Magazine of the Ministry for the Environment

ENVIRONZ

Take Taiao Aotearoa

April // 2007

08

To become truly sustainable will mean changing our behaviour… the government is prepared to lead by example.

The PM tells us how on page 08.

Ministry for the Environment
Manatū Mō Te Taiao

IN THIS **ISSUE**

welcome

Welcome to the new look Environz. Thank you to those readers who responded to our readership survey last year, this is the result of your suggestions. We are also pleased to announce that Environz is now printed on 60 per cent recycled paper and was sent to you in biodegradable flow-wrap (called NatureFlex™). Using this flow-wrap is an experiment for both the distribution company and us. //

Sustainability is now firmly at the heart of the government's agenda and the Ministry for the Environment welcomes the Prime Minister's resolve to aim for a truly sustainable New Zealand.

It is exciting to see sustainability recognised for the competitive advantage it can provide in terms of life style, quality of life, business results and, of course, quality of environment.

All of us have an important role to play in making New Zealand more sustainable. The Ministry will be driving a number of programmes to support sustainablity in New Zealand's businesses and households, and how as a nation we can further reduce waste. We will show leadership in reducing our carbon footprint, and purchasing sustainable goods and services. Our intention is to provide the advice, information and support that enables people to make a difference.

I want to highlight two important sub-themes embedded in the sustainability initiatives. These are climate change and fresh water.

The recent report from the Intergovernmental Panel on Climate Change makes it clear the world's climate is changing. We need enduring policies that are in New Zealand's best interests. We have consulted on a series of discussion documents that lay out policy options for climate change and energy, and the government is committed to action this year.

New Zealand's fresh water is a valuable resource domestically and an important competitive advantage for this country in the future. With the Ministry of Agriculture and Forestry, we are developing a better framework for the management of fresh water that will reverse the decline we have seen in the quality of some fresh water systems. At the same time the system of allocation is being examined to improve equitable access to water.

Hugh Logan

Chief Executive and Secretary for the Environment
Ministry for the Environment

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01 // Flexi-fuelled cars can run on high levels of biofuel.
Photo // Energy Efficiency and Conservation Authority.

A **TREE-POWERED CAR** IN THE GARAGE?

We may soon be filling our cars from fuel derived from tallow and, even further in the future, fuel sourced from trees and algae. A biofuels sales obligation, announced in February, will mean that most fuel sold will soon contain some biofuels.

The biofuels sales obligation will come into effect in April 2008. It will require oil companies' annual fuel sales to contain 3.4 per cent biofuel by 2012. These levels are set to reflect the quantity of biofuel feedstock currently estimated to be available in New Zealand. An example of a biofuel feedstock is woody biomass from trees.

According to Climate Change Minister, David Parker, the sales obligation will reduce greenhouse gases by more than a million tonnes between 2008 and 2012. This is because of the carbon dioxide absorbed by the tree or plant during its growing life.

"Using biofuels will help us address climate change. They will also help reduce harmful pollution in our air," said Parker.

Around half of New Zealand's carbon dioxide emissions are from transport. Biofuels are one of several proposals for a sustainable energy future laid out in the draft New Zealand Energy Strategy and the draft New Zealand Energy Efficiency and Conservation Strategy.

Government is currently holding discussions with companies to explore how it can support more development of New Zealand-based biofuels, particularly second generation biofuels produced from trees, certain grasses, or algae growing on sewage ponds.

Biofuels have received a mixed response from environmentalists worldwide. There is concern around the clearing of tropical rainforests for biofuel crops such as palm oil. Another issue is the use of good agricultural land for fuel rather than food production.

However, New Zealand has large areas of land that are potential sources of sustainable woody biomass and we are unlikely to use higher value food producing land for biofuel production. //

First generation biofuels are:
// bioethanol (a substitute for petrol) from whey (from dairy production) or corn
// biodiesel (a substitute for diesel) from tallow (a by-product of the meat industry).

Second generation biofuels are:
// bioethanol from woody biomass (trees and certain grasses)
// biodiesel from algae growing on sewage ponds.

For more information about biofuels contact **David Weinstein** on **(04) 439 7487** or email **david.weinstein@mfe.govt.nz**

MINISTRY HOSTS **YOUNG ENVIRONMENTALISTS**

Young people around the country can again be involved in the Sir Peter Blake Youth Environment Forum, in Wellington during July.

Delegates will spend a week participating in community projects, voicing their opinions on environmental issues and learning first hand about environmental management.

The forum is led by the Ministry, in partnership with the Sir Peter Blake Trust, and is an excellent opportunity for tomorrow's environmental leaders to gain experience and skills to take back to their regions.

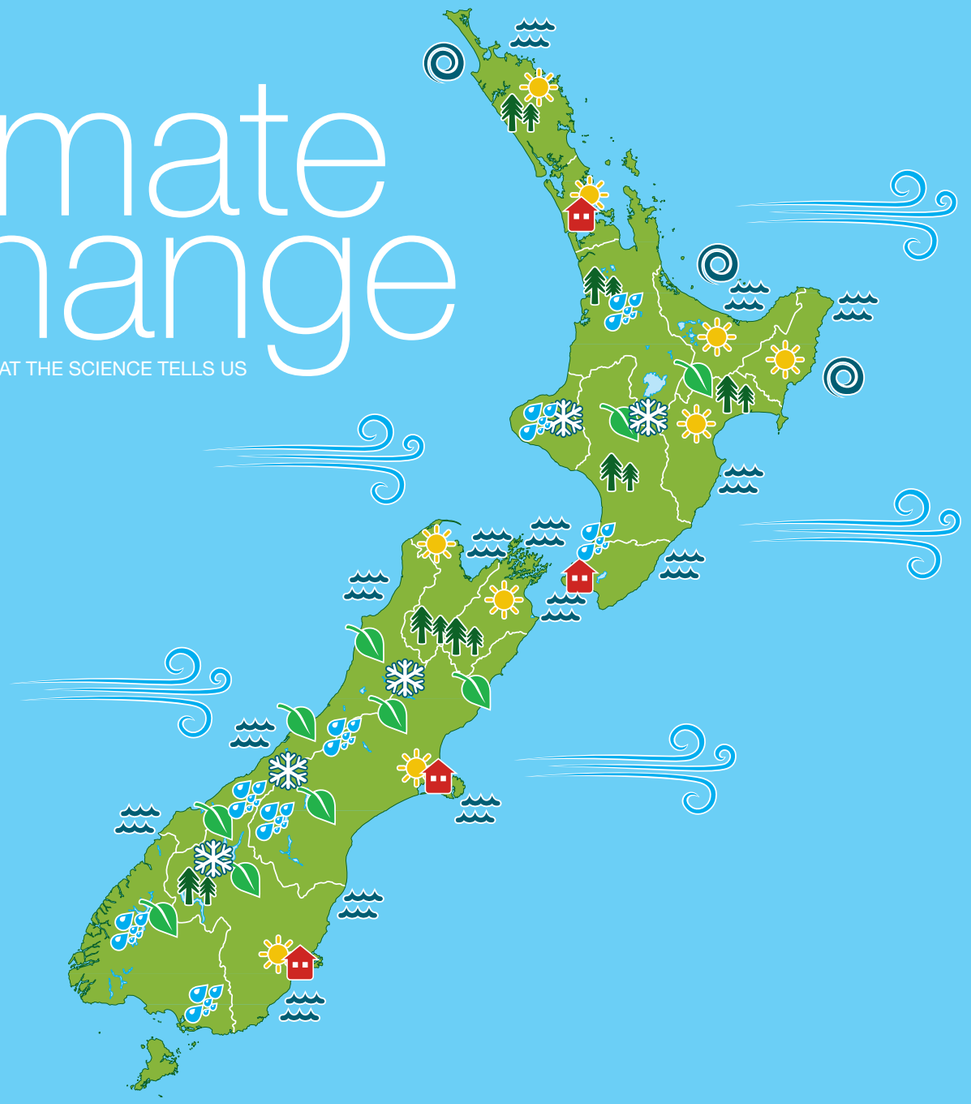
Budding environmentalists between the ages of 15 and 18 years will be selected by regional councils and territorial local authorities. //

Applications close soon:
contact your local regional council or email **youthforum@mfe.govt.nz** for more information.

02 // Forty-five young people participated in the 2006 Youth Environment Forum.

climate change

WHAT THE SCIENCE TELLS US



Key

Urban
Warmer winters and summers

Snowlines and glaciers
Changes in length and area of glaciers, rise in snowline and possible increase in snowfall and avalanches

Wetter
Increased precipitation and flooding for already flood-prone areas and increased slips and soil erosion

Ex-tropical cyclones
Increased wind, waves, storm surge and rainfall

Drier
Less rainfall and decreased run-off to rivers. Increased evaporation, drought for already drought-prone areas and irrigation demand

Commercial forests
Increased growth rates and geographic range. Also, increased winds and temperature leading to increased damage and pests

Natural areas
Species distribution changes, changes to/loss of habitat, increased pressure from pests, animals and plants

Coastal
Sea level rise, coastal inundation and increased storm damage and coastal erosion

Wind
Increased westerly winds

"Findings, which governments have agreed upon, leave no doubt as to the dangers mankind is facing and must be acted upon without delay. Any notion that we do not know enough to move decisively against climate change has been clearly dispelled."

These are the words of Yvo de Boer, Executive Secretary of the United Nations Framework Convention on Climate Change, on the release in February this year of the Intergovernmental Panel on Climate Change's science report.

The Panel's reports are the most comprehensive and authoritative source of information on climate change with contributions from more than 800 authors reviewed by more than 2500 scientists.

Global climate change

The findings of the latest Intergovernmental Panel on Climate Change (IPCC) report are sobering. For every continent, except Antarctica, there is strong evidence that the climate is warming. It is almost certain that over the course of this century most land areas will experience fewer cold days and nights and more hot days and nights.

Reinforcing expectations that climate change will bring more weather extremes, the report predicts a likely increase in the frequency of heat waves and very heavy rainfall. There are also likely to be more areas affected by drought, an increase in the incidence of extreme high sea level and intense tropical cyclone activity.

Globally-averaged sea level rises of between 18cm and 59cm are projected by the end of the century for selected greenhouse gas emission scenarios.

Even if greenhouse gas concentrations are eventually stabilised at constant values, temperature and sea level rise are expected to continue increasing for centuries. Climate models suggest a global average warming in excess of 1.9°C to 4.6°C (depending on the model) above pre-industrial values.

The cause cannot simply be natural variation, says Dr David Wratt, National Institute of Water and Atmospheric Research (NIWA), who represented New Zealand at the IPCC plenary in Paris. It is probable global warming since the mid-20th century is largely the result of increased greenhouse gases from human activity.

What is the International Panel on Climate Change?

The IPCC brings together research from thousands of scientists, from around 130 countries, to report on climate change. It was formed in 1988 by the United Nations Environment Programme and the World Meteorological Organisation. Its schedule of reports this year is:

- // Science report, released in Paris, 2 February
- // Impacts, Adaptation and Vulnerability report, including a chapter on Australia and New Zealand, to be released in Brussels, 6 April
- // Mitigation report, which includes chapters on forests and agriculture, Bangkok, 4 May
- // Synthesis report summarising the 3000 pages of the main volumes, November.

Impacts on New Zealand

"Clearly, no matter what happens, we New Zealanders must ready ourselves for changes to our climate which may affect our agriculture, biodiversity, tourism and way of life," said Climate Change Minister, David Parker.

Parker recently released a map (pictured) showing the impacts of climate change around the country. Average temperatures in New Zealand are projected to increase by about 1°C by the 2030s and 2°C to 3°C by the 2080s.

Under moderate projections it is possible sea levels will rise between 30cm to around 50cm by 2100, exacerbating coastal erosion, sea inundation during storms, salinisation of fresh water and problems with drainage on low-lying land.

Coastal hazards

People living and investing in coastal areas need to take climate change risks into account particularly in relation to roads, stormwater systems, marinas, amenities, electricity and communications systems.

Projections of rising sea levels, increased storm intensities (including waves and river flows), changes in sediment supply to beaches and their resulting impacts (inundation and shoreline changes) will alter how we build beside coasts and harbours.

"Clearly, no matter what happens, we New Zealanders must ready ourselves for changes to our climate which may affect our agriculture, biodiversity, tourism and way of life."

The Ministry has produced three publications to help New Zealanders understand climate change and the action they can take to reduce its impacts. These are:

// Get a grasp of the facts. Understanding climate change.
// Small acts. Big impacts. Taking action on climate change.
// Look ahead to the future. Preparing for and adapting to climate change.

These booklets and the poster on page 4, showing climate change impacts are on www.mfe.govt.nz/publications/climate/

To order a free printed copy call (04) 439 7546 or email publications@mfe.govt.nz

More extreme weather

We can expect more episodes of heavy rainfall, more prevalent westerly winds and a greater risk of severe winds and storms. The number of frost-free days is likely to increase in the lower North Island and the South Island and the number of hot days, where temperatures exceed 25°C, is expected to substantially increase, especially in the north of the North Island.

In the east

Changing rainfall patterns coupled with higher temperatures and more wind may lead to more drought and increased demands for irrigation and other water uses in some eastern agricultural areas.

Wet areas may get wetter

More and heavier rain is expected, especially in those already wet areas of the country. This could cause slips and soil erosion. Many of these changes will pose significant challenges to farmers.

Government consults on New Zealand's response

Government has just completed its latest round of consultation on five discussion documents presenting policy options for climate change and energy. These documents are available at www.climatechange.govt.nz:

// Sustainable Land Management and Climate Change: Options for a Plan of Action
// Draft New Zealand Energy Strategy to 2050
// Draft New Zealand Energy Efficiency and Conservation Strategy
// Transitional Measures: Options to move towards low emissions electricity and stationary energy supply and to facilitate a transition to greenhouse gas pricing in the future
// Reduce Greenhouse Gas Emissions in New Zealand Post-2012.

For more information contact Christian Judge on (04) 439 7514 or email christian.judge@mfe.govt.nz

THE STATE OF OUR ENVIRONMENT

A picture showing the health of New Zealand's environment will be available at the end of this year in a report now being compiled by the Ministry. The report's basis is being formed by a core set of environmental indicators confirmed in February.

Environment New Zealand 2007 will provide in-depth information about our air quality, greenhouse gas emissions, fresh water quality and allocation, and a number of other indicators informing us about the health of our environment.

"This work is a cornerstone for environmental decision making. It provides baseline information about the environment and particularly those aspects currently seen as nationally important," said Ministry Chief Executive Hugh Logan.

"Data in the report has been supplied by our reporting partners all around the country including scientists in central and local government agencies," he said.

Environment New Zealand 2007 will be rich in information presented in maps, graphs, tables and pictures as well as accompanying narrative text.

Environmental indicators enable environmental information to be compared across New Zealand and will be used in the future to show trends or changes in our environment. They guide what we should measure and report on, as well as how often and where. //

For more information contact Kirsty Johnston on (03) 365 9266 or email kirsty.johnston@mfe.govt.nz

01

02

INDUSTRY MUSSELS UP

Mike Burrell, head of the new fish farming group, New Zealand Aquaculture Ltd, is aiming for industry sales of $1 billion by 2025, and part of his plan is to be environmentally sustainable.

"It is easy to talk about sustainability and much harder to put it into practice. We would kind of like to see ourselves as the guinea pig. If you can't make economic and environmental sustainability work for the aquaculture sector I don't think there is a sector you could make it work for," he said.

According to Burrell, the industry plans to grow through innovation, product development and by getting better value out of existing products. For example, by growing a better mussel and different varieties that can go to a wider range of markets or through charging a special price for special products such as green shell mussels.

The industry is also proposing an environmental sustainability quality mark which would assure customers that if they eat this product the environmental footprint is sound.

"We want to be on the front foot of sustainability. We think it is a fundamental shift in the way consumers buy and we believe the only way to compete internationally is to produce high quality and high value products. If our whole environmental footprint is less than our competitors we shouldn't be penalised for air miles."

Government supports the development of sustainable aquaculture and will announce a response to the sector strategy in April. Last week, it opened a $2.9 million aquaculture fund to help regional councils and unitary authorities with marine farm planning. Of this fund, $2 million is available on a contestable basis over the next five years.

Environment Bay of Plenty is processing two applications for mussel farms. Senior Coastal Planner Aileen Lawrie said the Council has conducted extensive work (partly funded by the Ministry of Economic Development) to investigate how many mussels can be sustained and to identify suitable places for the farms.

"We worked out how the bay functions in terms of currents, food availability and so on and then put in different scenarios of mussel farms and ran the model. Substantial work was involved in putting the model together as a lot of measuring and data collection had to be done," Lawrie said.

Maps showing cultural or ecological areas of value were created by investigating marine mammals, seabirds, life on the seabed and other factors such as landscape and amenities.

Mussels take food out of the water which could impact on the local ecology. So the amount of phytoplankton (mussel food) was measured to determine the carrying capacity of the area for mussels and existing marine life.

"There are two questions really: how much? and where? The mapping answers the 'where' question by guiding us away from sensitive areas, such as areas of cultural or ecological importance. The science modelling answers the 'how much' question," said Lawrie. //

03

01 + 02 // Mussel farming presents opportunities for economic growth.

03 // Mike Burrell, aiming for $1 billion sales.

Photos // New Zealand Aquaculture.

For more information contact Kevin Currie on (04) 439 7590 or email kevin.currie@mfe.govt.nz

a sustainable new zealand

Our editor, Julia Crosfield, interviews the Prime Minister

01

01 // Helen Clark visits the Department of Conservation's new energy efficient building.

Photo // Office of the Prime Minister.

JC // New Zealand's greenhouses gases rose more than 20 per cent between 1990 and 2004. How can we reach carbon neutrality when our emissions are on the increase?

PM // To become a carbon neutral and truly sustainable nation will mean changing our behaviour and that doesn't happen overnight. But it can and must be done and the government is prepared to lead by example.

By early next year the Ministries for the Environment, Health, and Economic Development, and the Departments of Inland Revenue and Conservation, and Treasury will have reduced their emissions and will have plans in place to offset those emissions which can't be avoided by using New Zealand-based projects. I expect that every core public sector agency will be on the path to carbon neutrality by 2012.

These agencies will reduce their emissions by having buildings and equipment which are more energy efficient, more fuel-efficient cars, and sustainable procurement practices.

The government's own efforts will be just a small part of what is needed to achieve carbon neutrality. Overall our country needs more renewable energy, more energy efficiency, sustainable forestry, and much more. But I believe that if we can reduce our carbon footprint in our government, we can do it in our businesses and in our households too.

JC // We don't have emission testing for vehicles – isn't that a must?

PM // Yes, it is a must, and last year in October we introduced a visual smoke test for all vehicles currently on our roads as part of the warrant of fitness testing criteria.

Testing for harmful emissions leads to better maintenance of vehicles which in turn leads to reduced fuel use, and reduced greenhouse gas emissions.

As well, a new draft rule will be ready for public consultation in May on appropriate controls for second-hand vehicles entering New Zealand, so that they meet rigorous European and Japanese standards for air quality.

These second-hand vehicles entering New Zealand will also undergo a physical test to ensure they meet the original standards they were built to.

JC // You suggest New Zealand should lead the way in being environmentally sustainable. What is your vision of a sustainable New Zealand?

PM // Being sustainable means living and working in a way which meets the needs of our community without compromising the well being of future generations. I want to know that the beautiful country we have today will endure and prosper.

Environmentally this means protecting the quality of our air, our water and the land. It means reducing our waste and managing better the waste we do have. It means we must tackle the very serious issue of climate change.

JC // How will you make 'being green' appealing to all New Zealanders?

PM // Most New Zealanders can see the sense in living sustainably and we know that most people believe they need to make lifestyle choices to reduce the effects of climate change. Our clean green image is already part of our national identity. Sustainability is rapidly becoming a core value in many countries around the world – it is an imperative, environmentally, socially, and economically – and there are compelling reasons why New Zealand should be in the vanguard of making it happen. In time, being truly sustainable and carbon neutral will become as important to us as being nuclear free.

Our tourism industry and our international trade are under threat from competitors who threaten to use to their advantage the distance people must travel to visit New Zealand and the distance our goods must travel to market. We need to go the extra mile for sustainability to keep offshore protectionist forces at bay.

Later this year a campaign will be launched to help and encourage householders to be more sustainable through taking practical, cost-effective actions. We don't have to sacrifice our living standards to be sustainable; we just have to be smart, innovative and determined.

JC // How will the government support consumers to be more efficient with energy, water and waste?

PM // The campaign I have just mentioned will give people practical advice on how they can make their households more sustainable. It will build on a lot of good work already underway, such as the Sustainable Living Programme sponsored by 30 councils, and the EnergyWise programme run by the Energy Efficiency and Conservation Authority.

Interview continued over page...

> "I want to know that the **beautiful country** we have today will endure and prosper."
>
> Helen Clark

10

JC // Businesses can be labelled as carbon neutral through Landcare's CarboNZero programme. What else will be done to make business more environmentally sustainable?

PM // Nearly 80 per cent of businesses surveyed recently in our country believe sustainability will make New Zealand more competitive. That means we have good prospects of sustainable business practices becoming business-as-usual. The government will work with business networks to help make this happen. We will continue to provide advice and support through the Sustainable Business Network and we will work with business to help it leverage off the government's sustainable purchasing and practices.

Consumers increasingly want products which are friendly to the environment. That means businesses using the Environment Choice NZ eco-label have a competitive advantage, and it can be expanded to cover a wider range of products. The government will also ensure that a public database of reliable eco-label and standards verification schemes is established.

These activities will supplement good work already underway, including through the Packaging Accord, the Sustainable Tourism Charter, and the Greening the Screen project. These have shown that partnerships between government and businesses work.

JC // New Zealand earns its living from agriculture. How can we change farming so it is environmentally sustainable?

PM // Our farming practices are already changing. In Hawke's Bay, for instance, people like Philip Holt, Gavin Kenny and Alec Olsen are looking at how to run farms along truly sustainable lines, including making them resilient to climate change by constructing dams for water storage and by planting trees on the farm for stock shelter and erosion control.

I know there is growing public concern about the impact of intensive land use on our streams and rivers. The dairying community is responding positively. Fonterra, which represents more than 95 per cent of dairy farms in New Zealand, signed an accord in 2003 with the Minister for the Environment and regional councils to reduce the impact of dairying on our waterways.

There are a lot of other very positive things happening. Since 2003, for instance, more than 220 tonnes of old and toxic chemicals have been removed from farms and, under an Agrichemicals Collection Scheme, have been safely disposed. Then there is the Ministry of Agriculture and Forestry's Sustainable Farming Fund, which provides more than $9 million each year in grants to help farmers adopt environmentally sustainable practices.

New Zealand also has a Pastoral Greenhouse Gas Research Consortium, a government and industry partnership investing in, for example, how to reduce methane emissions from ruminant animals. We are recognised as world leaders in this area.

JC // How is the concept of environmental sustainability going to be integrated across all government policies?

PM // All government agencies are being urged to minimise their waste and recycle as much as possible, to lower their transport costs and reduce emissions, to make their buildings environmentally friendly and to adopt sustainable procurement practices. Those agencies which have signed up to the Govt[3] programme are already seeing huge benefits. Inland Revenue, for example, runs a shuttle service between its main Wellington buildings. This has reduced its transport costs by $36,000 a year. It has also reduced emissions and traffic congestion.

If we can make sustainability business-as-usual in government operations, we will set an example the rest of the country can follow.

JC // In the United Kingdom, environmental education and screening of Al Gore's film 'An Inconvenient Truth' have become compulsory in schools. Should we do this here? How will we teach New Zealand children the importance of sustainability?

PM // I would love our schools to show the film. Many are already leading the way on sustainability.

We have a sustainable management fund which awards funds to schools and other groups. For example, students from a number of schools in Waikato have been involved in a programme to restore Waitete stream.

We can teach our children about sustainability by setting an example. Children who see their parents composting the family's food waste and recycling plastic, tins and glass are more likely to do these things themselves. Children who see their teachers and parents bike, walk or take a bus to school will feel encouraged to do the same.

I think sustainability is going to very quickly become part of our way of life here; it will be the way we do things, and it will be central to our identity as a nation. //

01

VISITING SCOTT BASE

Stepping on to the pristine landscape of Antarctica's McMurdo airfield late last year was a dream come true for Ministry for the Environment manager Paul Irving.

Irving flew to the 'ice' to participate in Antarctica New Zealand's audit of events and activities they support from Scott Base. All of these are carried out under strict guidelines imposed by the Antarctica (Environmental Protection) Act.

"You wake up in the morning at Scott Base and there is Erebus above you. It's just glorious," Irving said. "Everything is white but you quickly learn there are many shades of white."

Antarctica's reputation as a scenic and scientific wonder and its unique wildlife means the number of people wanting to visit the ice is burgeoning.

That puts great pressure on a fragile environment, including wildlife such as the adelie penguin colonies, and man-made features. The hut and belongings left behind by Ernest Shackleton's 1907 expedition have survived remarkably well in the dry atmosphere and under the care of the Antarctic Heritage Trust. But "you are constantly aware that they need careful management to prevent them being loved to death by the humidity from ever larger numbers of tourists entering the huts," said Irving.

Irving accompanied Antarctica New Zealand's Jana Newman during her environmental audit of events sites, including the international Andrill project.

Scientists from New Zealand, USA, Germany and Italy have drilled more than 2km through ice, water, ash and glacial sediment to reveal the Ross Sea's last six million years of climate history.

The drill is an engineering masterpiece, according to Irving. He was impressed by the overall lack of impact on the surrounding environment. "It didn't look like a drill site. Their systems for managing fuel, hydraulic oils and drilling fluids are second to none," he said.

The Andrill project is providing priceless knowledge about Antarctica, one of Earth's most important ocean current and climate engines.

One of Irving's main tasks during the visit was to help Antarctica New Zealand develop its assessment of a proposed wind farm for Scott Base. As New Zealand and USA cooperate on energy management issues, the proposal could ultimately result in more than 20 turbines supplying power to both bases.

The wind farm would halve New Zealand's reliance on diesel for power and heat – a major step towards making New Zealand's activities on the ice more sustainable.

The Ministry for the Environment is now preparing a report for the Ministry of Foreign Affairs and Trade, and for Antarctica New Zealand, including advice about the wind farm and suggestions for improving the environmental permitting process.

Scott Base is a hands-on place and, like all visitors, Irving helped out in the kitchens, peeling vegetables and washing dishes. He was impressed with the base recycling schemes – food scraps, glass, metal, plastic and paper all come back to New Zealand.

He said most countries with bases on the ice have similar or better environmental standards. New bases are designed to have a low environmental footprint with low energy consumption and minimal waste output. //

02

01 // The Andrill project is gathering valuable environmental information about our climate history.

02 // The iconic green buildings of New Zealand's Scott Base.

For more information contact
Paul Irving on (04) 439 1939
or email paul.irving@mfe.govt.nz

REVERSING THE DECLINE IN OUR

fresh water

World Water Day on 22 March focused on coping with water scarcity, a concern for many countries including New Zealand where there are increasing demands for fresh water as well as a decline in its quality. Better managing water use and reversing the decline is a high priority for government.

Reports released by the Ministry in November last year (see box on page 13) show aspects of water quality have declined in some rivers over the past two decades. Although point source discharges (such as sewage and industrial waste) are now better controlled, levels of nutrients have increased. This is almost certainly the result of leaching and run off of fertilisers and animal effluent in areas of intensifying agriculture.

Government is working with partners and stakeholders to improve the way we manage fresh water resources.

Last month, Environment Minister David Benson-Pope signed a partnership agreement for a $81.5 million fund to reduce levels of manageable nitrogen seeping into Lake Taupo.

Industry-led initiatives such as the Dairying and Clean Streams Accord continue to be supported by government. This accord has led to progress in sustainable farming practice and a reduction in impacts on waterways.

Over the past few years 75 per cent of Fonterra farmers have successfully developed ways to keep cattle out of streams, rivers and lakes. This is well above the 2007 target of 50 per cent. The dairy industry is also in the process of educating farmers about ways to improve nutrient management practices which have the added benefit of saving farmers money on fertilisers.

> "I am sure this mission to protect Lake Taupo will become a model of sustainable development for our country."

While water management remains the job of regional councils, the Ministry is providing tools to assist local solutions. For example, the Ministry recently consulted on a proposed national environmental standard for water measuring devices which will help provide good information about actual water use.

Water is our most precious asset and we need to do everything we can now to ensure there is abundant and high quality fresh water for future generations.

In November last year, the Ministry published three reports which provide a national picture of fresh water quality and allocation. They also look at trends over recent years. Available at **www.mfe.nz/publications/water**, these reports are based on regional council monitoring and consent data:

- // State and Trends in the National River Water Quality Network (1989-2005)
- // Snapshot of Lake Water Quality in New Zealand
- // Snapshot of Water Allocation in New Zealand.

Visit **www.4million.org.nz/water/community.html/** to learn about fresh water issues in your region.

Protecting Lake Taupo

A fund of $81.5 million has been committed to protect Lake Taupo in a project expected to be a model of both a partnership-based approach and of sustainability.

"I am sure this mission to protect Lake Taupo will become a model of sustainable development for our country," said Benson-Pope.

"This work must provide for the ongoing economic development of the area while protecting the water quality of this iconic lake. This means being creative, finding and exploring new opportunities that work and sustain in the long term, both the environment and the community."

Benson-Pope said the Taupo project has the added significance of central government, local government, regional interests and iwi working as one. Central government, Environment Waikato and Taupo District Council have together funded the project and Ngati Tuwharetoa, as kaitiaki of the Lake, are partners in the project.

The lake is a hub of international and national tourism for its fishing, stunning scenery and crystal clear waters. It also has a special significance to Tuwharetoa as the lake is a taonga in its rohe. Its pristine waters are under threat from land use activities in the area.

A trust is now charged with developing a programme of work for the next 15 years that will reduce 20 per cent of manageable nitrogen leaching into the lake.

Environment Waikato Chairman, Jenni Vernon, will help oversee the trust's work. She says the trust will encourage and assist land use change, purchase land/nitrogen in the Lake Taupo catchment, and undertake other initiatives to help landowners reduce the nitrogen impact of their activities on the lake.

"To support this work, Environment Waikato has introduced a proposed change to the Waikato Regional Plan for the Taupo catchment to cap the amount of nitrogen leaching into the lake." //

For more information on the Lake Taupo project contact **Kevin Currie** on **(04) 439 7590** or email **kevin.currie@mfe.govt.nz**

01 // Keeping our streams clean – cows crossing a culvert.
Photo // Fonterra.

02 // On the shores of Lake Taupo – David Benson-Pope; Jenni Vernon; George Asher, Tuwharetoa representative of the Joint Committee; Mayor Clayton Stent, Taupo District Council; and Hon Mark Burton, MP for Taupo.
Photo // Environment Waikato.

For more information on the Dairying and Clean Streams Accord contact **Ken Bouma** on **(04) 439 7620** or email **ken.bouma@mfe.govt.nz**

ACCELERATING WASTE REDUCTION

01

02

01 // Construction using sustainable principles.

Photo // Meridian Energy Limited.

02 // Every year in New Zealand, some 3.2 million tonnes of waste goes to landfill. That means around 400 kgs per person. This is too much.

For more information visit
www.mfe.govt.nz/issues/waste
or contact Jeffrey Seadon
on (04) 439 7630 or email
jeffrey.seadon@mfe.govt.nz

In her statement opening Parliament the Prime Minister outlined the government's intention to accelerate work reducing the impact waste has on our environment, health and society.

"Without a commitment to greater sustainability in our resource use and way of life, we risk not only damaging our own environment but also exposing our economy to significant risk," Helen Clark said.

Some good progress has been made. While the estimated amount of waste (approximately 3.2 million tonnes) that went to landfills was 4 per cent more in 2006 than in 2002, there was also a 5 per cent increase in population and a 9 per cent increase in GDP over the same period. There is still more work to be done.

By international standards, we have, overall, low volumes of waste and this reduces the viability of New Zealand based recycling and reprocessing facilities. Another challenge is ensuring waste is separated to maximise the opportunities for diversion and re-use. A lack of comprehensive national data on waste generation, diversion and management also makes it difficult to accurately measure our progress.

To address some of these challenges, the Prime Minister announced a huge work programme to improve New Zealand's environmental sustainability credentials including funding the development of more recycling facilities in public places.

The Prime Minister reiterated the need to introduce legislation this year for a waste levy to help fund better waste minimisation infrastructure, preferably in New Zealand. Product stewardship will also be improved by legislation.

"While voluntary initiatives have been useful, some form of regulatory backup will be necessary for the environmental impacts of manufactured products to be minimised as much as possible," she said.

Government supported the referral of a member's bill, the Waste Minimisation (Solids) Bill, to Select Committee so consideration could be given to these issues. If successful, legislation could be enacted before the end of the year. //

Meridian shows the way

A building site on Wellington's waterfront is showcasing how the construction industry can improve its sustainability.

Dominion Fund's three-storey Meridian Energy building, due to be completed late this year, shows how waste can be reduced during construction. Other projects showing the way include the New Zealand Archives Building in Manukau, Auckland and a new animal hospital at Wellington Zoo.

Construction and demolition waste is estimated to make up more than half of New Zealand's waste stream. Concrete, plaster board and timber are the big three components. Steel, fittings, glass and plastics such as shrink wrap are also thrown away in large quantities.

The volume of construction waste led to the Resource Efficiency in the Building and Related Industries (Rebri) project, a series of best-practice guidelines developed by the Ministry for the Environment, local government and industry which companies can follow to reduce waste. The guidelines are at www.rebri.org.nz/

Since the guidelines were completed the Ministry has continued to fund the development of case studies by engaging consultants to provide expert advice on resource efficiency and waste minimisation for selected building projects. Ministry adviser Mahara Inglis is currently overseeing the contract with environmental consultant URS New Zealand which is working with Fletcher Construction on the Meridian project.

Objectives of the case study are to reduce waste and present a business case to show companies that planning up front to reduce construction waste is financially smart and good business practice.

"The guidelines are new and even though they were developed in partnership with industry, there has been some trepidation. Big companies are watching these case studies closely to see how they go," Inglis said.

"We are confident the case studies will show that with a bit of up front planning, waste can be successfully reduced."

URS New Zealand consultant Marta Karlik-Neale says the workers on Meridian site are enthusiastic about the project. Already, 5 cubic meters (cu m) of paper, 4 cu m of mixed recycling, 2 cu m of metal and 200 cu m of timber have been diverted from landfill.

"Fletcher's has really taken waste minimisation principles on board by implementing a new waste system in their Johnsonville office, and by sharing the experience from Kumutoto (Meridian building) with other sites," Karlik-Neale said.

The need for sustainable business practices is now an economic imperative and minimising waste during construction helps companies increase the 'green' rating of their buildings and activities. //

For more information contact
Mahara Inglis on (04) 439 7639
or email mahara.inglis@mfe.govt.nz

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01 // Bottlenose dolphins swim off New Zealand's shore.

Photo // Rob Suisted.

LOOKING AFTER OUR MARINE AREAS

Marine areas are increasingly under demand for their resources and the Ministry has started work on new policy to minimise harmful impacts.

Improving the way we care for waters 12 to 200 nautical miles off the coast, called the marine Exclusive Economic Zone (EEZ), is a priority. Environment Minister, David Benson-Pope, wants a robust system that will create certainty for industries operating in the EEZ and prevent damage to ocean habitats.

The Ministry is working with the Department of Conservation, Ministry of Fisheries and other key agencies to explore ways we can improve regulation of environmental impacts in the EEZ. This work relates to activities not already regulated, for example non-fisheries disturbance of the seabed and displacement of marine life.

Consultation with major stakeholders is expected to start later this year. //

For more information contact
Ginny McLean on (04) 439 7591
or email ginny.mclean@mfe.govt.nz

IN BRIEF

Managing contaminated land

Proposals for how the Ministry can best help local government and community manage the effects of contaminated land have received a lot of interest. The Ministry has received more than 60 submissions on its discussion paper, *Working Towards a Comprehensive Policy Framework for Managing Contaminated Land in New Zealand.* These submissions are now being analysed and a position paper will be available later this year.

Contact **James Court** on **(04) 439 7644** or email **james.court@mfe.govt.nz**

New tools for urban design

A second edition of the Urban Design Toolkit will be launched in May with several new tools, including Health Impact Assessment, Low Impact Urban Design and Subdivision Code of Practice. The Toolkit is a compendium of tools that can be used to facilitate high-quality urban design. It is available on the Ministry's website.

Contact **Melissa Keys** on **(04) 439 7488** or email **melissa.keys@mfe.govt.nz**

Join a sustainability debate

Every few weeks the Parliamentary Commissioner for the Environment poses an issue for discussion on a sustainability forum. This is part of their review of New Zealand's progress towards sustainability, begun in mid-2006 and finishing in mid 2007. You can have your say at **www.pce.govt.nz/forums/**

Wind farms proposed

Resource consent hearings are expected soon for two wind farms: Central Otago District Council's Project Hayes and the Clutha District Council's Mahinerangi Wind Farm. Wind power is a viable energy source that can help ensure security of energy supply by providing additional generation capacity and diversification of electricity production methods. It provides an environmentally responsible alternative to fossil fuels.

Contact **Nick Vincent** on **(04) 439 7646** or email **nick.vincent@mfe.govt.nz**

Urgent call for Green Ribbon Award nominations

Do you know of an individual, organisation or business doing outstanding work towards a cleaner, greener New Zealand? Please nominate them for a Green Ribbon Award. These awards recognise contributions made by people putting environmental sustainability into action in their own backyards, communities and workplaces.

Nominations close Friday 13 April 2007.

For the list of categories visit our website **www.mfe.govt.nz/** Contact **Vikki James** on **(04) 439 7556** or email **vikki.james@mfe.govt.nz**

FOR YOUR DIARY...

Topic	Date	Input	Contact
Waste Minimisation (Solids) Bill	Until 20 April 2007	Hearings occurring in Wellington and Auckland	**Angela Rego** phone **(04) 439 7401** or email **angela rego@mfe.govt.nz**
Climate change policy	April and May 2007	Submissions and consultation meetings	**Phil Gurnsey** phone **(04) 439 7660** or email **phil.gurnsey@mfe.govt.nz**
National environmental standards for low impact telecommunications structures in road reserves	April and May 2007	Consultation workshops	**Glenn Wigley** phone **(04) 439 7515** or email **glenn.wigley@mfe.govt.nz**
National environmental standards for electricity transmission	Late April and May 2007	Consultation workshops	**Barbara Rouse** phone **(04) 439 7733** or email **barbara.rouse@mfe.govt.nz**

Note: plans and dates are a guide only and may be subject to change