are responding to the campaign.

We believe that social marketing, which uses a 'customer-focused' approach and a variety of communications tools, offers opportunities to encourage environmentally friendly behaviour by individuals and households. It is not a 'quick fix' – to be effective it requires a long-term commitment. It needs to be based on good research about what the target audience already knows and is doing, and the barriers to change.

Businesses will also respond to simple, practical guidance and to learning more about their own effects on the environment. Many have found that paying attention to waste, energy and resource use has both financial and environmental benefits. Others recognise that the process of looking at their economic, social and environmental results as part of producing a public 'triple bottom line' report is a motivation to show better results next time.

International evidence also suggests that people will respond to price incentives. The OECD puts considerable store on "getting prices right" as a central part of sustainable development. While New Zealand has done little of this, it was effective in reducing use of petrol containing lead before lead was phased out.

In an economy like New Zealand, prices will influence consumption and production choices over time. However, economic instruments are difficult to introduce and can be slow to encourage changes behaviour, especially if people do not have ready alternatives to their current pattern of behaviour.

Experience suggests that using a number of complementary measures is often more successful in changing behaviour than using just one or two tools. If people and organisations understand why environmentally friendly behaviour is valued, have easy steps to follow, and this is reinforced by moderate price signals, then change is more likely.

3 Economic Development Without Environmental Pressure

The usual pattern is that increasing economic activity results in increased pressure on the environment caused by greater use of natural resources and growing levels of pollution and waste. We need to break the shackles that bind production to adverse effects on the environment. They need not march in step.

For example, separating the increase in energy use from rising emissions of greenhouse gases could be achieved by replacing the burning of fossil fuels with renewable energy sources. An essential basis for sustainable development is that economic growth is separated from environmental pressure.

Internationally, it is widely accepted that economic activity can occur without damaging or degrading the environment. Our economic behaviour doesn't need to have adverse impacts on the environment. We can have economic development *and* clean, healthy air, land, water and ecosystems. But, in the long term, we can't have economic development *without* a clean, healthy environment.

In New Zealand we have already started to break the shackles through more efficient use of energy, and phasing out the use of ozone-depleting substances in industries such as refrigeration. We are well on the way to having a horticulture industry that relies primarily on safe and effective methods of pest management rather than the use of toxic chemicals.

This is a good start, but we can do much more. We see major opportunities for economic development and environmental improvement in:

- waste – using resources more efficiently, producing less waste, reusing materials and by-products, recycling waste
- energy – more efficient use (especially in transport), avoiding wasteful use of energy, and making greater use of renewable sources
- oceans – establishing a balance between developing marine resources and conserving biodiversity and ecosystems
- agriculture – less water pollution, more efficient water use
- urban development – better mobility through improved transport, safe water supply, clean air, and safe treatment and disposal of waste to keep our cities better places to live
- tourism – maximising the earning potential while achieving environmental sustainability.

Waste

The Ministry for the Environment launched *The New Zealand Waste Strategy* jointly with Local Government New Zealand in March 2002. The Strategy looks from a new perspective at how we deal with waste. It recognises that preventing waste is far more cost-effective than attempting to deal with it after it is produced. New Zealand has an opportunity to focus on where waste is produced in the search for a more effective, integrated approach to material and resource efficiency at every stage of production and consumption.

Some key targets of the Waste Strategy are:

- over 95% of garden waste and commercial organic waste will be diverted from landfills and beneficially used by 2010
- all substandard landfills will be upgraded or closed by 2010
- hazardous wastes will be appropriately treated before disposal at licensed facilities by 2004
- 95% of the population will have access to community recycling facilities by 2005.

By producing less waste, we can help protect our clean, green image, reduce the costs of waste storage and disposal, and reduce the cost of materials for business. These actions all provide efficiencies that make us more competitive and add to the attractiveness of our products. The long-term challenge is to break the link between the rate of economic growth and the increasing rate of waste production. We want to achieve sustainable growth by learning how to use resources more efficiently – to produce more with less.

There are some early gains available through waste reduction, particularly removing organics from landfills and making good use of them. Further down the track, more efficient use of materials will have the biggest, long-term impact on waste reduction. Greater efficiency will not only cut the use (and cost) of materials but offer more re-use and recycling options. In addition, we need pricing policies that, as far as practicable, reflect the full costs of waste treatment and disposal.

If people are given more choice about the ways they deal with waste, the more effective they are in doing so and the greater their financial savings. Local authorities are keen to achieve these gains, as they will translate into immediate cost savings and rate reductions. Progress is being made on more efficient pricing policies, but further development and application of those policies is a cornerstone of the strategy.

There is an increasing acceptance in the community of the need to cut our waste. Already many households and community groups are involved in recycling and many businesses have taken steps to reduce their waste. We want to build on that goodwill as we work with local government on education programmes and identify the easy steps that will motivate businesses and households to reduce waste.

Energy and transport

New Zealand has already started to make progress towards a more sustainable energy future. There are many advantages in using energy more efficiently and making greater use of renewable sources of energy. A combination of increased awareness, market signals and new technology has seen many businesses and communities increasingly able to take up cost-effective opportunities to increase their energy efficiency.

We are starting to see a wedge being driven between growth in GDP and the growth in energy demand. However there is much more that can be done to restrain energy growth while enhancing economic growth. The focus needs to be on innovative programmes to eliminate wasteful practices and increase the use of efficient new technology and design.

There are also opportunities to benefit from a progressive transition to renewable sources of energy over time. In the past New Zealand has made much greater use of renewable energy sources than other countries. In recent years, however, the ability to tap our traditional

renewable energy resources has slowed. Now that there are increasingly cost-effective technologies to make use of wind and woody biomass, it is once again possible to increase our use of renewable energy sources.

A *National Energy Efficiency and Conservation Strategy* was launched in September 2001. This Strategy aims to improve energy efficiency by 20% by 2012. A similarly challenging target for renewable energy is being refined. The combined effect of dampening the growth in energy demand and improving the sustainability of our energy supply will reduce the environmental impacts, especially the greenhouse gas emissions, from increasing energy supply.

In addition to its environmental benefits, energy efficiency has other benefits:

- reduced energy costs contribute to better business performance and cost-competitiveness
- energy efficient commercial buildings are cheaper to light and heat and are more comfortable for their occupants, leading to productivity gains
- energy efficient homes are warmer and drier in winter, when respiratory health is an issue for many New Zealand families, and power bills are lower for the same level of comfort.

The Strategy has many initiatives targeting central government, energy supply, buildings and appliances, industry, and transport sectors. The majority of actions are being taken through the Energy Efficiency and Conservation Authority. The Ministry for the Environment has the main responsibility for several areas of work and plays a supporting role in others.

The transport sector presents challenges, as it makes up 40% of New Zealand's total energy use. Demand for energy by this sector has been growing at 3–4% a year over the past decade or so. Transport, nevertheless, offers cost-effective opportunities for improved energy management and innovation.

Oceans

New Zealand has always had a close relationship with the sea. The marine area within New Zealand's exclusive economic zone is around 15 times the size of our land area. When further work to fully define New Zealand's jurisdiction over the continental shelf is complete, 'our' area of ocean may be around 24 times our land area. This would give New Zealand rights over 1% of the Earth's surface. New Zealand also has rights and responsibilities for about 2.3 million square kilometres of Southern Ocean in the Ross Dependency of Antarctica.

In strategic terms, this represents an immense increase in the resource base that will underpin New Zealand's future development and prosperity. The main economic opportunities lie in fisheries, hydrocarbon exploration (especially gas), mineral deposits, ocean tourism, and biotechnology.

The main challenges for the sustainable development of ocean-based industries are to improve our knowledge about the resources, direct greater investment into marine and coastal sciences, remove legislative barriers to an integrated approach to oceans management, and reconcile the differing expectations about ocean resources.

Apart from possible contributions to our economy, the oceans have immense value to life through nutrient cycling, waste assimilation, their wide ranging biodiversity of plants and animals, and food resources. It is important that we understand and protect this capacity.

We need a balance between stimulating industries and services based on developing our marine resources, and conserving marine resources and ecosystems. The development of a national vision or strategic plan for sustainable development of the oceans is an essential start to dealing with these challenges.

The economic opportunities afforded by our exclusive economic zone are potentially enormous. To develop and exploit our marine resources in a way that is sustainable, we need to place a high priority on:

- improving our knowledge about marine resources and ecosystems
- developing a strategy and framework of policies to balance commercial development with protection of marine resources and ecosystems
- developing governance mechanisms that encourage innovation and entrepreneurial activity, resolve conflicts, and maintain effective stewardship of resources.

The Ministry for the Environment now has responsibility for development of an oceans policy. Ministers have already identified four goals that provide direction to the policy process:

- New Zealanders having confidence in, supporting and participating in the wise management, stewardship and sustainability of New Zealand's oceans
- ecological integrity and abundant biodiversity within New Zealand's oceans
- New Zealand's oceans providing the best value for New Zealand society now and in the future
- development of a framework to allow current and future issues arising in relation to the marine environment to be managed in the context of the overall responsibilities of the Crown as Treaty partner.

Cabinet has directed officials to prepare a discussion document for approval by 30 June 2003. The Ministry is leading a whole-of-government approach to this task.

Agriculture, horticulture and forestry

Agriculture and forestry are significant contributors to New Zealand's economy. Agriculture is New Zealand's largest export industry, with exported goods (including processed products) contributing over 60% of our total export earnings. Over half of New Zealand's land area is used for farming or plantation forestry. Forest industries are based on nearly 1.2 million hectares of forest plantations, consisting mainly of introduced conifers.

These industries contribute the largest proportion of our total export earnings. Like tourism, they rely directly or indirectly on the perceptions of international buyers and consumers about the quality of New Zealand's environment. However, agriculture, horticulture and forestry are large users of water, energy, transport and chemicals, and they contribute to air pollution and water pollution.

While strong growth is a feature of recent development in the dairy industry, other primary industries are facing serious constraints to further growth, particularly in relation to water. We need to work with local government and the primary production sectors to resolve issues about access to water and to reduce pressure on the environment.

The key environmental issues for these sectors are efficient water allocation, reducing water pollution, and unsustainable land use practices in our hill and high country.

The expansion of dairying and crops such as grapes into dry regions is increasing the pressure on water resources. There is now a wave of proposals for large irrigation schemes along dry, eastern areas. The demand for water is already exceeding, or will soon exceed, available supplies in Hawkes Bay, Wairarapa, Tasman, Marlborough, Canterbury and Otago. In some areas, fisheries and ecosystems are suffering.

We are working closely with regional councils such as Environment Canterbury, the Ministry of Agriculture and Forestry and researchers to implement new ways to plan for and manage water allocation. One option is to use a national mechanism such as a water strategy to encourage agencies to work together.

While New Zealand has made huge progress in reducing discharges of sewage and industrial waste into our waterways, the water quality in lowland streams and rivers is often poor. Run-off from intensive farming activities, such as market gardening, dairying and arable cropping, is a major cause of pollution in both ground and surface waters.

We are working with the dairy industry (including Fonterra), regional councils and other stakeholders to develop and implement the Dairy and Water Environment Action Plan to reduce the levels of pollution in waterways and improve water quality. While the initial focus is on dairying, we will soon address the arable, market garden, viticultural and horticultural sectors, as well as the impact from urban catchments.

Soil erosion seriously impairs the viability and productivity of farms in erosion-prone areas, contributes to many water quality problems, and increases the risk of flooding. Nearly 10% of our land, mainly hill country farmland, suffers from severe to extreme erosion, and over 50% suffers from moderate to slight erosion. Rabbits are an additional problem in some areas – populations are recovering from the decimation caused by the unplanned introduction of RCD.

On the East Coast, the area most damaged by erosion, we are helping the Gisborne District Council develop and implement its district plan. We are also assisting the Ministry of Agriculture and Forestry with the implementation of the East Coast Forestry Project.

Farmers can tackle many land and water problems if they get practical information from a trusted source. We help fund the Landcare Trust, which has connections with a national network of around 200 Landcare groups. We are also working with farmers and councils such as Environment Waikato and the Taupo District Council to address water quality problems in Lake Taupo caused by run-off from the land around the lake.

Urban development

The battle for sustainable development will be won or lost in the world's cities, where an increasing majority of the world's population lives. That is the view of the United Nations Environment Programme (UNEP). More than 80 percent of New Zealanders live in our towns and cities, where environmental issues such as air and water quality, waste, and energy use in transport are significant.

The World Bank suggests that for towns and cities to promote the welfare of their residents they must be sustainable and functional in four respects. They must be good places to live, ensuring

a decent quality of life and equality of opportunity for all residents. To achieve this, they must also be competitive, well-governed and managed, and financially sustainable.

The OECD points out that cities are increasingly seen as the engines of economic growth. Many of the specialised services and facilities essential to modern economies (e.g. information technology, financial markets) require a critical mass of economic activity present only in urban centres.

Most of New Zealand's people and jobs are in urban areas. These are also our biggest consumers of resources and producers of waste. Environmental issues in urban areas can include air and water pollution, overloaded transport systems, variable water supplies, urban sprawl and reduced liveability. Innovative and integrated management and investment are needed in many of the systems that provide essential services, for example, transport, water supply, waste treatment and disposal.

Some of these essential changes are signalled in the previous sections on energy, transport and waste. However to achieve the best environmental and social outcomes, the action must be visionary and integrated. For example, surveys by the Department of Work and Income on barriers to employment in Auckland indicate that the most frequently mentioned barrier was 'limited mobility'.

Management of our urban centres is a complex challenge. Different centres have different ethnic and age structures. Auckland, with substantial Maori (11%), Asian (13%), and Pacific Island (13%) populations, is increasingly different from the rest of the country.

Some towns are retirement centres, while our larger cities attract younger people. Smaller centres and those with declining populations face real challenges to simply maintain existing infrastructure and urban fabric in the longer term. On the other hand, areas experiencing substantial growth face considerable pressure on infrastructure and other services.

Internationally cities are competing against one another to attract investment and to grow. Auckland is possibly this country's only candidate for a global city, but Competitive Auckland suggests that it is under-performing. While Auckland is unlikely to match the salaries offered in other global cities, to offset this it could offer and promote a quality of life rarely found in other countries. (In a recent survey of 215 cities Auckland came sixth.)

The Ministry has begun work with a range of sectors involved in urban outcomes. Our fledging urban work, including a guide *People + Places + Spaces: An urban design guide for New Zealand* and seven workshops, has been well received. At a recent national workshop on urban sustainability and eco-efficiency, three key themes emerged:

- the need to integrate approaches to urban sustainability and the institutions that plan and manage these approaches
- the importance of urban design in contributing to short-term liveability and long-term sustainability, particularly in regard to transport
- the need to motivate individuals, communities, businesses, and governments to change their mindsets and behaviour.

Tourism

Tourism currently generates 16% of New Zealand's export earnings and contributes 9.3% to GDP. Total tourism earnings are projected to grow from \$8.9 billion at present to \$15.7 billion by 2010. If the New Zealand Tourism Strategy (May 2001) is successful, earnings could grow to \$26.8 billion by 2010.

Our clean, green image has real dollar value for the tourism industry. In a report for the Ministry last year, PA Consulting Group estimated that if tourists see us as tolerating degradation of our environment, we could stand to lose between \$0.5–1 billion in future tourism earnings.

The *New Zealand Tourism Strategy* sets out a framework for sustainable development of the tourism industry. One objective of the Strategy is to mitigate the environmental impacts from increasing and unrestricted numbers of tourists. The majority of tourism operators are small to medium businesses employing less than five people in a busy and competitive sector. According to a review of the Tourism Strategy by Lincoln University, they do not have the capacity to take up the challenges of the Strategy.

While the Ministry is not the appropriate agency to lead work on the Tourism Strategy, we have a strong interest in working with other government and non-government organisations to achieve its objectives in relation to environmental sustainability.

We have done some preliminary work to assess the value of New Zealand's clean, green image for tourism and to assess the extent to which the *New Zealand Tourism Strategy* is likely to achieve the goals for sustainable development. Further work is planned to assess if and where we can help.

4 Protecting the Foundations

Improving the state of our environment and maintaining these improvements comes about mainly through changing the way people behave. There are three main ways to change behaviour – persuade people to act in a different way, provide incentives for them to act differently, and create rules backed by sanctions. These methods for guiding and changing behaviour are the foundations for environmental management and protection.

In general, voluntary approaches to environmental improvement are preferable because they tend to be least-cost and easier to put in place. However, regulation is required in cases where the incentives for more environmentally friendly behaviour are not strong enough. The foundations on which we build are legislation and regulation (including standards). For example, we use national environmental standards to control the disposal of hazardous waste and to control pollution of air and water.

We need to maintain these foundations. The provisions we have in place are designed to deal with the issues and problems we know about, but new issues arise that often require a new approach. We also need to be confident that the rules and sanctions we have in place are effective in achieving the environmental results we want.

We want to be able to measure New Zealand's environmental performance within the wider framework of sustainable development to better determine the relationships between the economy, environment and social wellbeing. This will also help measure the success of existing or emerging policy and enable us to refine policy where necessary. Good reliable information is needed by both the Government and export businesses to move from 'I believe' statements to those based on 'I know'.

So, even while putting our efforts into developing transition paths, we need to maintain the foundations of environmental protection. Those foundations protect our economy, especially in areas such as agriculture, forestry and tourism where economic activity relies heavily on a clean and healthy environment.

The laws

We may need to re-orient our environmental management systems so that we can better anticipate and manage development rather than respond to effects. This will need Ministry leadership. While central to New Zealand's foundations for environmental management, the Resource Management Act needs to be kept under review. We need to ensure that it enables rather than impedes environmentally responsible innovation in the economy.

The Resource Management Act has attracted criticism that has proved to be more about the way the Act is implemented than its substance. However, recent reviews show that the potential for best practice in processes under the Act has not yet been fully realised. The Ministry will continue working with local government and other government agencies to improve the Act's delivery of environmental results and lower the barriers of process and compliance costs.

Increasingly, the interaction between the new Local Government Act and the Resource Management Act will be the centre of attention. These two laws need to work together so that decisions are made locally where people close to the issue are able to do a better job.

At the same time, national instruments and national guidance will be necessary in some cases. We need to make sure that artificial barriers (such as a cumbersome process for developing national policy statements) do not impede the delivery of effective national guidance.

The Hazardous Substances and New Organisms Act controls both genetic modification, and hazardous substances. As well as being subjects of strong public sensitivity, these are subjects with both economic risks and opportunities.

The big challenge in the next few years will be to ensure that a dispassionate and strategic approach is taken to these issues. This should include adequate consideration of the benefits of not heading down a track that commits New Zealand to irreversible environmental changes.

Monitoring and reporting

New Zealand needs robust, reliable and timely information on the state of the environment. This information is critical to knowing where the issues and problems lie and how to minimise and fix them.

Our environmental indicators and reporting programme is an important foundation stone for environmental decision making. The programme has identified key priorities (in the form of indicators) for regional and national information and is on the verge of settling agreements with regional councils for monitoring and information collection.

These agreements set in place a long-term partnership between central and local government that will result in a consistent monitoring network across the country. It will then be possible to identify national trends in environmental performance, giving businesses and local authorities a means to benchmark their performance against national averages. We will also be able to benchmark ourselves internationally against a range of key environmental performance measures.

The Ministry is close to releasing two new classification systems which, as well as providing a consistent framework for resource management in New Zealand, will also be useful for identifying economic opportunities or threats. For example, they can be used to measure the loss of native ecosystems, to prioritise international biosecurity screening, predict pest spread or identify optimal growing locations for horticulture and forestry.

To date we have concentrated on getting the scientific frameworks and partnership arrangements in place. From now on our main work will be to streamline monitoring practice and information collection, and on reporting. Reports in the pipeline cover air quality, water quality, resource use in New Zealand, and people's perceptions of water quality.

Biodiversity

Since humans first settled in New Zealand our unique plants, animals and ecosystems have been in decline. This has been caused by:

- species extinction
- loss, degradation and disruption of natural areas and ecosystems
- an increasing number and variety of introduced pests
- competition from introduced species

- unsustainable harvesting.

Today, about 1000 of our known animal, plant and fungi species are threatened, including approximately 75% of indigenous bird species and one third of indigenous freshwater fish species. Many species (e.g. the birds and insects that depend on freshwater habitats) now have a significantly restricted distribution.

Established pests such as possums are a huge threat to our remaining natural ecosystems and species. They damage habitats and ecosystem processes, compete with existing species for food, and prey on them.

Ideally, New Zealand should maintain and restore a full range of the remaining habitats and ecosystems, along with viable populations of all native species (New Zealand Biodiversity Strategy, 2000). But it is clear that, despite big investments, we are not doing enough to turn the tide of loss of this country's indigenous biodiversity.

Action on the Crown estate will not be enough to do this, because the protected estate does not cover the full range of our indigenous biodiversity. The existing network of protected areas is far from representative of the full range of ecosystems and habitats. The lowlands, river margins, wetlands, dunelands and coastal areas have relatively few natural habitats left for our unique species. The loss of indigenous biodiversity is proportionately much greater there than in hill and high country.

The Ministry's main focus is on biodiversity outside the conservation estate. We are working with the Department of Conservation, Ministry of Fisheries, Ministry of Agriculture and Forestry, and local government to implement the Biodiversity Strategy.

Many rural landholders are concerned that requirements to protect biodiversity on their land will threaten their property rights. It will be a challenge to restrain behaviours that lead to the loss of important biodiversity while at the same time retaining the goodwill of those landowners who are already taking steps to protect indigenous biodiversity on their own land.

In December 2000, the Government announced a package of initiatives to address biodiversity issues on private land. The package had four main parts:

- 1 Funds for biodiversity advice and improving the condition of biodiversity on private land.
- 2 A local government project called *Action Bio-Community*, which was launched in November 2001.
- 3 A national policy statement covering all indigenous biodiversity landward of the coastal marine area (including indigenous biodiversity in freshwater), which will state policies for the management of indigenous biodiversity.
- 4 Amendments to the Resource Management Act. A Bill to amend the Act is awaiting its final stages through Parliament. The Bill proposes giving specific functions to regional and district councils for the management of indigenous biodiversity.

The Ministry could continue to play a relatively minor role in biodiversity by restricting our efforts to mechanisms under the Resource Management Act, and leaving the main central government role to the Department of Conservation.

The alternative is a more active role in step with biodiversity's pervasiveness as an environmental issue and recognising the strong synergies with sustainable land and water management. This would require partnerships with local government, community groups and

landowner initiatives, coordination of information, and administration of funds designed to support these initiatives.

Biosecurity

Effective biosecurity is critical in protecting both our production based on natural resources – agriculture, horticulture, forestry – and the plants and animals that are unique to New Zealand. New Zealand is free of many significant pests and diseases present in other parts of the world. This offers our primary production a competitive advantage. Alien invaders that beat us at the border are a major and very real threat to this advantage. New Zealand is also free from a number of human diseases, but will maintain this status only if we can exclude insect pests such as mosquitoes that transmit disease.

Our biosecurity systems are under pressure from increasing travel and trade. There is concern that the level of biosecurity protection is not being maintained as biosecurity risks increase. The scope of biosecurity has expanded from its traditional focus on protection of primary production and trade, to cover human health and indigenous environments.

Activities that support our biosecurity include pre-border measures (import health standards, pre-border inspections, quarantine), activities at the border (screening, interceptions), and post-border measures (surveillance, containment/control programmes and responses to incursions).

A biosecurity strategy for New Zealand is being developed. It will:

- set an overall direction for biosecurity
- identify areas of priority for biosecurity programmes
- provide guidance to all involved in biosecurity
- raise public awareness and understanding of biosecurity.

The strategy will need to take account of the interests of central and local government, Maori, all relevant sectors, including environment, primary production, public health, trade, travel, and science and research. It will need to strike the best balance between maintaining biosecurity and maximising the benefits that arise from trade and travel.

The Government requires that the strategy development process achieve agreement on:

- a policy framework for biosecurity decision-making
- the appropriate level of protection against biosecurity risks for New Zealand
- biosecurity programmes and areas of priority
- responsibilities for action
- appropriate structural arrangements and resource needs
- an appropriate legislative framework
- biosecurity research requirements
- increased awareness of biosecurity.

The work is overseen by the Biosecurity Council and is managed by an interdepartmental Biosecurity Development Team. This work is headed by the Ministry of Agriculture and Forestry and involves the Ministry for the Environment. The strategy, which will be finalised in 2003, will be presented to the Biosecurity Council, the Minister of Biosecurity, and Cabinet for approval.

5 The Emphasis of our Work

We would like an opportunity for an early discussion on your strategic priorities, and the issues and challenges we have raised. For example, we want to know how much emphasis you want to place on us being ‘out there’ influencing others, as opposed to ‘back in the office’ developing and analysing policy proposals.

Now is an opportune time to consider the future direction of the Ministry. In the past decade there has been a rapid evolution in the expectations of both government and society of their environment, and therefore, of their environmental agencies. There has been an increase in environmental awareness and knowledge in the wider community. Many of the overt pollution and discharge problems have been, or are being, addressed.

We believe that the emphasis of our work needs to change. We want to operate in ways that support the creation of wealth and quality of life for New Zealanders while ensuring that activities are carried out in an environmentally sustainable way. We want to help influence people’s hearts and minds so that the environment New Zealanders value is protected and enhanced. We want to work with key sectors to map out long-term transition paths.

To move towards a more sustainable future for New Zealand, we see an increasing emphasis on partnerships between central government, business and local government that create a climate in which economic activity can be expanded while we maintain and improve the quality of our environment. We also see a different emphasis in the Ministry’s work, towards facilitating whole-of-government positions on issues where environment is key.

6 Urgent Issues that the Minister will Need to Consider in His/Her First Month of Office

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

- Respond to the Government's requests for bids for the legislative programme. Some of the likely contenders are:
 - Resource Management Amendment Bill
 - Resource Management (Aquaculture Reform) Amendment Bill
 - Resource Management Act Amendment (Transitional Fees, Rents and Royalties) Regulations.
- Make a decision on an application to waive the Sand and Shingle Royalties under the Resource Management Act Regulations, made by the Port of Tauranga in June 2002.
- Make a decision on the requiring authority application by Shell Todd Oil Services, under section 167 of the Resource Management Act.
- Make a decision on whether to give written approval to the Taranaki Regional Council to review the CO₂ mitigation conditions on the air discharge permit for the Taranaki Combined Power Station.
- Obtain Cabinet approval to release the report of the Agrichemical Trespass Ministerial Advisory Committee and set up a programme to implement its recommendations.
- Obtain Cabinet agreement on the lead Minister, timing and key elements of the remaining items of the Government's response to the Royal Commission on Genetic Modification ('stocktake' paper for Cabinet).
- Obtain Cabinet approval to release the discussion document on HSNO Act (GMO) Amendments (Royal Commission on GM response programme).
- Decide on a revised approach to enhancing Maori input into decision making under the HSNO Act (Royal Commission on GM response programme).
- Release the Ministry for the Environment's first Triple Bottom Line Report.
- Release the results of the New Plymouth dioxins study carried out for the Ministry for the Environment (late August).
- Decide on the ERMA Purchase Agreement for 2002–03.
- Release report on Environment Court delays.
- Release report on Rooding Delays and the Resource Management Act.
- Release Bathing Beach Water Quality Guidelines.
- Approve Residual Catchment Works – grant allocation for Lower Waikato Waipa Control Scheme.

Issues that other Ministers have the lead on, but that the Minister for the Environment may make decisions on:

- Attendance at the World Summit on Sustainable Development, Johannesburg, South Africa, 26 August to 4 September (DPMC led).
- A suite of climate change Cabinet papers related to policy, links with the Resource Management Act, public awareness and education and the programme's institutional arrangements and budget by end of August. (Convenor, Ministerial Group on Climate Change – previously Hon Pete Hodgson).
- Cabinet approval to promulgate fuel specifications regulations (Energy portfolio).
- Cabinet approval to renewable energy target and mechanisms (Energy portfolio).

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

- Release of the results from the dioxin dump site investigations in the Bay of Plenty (Environment BOP, 2 August).
- Import Health Standard for corn (*Zea mays*) (Ministry of Agriculture and Forestry, expected by 1 August).