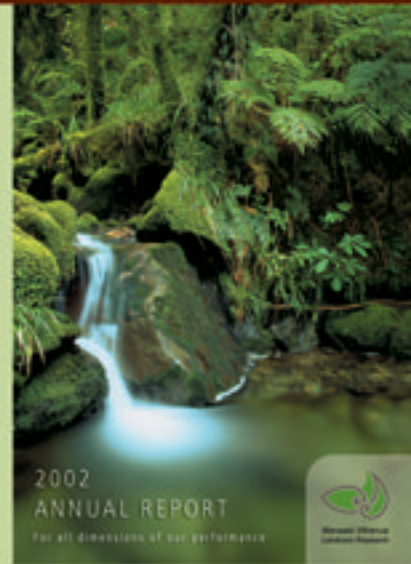




Science making a difference



for a truly clean, green New Zealand



# 2002 SUMMARY REPORT

Ngā mahi o Manaaki Whenua—Landcare Research



Manaaki Whenua  
Landcare Research



Manaaki Whenua  
Landcare Research

MANAAKI WHENUA

care for the land

MANAAKI TANGATA

care for the people

HAERE WHAKAMUA

go forward

# Our vision

Science making a difference for  
a truly clean, green New Zealand.

## SUSTAINABLE MANAAKI WHENUA

We will continually strive:

- to create wealth (for New Zealand, our Government owners and Manaaki Whenua)
- to make our customers successful
- to care for people (our staff and the communities we work in and with)
- to care for the environment (in our activities and through our influence)
- to demonstrate leadership (by ourselves and in partnership with others) in all we do.

Much of this summary report is in Māori to enrich the report, to provide a possible learning resource for students of te reo Māori, and to encourage more Māori students into science.

Summary Report 2002  
Landcare Research New Zealand Limited  
(Manaaki Whenua)  
ISSN 1176 0478

Our full Annual Report 2002 is available  
on our website or on request.



# Tā mātou kitenga mō ngā rā kei te tū mai

MANAAKI WHENUA

care for the land

MANAAKI TANGATA

care for the people

HAERE WHAKAMUA

go forward

Mā te pūtaiao e hāpai ngā mahi tiaki i Aotearoa  
pāruhiruhi, i Aotearoa matomato te tipu.

MANAAKI WHENUA TANGO MIMITI KORE

Ka hihiri tonu mātou ki te:

- whakatipu hua (mō Aotearoa, mō te Kāwanatanga, mō Manaaki Whenua)
- whakarite tikanga e rangatira ai ā mātou kiritaki
- manaaki tangata (ā mātou kaimahi, me ngā hapori e mahi nei mātou i roto, i te taha)
- manaaki i te taiao (mā roto i ā mātou mahi, mā tā mātou whakaawe tonu)
- whakaputa tikanga ārahi i ētahi (ahakoa ko mātou anake, i te taha hoki o ētahi atu) i roto i ā mātou mahi katoa.

He nui ngā kōrero o tēnei pukapuka kei roto i te reo Māori, hei whakaataahua, hei tirohanga mō te hunga e ako ana i te reo Māori, ā, hei tono atu kia kuhu mai e hia noa atu ngā Māori ki te mahi rangahau pūtaiao.



# About Manaaki Whenua

## Anei ā Manaaki Whenua

Manaaki Whenua is New Zealand’s foremost environmental research organisation specialising in sustainable management of land resources to benefit primary production, conservation and communities. Key issues are:

- halting the decline of New Zealand’s biodiversity
- addressing our worst environmental pest problems
- maintaining the quality of our soils and land resources
- mitigating greenhouse gas emissions
- improving the sustainability of our cities and of businesses.

Our work is strongly aligned to national strategies, especially the Sustainable Development Strategy, which is being formulated for government, and public and private enterprises.

Manaaki Whenua is one of nine independent Crown Research Institutes (CRIs) established in 1992 from a reorganisation of Government-funded research. We are a government-owned, tax-paying company with over 400 staff at nine locations throughout New Zealand. Turnover in 2001/02 was \$42.7 million, with much of this from government agencies.

Our subsidiary, Sirtrack Ltd, manufactures wildlife tracking equipment—about 70% of which is exported. Sirtrack has a staff of 14 and turnover of \$2.1 million.



See page 20 for summary of financial performance.

Most of our research supports more than one strategy, and all of our research is relevant to the Sustainable Development Strategy, which is in the early stages of formulation.

# Message from our Chairman & Chief Executive

## He kupu nā te Tiamana me te Kaiwhakahaere Matua



The year to June 2002 completed a very successful first decade with another strong financial performance. Operating surplus (EBIT) and return on science assets (19% pre-tax) were both better than budgeted, and we invested \$3.6 million (8.5% of turnover) in our own R&D projects.

Over the decade, turnover has increased by 50%, and our science staff by 27%. Shareholder wealth (equity plus dividends paid) has increased more than three-fold.

Our bold reinvestment programme is already bearing fruit. New patents have been filed in pest control, and for clay-based products that clean up pollution. We significantly reduced uncertainty in carbon losses associated with soil erosion (now a mandatory accounting element for the second period of the Kyoto protocol). And we documented potential CO<sub>2</sub> offsets worth at least \$100 million per year in regenerating scrubland. We also established two joint-ventures—one with a biotechnology company in New Zealand, and the other in Australia to progress first-generation fertility control products for possums.

We remain totally committed to achieving our vision of 'science making a difference for a truly clean and green New Zealand' through partnerships with our clients, end-users and stakeholders. The benefit-to-cost ratio of our research is already high (100-fold to 1000-fold for some projects). We will strive to increase the average benefit-to-cost ratio by working on issues that can generate the greatest benefits, and by working with the end-user partners who can make the greatest difference.

Lastly, we thank the staff of Manaaki Whenua for all that has been accomplished this year, and over the last decade. Their skills, dedication and fortitude are the foundation of past and future success, and we look forward to the future with confidence.

We encourage our readers to look at our full report, which is available on our website or on request.

Ian Donald  
Chairman

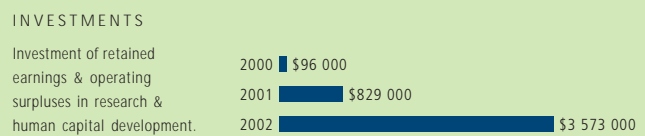
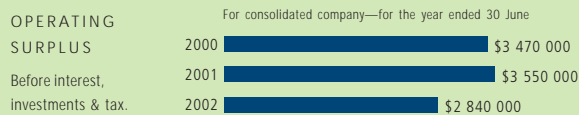
Andy Pearce  
Chief Executive

# Key indicators of our performance

## Ngā tino tohu mō te pai o ā mātou mahi

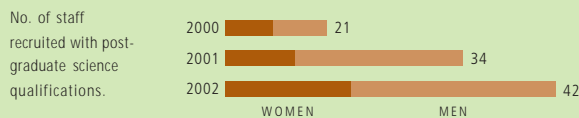
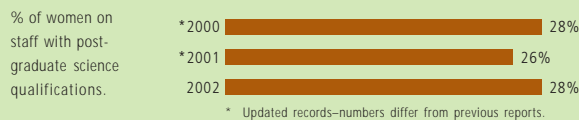
The following key or 'headline' indicators summarise our performance in relation to the Operating Principles of the Crown Research Institute (CRI) Act (1992) and our commitment to leadership in triple bottom line (TBL) performance. Our Annual Report 2002 provides a much fuller coverage.

**FINANCIAL VIABILITY:** These and all other figures exclude GST. Also see page 20 for summary of financial performance.



### GOOD EMPLOYER:

#### EQUAL EMPLOYMENT OPPORTUNITIES



#### STAFF

##### SATISFACTION

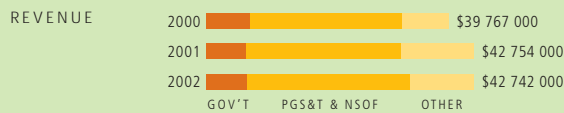


##### SAFETY

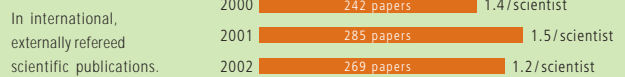


Statistics exclude Sirtrack Ltd (no work-related accidents in 2001/02).

BENEFIT TO NEW ZEALAND, FACILITATION OF THE APPLICATION OF RESEARCH, & SCIENCE EXCELLENCE:

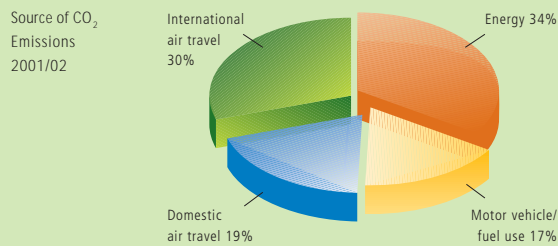


SCIENTIFIC PAPERS

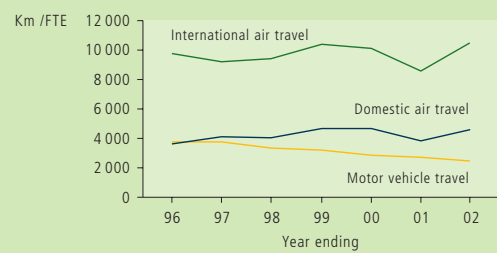


ENVIRONMENTAL PERFORMANCE:

CO<sub>2</sub> EMISSIONS



TRAVEL PER PERSON



ANIMALS IN RESEARCH



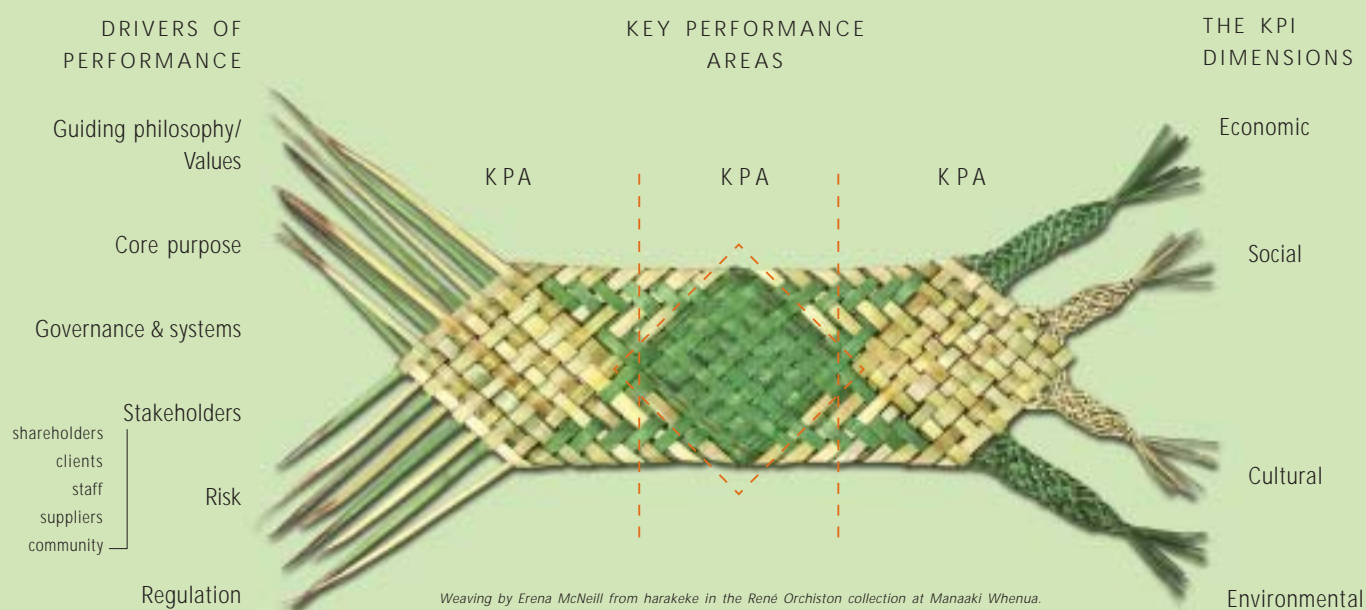
# Our approach to reporting

Manaaki Whenua is passionate about sustainable development and managing all dimensions of the company's performance.

We have chosen to go beyond just reporting our financial success and other requirements of the CRI Act. We have elected to report in detail on our social, environmental and economic performance—the triple bottom line of sustainable development. We actively encourage other organisations to adopt this approach, and many of the TBL reports published by New Zealand companies are the result of our work with them.

The fundamental drivers for any company's success are described in the key performance areas (KPAs). Every KPA has interwoven social, environmental and economic dimensions, which are difficult to isolate but which can be measured through key performance indicators (KPIs). KPIs are the measurable strands that give accountability to a company's performance.

## TBL REPORTING



*Weaving by Erena McNeill from harakeke in the René Orchiston collection at Manaaki Whenua.*

The René Orchiston collection is part of the National New Zealand Flax Collection, which includes traditional weaving cultivars and flaxes of historical significance. The collection grows at Lincoln and divisions can be provided on request.

# Ngā tikanga o tā mātou whakatakoto pūrongo

E tino ngākau nui ana ā Manaaki Whenua ki ngā mahi whanake mimiti kore, me te tika o ā mātou mahi katoa.

Kua whakatutuki e mātou kia ahū whānui kē atu ā mātou mahi kia kaua noa iho e aro ki ngā whakaritenga o te Ture CRI anake. Kua whakaritea kia tuku kōrero mātou mō ā mātou mahi katoa, e toru nei ngā wāhanga whānui; te taha tangata, te taha taiao, me te taha mahi moni. Koianeī ngā kaupapa taketake mō tēnei mea te mimiti kore. Ko te wawata kia mahi pēnei te katoa, ā, he maha tonu ngā pūrongo pēnei kei te puta mai, he hua nō ā mātou mahi me ēnei kamupene. Ko te tūmanako kia mahi pēnei te katoa o ngā kamupene.

Ki tā mātou titiro ko ngā Tino Tohu o te Wāhanga Mahi (KPAs) ngā tino pūkaha mō te otinga pai o ngā mahi katoa. Kei tēnā KPA, kei tēnā KPA tona nei taha tangata, taha taiao, taha mahi moni rānei, kāre mō te wehewehe; engari ka taea te kite i ngā KPIs. Mā ngā KPIs ka mohio ai mehemea he pai te mahi o tēnā kamupene, o tēnā kamupene, he wehi rānei.

## KO NGĀ HARAKEKE O AOTEAROA

He maha ngā momo harakeke kei ā mātou kei Lincoln, me te wharariki. Pātaia mai mehemea ka pīrangī koe i ētahi.

Ētahi kairaranga e titiro ana ki te ti e tipu ana i Lincoln.

Weavers looking at a ti trial at Lincoln.

Sue Scheele



Sue Scheele



Sue Scheele



Te tihore o te muka mai te harakeke.

Stripping muka from harakeke.

Ko Warwick Harris e kuti ana i te harakeke i Lincoln.

Warwick Harris trimming harakeke at Lincoln.



Sue Scheele

# Progress & achievements

## Te ahunga whakamua me ngā mahi i oti

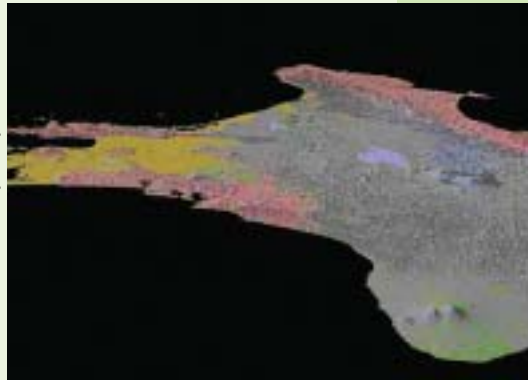
### KEY PERFORMANCE AREAS NGĀ TINO WĀHI MATUA HEI MAHI

### PROGRESS TE AHUNGA WHAKAMUA

Our science is making a difference through:  
Ko ā mātou mahi pūtaiao kei te hāpai i te iwi mā te:

- sustaining New Zealand’s indigenous biodiversity
- tiaki i te mauriora o ngā koiora o Aotearoa
- delivering biosecurity management systems and reducing the impacts of New Zealand’s worst environmental pests
- whakarite tikanga tiaki taiao i ngā mea kikino, me te ārai i ngā pānga o ngā riha kino atu o te taiao o Aotearoa

Courtesy Ministry for the Environment



We are developing applications for Land Environments New Zealand (LENZ), which describes and map ecosystems.

I whanaketia e mātou ā (LENZ), hei whakaatu, hei whakamahere hoki i te taiao.

DOC is using LENZ to underpin their Natural Heritage Asset Management System (NHAMS) for prioritising conservation management. MfE is providing LENZ to local government for environmental reporting purposes.

Kei te whakamahia ā LENZ e te Papa Atawhai hei tautoko i tā rātou pūnaha ā NHAMS. Kei te tukuna ā LENZ e te Tari MfE ki ngā kaunihera ā rohe mō ā ratou mahi tuhi pūrongo mō te taiao.

We are developing BIOSECURE with MAF and DOC. It will enable border control authorities to assess areas potentially at risk from invasive species, and will help prevent unwanted pests establishing.

Ko BIOSECURE he taputapu kia taea ai ngā Mana Ārai i ngā Whaitua o te Whenua te aukati i ngā kararehe kino atu i te nei whenua.

Our biological control of weeds programmes are beginning to have significant impacts on some target weeds.

Kei te pai te haere o ā mātou mahi patu tarutaru mai te motu whanui.

Researchers and local government biosecurity staff checking mist-flower (a noxious plant) for damage from biocontrol agents.

Ko ētahi kairangahau e titiro ana i te mist flower (he tarutaru mōrearea).

Lynley Hayes



Manaaki Whenua bred the first stoats in captivity in New Zealand as part of efforts to develop controls for these predators of kiwi and other native birds.

Na Manaaki Whenua i whakawhānau mai ngā toara tuatahi atu i te ngahere.



Grant Morriss

## AND ACHIEVEMENTS IN 2001/02

ME NGĀ MAHI I OTI I TE TAU 2001/02

### ENVIRONMENT TE TAIAO

Our 10-year kiwi research programme at Waikaremoana concluded. It showed that kiwi populations recover when stoats are eliminated. Tūhoe and DOC are now managing the kiwi recovery programme.

Kei a Tūhoe inaia nei, me Te Papa Atawhai, te huarahi hei para mo tēnei mahi, arā, kia maha ake ngā kiwi i ngā ngahere.

Courtesy Wairoa Star



Ariki Mei unveiling the plaque that commemorates the start of Tūhoe's kiwi recovery programme.

Ko Te Ariki Mei e huri ana i te kōhatu mo tēnei mahi.

### SOCIAL & CULTURAL NGĀ MAHI PĀPORI, TE TAHA KI NGĀ IWI

Kūkupa (wood pigeon) numbers increased in an area of Northland forest, following intensive possum and rat control. This concludes our part in the joint project with Ngāti Hine and DOC.

Kua tino piki te maha o ngā kūkupa i te ngahere o Mōtatau, i te takiwā o Whāngārei, i muri i te pēhitanga o ngā paihama me ngā kiore. I mutu atu i konei te wāhanga ki a mātou i roto i te kaupapa mahi tahi ki a Ngāti Hine me Te Papa Atawhai.

Grant Morriss



### ECONOMIC TE TAHA ŌHANGA

Public sector clients funded \$6.1 million of our work. Manaaki Whenua is the preferred research provider for DOC and AHB (>70% of AHB's research investment in 2001/02 was with us).

\$6.1 miriona te utu o ā mātou mahi katoa mō te Kāwanatanga. Ko te nuinga no ngā tari e rua, a Te Papa Atawhai me te Animal Health Board.

Work by Manaaki Whenua for AHB has significantly improved the efficiency and effectiveness of Tb-vector control. Possums are the key wildlife host of bovine-Tb.

Nā ngā mahi a Manaaki Whenua mō te AHB ka tino pai rawa atu a matou mahi patu kirehe kino pēnei i te paihama.

# Te ahunga whakamua me ngā mahi i oti

## Progress & achievements

### NGĀ TINO WĀHI MATUA HEI MAHI KEY PERFORMANCE AREAS

Ko ā mātou mahi pūtaiao kei te hāpai i te iwi mā te:  
Our science is making a difference through:

- āwhinatanga i ngā kaiahuwhenua ki te mahi mimiti kore i ngā hua o te whenua
- helping the rural sector deliver sustainable production
- āwhinatanga i Aotearoa ki te whakatutuki i ōna kawenga i raro i te Kyoto Protocol
- helping New Zealand meet its obligations under the Kyoto Protocol
- whakapiki i te pai o te noho o te tangata i ō tātou tāone nui me ō tātou tāone iti.
- improving the quality of life in our cities and towns.

Claire Newell



### TE AHUNGA WHAKAMUA PROGRESS

Ko etahi o ā matau kaimahi ngā mea tuatahi ki te mahi mahere whenua, inā kua topea ngā maunga.

Manaaki Whenua scientists achieved a world-first in 'flattening' topography in satellite images with ECOSAT— an automated data processing and mapping technique.

Kei te NVS nei ngā kōrero katoa mō ngā otaota mai te tau 1940. Inaianei na kei te haere tonu te mahi kōhi i ēnei kōrero.

NVS (National Vegetation Survey) forms the basis for MFE's national carbon monitoring system (CMS). NVS has records of most key vegetation surveys since 1940s.

I rangahata e mātou me pēhea ai e taea te whakatō rākau Māori kia whakaritea ai te whakaputa waro. 18 ngā kamapene kua tirohia e mātou.

Manaaki Whenua's EBEX21<sup>®</sup> is enabling companies to assess, reduce and then offset their remaining CO<sub>2</sub> emissions by encouraging native forest regeneration. We assessed greenhouse gas footprints for 18 companies as part of EBEX21<sup>®</sup>.

Anei ā Ngāti Porou e tiro ana me pēhea ai e mahi tēnei mahi.

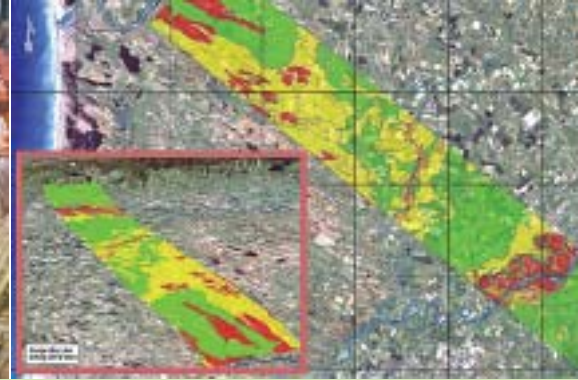
A workshop with Ngāti Porou discussing management options for the Waiapu catchment.

Maggie Lawton



He maha ngā mahi e puta mai ana i ngā putanga kōrero kei ā mātou e pupuri ana.

Our nationally significant databases have many resource management applications, e.g. mapping the risk of nitrate leaching to groundwater in Manawatu.



## ME NGĀ MAHI I OTI I TE TAU 2001/02 AND ACHIEVEMENTS IN 2001/02

### TE TAIAO ENVIRONMENT



He mahere ECOSAT tēnei o ngā rakau o ngā awa o Wairarapa.

ECOSAT is a new innovative technique for 'mapping' the landscape, eg. woody vegetation along streams and rivers in Wairarapa.

I mahi tahi a Manaaki Whenua me Macpac te whakatō rākau Māori i tētahi whenua ō Te Kaunihera ō Otautahi.

Manaaki Whenua brokered an EBEX21® relationship for Macpac Ltd, a manufacturer of outdoor-gear, to plant native trees on land owned by Christchurch City Council. Staff, suppliers and customers participated in the planting days.

### NGĀ MAHI PĀPORI, TE TAHA KI NGĀ IWI SOCIAL & CULTURAL

E whā ngā kaimahi o Manaaki Whenua i whakawhitingia ki Environment Waikato, Environment Bay of Plenty, Environment Canterbury me Te Rūnanga o Ngāi Tahu.

Four of our staff were seconded to Environment Waikato, Environment Bay of Plenty, Environment Canterbury and Te Rūnanga o Ngāi Tahu.

Mai ngā marama e ono tekau ma tahi ngā kaimahi i kohikohu haere i ngā kōrero mo te nui o te waro e puta mai ana i te whenua.

Over six months, 11 staff spent 750 person days in the field collecting additional data on carbon stored in soil, native forests and scrub. These data are being used in refining the carbon monitoring system (CMS).



### TE TAHA ŌHANGA ECONOMIC

I roiro i ā mātou he putea hei rangahau mehemea ka patua ā tatou rakau Māori e te hae o ngā tarutaru kua raweketia e te GM.

We won new PGS&T funding to research the potential for pollen from GM crops to cause genetic "pollution" of native plants.



Claire Newell



Dentis Parker, Macpac

# Progress & achievements

## Te ahunga whakamua me ngā mahi i oti

### KEY PERFORMANCE AREAS NGĀ TINO WĀHI MATUA HEI MAHI

Manaaki Whenua ensures the best science for New Zealand by:  
E kore e mutu te mahi a Manaaki Whenua, ki te whakapūmau i te tiketike rawa o ngā mahi pūtaiao mō Aotearoa, mā te:

- collaborating with leading R&D agencies overseas.
- mahi ngātahi ki ngā whakahaere rangahau, waihanga hoki, i tāwāhi.

Manaaki Whenua practices what it preaches:  
Ka ū tonu a Manaaki Whenua i roto i ana mahi ki tāna i whakahau ai:

- we create wealth for our owners, staff and New Zealand
- whakatipu rawa ai mātou mō ngā rangatira o te kamupene, mō ngā kaimahi, otirā mō tātou katoa i Aotearoa

### PROGRESS TE AHUNGA WHAKAMUA

Our Motueka Integrated Catchment Management programme is being recognised internationally. It was cited as a leading example of catchment research in the 21<sup>st</sup> century, by the US National Academy of Sciences and UNESCO's HELP initiative.

I whakahonoretia tā mātou mahi rangahau i Motueka e te US Academy of Science me UNESCO. I ki ratou koianeī tētahi o ngā tino mahi rangahau penei i te rautau rua tekau mā tahi.

Graeme Rogers



We are contributing to greenhouse gas policy development with our estimate that New Zealand could benefit by over \$100 million/year from potential CO<sub>2</sub> sink credits on land with regenerating scrub.

Mā ngā whiwhinga mō te whakaheke i te CO<sub>2</sub>, e hua ai pea nui atu i te \$100m i te tau ki Aotearoa.

Our forest research on carbon dynamics & CO<sub>2</sub> exchange contributes to global climate change programmes. This 30m tower is at Okarito.

Koiane te atamira, e toru tekau mita te teitei, kei Okarito, nā mātou i hanga kia mohio atu e hia te nui o te waro kei te puta mai i ngā rākau o te ngahere.

John Hunt



We have invested strongly in developing our research capacity and science skills.

He nui te putea kua tukuna hei whakanui ake i tā mātou kaha ki te mahi rangahau.



Janine Duckworth

## AND ACHIEVEMENTS IN 2001/02 ME NGĀ MAHI I OTI I TE TAU 2001/02

### ENVIRONMENT TE TAIAO

### SOCIAL & CULTURAL NGĀ MAHI PĀPORI, TE TAHA KI NGĀ IWI

### ECONOMIC TE TAHA ŌHANGA



Number of overseas visits by Manaaki Whenua scientists participating in conferences, meeting leading researchers, or working at international research agencies.

● Location of 130 research teams with whom we have links in our PGS&T programmes.

We signed agreements with CSIRO Sustainable Ecosystems (CSE) and Sustainable Tourism CRC (both in Australia).

I hainatia e mātou e rua ngā whakaetanga, kotahi ki ā CSIRO, kotahi ki ā Sustainable Tourism CRC (no Ahitereira raua tahi).

We reached midway in our programme of \$11.8 million investments of retained earnings and operating surpluses in developing our science and technology to benefit primary production, the environment, and the community.

\$11.8 miriona tā mātou putea mai ā mātou mahi rangahau, kei te toha haeretia e mātou hei whakapakaritanga i ā matou mahi katoa.

We continued our strong financial performance. After investments of \$3.6 million, the company had a post-tax loss of \$0.1 million.

\$3.6m tā mātou pūtea penapena, engari i te mutunga i hē mātou \$0.1m.

Ian Whitehouse



We planted 1300 native plants at our Lincoln site. Through EBEX21®, Manaaki Whenua invested in the restoration of 40ha of scrubland to offset 200 t of our CO<sub>2</sub> emissions.

1300 ngā rākau Māori i whakatōngia i Lincoln. Mai te EBEX21® i whakahokia mai whā tekau ngā hekitā rākau mō te rua rau tana o te waro i puta mai i te whenua.

Staff made 57 visits to Australia and over 80 to other countries.

Rima tekau mā whitu ngā hiko ki Ahitereiria; waru tekau ki etahi atu whenua.

We spent \$620 000 on science-related overseas travel.

\$620 000 i pau mō te haere ki tāwāhi ki te mahi pūtaiao.

We awarded 10 sabbatical fellowships, and we are funding 18 post-doctoral fellows on staff.

Tekau ā mātou kaimahi i whiwhi i te karahipi o Manaaki Whenua kia haere ki tawahi, ki hea ranei kōrero pukapuka ai. Tekau mā waru ā mātou tohu kairangi.

# Te ahunga whakamua me ngā mahi i oti

## Progress & achievements

### NGĀ TINO WĀHI MATUA HEI MAHI KEY PERFORMANCE AREAS

Ka ū tonu a Manaaki Whenua i roto i ana mahi ki tāna i whakahau ai:

Manaaki Whenua practices what it preaches:

- he manaaki tangata, manaaki iwi
- we care for our people and our community
- he manaaki i te taiao.
- we care for the environment.



Waiho anō mā te iwi mātou e kōrero, mō te whakatipu mimiti-kore i te oranga, me ngā mahi pūtaiao hira rawa atu.

We are recognised as a leader in sustainable development and scientific excellence.



He whakaahua ēnei o te KOIORA-BIOASSIST.

Images from KOIORA-BIOASSIST.

Birgit Rhode

### TE AHUNGA WHAKAMUA PROGRESS

Ko mātou ngā kaitiaki mō ēnei kohikohinga rakau, kararehe ranei, me ngā raraunga rauemi.

We are continuing to improve web access to the nationally significant biological collections and resource databases for which we are custodian. They provide vital information to researchers, environmental managers and the community.

Ko etahi ō ā mātou putanga kōrero kua whakamāoritia.

We are now making some of our collections and databases bilingual.



E toru ngā tohu i riro i te Pūrongo ā-Tau a Manaaki Whenua o 2001, ko tētahi ko te tohu matua.

Manaaki Whenua is increasingly being recognised as a top TBL performing company. We won three awards (including the premier award) for our 2001 Annual Report.

la wiki kei te reo irirangi o Waikato etahi kaimahi e kōrero ana.  
Each week, our staff host a Waikato community radio programme on environmental issues.

Maggie Lawton



Ke tētahi o ā matou kaimahi e whakatu ana i te ngāwari o te mahi tango DNA, mai te harakeke.

Extracting DNA from flax—a demonstration for weavers.



Sue Scheele

ME NGĀ MAHI I OTI I TE TAU 2001/02  
AND ACHIEVEMENTS IN 2001/02

TE TAI AO  
ENVIRONMENT

NGĀ MAHI PĀPORI,  
TE TAHA KI NGĀ IWI  
SOCIAL & CULTURAL

TE TAHA ŌHANGA  
ECONOMIC

Nā mātou i tautoko te timatanga o tēnei rauemi akoranga, ā, ko tā mātou pae tukutuku tētahi wāhi ka kitea e koe i ā TuiTime.

Manaaki Whenua staff helped develop this interactive educational resource, and we host TuiTime on our website.



I hainatia tētahi kirimana ki te Whare Wānanga o Tāmaki Makaurau, e kōkiritia ai ētahi wāhanga rangahau me tētahi whare hou i Tāmaki.

We signed an agreement with the University of Auckland encompassing five joint research areas and a new building for us at their Tamaki campus.



Courtesy Auckland University

\$38 000 te nuinga o te pūtea karahipi kua whakaritea e mātou mō ngā taura Māori, e iwa ratou (e ono mō te tohu paerua; e rua mō te tohu pia, kotahi kei te kura tuarua tonu). Ko ngā taura e whā o te Whare Wānanga o Papaioea i whiwhi i te putea o Manaaki Whenua.

We provided \$38 000 of bursary and travel / training support to 9 Māori students (6 masters, 2 under-graduates, and 1 high school). These 4 are at Massey University.



Pui-Ching Tan



IPURANGI

[www.LandcareResearch.co.nz](http://www.LandcareResearch.co.nz)



KŌRERO MAI

Andy Pearce (Chief Executive)

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Email: [PearceA@LandcareResearch.co.nz](mailto:PearceA@LandcareResearch.co.nz)

# A scientist's footprint

Manaaki Whenua is a science business. Our business performance is affected by the accumulated impacts from each scientist's activities. This individual impact or 'footprint' can be measured by some of the summarised data presented here.

On average in 2001/02, each of our scientists:

- produced work with a value of more than \$175 000
- published 1.2 papers in international peer-reviewed journals and presented one paper at a scientific conference
- covered 4000 km in air travel and 2500 km in vehicle travel for work activities in New Zealand
- flew 12 600 km to overseas destinations, and spent \$2000 on international travel and conferences
- used 6900 kilowatt-hours of energy for heating, lighting and operating equipment
- produced 6.5 tonnes of carbon dioxide from travel and energy-use
- used 6300 sheets of A4 paper (32 kg), 140 envelopes and 1.7 kg of coffee grounds
- recycled 32 kg of paper and disposed of 100 kg of solid waste
- were supported by 0.75 technical and 0.4 administrative staff

Claire Newell



Aroon Parshotam

Ian Whitehouse



Jake Ovarton



each scientist has an environmental, social and economic impact



John Hunt

- used 1.6 gigabytes of computer disk space
- obtained \$6200 worth of new science equipment, personal computers and printers



Craig Ross

- shared in the company profit with a \$890 bonus and a 1.5% base salary increase

- accessed journals and bibliographic databases costing \$2600

- has worked for Manaaki Whenua and its predecessors for 10.6 years
- spent over 20 days working in the field
- took 3.7 days of sick leave



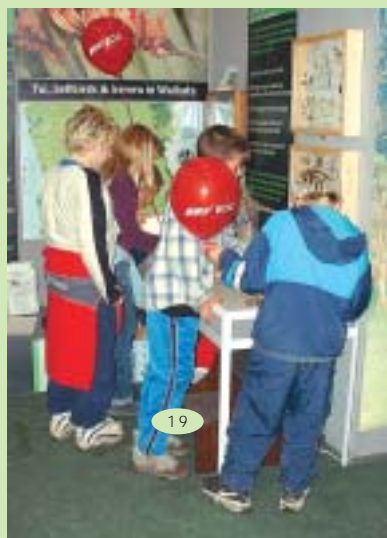
Ivor Yockney

- contributed more than 7 full days in socially-responsible activities to science societies, students and the public

- increased their salary by 5.5%
- and were paid 7.8% above the science sector and 3.7% below the general market rate.



Ian Whitehouse



Diana Leutkens



INTERNET

[www.LandcareResearch.co.nz](http://www.LandcareResearch.co.nz)

- Calculations used to estimate the scientist's footprint.

# He tapuwae pūtaiao

He umanga pūtaiao a Manaaki Whenua. Mā te hua o ngā mahi a tēnā, a tēnā o ngā kaipūtaiao, e pakari ake ai ngā mahi o tēnei umanga. Tērā e kitea te pānga, te tapuwae rānei, i ngā mahi e rārangi iho nei.

I tēnei tau, 2001/02, te toharite tēnei o ngā mahi i oti ai ia kaipūtaiao:

- i neke atu te \$175 000 te mahi i oti
- 1.2 ngā pepa i whakaputaina ki ngā hautaka o te ao whānui, ā, i pānuitia tētahi pepa ki tētahi huihuinga kaipūtaiao
- i rere 4000 ngā kiromita, i haere 2500 kiromita mā runga motokā, mo te mahi i roto o Aotearoa
- i rere 12,600 kiromita ki tāwāhi, ā, i pau te \$2000 i te takahi i te nuku o te ao, i te haere hoki ki ngā huihuinga nui i tāwāhi
- i pau te \$6900 hāora kirowāta pūngao, hei whakamahana whare, hei tahu rama, me ēra atu mahi
- i whakaputaina te 6.5 tana o te hauhā i ngā hāereere, me ngā mahi whakapau pūngao

Jake Overton



- i whakapaua te 6300 hīti pepa A4, 140 pūkoro pepa, me te 1.7 kiorāmu kukū kawhe
- i hangarautia 32 kiorokarāmu pepa, ā, i kawea atu 100 kiorokarāmu parahanga



John Dando

- 0.75 ngā kaimahi hangarau, 0.4 ngā kaimahi whakahaere mo ia kaipūtaiao

Maggie Lawton



Wendy Ruscoe



e kore e hapa he pānga  
ā-taiao, ā-pāpori, ā-ōhanga,  
tā ia kaipūtaiao



Claire Newell

- i whakapaua 1.6 kikapaiti i te whakaputu kōnae ki te manawa rorohiko
- i whakawhiwhia ki te \$6200 o ngā rāwekeweke pūtaiao hou, ki ngā rorohiko takitahi me ngā pūreretā
- whakapā atu ki ngā hautaka me ngā pātengi tātai pukapuka, ko te wāriu \$2600



Ian Whitehouse

- i whiwhi i te hua o te kamupene, nā te moni tāpiri \$890, me te pikinga o te utu ā tau mā te 1.5%

- kua taka te 10.6 tau e mahi ana mō Manaaki Whenua
- i pau te 20 rā i te mahi kohikohi mōhiotanga i waho i te tari
- kīhai i tae ki te mahi, i ngā rā 3.7 nā te māuiui
- i mahi mō ngā rā e whitu mō ngā rōpū pūtaiao, mō ngā taurira, me te iwi whānui



Ian Whitehouse



Ivor Yockney

- i piki tō rātou utu mā te 5.55%
- 7.8% te pikinga ake o ō rātou utu i te nuinga o te wehenga pūtaiao, 3.7% i raro i te ōhanga whānui, mō ngā mahi pēnei.



Robyn Simcock



IPURANGI

[www.LandcareResearch.co.nz](http://www.LandcareResearch.co.nz)

- Ngā tātaitanga i mahia hei ine i te tapuwae o te kaipūtaiao.

Nā te kaha o ngā kaimahi o  
 Manaaki Whenua ka piki ake tā  
 mātou kaha ki te mahi moni,  
 inā ra, tā rātou ngākau nui ki  
 te taiao me te whakaaro kotahi  
 ki ētahi atu.

# Our business success

## Ta mātou kaha ki te mahi moni

The success of our business reflects the talent of our staff—their passion for the environment, their knowledge and reputation, and their ability and desire to help others be successful.

Manaaki Whenua is a strong advocate for the benefits of collaboration. Through partnerships with other researchers, end-users of research and the community stakeholders, we can ensure our science makes a difference for a truly clean, green New Zealand. Manaaki Whenua, manaaki tangata—haere whakamua.



Dave Morgan



Janine Duckworth



Maggie Lawton

### STATEMENT OF FINANCIAL PERFORMANCE

FOR THE YEAR ENDED 30 JUNE:	CONSOLIDATED <sup>1</sup>		
	2002	2002	2001
	BUDGET		
	\$000s	\$000s	\$000s
Total Revenue	42,742	41,957	42,754
Operating Surplus [EBIT]	2,838	2,688	3,551
Interest and Net Non-Operating Income	384	202	656
Investment Project Expenditures	(3,573)	(4,882)	(829)
Net Surplus / (Deficit) before Taxation	(351)	(1,992)	3,378
Taxation (Credit) / Expense	(282)	(658)	1,133
Net Surplus / (Deficit) after Taxation	(69)	(1,334)	2,245

### STATEMENT OF MOVEMENTS IN EQUITY

FOR THE YEAR ENDED 30 JUNE:	CONSOLIDATED <sup>1</sup>		
	2002	2002	2001
	BUDGET		
	\$000s	\$000s	\$000s
Equity at beginning of year	21,676	20,731	22,931
Net (Deficit) / Surplus after Taxation	(69)	(1,334)	2,245
Recognition of Library Assets	262		
Total Recognised Revenue and Expenses	193	(1,334)	2,245
Special Dividend Paid	-	-	(3,500)
Distributions to Shareholders	0	0	(3,500)
Equity at end of year	21,869	19,397	21,676

<sup>1</sup> Parent company plus our subsidiary Sirtrack Limited.

For audited financial statements, see our full report.

# Contacting us

Te whakapā mai ki a mātou

www.LandcareResearch.co.nz

## DIRECTORS

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Rob G M Fenwick, *OStJ*  
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S Kevin Prime, *MBE*  
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Anne Urlwin

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Richard Gordon	Science Manager, Sustainable Business & Government
Michael Johnson	Human Resources Manager
Rauru Kirikiri	Treaty Responsibilities Manager
Margaret Lawton	Science Manager, Rural Land Use Impacts
David Penman	Research Manager
Oliver Sutherland	Science Manager, Biodiversity & Ecosystem Processes
John Tan	Chief Financial Officer, and Company Secretary
Ian Whitehouse	Strategic Development Manager

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ISO 14001



BIOSECURE map showing  
potential distribution of  
Argentine ants

