Ministry for the Environment
Manatū Mō Te Taiao

Environmental stewardship for a prosperous New Zealand

Briefing for incoming Minister for the Environment and Minister for Climate Change Issues

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Seen by Minister for the Environment

Contents

1. Introduction

New Zealand faces the challenge of continuing to grow as it approaches limits to the natural resources upon which a large part of our economy relies. Growth within limits – green growth – requires New Zealand to manage its resources in a way that benefits current and future generations.

To achieve this, we need a resource management system that is responsive in dealing with the issues of the day, but can also adapt seamlessly over time to emerging pressures and changing values. A dynamic system is one that can leverage interactions between the economy and the environment in a positive way.

Over the past few decades, the resource management system has evolved through new legislation, institutions, and multiple amendments to address new and emerging issues. However, when the system is viewed as a 'whole', this evolution has resulted in inconsistencies and misalignment between core legislative frameworks. The priority over the coming term should be to redirect piecemeal changes to the system towards a system-wide approach that results in better integration and alignment.

At the same time, there is a window of opportunity to address cross-cutting issues such as governance and the Treaty of Waitangi partnership through freshwater reform.

Freshwater limits are being reached and exceeded in some areas. This means that some tough decisions will be needed about defining environmental limits and allocating resources within those limits in a way that enables the economy and society to grow. The Land and Water Forum will provide consensus-based advice that will inform those decisions.

A focus on governance and the Treaty partnership in the context of freshwater reforms will give us the building blocks to apply lessons more widely across the system.

Underpinning effective governance arrangements and decision making are a diverse range of values, which makes allocation decisions increasingly complex. As resources become increasingly scarce, it becomes harder to reconcile these values and allocate resources to competing uses. Collaborative processes are proving an effective way of achieving consensus-based decisions. The Land and Water Forum process has been instrumental in creating, for the first time, a 'receiving environment' that is conducive to new policy solutions. That is, members have been prepared to listen to each other and work towards a common view.

The Treaty partnership highlights that both the Crown and Māori have a significant stake in the effectiveness of our governance frameworks.

For Māori, natural resources are central to their identity and economic development, and are often at the heart of Treaty claims. Māori resources will largely remain in Māori hands; the returns from their natural resources will likely be reinvested in New Zealand to increase Māori development; and Māori will need to integrate iwi interests with broader collaborative approaches.

The Crown will need to be prepared to move beyond constructive dialogue towards proposals that better provide for Māori rights and interests in natural resources. The Minister for the Environment and the Ministry have roles in both negotiations and post-settlement action.

In the area of climate change, New Zealand supports the objective of a comprehensive international agreement that limits global warming to 2°C. It is inevitable that pressure for such an agreement will grow over time.

In the meantime, there are a set of important decisions that the Government will need to take in the next term regarding the settings of the Emissions Trading Scheme. In particular the Government needs to decide on how strong a signal to send to investors, how to treat agricultural gases, and the level of ambition needed to demonstrate to our international trading partners that we are acting on climate change. Overlaid on this is increasing evidence that market signals from our trading partners will require a demonstrable effort on climate change.

Climate change will increase the already significant risk of natural hazards in New Zealand. As this risk increases, the distribution and management of risk will need to change so that those best placed to assess and manage it face incentives to do so. This will build resilience over the long term and lead to better decision making.

The Ministry for the Environment works closely with other Natural Resources Sector agencies of government to ensure integrated and consistent advice is provided to the Government. Our briefing has been developed within the context of the information and advice in the Natural Resources Sector briefing, which will be provided to you separately.

Dr Paul Reynolds
Chief Executive

2. Resource management system

New Zealand's long-term prosperity requires a dynamic and responsive resource management system that that can adapt over time to changing values, pressures and technology. The resource management system is wider than the Resource Management Act (RMA), encompassing a range of frameworks and institutions that affect planning and decision making about resources and land use.

In addition to continuing the momentum on improving freshwater management, some key considerations for the next term of government are the need for a system-wide approach, evaluating what we learn from the freshwater process for its relevance in the wider resource management system, and ensuring that recent and proposed reforms deliver on their objectives. This will require some reconsideration of priorities.

System-wide approach

The resource management system has evolved over the past few decades as central and local government have tried to meet the sometimes conflicting needs and expectations of society. There have been 20 resource management amendment acts, as well as amendments to other laws and new issue-specific legislation.

For example, recent changes to the RMA enable decisions of national significance to be made in more consistent and streamlined ways through the Environmental Protection Authority. Other amendments have also targeted the efficiency of the RMA, including the timeliness and costs of consent processes.

Evolution is inevitably piecemeal and so the resource management system has become even less integrated. There is increasing misalignment between the core legislative frameworks and continued incremental reform has added increasing complexity.

We consider it is time to step back from pursuing incremental improvements in isolation and to examine the resource management framework in a more systematic and coherent way across government.

A system-wide view of New Zealand's resource management framework could provide opportunities to better leverage multiple outcomes from the existing frameworks and tools. For example, transport investment can have benefits for greenhouse gas emissions and air quality.

To get better integration would require not only taking a system-wide approach over the next few years, but also a continuing focus on core strategic issues that are integral to the successful functioning of the system. These cross-cutting issues (as outlined in the briefing from the Natural Resources Sector) include governance (rights, responsibilities, rules and tools), Treaty of Waitangi issues, and information to support decision making.

We have a rare window of opportunity over the next three years to develop approaches that are relevant to the wider resource management system through work on these cross-cutting issues as part of improving freshwater management.

Opportunities around fresh water

Fresh water is critical to the well-being of New Zealanders. The export economy is largely based on water; much of the renewable electricity supply is derived from water; and New Zealanders value water for scenic, recreational and cultural reasons.

Water is a priority for the Natural Resources Sector and is one of this Ministry's three strategic priorities.

Despite the importance of fresh water, its management is currently deficient. Variable management has led to a failure to set appropriate quantity and quality limits, resulting in deteriorating water quality and increased costs. Poor allocation mechanisms fail to take into account wider values, so that water is not always allocated to where it will deliver the highest value.

Momentum to improve freshwater management is building through the Fresh Start for Fresh Water programme, particularly the work of the Land and Water Forum and the relationship between Freshwater Iwi Leaders and senior Ministers. As these reforms develop, there is an opportunity to transfer lessons around governance (including rights, responsibilities, rules and tools), Treaty issues, and information to other resource management issues.

Current state of play

Successful implementation and monitoring of the National Policy Statement for Freshwater Management will ensure that regional councils collectively continue to improve water management. However, there is consensus that further reform of the system is required.

The freshwater reforms must improve how we set limits for both water quality and quantity, and how we allocate efficiently within those limits. New Zealand needs to move beyond a 'first-in first served' approach to ensure the highest value use is achieved, including through reallocation over time. This will require consideration of market-based instruments, regulations, and collaborative approaches. Better tools for managing transfer and efficient use of water, and the effects of land use on water quality, are also needed.

Central government will need to establish the right incentives and framework, which will require some hard decisions.

The Land and Water Forum, commissioned in 2009 to recommend improvements to freshwater management, has delivered its initial advice to the Government. During 2012 the forum will deliberate and deliver further advice. This process is operating as part of the broader Fresh Start for Fresh Water work programme, which also includes discussions between senior Ministers and the Freshwater Iwi Leaders Group and work undertaken by officials.

The consensus established through the Land and Water Forum and the positive relationship that has been built with iwi leaders provide an opportunity to create a durable, less litigious approach to water management – and potentially to other resource management issues.

Governance of water resources

The Land and Water Forum, like regional initiatives such as the Kaikoura Guardians (Te Korowai o Te Tai o Marokura), is an example of collaboration and collective action. Collaborative processes encourage decision making based on consensus rather than the

strength of expert argument in the Environment Court. Collective action sees consensus-based decisions played out on the ground through agreed rules and norms.

Evidence from New Zealand and overseas shows that collaborative processes and collective action have the potential to decrease the overall cost and time normally seen with adversarial planning processes. Collective action, particularly at the local level, provides for greater adaptability over time and is more suited to the specific nuances of different communities.

Our research suggests that collaboration and collective action could play a more significant role in New Zealand's future resource management system, drawing on lessons learned from the Fresh Start for Fresh Water programme.

More broadly, the work around freshwater rights and responsibilities is also examining decision-making frameworks in terms of the role of the courts, and the interplay between different levels of government. Governance of water resources is also critical to advancing the Treaty relationship and making progress on an overall water reform package that Māori can support.

Lessons in governance applied more broadly

While there is potential to make collective action a bigger part of New Zealand's resource management regime, there are lessons to consider about how and where it works best.

Overseas experience shows that collaborative institutions emerge if there is a suitable enabling environment, though are likely to fail when they are forced. Participants must be able to see that there are gains to be made over the existing regime.

This suggests that communities could be given the option of a collaborative regime as long as certain conditions such as sustainability and democracy are met, but that existing regulation must be a backstop. Incentives for participation are important. If adversarial RMA processes remain the end-game, there is little incentive to collaborate and an incentive to defect from anything that is started.

Incentives could include collaborative plan changes that are ratified by councils and included in plans, or criteria to be met when funding is allocated. Our research has identified some enabling principles which underpin collective action success – inclusive, deliberative, transparent, accountable, resilient and adaptable. These principles could act as criteria to channel Community Environment Fund funding towards more productive ventures.

There is a question about how these principles would apply in the built environment, although more work would be needed to substantiate this idea. In the built environment where private property rights dominate, moving to more collaborative rights and rules implies less regulation and more agreement between property owners.

Consideration of collective action could give direction to work on spatial planning and would need to be part of a more integrated and comprehensive examination of the resource management system.

Treaty of Waitangi and Māori rights and interests

The Government's work on freshwater reforms is paving the way for a constructive and enduring Treaty partnership between iwi and the Crown. This work has introduced a new

model that integrates iwi/Māori perspectives into the policy development process. Certain iwi have taken up a more pivotal role in the Land and Water Forum.

The dialogue between senior Ministers and iwi leaders on water has been running for more than three years and discussion on the substantial questions around rights and interests is beginning. The challenge now is to move beyond constructive dialogue and into reform proposals that better provide for Māori rights and interests.

While this engagement has yet to incorporate the views of all Māori, it provides a framework for constructive dialogue at all levels. Multi-level dialogue is important in ensuring that the Treaty partnership is reflected at all levels of decision making, and has close linkages with local government settings.

The freshwater model of iwi engagement has recently been adapted for use with Exclusive Economic Zone issues, with an expectation that this will be equally constructive. Such engagement with iwi/Māori is essential to achieve successful and enduring reforms across the wider resource management system.

Information to support decision making

A credible and accessible information system is required for sound decision making.

Resolving issues in water management is complex, involving difficult judgements to achieve the preferred balance between environmental, economic, social and cultural considerations. Freshwater decision making, particularly allocating rights and setting limits, requires both user-driven knowledge and the meaningful engagement of stakeholders.

Scientific data about the state of New Zealand's fresh water bodies informed the early stages of the Land and Water Forum's deliberations and values-based decisions. The information provided included water quality and quantity, information gaps and mātauranga Māori.

Information will continue to be important in determining rights and rules around fresh water, underpinning the Land and Water Forum's efforts to reconcile some of the diverse interests. Now that certain decisions have been reached around water management, science and other disciplines such as economic analysis will also play a key role in determining management options, such as setting numerical limits and monitoring.

Access to data and information remains an important issue for both water reform and resource management more generally.

While progress has been made on accessing open data in the natural resources area, improvements are still required in knowledge transfer and uptake and in the standards and consistency of data.

With limited resources, New Zealand needs to have an integrated information system that is coordinated between the key providers – Crown research institutes, private providers, local government and central government. This collaboration will be essential for targeting information needs and avoiding repetition and conflict.

Recent and proposed reforms

Several recent reforms in the wider resource management system have streamlined the planning system. The recent reforms will require continuing attention and monitoring to

ensure implementation is effective and achieves the intended gains. Some of the work areas could potentially be leveraged to provide an entry point into wider work on the resource management system.

Proposals of national significance

Following legislative changes in the last term of government, the EPA has been established as the regulator for consenting proposals in cases considered to be of national significance. Enabling proposals that have national significance to be decided at a national level means decision makers are able to consider the full range of costs and benefits.

This reform is particularly important to the effective operation of New Zealand's resource management system and to ensuring an appropriate balance of decision making between central and local government.

We will need to work with the EPA, now operating as a Crown Agent, to ensure that decision making processes are working in the most effective and efficient way and that implementation achieves the objectives of this reform.

Exclusive Economic Zone (EEZ)

The marine area is important for New Zealand because of its scale, economic potential and the increasing pressures on it. There are a variety of competing interests and values. More cohesive governance is needed to ensure that marine resources are allocated to their highest and best use and that the environmental impacts of use are better managed.

Improving environmental management in New Zealand's Exclusive Economic Zone is the priority for action in the marine area. The Exclusive Economic Zone and Continental Shelf (Environmental Effects) Bill was introduced to Parliament on 24 August 2011. When the Bill is enacted, it will not come into force until the first set of regulations is promulgated. It is important for this Bill and associated regulations to be progressed in order to realise the economic potential within the EEZ while protecting the environment.

The EPA is expected to be responsible for implementing the EEZ legislation, including decision making, information management, monitoring and enforcement functions. Voluntary measures have been introduced in the interim until the legislation is in force.

Resource Management Act reforms

Changes made during the last term of government have led to the simplification and streamlining of some processes under the RMA. These changes continue to require effort to ensure they are implemented appropriately and monitored to ensure they are having the intended effect. In addition, there are further potential minor changes that could be made to the RMA to further streamline and speed up processes, such as some of the outcomes of the *Building Competitive Cities* consultation process relating to infrastructure.

While we recommend implementing these changes, the likely gains will be modest. Any further simplifying and streamlining reforms should be considered against the longer-term gains from a wider look at the resource management and planning system as a whole.

One of the changes made during the last term of government was reform of the aquaculture planning and management regime. Like other reforms, this requires ongoing implementation

and monitoring, which is the responsibility of the Aquaculture Unit within the Ministry of Agriculture and Forestry.

Auckland and Christchurch planning regimes

The Auckland Governance Reforms and the systems and structures set up to support the Christchurch recovery are significant changes to the current resource management and planning system. They focus particularly on integrated planning and decision making, new forms of community and Māori involvement, and faster processes, and address the particular circumstances in Auckland and Christchurch.

It is important that these processes continue to be supported by central government. This support will require further policy and implementation work across several agencies, working with the local councils, as well as potential legislative changes to better support the new arrangements.

It is likely that as the processes in Auckland and Christchurch play out, there will be lessons that can be applied to the resource management and planning system more widely, and which can feed into wider work.

The next few years

We consider that the priorities for the next term of government are to focus on:

- gathering evidence and undertaking analysis to underpin a system-wide approach to integration and alignment across core legislative frameworks
- maintaining current efforts to improve freshwater management
- evaluating the new approaches to improving freshwater management for their wider resource management application, especially the use of collaborative processes, rules for allocation and setting limits, Treaty issues, and information for decision making
- ensuring that recent and proposed changes to the resource management system are implemented and monitored in a way that delivers a more efficient and integrated resource management regime.

Implications of this approach

If the Government agrees that there is merit in taking a more comprehensive and integrated view of the resource management system, we would need to discuss with you how to proceed. This work would need to extend beyond the responsibilities of the Ministry for the Environment to be effective, though environmental legislation is core.

We do not have the capacity to undertake this work as a new priority while continuing the current programme of incremental improvements. Our capacity has already been stretched by the need to respond to the Canterbury earthquake, Rena grounding, and other urgent matters and we have had to stop some RMA activities.

We would need to discuss with you where incremental and lower priority work could be stopped in order to enable us to reprioritise and where it might be refocused towards a broader system approach.

We recognise, however, that there is value in actions which will improve the efficiency and speed of current processes while not compromising the opportunity for more integrated and comprehensive improvements in the system.

3. Risk and hazard management

The framework for managing risks from chemical, biological and natural hazards that are likely to affect people, the economy and the environment is an important element of the Ministry's work. The policy framework needs to ensure that these risks are effectively managed.

Except for the introduction of the Waste Minimisation Act in 2008, the risk and hazard management framework has not been a significant focus of attention in recent years. The Ministry's efforts have largely been focused on implementation and streamlining of the relevant legislation.

Recent events in New Zealand have highlighted the importance of effective management of risks and natural hazards. There are aspects of this framework, particularly in relation to hazardous substances and natural hazards, which deserve greater attention over the next term of government.

Chemical and biological hazards

The Hazardous Substances and New Organisms Act (HSNO), now 15 years old, is a key part of the framework for managing chemical and biological hazards. The EPA has overall responsibility for decision making, monitoring and compliance.

The HSNO regime needs to strike the balance between opportunities and risks – there are potentially significant consequences if the balance is wrong.

There are persistent concerns that the HSNO Act is a barrier to prosperity and innovation for both hazardous substances and new organisms, and suggestions about the need for change. However, there is limited evidence that changes would result in substantive gains.

Before any change is considered to address problems that are unnecessarily restricting economic growth, there is a need to better understand the concerns and gather evidence. As the legislation encompasses several quite different elements, it would be sensible to phase work in this area.

The initial focus should be on hazardous substances, including the concerns about compliance costs, barriers to entry and poor compliance. Evidence about compliance is currently being validated through an EPA project. This data, along with additional research on compliance costs and barriers to entry, will provide a stronger basis for any decision to consider change. A more coherent approach to data collection, monitoring and evaluation is required to enable the continuing evolution and improvement of the risk management framework for hazardous substances.

Because more work is needed to understand the issues surrounding new organisms (including potential impacts on prosperity) this area should be considered at a later stage. That would enable us to build an evidence base from current and past new organism experiences.

Managing natural hazards and a changing climate

New Zealand is vulnerable to a vast array of natural hazards, for example: coastal erosion and sea level rise, floods, droughts, land slippage, tornadoes and other extreme wind events, earthquakes (including liquefaction and other associated effects), tsunami and volcanic eruptions. These hazards pose risks to people, property and the environment. They can lead to injury and loss of life; loss of productive land, crops, and stock; loss of homes, buildings and infrastructure; and damage to local ecosystems.

Many of the risks will change in nature and scale as the climate changes; evidence indicates a greater frequency of major climate-related events in the future.

Community resilience to such hazards requires access to information, sound infrastructural planning and engineering, and strong institutional arrangements for insuring against residual risks. The Canterbury earthquakes have demonstrated the challenges in ensuring resilience, particularly to risks that require long-term planning in a context of uncertainty.

Risk and liability

Natural hazards raise important questions relating to who carries risk and liability and, in particular, how these are shared between the public and private sectors. Individual and community decisions relating to risk management involve trade-offs. They also involve a balance between individual and community responsibilities.

Some New Zealanders make choices (and often pay premium prices) to live in coastal environments that are exposed to high natural hazards; some purchase properties that are exposed to high winds or periodic flooding because the property has a lower market price; and some choose not to invest in insurance that would assist them to recover from natural disasters.

Community and national responses to previous natural disasters can influence individual decisions about the future. These responses can build an expectation of central government financial support to recover from disasters, rather than people taking responsibility for wise property and building investments and for taking out insurance.

The review of sections 6 and 7 of the RMA may provide recommendations on how risks from natural hazards could be better addressed by local government. But, by itself, this is unlikely to be sufficient to drive the behaviour change needed for greater community resilience in the future.

As some risks of major natural events are already known and evidence indicates a greater likelihood of extreme weather events in the future, it is likely that central government will need to give stronger direction about building resilience.

Potential improvements

Areas for potential improvement include:

- The provision of information to the community, industry and other interest groups. While there is much historic information on coastal erosion, flood zones, land slippage, and earthquake prone locations, there is less information about the future effects of climate change, the potential for liquefaction, and natural hazards that can change in form and

scale with time. Quality information targeted to industry sector groups and particular communities will assist business and community decision making

- Planning for, and provision of, well located and properly engineered infrastructure
- The processes for, and priorities factored into, local government decision making
- Understanding and improving the market place for risk management institutions and insurance products.

These activities need to adopt a very long-term view (possibly up to 100 years), since the decisions today will affect New Zealand's future resilience to a changing environment. A cross-agency approach that engages with community and business interests is required.

The Ministry will need to increase its work on natural hazards, including coordination across agencies and a wider dialogue with local government and the private sector. While there have been pieces of work across government, there is little coordination of wider activity and a uniting vision and framework is needed. We will start to bring forward proposals on priorities next year.

Waste minimisation and management

The Waste Strategy sets the direction for waste minimisation and management in New Zealand. The goals of the strategy are focused on reducing the harmful effects of waste and improving the efficiency of resource use.

Over the last few years our efforts have concentrated on implementation of the Waste Minimisation Act 2008, including collection and distribution of the waste levy, and accreditation and monitoring of product stewardship schemes.

Over the next term of government we will need to turn our attention to addressing a number of implementation issues, such as levy avoidance, and any unintended consequences for the Emissions Trading Scheme (which uses Waste Minimisation Act definitions). This is likely to require new or amended regulations.

Current approaches to product stewardship focus on accreditation and monitoring of voluntary schemes. For some difficult waste types, where there is no industry-led move to establish a voluntary scheme a mandatory approach will need to be considered.

Credible and consistent information is a continuing concern for waste minimisation and management. The statutory review of the effectiveness of the waste disposal levy every three years needs to be underpinned by good data. Information regulations, which are provided for under the Act, will be important in ensuring that the Ministry has adequate information on which to base decisions about implementation of the legislation.

4. Climate change

The Government faces two key judgements in relation to climate change settings for the next decade: first, the balance between the level of costs for the economy versus the incentive to adjust to a lower carbon economy, and second, how New Zealand's emissions performance is perceived externally. If the focus is on domestic action, then New Zealand's emissions path will appear higher in the short run than if there is a continuing reliance on purchasing international units. There is also a key question about the evolution of the Emissions Trading Scheme and the inclusion of agriculture.

Drivers for action

New Zealand's obligations under the Kyoto Protocol's first commitment period end in 2012. There is likely to be a delay before any new agreement that imposes legally or politically binding obligations.

New Zealand's objective for negotiations is a comprehensive global agreement that limits warming to 2°C and involves all major emitters. For New Zealand to join a new agreement it will need to be fair (involving comparable national efforts), affordable and provide certainty.

Even in the absence of a new agreement, there remains a strong international political commitment to action. New Zealand's ability to demonstrate credible domestic action will be important for its ability to influence any future agreement and for its wider international reputation.

In addition, New Zealand will continue to face international drivers outside the negotiations to position itself credibly on climate change. The global marketplace for New Zealand's goods and services is likely to change irrespective of progress in the negotiations, as both companies and countries take action independently. How New Zealand's climate policies are perceived will impact on the 'New Zealand brand' and on the ability of our firms to access overseas markets.

In the longer term, pressure from international drivers to reduce emissions will grow. After 2020 it remains likely that New Zealand will face an international framework that requires significant emissions reductions. This will be challenging given New Zealand's unique emissions profile and projections, which show New Zealand's gross emissions rising substantially to 2050 and beyond.

The Government, therefore, needs a mix of policies that demonstrate credible action in the short term and position New Zealand well to deliver the substantial emissions reductions needed in the longer term. A smooth transition to a low carbon economy will be needed, with the emphasis being on options that enable New Zealand to produce more with fewer emissions, generate co-benefits and gain competitive advantage.

Currently the conditional emissions reduction target is to reduce emissions by 10 per cent to 20 per cent of 1990 emissions by 2020. It is unlikely that New Zealand's conditions for this target will be met before 2020. Ministers will need to decide what level of ambition New Zealand needs to demonstrate in the period to 2020 to be credible. A credible position will likely combine a commitment to specific emissions reductions with a wider narrative about the action New Zealand is taking to support the transition to a low carbon economy.

Emissions Trading Scheme

The first priority is to ensure the Emissions Trading Scheme (ETS) is fit for purpose.

The ETS is New Zealand's primary means to demonstrate credible short-term effort and to send a long-term signal to investors that will support a smooth transition to a low carbon economy. The ETS is a flexible and adaptable instrument, which can be adjusted to deliver different price signals (to the economy as a whole or to specific sectors) and to suit a range of international frameworks. The five-yearly statutory review ensures that it can be regularly calibrated.

In the wake of the 2011 ETS review report, officials will provide advice on potential changes to the ETS in February 2012, for legislative change in 2012. In this term the Government faces a number of key choices on ETS design.

First, the Government will need to decide what level of cost it wishes to impose on the economy in the short term, while the international framework is still uncertain. Adopting the ETS review recommendations to phase out the transitional '50 per cent obligation / one-for-two' over two years, rather than ending it in 2013, will have limited negative impacts on long-term price signals needed to support the transition to a low carbon economy, but will come at a fiscal cost.

Second, Ministers will need to make a decision on the timing of agriculture's inclusion in the ETS, as the sector is currently due to incur obligations from 2015. Decisions about the timing of agriculture's entry should be driven by the availability of options to reduce emissions in the short, medium and long term; the overall efficiency and effectiveness of the ETS price signal; and competitiveness impacts.

Agricultural emissions derive from multiple sources. The capacity of the sector to reduce emissions will vary significantly by gas and by farm:

- Options exist to reduce nitrous oxide emissions through best management practices and use of nitrogen inhibitors. Their uptake will require incentives, such as a price on carbon, and may provide wider co-benefits, for example for water quality. But the effectiveness of these options varies significantly by farm.
- Cost-effective technologies exist to mitigate methane emissions from animal waste on a large scale. But there are far fewer options currently available to reduce ruminant methane emissions, which make up the majority of emissions. Research and development is continuing and may be incentivised by the prospect of a price on emissions.
- Emissions intensity, in terms of emissions per unit of product for both methane and nitrous oxide emissions, have improved over past decades at levels consistent with the current proposed phase-out rate for agricultural allocation. As allocation to the sector is currently intensity-based, the most efficient processors or farms will likely have options to manage down their liability and potentially generate a surplus of units over time.

As agriculture makes up close to 50 per cent of New Zealand's emissions profile and a large part of New Zealand's international trade, it is unlikely to be feasible to exclude it from the ETS into the long term, given the range of international drivers described above. An ETS with a wide and comprehensive coverage is also likely to operate more efficiently by providing more scope for financial flows to the most cost-effective abatement options. However,

Ministers have a range of options to ensure the impacts of the scheme on the sector are tailored appropriately: including allocation; the option of starting with a lower level of obligation (as suggested by the ETS review panel); and the option of treating different gases differently.

International markets

Finally, Ministers will need to consider the relationship between ETS settings, the level of ambition New Zealand wishes to demonstrate internationally and the degree to which they wish the ETS to remain linked to international markets in the period of international uncertainty.

Currently, ETS settings are designed to align with obligations under the Kyoto Protocol and link with international carbon market mechanisms established under Kyoto, such as the Clean Development Mechanism (CDM). Because overseas abatement can be achieved at lower cost than abatement in New Zealand, high levels of purchasing of international units are expected under the ETS to 2020.

This openness to international markets provides benefits by ensuring New Zealand prices are aligned with international prices. But, in the short term, it raises a number of issues:

- Purchasing of international units by ETS participants is potentially above and beyond what is needed to meet our 10–20 per cent conditional target, and is projected to lead to significant offshore cash flows in the period 2015-2020. It may be hard to justify these levels of offshore cash flows in the absence of a binding international obligation.
- The future of the mechanisms established under Kyoto, such as the CDM, is uncertain.
- ETS revenue is collected by the Government in the form of units that have an uncertain value, which impacts on the Government's fiscal position.

It is likely to be desirable to reduce levels of international purchasing under the ETS in the short term. Any mechanism to do so should be flexible enough to ensure that New Zealand could quickly and efficiently adjust settings to deliver future international obligations, which may require use of international markets. This could be achieved by auctioning additional New Zealand Units to a cap set at an appropriate level of ambition. This would ensure that carbon prices in the ETS continue to be set by the market, but would significantly reduce offshore cash flows.

Ministers may also wish to refocus links with international markets away from the mechanisms established under Kyoto and towards more direct bilateral and regional links with trade partners developing market mechanisms. These bilateral links will provide more control over the environmental integrity of the units ETS participants might purchase and would offer more tangible benefits in terms of strengthening relationships with key allies.

Work is ongoing with Australian officials on prospects for links with the Australian Carbon Pricing Mechanism from 2015. Discussions with regional partners considering market mechanisms are deepening through the Asia Pacific Carbon Markets Roundtable.

Other measures

While the ETS plays the core role in our response to climate change, a price alone will not be sufficient to deliver a smooth and efficient transition to a low carbon economy, particularly in

the short term while the price remains comparatively low. Complementary measures will be needed to support investment in longer term abatement and infrastructure. These will likely include measures to promote technological change, innovation and behaviour change.

Though a number of such measures exist (for example, support for research into agricultural abatement technologies), work is needed to understand abatement opportunities and costs in each sector.

Work will be required across natural resources portfolios to explore the effectiveness of our current package of complementary measures and identify significant gaps. This work will need to focus in particular on opportunities for abatement within sectors that will deliver co-benefits and overall economic benefit for New Zealand.

5. About the Ministry

Role and functions

The Ministry for the Environment sees its mission as 'environmental stewardship for a prosperous New Zealand'. This emphasises that environment and economy are intertwined – a healthy environment, based on healthy functioning ecosystems, is integral to meeting economic needs and aspirations. The Ministry considers that it will need to increasingly work across the interface with environmental, social and cultural issues to deliver robust environmental policy and programmes.

The Ministry is the Government's primary adviser on the New Zealand environment and international matters that affect the environment. It was established 25 years ago under the Environment Act 1986. Our functions under that Act, and our current work, are focused on the natural and built environment, human health and well-being, and sound resource management that supports economic development.

Because environmental policy has economic, social and cultural dimensions, we have increasingly become involved in policy issues in other portfolio areas, including energy and transport, building and housing, Treaty of Waitangi settlements and agreements, and free trade agreements. A continuing concern for the management team is ensuring that our resources are not spread so thinly that we cannot make effective progress in priority areas.

Strategic direction

The Ministry's strategic direction, established in 2010, aims to generate opportunities for New Zealanders to prosper by delivering robust environmental policy that has widespread support from stakeholders and the confidence of the Government. The strategic direction identifies three priorities for our work:

- Land use and health of water resources
- Climate change mitigation and risk management
- Reviewing institutions and frameworks.

The strategic direction focuses on four key approaches to the way we work:

- defining, designing and delivering tools and institutions which create economic incentives to change behaviour
- producing, using and publishing credible evidence and feeding evaluation information into what we do
- working more closely with Māori to develop deeper relationships and understandings, using new policies and processes
- fostering enduring relationships with stakeholders who lead and are trusted by their constituents.

Each of these approaches, and the related behaviours that express the way we want our people to operate, is encouraged and enabled by a supporting strategy. The strategies are concerned with people and culture, information, stakeholders, relationships with Māori, and

ways to improve quality and planning. These ways of working will take time to become well embedded in the organisation.

The strategic direction reflects our emphasis on building the capability, capacity and efficiency of the Ministry so that we can both deliver on the Government's priorities and provide a long-term perspective on environmental management in New Zealand.

Building our capability

Core to our strategic direction is building the capability of staff, through both developing our people and bringing in high-calibre recruits when we have vacancies. In recent years, capability building has concentrated mainly on management and policy skills.

In 2009 we introduced a Building Capable Managers programme intended to upskill all current managers and to provide development for new managers appointed after that. This programme is now part of a collaborative effort across the Natural Resources Sector.

A review of the policy function in 2010 indicated that a significant shift was needed for the Ministry to meet rising expectations about our role in leading policy thinking and debate on complex issues. Action to establish a high performing policy function has included ensuring that we have the right people in the right roles, introducing frameworks and tools to support our approach to policy advice, and developing clearer and more transparent ways of measuring quality that support continuing improvement. Our efforts to improve the quality of policy advice are continuing.

More broadly, we are maintaining our emphasis across the organisation on improving capability and the ways we operate, so that we can quickly adapt to changing demands while providing high quality and effective advice and support.

Work flow and the Ministry's capacity

The Ministry employs approximately 278 full-time equivalent staff based in three divisions – Policy, Programmes, and Strategy and Corporate.

Most of the work undertaken on Government priorities, including policy advice and the development of legislation and national policy statements under the RMA, is carried out by the Policy Division. Once policy is decided and/or legislation is passed, there is a significant workload in ensuring effective implementation and developing regulations. This work is undertaken by the Programmes Division, which is also responsible for development of national environmental standards, administration of grants schemes, statutory functions such as administration of the Waste Minimisation Act, and the evidence base.

The Ministry has a continuing need to balance the resources available for new policy priorities and interventions with those required for implementation and statutory obligations. This can mean, at times, that we must discuss with you options for scaling back or stopping work in some areas in order to take on new commitments.

Where there is a need for urgent operational involvement, as with the government response to the Canterbury earthquake or the grounding of the Rena, we need to reallocate staff from planned work. In both cases we have dealt urgently with matters related to RMA, waste disposal and funding.

Budget and efficiency

Over the past year we have more clearly identified the environmental outcomes we want to achieve in the long term and the shorter term to progress our strategic priorities. Use of government funding has been made more transparent by aligning our areas of expenditure and activities with these outcomes.

The Ministry's baseline funding for policy advice and implementation is approximately $38 million in Vote Environment and $12 million in Vote Climate Change. A more stable funding profile than in the past has been agreed with The Treasury to enable the Ministry to plan and manage its expected future work programme.

In addition to the departmental expenditure, we administer government funds of about $83 million to assist with external programmes such as remediation of contaminated sites, clean-up of polluted fresh water, waste minimisation, community environmental initiatives, and environmental legal assistance.

A major stream of non-departmental expenditure is the issuing of New Zealand Units under the ETS, which totals around $2.1 billion over the next three years. This stream could be subject to significant fluctuations due to the price of carbon, policy changes arising from the ETS review and economic drivers which drive emissions levels. Further formal monitoring at a departmental and ministerial level may be needed in the near future due to the uncertainties mentioned above. While administration of the ETS is now the responsibility of the Environmental Protection Authority (EPA) and the Ministry of Agriculture and Forestry, the Chief Executive of the Ministry for the Environment still has overall accountability for the ETS and the appropriation.

We have undertaken our planning for the next three years in the expectation that the work of the Ministry and the EPA will need to be resourced from the current appropriations and incorporating the efficiency dividend from 2012/13. We are continuing to improve our business planning and budgeting processes and to seek efficiency improvements. Any need to significantly reprioritise resources for new or urgent initiatives will require a discussion with you.

Key partnerships and relationships

Environmental Protection Authority

The Environmental Protection Authority (EPA) was established on 1 July 2011 to provide a consistent regulatory approach across the country and over a broad range of environmental issues at a national level. This Crown entity operates under legislation and regulations for which you and the Ministry for the Environment have responsibility.

Along with local government, the EPA is very important to the effective operation of New Zealand's environmental management system. We will work closely with EPA staff in developing or reviewing relevant policy, legislation and regulations to ensure that we understand the operational issues. We also monitor the implementation of legislation and regulations by the EPA and its organisational activities to ensure it is operating effectively.

Network of natural resources agencies

The Ministry collaborates on key issues and aspects of organisational development with government agencies that have interests in natural resources and environment. The core Natural Resources Sector (NRS) cluster comprises the Ministry for the Environment, Ministry of Agriculture and Forestry, Department of Conservation, Land Information New Zealand, Ministry of Economic Development, and Te Puni Kokiri. These have recently been joined by the Ministry of Science and Innovation.

The NRS is led by the Ministry for the Environment, which hosts the secretariat supporting the NRS work programme. By bringing together the expertise and perspectives of individual agencies, the NRS can collaborate on both key policy issues to improve the quality of our advice and shared services to improve the efficiency and effectiveness of how we operate.

The challenges posed by natural resources issues are bigger than any one agency can tackle on its own. The NRS enables central government to take a strategic and integrated approach to natural resources policies and management. This collaborative approach is increasingly important as we consider some very complex, difficult and intractable issues.

The NRS has developed the economy and environment principles – a framework to help analysts working on natural resources policy to take into account different perspectives and the links between the economy and the environment.

A separate briefing to be provided by the Natural Resources Sector Network sets the broader economy and environment frame on which this briefing is based.

Local government

Equally important to our ability to lead and influence environmental stewardship is our relationship with local government, which is responsible for day to day resource management. Through the Chief Executives Environment Forum we bring together the regional councils and natural resources agencies in central government. The forum aims to develop a good working partnership between central and regional government; support leadership in areas of mutual interest; undertake joint strategic planning and programmes of action; and encourage open discussion of environmental issues.

Other important partnerships and relationships

The Ministry has a range of other important partnerships and relationships. We continue to forge closer ties with iwi leaders and advisers, whose interests in natural resources are connected to many areas of the Ministry's work.

We have extensive connections with business, the primary production sector, non-government organisations and Crown research institutes.

We aim to engage our stakeholders in relevant issues, understand their perspectives, and work closely with them on matters of common interest.

6. Minister's statutory responsibilities

Environmental legislation and specific responsibilities in law

The Minister for the Environment has specific responsibilities in law under a number of environmental Acts. The Ministry for the Environment administers these Acts.

Environmental Protection Authority Act 2011

The Environmental Protection Authority (EPA) was established under the Environmental Protection Authority Act 2011 to carry out specific functions and duties set out in this Act and a range of other environmental acts. The EPA's main functions are concerned with:

- national consenting under the Resource Management Act and other national resource management processes
- regulation of pesticides, fireworks, explosives and other hazardous substances
- regulation of ozone-depleting substances, certain chemicals and hazardous waste controlled by international environmental agreements
- regulation of new organisms, including (amongst others) genetically modified organisms
- administration of the New Zealand Emissions Trading Scheme, including the New Zealand Emission Unit Register and allocation of New Zealand units (from 5 December 2011).

The Minister for the Environment oversees and manages the Crown's ownership, policy and regulatory interest in the EPA. This includes appointing the Board and approving the Board's appointments to certain committees.

As a Crown Agent the EPA must give effect to any policy direction given by the Minister. There are some specified limitations on the ability to direct the EPA in respect of decision making under the Hazardous Substances and New Organisms Act, certificates of compliance under the Resource Management Act, and marine consent decisions under the proposed Exclusive Economic Zone and Continental Shelf (Environmental Effects) Bill.

Environment Canterbury (Temporary Commissioners and Improved Water Management) Act 2010

The Minister for the Environment and the Minister of Local Government are jointly responsible for the Environment Canterbury (Temporary Commissioners and Improved Water Management) Act. Relevant powers and responsibilities include to:

- remove and appoint Commissioners
- amend the Commissioners' Terms of Reference
- approve the imposition of moratoria on water consents
- undertake a number of actions related to Water Conservation Orders in Canterbury.

Waste Minimisation Act 2008

The aim of the Waste Minimisation Act 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.

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 Māori 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.

Fiordland (Te Moana o Atawhenua) Marine Management Act 2005

The Fiordland (Te Moana o Atawhenua) Marine Management Act establishes the Fiordland Marine Management Area, including eight marine reserves, and puts in place measures to assist in the preservation, protection, and sustainable management of the marine environment and biological diversity.

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

- appoint the Fiordland Marine Guardians – the terms of seven Guardians end in 2012
- provide direction to the Fiordland Marine Guardians relating to management of the area

- initiate reviews to determine the effectiveness of the management of the area.

Hazardous Substances and New Organisms Act 1996

The Hazardous Substances and New Organisms Act (HSNO) aims to prevent or manage the adverse effects of hazardous substances and new organisms, including genetically modified organisms within New Zealand. The Environmental Protection Authority (EPA) is responsible for the operation and implementation of the Act.

Under the HSNO Act, the Minister for the Environment has responsibility to:

- approve Board appointments to any decision-making committee
- 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, using the EPA as advisors rather than the EPA making the decision.

Ozone Layer Protection Act 1996

The purpose of the Ozone Layer Protection Act 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 EPA implements the regulations associated with the import and export of ozone-depleting substances.

The Minister for the Environment is responsible for reviewing the reduction timetables for ozone-depleting substances and for annual reporting to the House under the Ozone Layer Protection Act 1996.

Resource Management Act 1991

The Resource Management Act (RMA) 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. Most decision making under the RMA is devolved to local authorities or to Boards of Inquiry appointed by the Minister for nationally significant proposals.

Under the RMA, the Minister for the Environment is responsible for:

- recommending the making of national policy statements and national environmental standards
- considering recommendations of the EPA or exercising Ministerial call in powers where a matter is considered to be, or part of, a proposal of national significance, and referring the matter to a Board of Inquiry or the Environment Court for a 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, heritage protection authority or 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.

The Minister for the Environment also has 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 RMA
- make grants and loans to assist in achieving the purpose of the RMA.

Imports and Exports (Restrictions) Act 1988

The Minister for the Environment is the decision maker under the Imports and Exports (Living Modified Organisms) Prohibition Order 2005, which controls the export of living modified organisms as necessary to fulfil New Zealand's obligations under the Cartagena Protocol on Biosafety 2000. The Minister has the power to permit the export of living modified organisms.

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.

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 Act 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. It also establishes the New Zealand Emissions Trading Scheme.

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 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 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 five-yearly review of the operation and effectiveness of the Emissions Trading Scheme. The first review has just been carried out so the next one is not due until 2016.

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:

- exempt any person listed in Schedule 3 from being a participant
- direct the issuance of New Zealand Units into a Crown holding account in consultation with the Minister of Finance
- notify the Crown's intention to issue and sell, or allocate freely, New Zealand units
- direct the Chief Executive in relation to the Chief Executive's exercise of power, and performance of functions, under Parts 4 and 5 of the Act
- add further removal activities to Schedule 4, and activities relating to fishing and coastal shipping to Schedule 3
- make targets.

Finally, the Minister for Climate Change Issues has various powers to make regulations relating to a wide range of matters and to direct agencies as needed to operate the Emissions Trading Scheme.

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.

Obligations from Treaty of Waitangi settlements and accords

A number of obligations arise as a result of the deeds of settlement in relation to the Waikato River. The Minister for the Environment has specific obligations related to the Waikato River Authority, a statutory body formed under the Waikato-Tainui Raupatu Claims (Waikato River) Settlement Act 2010 and the Ngati Tuwharetoa, Raukawa, and Te Arawa River Iwi Waikato River Act 2010. These include:

- make recommendations to the Governor-General about 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)
- present the annual report to Parliament
- appoint or remove the Crown members of the Authority
- participate in reviews of the Authority every five years (first review due in 2016)

- resolve any issues, in conjunction with a nominated iwi representative, if the Authority is unable to make a decision.

Other Waikato River settlement obligations include:

- attend annual relationship forums with each of Waikato-Tainui, Raukawa, Te Arawa and Maniapoto
- take into account the interests of the Waikato River iwi when carrying out functions under the Resource Management Act 1991, the Environment Act 1986 and the Soil Conservation and Rivers Control Act 1941 that directly affect the Waikato and Waipa Rivers and their catchments
- participate in the reviews of the four Environment Accords, the first of which must take place no later than three years from their settlement dates (the earliest settlement was in September 2010 with Waikato-Tainui)
- resolve any disputes that arise between iwi and local authorities in the development of joint management agreements.

The Ministry has a significant and growing role in implementing aspects of Treaty of Waitangi settlements and accords. We currently have ongoing obligations with 25 settled iwi stemming from relationship agreements with varying levels of obligations. The relationship agreements were established to help meet the aspirations of claimant groups to improve their relationship with the Crown and increase their participation in resource management.

A particular focus of the agreements has been on the Ministry's monitoring of local authorities in carrying out RMA functions in the claimant group's area of interest, as well as the ability to provide high-level policy input into the development of the RMA and other environmental policies.

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 *Statement of Intent 2011–2014* provides an overview of our activities, the outcomes and impacts we are working to achieve and our operating environment. We will discuss with you the planned work for 2011/12 and how you wish to progress your priorities.

The Ministry monitors the Environmental Protection Authority's activities and performance on your behalf. During the current phase of EPA establishment and greater capital expenditure, this monitoring will be more intensive to ensure we are aware of any risks and issues. We will advise you of any concerns. The EPA will provide a separate briefing about its functions and current issues.

We also provide advice on appointments to the Board of the Environmental Protection Authority. The terms of two Board members will expire on 1 June 2012 and a decision will be needed soon on the process for making appointments to these vacancies.

The Minister for the Environment normally provides direction for a Crown entity's planning through the annual letter of expectations or a process such as a meeting with the Chair and/or Board. We will seek confirmation from you soon about how you wish to communicate your expectations to the EPA. The Ministry will assist in preparing the letter of expectations, or a briefing if you prefer to have a meeting with the Chair and/or Board.

7. Issues that need consideration by March 2012

Priority Issues for the Minister for the Environment to consider by March 2012	
Exclusive Economic Zone and Continental Shelf (Environmental Effects) Bill	• Reinstatement of the Bill into the House • Cabinet approval for a Supplementary Order Paper giving effect to the previous decision to transfer discharge and dumping functions to EEZ legislation • Cabinet agreement to release a discussion document on EEZ regulations
Fresh Start for Fresh Water	• Interim report from the Land and Water Forum on setting of limits, decision-making structures for limit-setting, managing to limits (including land use), and allocation is expected on 16 December 2011, with a final report on 31 March 2011
Green Growth Taskforce	• Cabinet consideration of findings on Green Growth initiatives
Environmental Reporting Bill	• Consideration of report following consultation on the proposed Bill • Cabinet consideration of the introduction of the Bill to the House
Resource management reforms	• Decisions on next steps with the resource management reforms, in particular the legislative links between the Auckland Spatial Plan and the rest of the national planning framework • Report of the Technical Advisory Group tasked with reviewing sections 6 and 7 of the Resource Management Act is expected in February 2012

Other Issues for the Minister for the Environment to consider by March 2012	
Hazardous substances regulations (Tank Wagons and Transportable Containers, Compressed Gases, and Personnel Qualifications)	• Final Cabinet approval of amendments following drafting
Product stewardship for e-waste	• Cabinet approval to release a discussion document
Agreement between Minister and five iwi regarding a package of 35,000 hectares of conservation land	• Decision on a meeting with iwi leaders to discuss the findings of additional work
Ministerial appointments	• Decisions on the process for appointment of two EPA Board members (terms end 1 June 2012) and seven Fiordland Guardians (terms end in June, October and December 2012)
OECD Environment Ministerial	• Decision on attendance at meeting scheduled for 29–30 March 2012.

Issues for the Minister for Climate Change Issues to consider by March 2012	
Emissions Trading Scheme	• Cabinet consideration of response to the 2011 ETS Review's recommendations and possible legislative amendments in 2012
Negotiated Greenhouse Agreement	• Decision on review of agreement with the New Zealand Refining Company.

Appendix 1 – Overview of environmental issues

This section presents information on selected indicators for environmental issues across the Natural Resources Sector but is not exhaustive. The information is assessed from an environmental perspective; impacts on social and economic well-being are not considered. The 'benchmark' meters in the left column compare the latest information on each indicator against national standards where possible. In the absence of a national standard, New Zealand's performance has been benchmarked internationally (eg, against our OECD peers). The 'trend' meters in the right column show whether that aspect of the environment is getting better or worse over time. If New Zealand scores highly relative to other countries, it does not necessarily mean that it is performing to the standard to which New Zealanders aspire.

Key

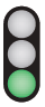

Performing well against national or international benchmark data (for the latter, NZ is in the top third of OECD countries).


Mixed or performing averagely against national or international benchmark data (for the latter, NZ is in the middle third of OECD countries).


Performing poorly against national or international benchmark data (for the latter, NZ is in the bottom third of OECD countries).

— 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		PM_{10}: NZ has good air quality in most locations for most of the time. However, air quality can be poor in a number of locations around NZ. Problems stem from high winter emissions of PM_{10} from coal and wood used for home heating. Auckland can experience high levels of PM_{10} from road transport emissions. In 2010, 50% of the 44 monitored airsheds breached the national environmental standard for PM_{10} by having more than one exceedence in the year. In 2010, 83% of the 41 airsheds for which data requirements were met, complied with the annual mean PM_{10} ambient air quality guideline.	Getting better	In the five years to 2010, annual mean levels of PM_{10} decreased at one selected monitoring site in Auckland, Hamilton, Wellington and Christchurch, while levels fluctuated at the Dunedin site. Annual mean PM_{10} levels at one selected monitoring site in Auckland, Hamilton and Wellington met the NZ ambient air quality guideline in the decade to 2010, while levels at the Dunedin site commonly exceeded it. Levels at the Christchurch site met the NZ ambient air quality guideline in the four years to 2010.
		*Four other pollutants*: In 2008, carbon monoxide, sulphur dioxide, nitrogen dioxide, and ground-level ozone levels at all monitoring sites in NZ complied with the national environmental standard for air quality.	Mixed	In general, *carbon monoxide* levels have improved or stabilised over time in NZ, probably reflecting changes to transport fuels. *Sulphur dioxide*, *nitrogen dioxide* and *ground-level ozone* have displayed mixed trends across monitoring sites, sometimes exceeding the standards and/or guidelines.

	BENCHMARK/STATE		TREND	
ATMOSPHERE		*Greenhouse gas emissions*: Although NZ produced 0.21% of global gross greenhouse gas emissions in 2005, we were the 11th highest greenhouse gases emitter per capita in the world. In 2005, we were the 5th highest emitter per capita out of 40 Annex 1 (ie, developed) Parties to the UNFCCC. In 2005, we were the 5th highest greenhouse gas emitter per capita out of 30 OECD countries.	Mixed	As our population, economy and energy use have grown, *greenhouse gas emissions* have also grown. Between 1990 and 2009, NZ's total greenhouse gas emissions increased by 19.4%. However, greenhouse gas emissions per capita decreased by 4.8% between 1991 and 2009.
		*Stratospheric ozone*: In 2009, NZ had the 6th lowest use of *ozone-depleting substances* per capita out of 13 OECD countries. In 2008, the average yearly *stratospheric ozone* concentration over NZ was one of the lowest, ie, worst, since records began in 1970.	Mixed	*Stratospheric ozone* levels over NZ fluctuate from year-to-year. In general, levels between 1970 and 1984 were higher (ie, better) than levels between 1985 and 2008. However a small increase was recorded in the decade to 2008, after record lows in the late 1990s. Between 1995 and 2009, use of ozone-depleting HCFCs in NZ decreased by 60%.

Source: Ministry for the Environment's environmental report cards: www.mfe.govt.nz/environmental-reporting/report-cards. International comparisons based on data from the OECD, United Nations, UNFCCC, Emerson et al, the World Bank and the World Resources Institute.

RIVER, LAKE AND GROUND WATER QUALITY	BENCHMARK/STATE		TREND	
		In 2010, NZ's *freshwater quality* was rated second out of 156 countries. The water quality index consisted of five parameters: dissolved oxygen, electrical conductivity, pH, total phosphorus and total nitrogen.	Mixed	No overall trend in NZ's *freshwater quality* can be identified from monitoring data available. Some aspects are getting worse – *nutrient enrichment* has increased in some water bodies in catchments that are subject to intensive land use. Some aspects are getting better – *organic pollution* levels from point sources have improved.
		*Rivers*: Nutrient levels in NZ rivers are still low by international standards. Our most nutrient-enriched rivers have about half the average nutrient levels of rivers in the OECD. Rivers in natural or near-natural catchments make up about half the total length of NZ rivers, and have good river water quality. However, river water quality is significantly deteriorated in lowland areas of Northland, Auckland, Waikato, the east coast of the North Island, Taranaki, Manawatu-Wanganui, Canterbury and Southland.	Getting worse	*Nutrients*: Between 1989 and 2007, average annual levels of nitrate, total nitrogen and dissolved reactive phosphorus in national network rivers increased by 0.5%, 1%, and 0.6% respectively. While these increases may seem small, it signals a long-term trend towards nutrient-enriched conditions that are likely to trigger undesirable changes to river ecosystems. For the same period, NZ rivers with relatively high levels of nitrogen deteriorated (became more nutrient enriched) more rapidly than rivers with low levels of nitrogen.
			Getting better	Between 1989 and 2007, median *visual clarity* in national network rivers improved by 0.6% per year. *Biological oxygen demand* has also improved across national network rivers over the last few decades. These improvements are consistent with reductions of organic pollution from point sources.
			—	*Other river water quality variables*: there is no significant national trend to report for dissolved oxygen or temperature.
	—	*Lakes*: 43% of all lakes in NZ are estimated to have low concentrations of nutrients and excellent water quality. This is because they are in natural or partially developed catchments. 25% are estimated to have moderate levels of nutrients, and the remaining 32% are estimated to have high levels of nutrients and poor water quality.	Getting worse	Between 2005 and 2009, water quality in 28% of the 67 lakes with data available deteriorated and 12% showed an improvement.
	—	*Groundwater*: Between 1995 and 2008, median nitrate levels exceeded the health-related drinking water guideline (11.3 mg/L) at 5% of the 900 groundwater monitoring sites from which data was collected. Levels of *E. coli* exceeded the health-related drinking water guideline (<1 unit/100 ml) at 23% of monitoring sites, indicating faecal contamination. This may be due to poor well-head protection rather than overall groundwater quality. Many of these sites are not used for drinking-water supply.	Mixed	Between 1995 and 2008, groundwater quality was stable or changed slowly (probably due to natural processes) at around three-quarters of sites. About one-third of sites showed significant changes in nitrate levels. Of these, more had increasing (deteriorating) trends than decreasing (improving) trends.

	BENCHMARK/STATE		TREND	
FRESHWATER DEMAND		*Water withdrawals*: NZ had the 3rd lowest water withdrawals as a share of total water available, out of 29 OECD countries. *Water abstractions per capita*: In 2007, NZ had the 2nd highest water consumption per capita out of 30 OECD countries. In 2010, 27 billion cubic metres of water was allocated for consumption in NZ. This is equivalent to almost half the volume of Lake Taupo. Irrigation accounts for 46% of weekly consumptive water allocated in NZ (largely in Canterbury and Otago), and hydro generation 41% (for Southland's Manapouri hydro take). The percentage of estimated actual water used compared with the maximum allocated volume in NZ is around 65%. However, most regions use less than 50% of their allocated water.	Getting worse	Demand for freshwater is increasing, particularly in drier parts of the country, mainly as a result of an increase in the area of irrigated land. Between 1999 and 2010, national weekly consumptive water allocation increased by a third. Excluding the Manapouri hydro take, water allocation (to uses such as irrigation) has nearly doubled since 1999, and increased by 10% in the past four years.

	BENCHMARK/STATE		TREND	
FRESHWATER RECREATIONAL WATER QUALITY	—	Over the 2010/11 summer, 87% of the 238 monitored *freshwater swimming spots* generally posed a low public health risk, and 13% were often high risk.	—	Freshwater recreational quality in the 2010/11 summer was similar to the typical exposure to risk at monitored beaches (as derived from the last 5 years of data).

	BENCHMARK/STATE		TREND	
COASTAL RECREATIONAL WATER QUALITY	—	Over the 2010/11 summer, 98% of the 350 monitored *coastal swimming beaches* generally posed a low public health risk, and 2% were often high risk.	—	Coastal recreational water quality in the 2010/11 summer was similar to the typical exposure to risk at monitored beaches (as derived from the last 5 years of data), although some coastal beaches had more 'occasionally high risk' conditions than usual.

	BENCHMARK/STATE		TREND	
MARINE PROTECTED AREAS		In 2011, NZ has 12,796 km² of *marine reserve*, which is high by international standards. Marine reserves cover just over 7% of NZ's territorial sea. In 2011, NZ has 34 gazetted marine reserves, 18 of which have been established since 2003.	Getting better	Between 2001 and 2011, the area designated as *marine reserve* increased from 7,634 to 12,796 km² (an increase of 68%). However, 97% of the total area protected by marine reserve is found in two marine reserves around isolated offshore islands, and some key habitats remain unprotected.

	BENCHMARK/STATE		TREND	
FISHERIES		*Fish stock status*: In 2010, of the 633 fish stocks in the quota management system, 119 stocks had data available to assess stock status. Of these 119 stocks, 69% were at or above the management target, and 31% were below the management target.	Getting worse	In 2010, 31% of assessed *fish stocks* were overfished, compared with 15% in 2007.
	—	In 2009, the *commercial fishing* industry caught 424,693 tonnes of fish in NZ waters. In 2008, 68 large (>28 m) fishing vessels conducted 38,648 *seabed trawls* covering 85,222 km².	—	*Commercial fish catch* in NZ waters increased from 431,389 tonnes in 1990 to a peak of 652,311 tonnes in 1998, and decreased to 424,693 tonnes in 2009. The estimated *total area trawled* by commercial vessels increased from 85,448 km² in 1990 to a peak of 166,233 km² in 1998. Between 1998 and 2008, the total area trawled almost halved to 85,222 km².

BIODIVERSITY

BENCHMARK/STATE		TREND	
	*Protected areas*: About 44% of NZ's land area is covered by *native vegetation*, most of which is in hill country and alpine areas. In 2009, 33.4% of NZ's land (or 8,763,300 ha) was legally protected for conservation. By international standards, a high proportion of NZ is *legally protected* for conservation purposes.	Getting better	Between 2006 and 2009, *legally protected conservation land* increased by 408,600 ha or 4.9%. About three quarters of this increase was from land acquired and protected through the High Country Tenure Review. However, protection is not evenly spread across NZ's different ecological environments. Some of our most threatened environments are poorly protected.
	*Native species*: NZ's native biodiversity is unique. With an estimated 80,000 *species* of native animals, plants and fungi, NZ makes an important contribution to global biodiversity. 5% of NZ's 2359 indigenous *vascular plant* species are threatened, the 3rd lowest percentage out of 16 OECD countries. 21% of NZ's 281 indigenous *bird* species are threatened, the 9th lowest percentage out of 17 OECD countries. 18% of NZ's 60 indigenous *mammal* species are threatened, the 7th lowest percentage out of 20 OECD countries. 11% of NZ's 90 indigenous *reptile* species are threatened, the lowest percentage out of 18 OECD countries. 75% of NZ's 4 indigenous *amphibian* species are threatened, the highest percentage out of 18 OECD countries.	Getting worse	The distribution of seven monitored *native species* (the lesser short-tailed bat, kiwi, kokako, kaka, mohua, wrybill, and dactylanthus) decreased in range between the 1970s and 2006, probably due to pest activity rather than habitat loss.

SOIL HEALTH

BENCHMARK/STATE		TREND	
—	*Soils* under agricultural grazing land are generally in poorer condition than soils under other land uses, with levels of compaction, nitrogen, phosphate, and organic carbon outside of target ranges.	Mixed	Slightly more sites under productive land uses are meeting target ranges for *all* soil health indicators now than in the past. However, levels of compaction, organic reserves, and fertility are generally increasing in sites under grazing land uses. Increasing compaction and organic reserves may indicate deteriorating soil health, but, up to a point, increasing fertility may improve soil health.

EROSION RISK

BENCHMARK/STATE		TREND	
—	10% of NZ is classed as severely *erodible* (ie, prone to erosion). Much of this land is in hill country pasture.	Getting better	Between 1997 and 2002, about 3% (or 36,350 ha) of the 1.18 million hectares of pasture on *erosion-prone* hill country was converted to exotic forestry or retired and left to revert to scrub.

LAND USE

BENCHMARK/STATE		TREND	
	In 2008, of NZ's total land area: *Natural forest* covered 8.1 million ha *Planted forest* covered 2.0 million ha *High producing grassland* covered 5.8 mill ha *Low producing grassland* covered 7.7 mill ha *Scrubland* covered 1.1 million ha *Cropping & horticulture* covered 0.4 million ha *Human settlements* covered 0.2 million ha. NZ has the 8th highest *livestock densities* out of 30 OECD countries. *Nutrient balances:* nutrient surpluses are lost to the environment, and can pollute soil, air and water: *Nitrogen balance*: In 2006/08, NZ had an average annual nitrogen surplus of 45 kg per hectare of agricultural land, the 15th lowest of 32 OECD countries. *Phosphorus balance*: In 2006/08, NZ had an average annual phosphorus surplus of 13 kg per hectare of agricultural land, the 5th equal highest of 32 OECD countries. NZ has the lowest *pesticide use* per km² of agricultural land of 27 OECD countries.	Getting worse	Between 1990 and 2008 the net area of: *Forest cover* increased by 5.1% *High producing grassland* decreased by 0.9% *Low producing grassland* decreased by 3.9% *Scrubland* decreased by 10.6% *Cropping & horticultural land* increased by 1.1% *Human settlements* increased by 1.3% Between 2000 and 2009, NZ had the 4th largest percentage increase in *agricultural production* in the OECD. Although the total area of pasture in NZ has been decreasing since 1972, the area of land in *dairy pasture* has increased. Between 1999 and 2010 the national *dairy herd* grew by 37%. Between 1990/92 and 2006/08, NZ's average annual *nitrogen surplus* increased by 47%. Between 1990/92 and 2006/08, NZ's average annual *phosphorus surplus* increased by 115%.

Appendix 2 – Additional briefings

This briefing does not cover the full range of the Ministry's diverse work programme, which is outlined in the *Statement of Intent 2011–2014*. Please indicate if you would like additional briefings over the next few months on any of the topics shown in the table below.

Work programme or topic	✓
Emissions Trading Scheme implementation	
Emissions Trading Scheme review and government response	
Developments in national and international carbon markets	
International climate change negotiations and New Zealand's negotiating position	
Greenhouse gas reporting and national carbon accounting system	
Projects to reduce emissions and Negotiated Greenhouse Gas Agreements	
Fresh Start for Fresh Water initiatives, including Land and Water Forum activities	
Fresh Start for Fresh Water Funds – Lake Taupo, Rotorua Lakes, and other initiatives	
Water conservation orders	
Improving environmental reporting	
Resource management reforms	
National policy statements and national environmental standards – current and proposed	
National air quality standards and local government implementation	
Resource management practice issues, training and guidance	
Environmental Protection Authority	
Environmental and resource management aspects of Canterbury earthquake recovery	
Exclusive Economic Zone and the EEZ Bill	
Treaty of Waitangi settlements and environmental accords with iwi – negotiations and implementation of obligations	
Chemical and biological risk management framework	
Natural hazards management framework, including flood risk	
Waste management and minimisation, including collection and distribution of levy	
Product stewardship schemes – voluntary and mandatory	
Funding and grant schemes – Community Environment Fund, Environmental Legal Assistance Fund, and strategic agreements with third parties	
Contaminated site remediation projects, including Tui Mine	
Environment cooperation agreements associated with free trade agreements	
New Zealand's compliance with international environmental obligations	