

ACTION FOR THE GROUND

New Zealand's natural environment is a taonga – a treasure beyond price. It is our inheritance, our economic base, our playground and our home.

Agriculture is New Zealand's largest economic endeavour, regularly contributing more than \$20 billion to the Gross National Product. New Zealand's temperate climate, fertile soil and relative isolation make it ideal for almost every kind of production – from sheep and cattle, to cropping and horticulture.

Our nation makes much internationally of its environmental status and our "clean, green image" is a powerful marketing tool. Our reputation for quality products from a quality environment depends on environmentally sustainable practices. The reality is that the ways we earn our living – agriculture, horticulture, forestry, fishing and industry – and our lifestyle impact on our environment. The consequences may not be obvious, but they are there.

The Ministry for the Environment encourages the sustainable management of our rural environment, including farming and forestry practices that can co-exist with, and respect natural values and resources. In that way we can continue to live and work in the countryside and still preserve its beauty, diversity, and productivity for generations to come. What's more, sustainable land and water management can contribute to farm profitability.

Much of the Ministry's work is behind the scenes, working in partnership with other organisations. This brochure introduces some of that work for the rural environment – in land and water, air, biodiversity and waste reduction.

One of the ways the Ministry can offer practical support for farmers is through its Sustainable Management Fund. The Sustainable Management Fund is a funding scheme designed to support the community, industry, iwi and local government through a wide range of practical environmental management initiatives. Some of the projects that may be of interest to the rural community are highlighted in this brochure. For more information about these projects or the Sustainable Management Fund itself, you can visit www.smf.govt.nz or call 04 917 7400.

For more information about the Ministry for the Environment's work, you can visit our website at www.mfe.govt.nz or call us on 04 917 7400.

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fresh

Clean, abundant water is essential for our quality of life, our economy and our ecosystems

WHAT'S GOING ON WITH WATER?

Clean, abundant water is essential for our quality of life, our economy and our ecosystems.

Worsening water quality, particularly in our lowland streams, is one of the most significant environmental issues facing New Zealand. These streams have been affected primarily by landuse in rural and urban areas. The Ministry for the Environment is working to improve the quality of our freshwater resources in the following ways:

• Rural streams

Lowland waterways, including rivers, creeks, wetlands and farm drains play vital roles in maintaining water tables, controlling flooding, providing water for irrigation and for livestock, and providing native habitats. In many cases they're no longer safe to swim in, and in some cases they're not even safe for livestock to drink. It may not be reasonable to all small streams and drains to be suitable for swimming but they all flow to bigger rivers and the coast where people do expect to swim safely.

How the land bordering streams is used has a major effect on water quality. To help council staff and farm advisers improve their skills in managing this land, the Ministry for the Environment has produced a guide to the sustainable management of riparian margins, *Managing Waterways on Farms*. We are also working with regional councils running a series of workshops training people in waterway management.

The Sustainable Management Fund has funded NIWA to develop a *Stream Health Monitoring and Assessment Kit*. This is a practical tool that farmers can obtain to easily monitor the health of the waterways on their land. *Land and Water Group*

• Lake Taupo

Lake Taupo is our biggest natural lake and is treasured by New Zealanders. However, there has been a slow decline in the quality of its waters due to increased concentrations of nitrogen leaching from the surrounding land. This has encouraged more algae to grow in the lake, and its waters have gradually lost some of their clarity. Environment Waikato and the Ministry for the Environment are working to find solutions to return Lake Taupo to good health.

One of the solutions involves the Sustainable Management Fund funding a joint venture between Environment Waikato and Tuwharetoa Māori Trust Board. Together they are looking to undertake an integrated sustainable development strategy for the Lake Taupo Catchment. *Land and Water Group, Sustainable Management Fund*

• Getting rid of bad bugs

"Bad bugs" are the microbiological contamination of water. Their presence is a threat to human and animal health.

The Ministry of Health, Ministry for Agriculture and Forestry and the Ministry for the Environment have recently completed a freshwater microbiological research programme. The information from this is now being used to improve guidelines for recreational water activities, stock drinking water and water treatment. *Land and Water Group, The Ministry of Health, Ministry for Agriculture and Forestry*

• The fair and efficient allocation of water

Having enough water in our rivers and streams is essential for watering stock and irrigating pasture and crops. It's also important for maintaining fish and other aquatic animals, especially during dry periods. The Ministry for the Environment is working to ensure the needs of both are met.

Effective and efficient use of water through irrigation is the key to successful and sustainable farming in many parts of the country and especially on the east coast of both islands. The Ministry for the Environment is working with regional councils to put in place fair and effective frameworks for allocating that water.

The Ministry has also produced, with MAF and the regional councils, *The New Zealand Irrigation Manual*. This guide helps farmers' design and install irrigation systems, and promotes efficient water use through monitoring soil moisture with plant needs.

As well as the manual, the Ministry for the Environment's Sustainable Management Fund is funding a project to help farmers understand the environmental impacts of irrigation, and to help them through the water consent process. *Land and Water Group, Sustainable Management Fund, Ministry for Agriculture and Forestry*



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WORKING ON THE LAND

New Zealand's climate fertile soil and relative isolation make it ideal for almost every kind of production – from sheep and cattle to cropping and horticulture.

Until recently we haven't really understood how land is affected by the ways we use and manage it. In some areas we have soil erosion, silted up streams, rivers and estuaries, and waterways polluted by agricultural and urban runoff.

Where these problems conflict with our "clean, green" image, they threaten a significant part of our export income and are jeopardising the well being of future generations of New Zealanders. To tackle these issues we need to work in partnership with industry groups and local government, making use of good scientific information.

There's a whole range of ways the Ministry for the Environment is working to solve these problems, including:

• Market Focused

The Sustainable Management Fund has funded an environmental management system for dairy farmers. The system was developed by the New Zealand Dairy Research Institute and is called *Market Focused* in partnership with the NZ Dairy Board. This recognises the importance of New Zealand's clean green image to our international trade, sets out key animal welfare and environmental objectives, and provides guidance on how they can be achieved.

Dexcel is also being funded by the Sustainable Management Fund to develop specialist discussion groups which focus on best environmental practise for dairy farmers. These groups will initially focus on water quality and quantity. Dexcel will make available practical action-orientated outcomes for action on the ground. *The Sustainable Management Fund*

• Organics

The Ministry for the Environment, the Ministry for Agriculture and Forestry and the organics industry are developing a national minimum standard for organics. This will assure consumers of the authenticity of organic products and help gain access for these products to overseas markets. A national strategy is being developed for organics and will expand the organics industry and improve co-ordination between the various organics groups to enhance export opportunities. *Land and Water Group, Ministry for Agriculture and Forestry*

• New Zealand Land Cover Database

The New Zealand Land Cover Database is a valuable tool for monitoring and reporting on the state of our environment. It shows the extent of native and exotic forests, pastureland, wetlands, coastal sand dunes and urban land we have through out New Zealand.

The database was completed in 1999, this information is now being updated for use in the second Land Cover Database. The 18 original land cover classes has been expanded to 53. All of the images for the country were acquired over the summer of 2001/02. The new database is expected to be completed by the end of 2003.

The database can also be used to calculate the amount of carbon locked up in vegetation, identify changes in vegetation in areas that are vulnerable to erosion or fire, and monitor changes in land use and the extent of indigenous forests. *Land and Water Group*

• Soil conservation

The Ministry for the Environment and the Ministry for Agriculture and Forestry have jointly funded the *Soil Conservation Technical Handbook* published by the New Zealand Association of Resource Management. This handbook is a valuable resource for anyone dealing with soil erosion or landslips. *Land and Water Group, Ministry for Agriculture and Forestry*

• Protecting soils from contamination

The Ministry is working on two major initiatives to protect our pastoral and horticultural soils from contamination by metals and organic substances.

The Sustainable Management Fund has funded the development of guidelines for the beneficial use of biosolids (sewage sludge). The NZ Water and Wastes Association, local and central government, biosolid producers and end users are developing this project. The project will set contaminant limits for land application, application rates and establish other risk management requirements.

Secondly, the Ministry has proposed a national environmental standard that will prohibit the uncontrolled (open) burning of waste such as agricultural containers and silage wrap. The burning of waste materials has been identified as a source of dioxins and other hazardous air pollutants that can contaminate soil and make their way into primary produce. Alternative waste management options to burning are currently being investigated by the Ministry. *Contaminated Sites Group*

• Solving erosion problems on the East Coast

To deal with severe erosion on the East Coast of the North Island the Government is funding the *East Coast Forestry Project*, concentrated on the worst affected 60,000 hectares, mostly north of Gisborne. Around \$6.5 million has been put aside each year for the next 20 years. Money is available to landowners who wish to retire badly eroded land from farming, initiate conservation plantings, or put the land into commercial plantations. This project is administered by the Ministry of Agriculture and Forestry. *Land and Water Group, Ministry for Agriculture and Forestry*

• Environmental farm plans

Environmental farm plans are used by a number of regional councils to encourage best environmental management practices on rural land. The Ministry for the Environment, in consultation with regional councils and dairy industry representatives, is currently reviewing these farm plans to find out more about the range of best management practices in use, how regional councils assist their development and implementation, and their effectiveness in promoting environmental management on New Zealand's dairy farms. *Land and Water Group*

• Best Management Practices

The cost of implementing environmental best practice on dairy farms has not been well quantified to date. The Ministry is assessing the costs associated with implementing environmental best practice at a minimum level and at a comprehensive level. *Land and Water Group*



native

private lands are important in maintaining New Zealand's indigenous biodiversity



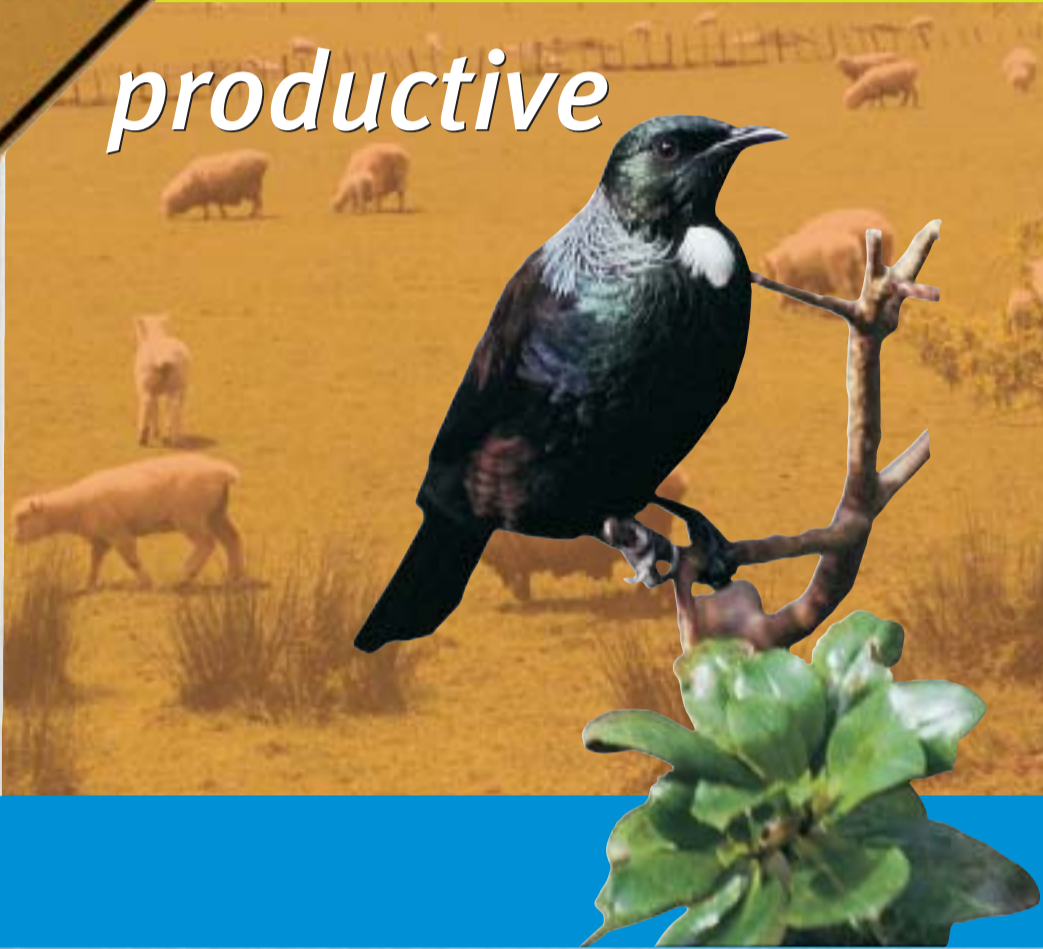
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MORE ACTION...

Native species and habitats: Indigenous biodiversity

Private lands are important in maintaining New Zealand's indigenous biodiversity.

New Zealand's native species and habitats (or indigenous biodiversity) are unique. Unfortunately our indigenous biodiversity has been declining for many years.

Private lands are important in maintaining this diversity because they contain native species and habitats that are lacking in our public conservation lands, e.g. wetlands and lowland forests and grasslands. Sustainable land management will help maintain this biodiversity.

The Ministry for the Environment is working with the Department of Conservation and other agencies on a package for indigenous biodiversity outside public conservation lands. This package involves:

- Funding to:
 1. improve the condition of biodiversity on private land, and
 2. provide advice on how to maintain and enhance biodiversity.
- Increasing local government capacity and community participation in biodiversity projects through a programme called *Action Bio-Community* (www.biocommunity.org.nz).
- Clarifying responsibilities for indigenous biodiversity through changes to the Resource Management Act 1991 and the drafting of a national policy statement under this Act.

The Sustainable Management Fund has provided funding for projects that aim to protect New Zealand's biodiversity. This includes the development of pest-proof fences and demonstrations on ways to manage primary production for the benefit of native species.
Environmental Policy Group, Department of Conservation

Towards zero waste

New Zealand produces too much waste and the existing ways we deal with it aren't meeting our needs. We need to 'close the loop' on waste, change the way we act and take personal responsibility for our waste.

The *New Zealand Waste Strategy* has been developed to help solve these problems. It aims to reduce costs and risks associated with waste, reduce harm to the environment and achieve economic benefits by using materials more efficiently.

The strategy sets out a number of targets, in part to provide inspiration for those who have not yet joined the journey towards zero waste, and to support to those who have embraced the concept. Making the strategy a reality will involve a large number of players including private sector businesses, environmental organisations, Māori groups and professional associations.
Pollution and Waste Group

Energy and the Rural Sector

Energy is a vital input to primary production, and the processing and transportation of primary products. High energy costs can adversely affect the competitiveness of these activities and the quality of life in rural areas.

Improved energy efficiency can reduce energy users' costs. The Energy Efficiency and Conservation Authority (EECA) is working with rural producers, processors and transporters of primary products to identify and implement cost-effective improvements in energy efficiency.

Most energy used by consumers is obtained through fossil fuels. Fossil fuels produce carbon dioxide emissions, which in turn contribute to climate change. These emissions are a reason to pursue the Government's objective of a progressive transition to renewable sources of energy. Often the sources of renewable energy are on, or affect, rural land – eg wind farms or hydro schemes. Sometimes they utilise waste products from primary production – eg biogas from dairy shed effluent, or industrial process heat from waste wood from forestry processing. Ministry for the Environment and EECA are working to reduce the costs of renewable sources of energy and to increase the use of renewable sources of energy where they are cost-effective.

More information can be found in the *National Energy Efficiency and Conservation Strategy* that was developed by Ministry for the Environment and EECA and released in 2001.
Environmental Policy Group, EECA

Climate change

Changes occurring in our climate are becoming a growing environmental concern. The Government has run consultations on climate change and polices New Zealand might put in place to address it.

Businesses, local government representatives and groups including farming and forestry attended meetings around the country to discuss the Government's preferred policy package for reducing greenhouse gas emissions in response to climate change and the Kyoto Protocol.

Feedback from meetings and written submissions will be used in the Government's final decisions on climate change policy. The Government intends to ratify the Kyoto Protocol in August 2002. For more information on climate change and proposed policies, go to www.climatechange.govt.nz.
Climate Change Programme

Thinking about living in the country?

People see the countryside in different ways. For some it's a place of production or a business opportunity, for others it's a haven from the pressures of city life. Different expectations of country life can cause conflict over what we call the "amenity" of an area – things like noise levels, smells, and the extent of development.

A working farm may create noise, dust and unpleasant smells that a neighbouring lifestyle block owner finds unacceptable. A horticultural spraying programme on one property may affect a nearby organic farmer's crops. Rural subdivision and development can radically alter the character of the countryside, particularly where it is poorly planned or controlled. It can result in buildings cluttering the landscape, structures dominating hilltops and a proliferation of power lines and signs.

The Ministry has been working with councils on how best to manage rural amenity conflicts and the effects of rural subdivisions. We've produced a pamphlet for people thinking about living in the country, with some ideas about what to check out before making the move.
Resource Management Group

Making the best use of pesticides

Pesticides are widely used in agriculture and horticulture in New Zealand to control weeds and pests.

But those pesticides can also pose a threat to human health and the environment in general. There are the dangers of "spray drift", when pesticides affect neighbouring properties. Other environmental effects result from pesticides seeping into surface and groundwater.

The Ministry has released a paper that looks at what we know about the environmental effects of pesticides. It looks at the law that sets out how these risks should be managed, together with user and industry codes of practice designed to reduce risks. The paper offers some actions and challenges for farmers:

- to take up training opportunities
- to think about consumer perceptions of production methods and the use of non-chemical weed or pest control methods. This does imply a focus on sustainability rather than a need to "go organic".

Copies of the paper can be obtained from pestrisk@mfe.govt.nz
Hazardous Substances and New Organisms Group



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