

**National Report to the Fourth Session of the
United Nations Forum on Forests**

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**Ministry of Agriculture and
Forestry**
Te Manatu Ahuwhenua, Ngaherehere

Key Contacts

Senior Forestry Official in New Zealand

Name: Mr Murray Sherwin

Title: Director General, Ministry of Agriculture and Forestry

Contact information:

Address: Ministry of Agriculture and Forestry, PO Box 2526, Wellington, New Zealand

Phone: + 64-4-474 4231

Fax: + 64-4- 474 4229

E-mail: murray.sherwin@maf.govt.nz

UNFF national focal point for New Zealand

Name: Mr Don Wijewardana

Title: Director, International Forestry Policy, Ministry of Agriculture and Forestry

Contact information:

Address: Ministry of Agriculture and Forestry, PO Box 2526, Wellington, New Zealand

Phone: + 64-4-498 9870

Fax: + 64-4-498 9891

E-mail: don.wijewardana@maf.govt.nz

Person to contact concerning the national report

Name: Mr John Eyre

Title: Senior Analyst (Forestry), Ministry of Agriculture and Forestry

Contact information:

Address: Ministry of Agriculture and Forestry, PO Box 2526, Wellington, New Zealand

Phone: + 64-4-498 9827

Fax: + 64-4-473 0118

E-mail: john.eyre@maf.govt.nz

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Progress and issues related to implementation of IPF/IFF proposals for action

Assessment (including of the relevance, priority, status of implementation, planned actions) of the IPF/IFF proposals for action in the national context

The United Nations Commission on Sustainable Development (CSD) has facilitated deliberations on the actions needed to promote sustainable forest management (SFM) by initially establishing the Intergovernmental Panel on Forests (IPF) and then the Intergovernmental Forum on Forests (IFF). The IPF and the IFF examined a wide range of forest-related topics and recommended a large number of proposals for action to be adopted by the international community. The role of the United Nations Forum on Forests (UNFF) is to promote “the management, conservation and sustainable development of all types of forests and to strengthen long-term political commitment to this end...”. As part of this the Forum is focusing on the implementation of IPF/IFF proposals for action.

Although the IPF/IFF proposals for action are not legally binding, participants in these processes (including New Zealand) are committed to sustainable forest management (SFM) and thus an obligation to implement the proposals for action. Each country is expected to conduct a systematic national assessment of the IPF/IFF proposals for action and to plan for their implementation.

To conduct this assessment for New Zealand, the Ministry of Agriculture and Forestry has convened an expert panel of officials who understand the production and/or conservation sectors of New Zealand forestry. This panel is tasked with working through New Zealand’s latest “IPF/IFF proposals for action” report and assessing how well New Zealand is doing. A scoring system will be used and an example is shown in Appendix 1. This stage of the exercise has a target completion time of late November 2003. The next step will be to involve a number of industry and environmental NGOs in a similar “scoring” assessment.

The objective is to identify areas where additional work may be needed to more fully implement the proposals for action.

Development and implementation of your national forest programme or similar national policy framework for forests.

New Zealand does not have, or see the need for, a National Forest Programme as implemented in many other countries. The Government’s cross-sectoral planning and policy approach to resource management is to control adverse effects on the environment and establish a neutral legislative and economic framework. This is backed by legislative enactments such as the Resource Management Act and the Forests Act as amended in 1990. Forestry (both commercial and non-commercial) is seen as a legitimate land use to be treated fairly and equitably with other land uses. In this way decisions about sustainable forest management can equally be driven by market (commercial) or non-market (non-commercial) situations. No national forest policy exists in New Zealand, and there is no target forest estate area or annual forest establishment target.

The Government has a number of goals to guide public sector performance and policy, two of which include:

- Protect and Enhance the Environment
Treasure and nurture our environment with protection for ecosystems so that New Zealand maintains a clean, green environment.
- Grow an Inclusive, Innovative Economy for the Benefit of All
Develop an economy that adapts to change, provides opportunities and increases employment, and while reducing inequalities, increases incomes for all New Zealanders.

These high-level goals help ensure sustainable forest management is implemented, without unnecessarily duplicating existing legislation or infrastructure.

Mechanisms or initiatives to facilitate stakeholder participation, including indigenous and local communities, in forest sector planning, decision-making and/or forest management.

There are four main categories of forest in New Zealand:

- indigenous natural forest owned by the government and managed solely for conservation purposes;
- planted production forests owned or managed by central and local government;
- privately owned indigenous forest; and
- privately owned and/or managed planted production forest.

In the first two categories there is extensive opportunity for participation in forest sector planning, decision-making and/or forest management through the New Zealand government's "open government" policies and mechanisms. Stakeholder participation in the latter two categories is mainly through the mechanisms provided in New Zealand's environmental management legislation. The way these mechanisms and frameworks operate for all four categories of forest is described further in this report.

A significant recent initiative is a process to develop national standards for the sustainable management of New Zealand's planted forests and small area of production indigenous forests. This initiative (describe in the section *Public participation* under *Traditional Forest Related Knowledge*) includes broad stakeholder participation.

Preparation of the Report

Describe the process of preparing this report, including which government agencies and stakeholder groups were involved, and the extent to which they contributed. Provide information on successes, challenges and lessons learned in the preparation of this report.

In preparing this report, the Ministry of Agriculture and Forestry (MAF) drew on, and updated, information in previous reports, particularly New Zealand's 2003 country report to the Montreal Process, and work-in-progress on an assessment of the IPF/IFF proposals for action in the national context. It was particularly helpful to have the Montreal Process report recently completed.

MAF co-ordinated and wrote this report, drawing on assistance from the Department of Conservation, Ministry for the Environment and Ministry of Foreign Affairs and Trade. Other stakeholder input was through the stakeholder consultation processes used by the four participating agencies. There was, however, considerable interaction between a wide range of stakeholders in the preparation of the 2003 Montreal Process Country Report, which is described in that report.

SOCIAL AND CULTURAL ASPECTS OF FORESTS

Fair and equitable sharing of the benefits arising from the utilization of forest genetic resources

Promote the fair and equitable sharing of the benefits arising from the utilization of forest genetic resources.

Genetic resources of both introduced and indigenous species are of vital importance to New Zealand. A major part of the New Zealand economy (farming, forestry and horticulture) is based on introduced species.

Historically, the Government took an active role in conserving introduced genetic resources such as trees for timber production. However, in recent years there has been increasing reliance on market forces and the interests of producers to conserve the genetic diversity of species that are important for production.

New Zealand's approach to intellectual property issues is subject to a number of international treaties, in particular the WTO-TRIPS⁴⁰ agreement and the WIPO Paris Agreement. New Zealand is also a member of the United Nations FAO Commission on Genetic Resources for Food and Agriculture, the International Convention for the Protection of New Varieties of Plants (UPOV) and the International Association of Plant Breeders (ASSINSEL).

The Plant Variety Rights Act 1987 creates an economic incentive to develop new varieties by protecting the plant breeder's propagation rights for a limited period of time. But it does not cover other biota or other forms of intellectual property. Although market mechanisms and intellectual property regimes, including the patent system, may provide significant incentives for conserving some genetic resources, they may not encourage more comprehensive protection of genetic diversity.

Using the genetic resources of indigenous species for commercial benefit raises ecological, commercial, cultural and ethical issues, as well as issues of access to genetic resources and how benefits from their use are shared. The interests and rights of Maori, the indigenous people of New Zealand need to be identified and addressed in the development of policy relating to bioprospecting.

In 2000 a review of the Patents Act 1953 was started to take account of the social and technological changes since the Act was passed. Part of the review considered issues including the Act's ability to deal with ethical and cultural considerations surrounding the patenting of inventions involving living organisms, genetic material and traditional knowledge. The Government agreed to policy proposals arising from this in July 2003.

The role of women in sustainable forest management

Involve women in national forest programmes, and enhance their role in sustainable forest management.

Women in New Zealand have equal opportunity in access to education, training and employment in all areas relevant to all types of forestry. In this way they are able to, and do, fully participate on an equal footing in all the management, scientific and other roles that sustainable forest management requires.

Enhanced role of indigenous and local communities in sustainable forest management

Develop and implement programmes for sustainable forest management.

The Department of Conservation develops and implements programmes for the conservation management of the government-owned indigenous forests it manages. These programmes are developed in consultation with, and in many cases the participation of, local communities.

Twenty-three percent of the indigenous forest estate is privately owned. Production is allowed on private indigenous forestland under Part IIIA of the Forests Act 1949 that stipulates forest owners who wish to harvest trees must obtain a Sustainable Forest Management Plan or Permit from the Ministry of Agriculture and Forestry (MAF). Plans and Permits require forest land to be managed in a way that maintains the ability of the forest growing on that land to continue to provide a full range of products and amenities in perpetuity while retaining the forest's ecosystem values. MAF has developed, and implements, national guidelines on the process, which are a form of national forest programme.

Most (over 99% by volume and by value) timber production comes from New Zealand's planted forest estate (1.8 million hectares as-at 1 April 2002), which is mostly (92%) privately owned. Development of

forest management programmes for these forests is generally left to the private sector companies. These companies develop and implement their own sustainable forest management programmes but they have to do that within the framework of New Zealand's stringent legislation governing resource use, particularly the Resource Management Act (RMA). It is the control exercised by this legislation that ensures the management and use of natural resources, such as planted forests and the land under them, is done sustainably.

The RMA is the centrepiece of the promotion of sustainable management in New Zealand. Its purpose is to promote the sustainable management of natural and physical resources (including forests). This is achieved through a series of national policy statements and standards, regional policy statements and plans and district plans. These instruments set out the legal framework within which resource users (including forest owners) may use natural and physical resources.

Other New Zealand legislation that supports sustainable forest management programmes in both planted and natural forests includes the Health and Safety in Employment Act 1992 (health and safety being a function of sustainability) and the Biosecurity Act, 1993.

The New Zealand forestry sector has negotiated a number of non-government national initiatives with environmental groups focused on forestry environmental issues, which help to ensure that management programmes for production forestry is sustainable. These include the New Zealand Forest Accord 1991 and Principles for Commercial Plantation Forest Management 1995. The forest industry also promotes sustainable forest management in planted forests through innovations like the New Zealand Forest Code of Practice 1993. Other industry initiatives include adoption of certification systems such as that available from the Forest Stewardship Council (FSC) and/or the ISO 14000 series.

The New Zealand Institute of Forestry (the professional body for forestry in New Zealand) has prepared a National Policy on Forestry and an Indigenous Forest Policy based on a forest ecosystem approach to sustainable forestry management programmes.

Support indigenous people and local communities by funding sustainable forest management projects

Maori are significant stakeholders and participants in the New Zealand forestry sector. There are approximately 7,000 hectares of Maori-controlled planted production forest, with a further 140,000 hectares being on Maori-owned land. In some regions of New Zealand this involvement is more significant, for example in Northland, where Maori forestry holdings make up more than 25% of the planted estate. Increasingly, Maori see forestry as a significant vehicle for sustainable development to benefit both current and future generations and, in some areas, new tribal-based forest companies are emerging.

The only direct government funding in New Zealand for promoting sustainable forest management (SFM) is the East Coast Forestry Project. This aims to encourage sustainable land management on severely eroding lands that are predominant throughout the East Coast of the North Island by encouraging the retention of existing indigenous forest and the establishment of planted forest. Financial incentives are available for this work.

New Zealand does not have other subsidies specifically addressing sustainable forest management. There are some provisions that allow some establishment costs of planted forests to be deducted from other taxable income, thereby reducing tax liability. This can encourage investment in planted forests, which then come under all the codes and sustainable forest management practices described in this document. These provisions are, however, under review as they can be seen as inequitable vis-à-vis other land use investments.

Capacity building through education

Forestry training covers a broad spectrum in New Zealand, from silviculture and harvesting techniques through to timber machining, wood science, product marketing to diploma and degree courses covering the full range of forestry science, management and engineering. Some of these skills are taught throughout New Zealand (e.g. harvesting techniques) but for more specialised activities training courses are held in only a few locations.

The Government, in partnership with the industry, has recently launched a major initiative to address the skill shortages that are beginning to arise in the sector, owing to the steady increase in harvest volumes. A National Centre of Excellence in Wood Processing Education and Training is being established in Rotorua and at Auckland University. The initial phase of development was funded predominantly by central government. Further implementation will be funded through a mix of industry and public sources.

The training providers involved in the Centre are the University of Auckland, Waiariki Institute of Technology and the Forest Industries Training Education Council. The University of Auckland will establish a Bachelor of Engineering in Wood Processing, to be followed by a Master's programme, while the Waiariki Institute is developing a National Diploma in Wood Processing (Level 6). This initiative is intended to meet the growing industry demand for engineers and skilled plant technicians.

Promoting public participation

New Zealand has an open, democratic society that provides significant opportunities for public participation in public policy and decision-making related to forests, and public access to official information.

National forest policy making (e.g. the Forests Act, trade negotiations, labour laws, etc) is undertaken by central government. To ensure that government ministers receive sound, comprehensive and co-ordinated policy advice, departments preparing papers must ensure they consult with other government agencies. Where appropriate, consultation with outside interest groups is encouraged when developing policy.

All government Bills¹ are referred to select committees for consideration. Select committee hearings allow the members of the House, interest groups and the general public to examine and have input, through written and oral submissions, into draft legislation before it passes into law.

Central government in New Zealand has devolved much of the responsibility for environmental planning and policy making to local authorities (regional and district councils) through the Resource Management Act 1991 (RMA). Regional and district plans developed under the RMA control adverse effects of resource management activities including the effects of forestry on the environment.

At a regional level, the RMA provides for members of the community to take part in managing the resource of their area. Under the RMA, every regional council develops a regional policy statement, under which regional and district plans must be consistent. A full review of all plans and policy statements is required every 10 years, a process that provides for extensive public participation and consultation with relevant sectors.

The Conservation Act 1987 requires the Department of Conservation to develop conservation management strategies in accordance with the legislation under which the Department operates. This includes provision for

¹ Except those taken under urgency, and Appropriation and Imprest Supply Bills.

extensive public consultation during the preparation of these strategies. These strategies provide an overview of conservation issues and give direction for the management of conservation areas, such as indigenous forest owned by the government. Conservation management strategies are reviewed every 10 years.

The Forests Act contains provisions for the Ministry of Agriculture and Forestry to approve forest management plans for privately-owned indigenous forests and to approve and monitor annual logging plans. The Ministry is required to consult with the Department of Conservation and where appropriate the Ministry of Maori Development (Te Puni Kokiri), prior to approving a sustainable plan or permit.

Social aspects addressed in national forest programmes

National forest programmes and the socially relevant elements

New Zealand's ability to report on the socio-economic benefits of forests gained by society is varied. In part, this is reflected in the distinction between the planted (largely commercial) forest and indigenous (largely conservation) forest estates. Generally, good information is available for production and consumption, and investment in the forestry sector – information derived predominantly from the planted forest sectors. Information on recreation and tourism is also available, and mainly relates to activities in indigenous forest areas.

Collecting information relating to cultural, social and spiritual needs and values is more difficult, with the exception of data on employment, injury statistics and, to a lesser degree, average wage rates. Other social and cultural factors tend to impact regionally and data are less readily available and there has been less research in these areas in recent years.

Forests for cultural, social and spiritual values

Under this heading is the amount of forest land placed under the range of tenure classifications and/or management regimes specifically designed to protect cultural, social and spiritual values.

The Department of Conservation (DoC) administers the majority of publicly owned land in New Zealand that is protected for scenic, scientific, historic and cultural reasons, or set aside for recreational purposes. DoC works with local Maori communities in almost all aspects of its work.

Employment

The contribution of the forest sector in providing employment at national and regional levels is a useful measure of a major aspect of community well-being (e.g. livelihood and economic activity). Comprehensive domestic employment statistics are collected regularly by Statistics New Zealand. The reference date is as at mid-February of each year with sample-based statistics for the other three-quarters of the year.

Direct employment in the forest sector is taken to be the numbers of persons engaged in forestry and first-stage processing activities. Indirect employment is not regularly estimated but can be derived from Input-Output studies of the economy. No recent studies have been undertaken to estimate the employment multipliers generated from the forest sector but a multiplier of 1.8 is generally regarded as applicable.

Table 1: Employment in forestry and first stage processing²

	1997 ³	1998	1999	2000	2001	2002
Forestry and wood processing	22 580	22 360	21 280	23 330	23 940	25 215
Total labour force ⁴	1 858 000	1 872 400	1 882 800	1 892 100	1 915 400	1 980 200
Forestry %	1.2%	1.2%	1.1%	1.2%	1.3%	1.3%

Source: Statistics New Zealand and Ministry of Agriculture and Forestry.

Maori participation in the commercial forestry sector is significant, through both employment and land ownership. At the 2001 census, 29% of the forestry labour force comprised Maori (compared to 23% in 1996) and a survey of forest owners in 2000 indicated that approximately 14% of New Zealand's planted forests (a net stocked area of 238,000 hectares) were sited on Maori -owned land⁵.

Wages and injuries

Data that measures forest sector wage rates and injury rates reflect workforce health and welfare. A sustainable industry will ensure high levels of workforce health and welfare and wage rates comparable with other rural industries. Comparison of wages in wood and wood product industries with wages in similar occupations can indicate the economic benefits of income security derived by communities. Decreasing injury rates in the forest sector reflect improved occupational health and safety and employment quality from which social benefits for the community may be derived.

Average total weekly earnings data for selected industrial activity groups are collected quarterly across the New Zealand economy. This can be taken as an indicator of average wage rates in major employment categories within the forest sector.

There are two sources of injury statistics for the forest sector, the Accident Compensation and Rehabilitation Corporation (ACC) and Occupational Safety and Health (OSH) – a branch of the Department of Labour. Commercial forestry, especially harvesting, unfortunately has a high fatality rate. In the five years from 1988/89 to 2002/03 there were 36 fatalities in tree felling operations, compared with 53 in the five years 1993/94 to 1997/98.

OSH's primary focus in helping to make forestry a safer occupation is to focus on employers' health and safety management systems, particularly on the training and supervision of new employees in high-risk forestry operations. Codes of practice (usually referred to as "bush codes") and guidelines continue to be improved and new codes are being developed by OSH to establish best practices and improve safety.

National forest projects and the social linkages

The Department of Conservation has a number of indigenous forest-related projects operating throughout New Zealand on the conservation estates it manages throughout New Zealand. Many of these focus on issues such as habitat and biodiversity restoration and pest management. Many of these in turn involve hands-on public participation, e.g. through school and community groups and community service organisations. Further information on these can be found on the Department's web site (www.doc.govt.nz).

² Forestry and first-stage processing is defined as the sum of ANZSIC activities: 030 Forestry and Logging; 231100 Log Sawmilling; 231200 Wood Chipping; 231300 Timber Resawing and Dressing; 232100 Plywood and Veneer Manufacturing; 232200 Fabricated Wood Manufacturing; and 233100 Pulp, Paper and Paperboard Manufacturing.

³ Figures are as-at February. Data for 2003 are not yet available.

⁴ Total labour force as at March quarter figures from the Household Labour Force Survey, Statistics New Zealand.

⁵ Forestry companies and the State manage the majority of these forests, while Maori directly manage approximately 20,000 hectares.

Involving the community in caring for its heritage through education, sponsorships, awards, community involvement programmes, partnerships and events such as Conservation Week is a key part of the Department's work. Public involvement activities range from national-level initiatives to locally run community programmes. The Department also works in partnerships with local and national communities to achieve its mission to conserve New Zealand's unique indigenous forest biodiversity. These partnerships include:

- a partnership with local Maori communities;
- work with regional and district councils to implement their responsibilities for biodiversity conservation in regional and district plans and coastal plans;
- work with private land owners for the protection of natural areas through covenants and other conservation measures;
- providing opportunities for corporate sponsorship of conservation programmes;
- working with education providers to enable them to deliver conservation education programmes;
- providing and promoting opportunities for community involvement in practical conservation projects and policy development; and
- joint programmes for protection of biodiversity.

TRADITIONAL FOREST RELATED KNOWLEDGE

Advance use of traditional forest related knowledge (TFRK) for SFM.

With the participation of indigenous people and local communities who possess TFRK, inventory, catalogue, retrieve and apply TFRK for sustainable forest management.

In mid-2000 the government set up a five-year fund for Maori to develop appropriate frameworks to preserve customary knowledge about nature, the Maturanga Kura Taiao (knowledge of biodiversity) Fund. This new funding enables the Government to work with appropriate Maori experts to develop an appropriate framework for the retention and promotion of Maturanga Kura Taiao with the knowledge (i.e. the intellectual property) remaining as the property of the particular local Maori community.

The Maturanga Kura Taiao project is a contestable fund to support tangata whenua/Maori initiatives to increase their capability to retain and promote traditional Maori knowledge and its use in biodiversity management (including forestry). The fund also helps increase Maori participation in processes for managing biodiversity in their rohe (area). It recognises that the use and protection of traditional knowledge is central to Maori participation in biodiversity management.

Over the last 50 years, needing to rely on forest resources for daily life has lessened for many Maori. Many older Maori have, however, kept alive a lot of TFRK (e.g. medicinal plants). The project aims to foster TFRK though facilitating the transfer of this knowledge to future generations by recording it using modern technology. Much of this TFRK relates to specific communities, such as the use of certain plants growing in specific areas that assist individual ailments. The Maturanga Kura Taiao project helps develop that local "intellectual property". The project also helps local Maori communities recognise and plan for specific forest protection activities, with follow-up management advice available from the Department of Conservation.

The government also has a programme to assist the voluntary protection of indigenous ecosystems on Maori owned, called Nga Whenua Rahui.

The criteria for Nga Whenua Rahui eligibility are that the land area:

- must be an indigenous ecosystem on Maori owned land which is of high cultural and ecological value;
- has strong spiritual and symbolic significance to, and is a traditional and important food source for, local Maori communities;
- is an important source for cultural materials and medicines;
- is or includes important tribal landmarks significant to Maori;
- is an important water catchment system to Maori for sustaining physical and spiritual values;
- is where cultural/spiritual and ecological values are threatened; and
- is of cultural importance and control by Maori has been lost.

Develop intellectual property rights for TFRK and promote equitable benefit sharing.

Develop ways and means to promote effective protection of TFRK and work with relevant international organizations and conduct studies to help to develop common appreciation and understanding of relationship between TFRK and intellectual property rights and promote fair and equitable sharing of benefits arising from TFRK, including consideration of payments.

The Ministry of Economic Development (MED) is responsible for policy relating to the protection of intellectual property and New Zealand representation in international intellectual property forums. MED, through the Intellectual Property Office of New Zealand (IPO), grants patents, registers trade marks and designs and makes available to the public technical information from patent specifications originating in New Zealand and other countries. MED advises Government on patents, trademarks, and design policy. The Plant Variety Rights Office administers the Plant Variety Rights Act 1987 under which grants of plant variety rights may be issued to breeders for their new plant varieties. Plant variety rights give breeders control over the commercialisation of their varieties helping them to obtain a financial return from their efforts and investment.

In 1991 a group of Maori lodged a claim with the Waitangi Tribunal that became known as the Indigenous Flora and Fauna claim. The claim relates to traditional uses of indigenous plants and animals. It is broad in scope and includes the ownership and use of indigenous flora and fauna and their genetic resources, related knowledge, intellectual property rights and the management and conservation of habitat. The claim has developed into a major generic inquiry. A statement of issues is in preparation, after which third party submissions and Crown evidence will be heard before a final report is prepared.

Means of implementation

Technology transfer and capacity building: as an integral part of national forest programmes, taking account of local TFRK.

The Maturanga Kura Taiao initiatives also apply here. Other relevant Maori networks include The Federation of Maori Authorities as well as many marae-based local projects.

Public participation

Promote participation of people who possess TFRK in planning, development and implementation of national forest policies and programmes.

In May 2001 a National Initiative Working Group (NIWG) was established to administer the development of, and manage a system for, national standards for the sustainable management of New Zealand's planted forests and small area of production indigenous forests. The Group promotes Forest Stewardship Council (FSC) principles and processes to support forest certification by FSC and other international

certification bodies. The New Zealand government has very limited direct involvement in production forest management, hence this process is largely a non-government one.

The composition of the NIWG mirrors that of the FSC Board of Directors with a balance of economic, environmental and social interests. The NIWG also established a Maori chamber in addition to the three economic, environmental and social chambers. In this way, Maori have a significant input to development of private forest “policy”, where their TFRK is particularly beneficial.

SCIENTIFIC FOREST RELATED KNOWLEDGE

The level of New Zealand government and private sector expenditure on research and development (R & D) has been climbing steadily over the past decade (in both nominal and real terms). Additional resources are being committed to ensure that New Zealand firms remain competitive on the international scene and have access to innovations that are tailored to local conditions.

The Ministry of Research, Science & Technology (MoRST) develops research and innovation policies and manages the publicly funded part of the research, science and technology (RS&T) system on behalf of the Government. MoRST contracts other agencies such as the Foundation for Research, Science and Technology (FoRST) to manage the distribution of funds for research and innovation projects.

FoRST invests in RS&T, including forestry, on behalf of the New Zealand Government. It invests nearly \$400 million annually in a wide range of RS&T initiatives with economic, environmental or social benefits. Each year, around 8% to 8.5% of its budget goes to forestry research.

Functional interaction between science and policy

Improve linkages between scientific research and policy processes and involve guidance from all the interested parties.

Each year the Ministry of Agriculture and Forestry (MAF) sponsors forestry research projects to provide information for forest policy development. MAF is responsible for providing the Minister of Forestry with policy advice on a wide range of forestry issues. Sound policy advice is built on a foundation of robust data. Where there is a lack of suitable information MAF often contracts research groups to provide it. This type of research, which provides information to assist in developing policy, and setting standards, is known as “operational research”.

Research currently being carried out under contract to MAF that cover forestry-related aspects is in maintaining biosecurity, facilitating market access, and facilitating resource management.

Setting the research priorities and addressing the knowledge gaps

Set research needs and priorities nationally, regionally and globally, address knowledge gaps, and promote and strengthen research efforts in support of SFM.

Research priorities for forestry must align with government priorities and FoRST criteria in order to secure a portion of the contestable research budget.

The Government, FoRST and the forest industry have worked collaboratively over the past two years on the development of an integrated (and interdisciplinary) RS&T strategy for the sector. The strategy identifies the type of research needed to build the industry and the mechanisms for increasing investment by industry and government. The key elements of the strategy include:

- Developing better market intelligence, in order to meet consumer needs and opportunities;

- Distinguishing between the needs of the existing planted forest resource and the future resource, as they will have different requirements;
- The development of pan-industry research platforms built around key issues such as wood/fibre properties, wood quality, market access and biosecurity; and
- The identification of different funding mixes for research, depending upon whether the work is classed as “business as usual”, “added-value” or “transformation” (i.e. new opportunities, outside of the existing business realm).

The Strategy is seen as a blueprint for guiding research and development (R&D) investment in New Zealand forestry over the medium- to long-term.

The objectives the Government is seeking to achieve through its provision of R&D funding include:

- enhancing the capacity of New Zealand businesses to adopt innovations;
- improving the international competitiveness of enterprises;
- protecting the environment through better knowledge of biophysical systems; and
- advancing the well-being and inclusiveness of New Zealand society.

Promote efficient sharing of information and strengthen networks

Make results and information available for all users to support decision making, develop new and innovative means of disseminating information and technologies and promote and make use of existing networks, institutions and mechanisms in efficient sharing of information.

Technical information transfer is an integral requirement of government research monies distributed through the Foundation for Research Science and Technology. Development of the Internet as an information dissemination system for forestry information is progressing, especially in relation to government held information generally (e-government) and forestry information in particular (for example, through the Ministry of Agriculture and Forestry’s website).

Global forestry research information is available through FAO, ITTO and other international forestry organisations. New Zealand contributes extensively through membership of such organisations.

Means of implementation

Mobilize funding for forest research: examine new ways to mobilize funding for forest research to accomplish its objectives and build capacity at the national, regional and global levels)

The forest industry announced its RS&T strategy in mid-2001. It was developed following widespread consultation within the industry and with government agencies, particularly FoRST. It identifies the type of research to be undertaken to build the industry and sets out the principles and mechanisms needed to increase investment in production forestry, both by the industry and government. In addition, there will be pan-industry research platforms built around key issues such as wood/fibre properties and wood quality, strategic market intelligence, market access, climate change, sustainable forest management, biosecurity, etc.

New Zealand (and particularly Forest Research) frequently contributes to, and works with, the International Union of Forest Research Organisations. Additionally, government, Forest Research and other forest-related New Zealand researchers maintain formal links with research organisations in many countries.

FoRST works closely with key stakeholders to determine how New Zealand’s major business sectors should be performing in the future. As part of this process a series of strategic objectives has been

prepared for each industry, including objectives for the wood fibre industry. FoRST uses these objectives as a guideline when assessing research applications.

Table 2: New Zealand investments in forest research

Year	Government allocation (\$ million)	Industry investment (\$ million)
2002/2003	27.6	34.8
2001/2002	27.8	31.3
2000/2001	27.7	25.3
1999/2000	27.2	29.6

Source: Research & Development Investment Report, NZ Forest Industries Council, February 2003

Table 2 highlights that the forest industry is providing an increasing level of R&D funding vis-a-vis the Government. Forest companies carry out some of this research in-house, but Crown research institutes (principally Forest Research) and the university sector carry out a large proportion. In addition to its direct investment, the industry provides a large amount of “in-kind” research investment, through the provision of experimental locations, staff and workers for laying out in-forest trials, and the use of mill equipment (and time) for technical experiments.

In recent funding rounds FoRST has placed an increasing emphasis upon projects that increase our knowledge of forest ecosystems, the maintenance of soils under production forests, biosecurity and forest health.

The major slice of the public investment in forest research and a significant proportion of the private expenditure are channeled through a single Crown research institute, Forest Research. In the year to June 2003, Forest Research had total revenues of \$39.6 million, of which FoRST funding contributed \$22.9 million (c.f. \$40 million and \$23.5 million respectively in 2001). Other institutions involved in the forestry research area are Landcare Research, Industrial Research, Hort Research and a number of universities.

A recent initiative by one of New Zealand’s major forestry companies, Carter Holt Harvey, has been to establish a venture capital fund (\$15 million), which is being used to encourage its employees and customers to put forward ideas for new products and production processes. The fund will investigate and, where practical, bring these products onto the market.

MONITORING, ASSESSMENT AND REPORTING, AND CONCEPTS, TERMINOLOGY AND DEFINITIONS

Collection and dissemination of national information on forests

Improve national forest resource assessments and make information related to sustainable forest management widely available.

New Zealand has a rich set of publicly available production forestry statistics, some dating back to the 1920s. These statistics cover forest planting, harvesting, production, processing and trade in forestry products.

National forest inventory

New Zealand’s national forest inventory for planted exotic production forests is the National Exotic Forest Description (NEFD).

The NEFD is New Zealand's official source of statistics on planted production forests. It is a quantitative database. The principal components of the database are forest area-age class information, yield tables, and national and regional wood supply forecasts.

From inception in 1982, the NEFD has operated as a partnership between the government (through its forestry department) and the private forest industry. In 1985 a Steering Committee was formally constituted to oversee the administration of the NEFD. This partnership model has proved to be highly effective. It has ensured the willing participation of forest owners in providing quite detailed information on their forest resources for the collective benefit of the forest industry and the government.

The NEFD is a least-cost approach to forest inventory based on the premise that by gathering information from relatively few large scale forest owners, details for 80 to 90 percent of the plantation resource can be captured. It utilises existing operational inventory information held by forest companies who meet the cost of this inventory and record keeping, and provide the data free of charge. The NEFD meets the costs of assembling, storing, analysing and publishing the aggregated data.

The NEFD costs are approximately \$0.17 per hectare of plantation forest per assessment. Other countries with strong backgrounds in national forest inventory have costs between \$1.25 and \$6.80 per hectare of forest per assessment.

The fact that government personnel undertake the resource survey is important with respect to confidentiality and reliability, and is highly influential in the co-operation of competing private companies from whom there is a 100 percent response to the annual survey.

Wood supply forecasts are undertaken periodically and are important components of the NEFD programme. Their purpose is not to predict what will actually happen, but to indicate a range within which the future level of harvesting could fall. Recent regional woodflow forecast work suggest that further consideration needs to be given to the assumption of non-declining yield used in the NEFD woodflow forecasts, and to improving the quality of area and yield information for the small scale forest owners.

Production and trade statistics

The Ministry of Agriculture and Forestry (MAF) produces about 40 detailed forestry statistical releases each year. These releases cover the production of forestry products, forestry trade, employment, and roundwood removals. Some of these statistics have been collected and published from as far back as the 1920's. The statistical releases produced include:

Annual production surveys

National annual postal surveys (year ended March) of sawmilling, pulp and paper production and panel products are carried out. The surveys cover the production of the main forestry products, mill capacities, fibre supplies and known mill expansion plans. Results are made available through *Statistical Releases* issued in November each year.

Quarterly production and stock level surveys

These are national postal surveys for the quarters ended March, June, September and December of sawmilling, pulp and paper production, and panel products. The surveys are designed to estimate quarterly production of outputs and stock levels at the end of each quarter. Results are made available through *Statistical Releases* issued six to eight weeks after the end of each quarter.

Roundwood removals

Using the results from the annual and quarterly surveys of production described above and using log export volumes from Statistics New Zealand MAF estimates – using roundwood conversion factors – roundwood removals for the quarters ended March, June, September and December. A reconciliation of wood flows is undertaken for the March year. The quarterly results are made available through *Statistical Releases* issued six to eight weeks after the end of each quarter. The March year reconciliation is generally released by December of the same year.

Employment in forestry and wood processing activities

MAF compiles total New Zealand employment in forestry and wood processing activities from statistical information supplied by Statistics New Zealand. The reference date is as at mid-February and the *Statistical Release* is normally available in October.

Exports of forestry products

These are a series of compilations on forestry exports using detailed trade data supplied by Statistics New Zealand. This work results in several *Statistical Releases*:

- comprehensive forestry exports statistics for the years ended March, June and December are produced eight weeks after the end of the reference year;
- quarterly *Statistical Releases* giving free on board (fob) values and quantities of log and woodchip exports by port of loading and country of destination for the March, June, September and December quarters are available six weeks after the end of the quarter;
- quarterly *Statistical Releases* giving fob values and quantities of logs and woodchips, sawn timber, plywood, particleboard, fibreboard, chemical pulp and mechanical pulp by country of destination for the March, June, September and December quarters are available six to eight weeks after the end of the quarter;
- quarterly index numbers compiled by Statistics New Zealand giving price and volume level movements for groupings of forestry products are distributed as *Statistical Releases* 10 weeks after the end of each quarter.

Imports of forestry products

Forest product import *Statistical Releases* for the years ended March, June and December are produced 12 weeks after the end of each reference year from trade data supplied by Statistics New Zealand

Further details on the statistics MAF collects are available on the MAF's website at www.maf.govt.nz/statistics/primaryindustries/forestry.

Improved and streamlined international reporting and information systems on forests

Develop improved and streamlined reporting and information systems to assist in the collection, verification, synthesis, interpretation and dissemination of information on progress in sustainable forest management and financial resources for SFM.

New Zealand participates fully in most international forestry organisations. Part of this involvement is a strong commitment to take part in the reporting processes instituted by these organisations. As part of this involvement, New Zealand makes representations whenever possible to encourage the various international forestry organisations to co-ordinate and reconcile their reporting requirements. As a small country, with a privatized forest industry, New Zealand considers that the multiple reporting requirements of different international agencies are resource intensive. Recent moves by ITTO and FAO to coordinate data requests is a welcome change in this regard.

The Montreal Process represents the prime arrangement for New Zealand to demonstrate its commitment to sustainable forest management. New Zealand is heavily involved in the Process to ensure its unique position of relying predominantly on planted forests of introduced species for our timber resource is internationally recognised as sustainable forest management. New Zealand contributed to the first approximation report by the Montreal Process in 1997 and submitted the first full official report in October 2002. Collecting the required information is a collaborative effort between government agencies and the forestry sector. New Zealand is the convener of the Technical Advisory Committee (TAC) that supports the Montreal Process.

New Zealand also provides reports to ITTO on progress made towards implementing Sustainable Forest Management.

New Zealand, along with Chile, Denmark, India, and Portugal sponsored an international meeting of experts entitled “The Role of Planted Forests in Sustainable Forest Management” (Santiago, Chile, 6-10 April 1999) to support the Intergovernmental Forum on Forests (IFF) in implementing actions to promote sustainable forest management. Seventy four participants attended the meeting from 31 countries from all regions representing governments as well as the private sector, international and non-governmental organisations.

A follow-up intersessional meeting organized by New Zealand on “The Role of Planted Forests in Sustainable Forest Management” was held in New Zealand in March 2003. This meeting was sponsored by the governments of Argentina, Australia, Canada, Chile, Malaysia, New Zealand, South Africa, United Kingdom, United States and the ITTO with technical support of CIFOR, FAO, ITTO and IUFRO. It brought more than 100 delegates together from 45 countries to discuss the role of planted forests in sustainable forest management.

Recommendations from the meeting about promoting the role of sustainability in planted forests was delivered to the third session of the UN Forum on Forests at the Geneva meeting in May 2003. Of special note is that the recommendations specifically included agro (farm) forestry, one of the few times this has happened in international forestry meetings.

New Zealand is also working in support of IPF/IFF implementation initiatives by its South Pacific island neighbours.

International reporting has to be built on a foundation of national collection of statistics and information. The agencies involved in this, principally MAF, are continually looking for improvements and efficiencies. A review of the NEFD (National Exotic Forest Description) was carried out in 2001, to identify where improvements could be made. Of fundamental importance to the NEFD is the issue of quality data capture for the increasingly important small-scale plantation resource largely planted since 1990. Ownership of this resource is not well understood, but these independent growers are estimated to own in excess of 400 000 hectares or 23 percent of the total plantation forest area. To address this, and to facilitate efficient management, the NEFD database is being linked with a New Zealand-wide GIS-based land cover database. This will facilitate linkages with other spatial databases such as the Land Cover Database (see below) and the Digital Cadastral Database (which records land ownership information).

The Ministry for the Environment (MfE) is government’s database steward for the land cover database. Satellite imagery for the database was acquired primarily during the New Zealand summer of 1996/97. National mapping of 17 land cover classes was completed in July 2000. The database provides a “snapshot” of the location and spatial extent of New Zealand’s forest resource as-at the date of the imagery. Within New Zealand’s land use cover change patterns, a five-yearly update cycle is considered

a useful time interval to make satellite spatial change detection worthwhile at the national level. Another national set of imagery was acquired over the New Zealand summer of 2001/02 and MfE is co-ordinating an update of the land cover database. Satellite-based land cover inventory significantly improves the coverage of core MAF statistical databases and assists in monitoring changes in land use and government's ability to meet a range of international reporting requirements.

The implementation of a carbon monitoring system for New Zealand's indigenous forests and soils is currently underway. Fieldwork for the installation of 280 plots in the first year of a five-year plan to install a national total of 1400 plots was undertaken in 2002. The completed system will install the 1400 plots on an 8 km by 8 km grid across New Zealand's indigenous forests and shrublands and will be very similar to the national forest inventory systems in place in most of the developed countries. The system will improve New Zealand's ability to more fully report changes in greenhouse gases under the Framework Convention on Climate Change (FCCC). The significant carbon pools contained in indigenous forests, scrub and soils were not previously being monitored or reported. This is in contrast to the well-refined methodologies for monitoring carbon fluxes in the planted production forests.

In addition to monitoring carbon stocks the proposed forest and scrub system will provide key national statistics on New Zealand's indigenous forests. The system will also support data collection for proposed environmental performance indicators and indicators of biodiversity. The Ministry for the Environment is the lead agency in the development of the carbon monitoring system. A key component of the carbon monitoring system is to monitor changes in soil carbon both under indigenous forest and shrublands and across all of New Zealand land uses, such as pastoral land and cropping land and land being converted to forest land.

Concepts, terminology and definitions

Formulate an internationally acceptable set of definitions of key terms used in forest resource assessment and criteria and indicators of SFM, including for low forest cover, planted forests and categories of protected areas.

New Zealand has participated on the UN-ECE Temperate and Boreal Forest Resource Assessment (TBFRA) 2000 Team of Specialists (TOS) since 1996 and wishes to continue this level of participation. A major focus of the TOS meetings has been the discussion and harmonisation of forest definitions. New Zealand was also represented in the Expert Meeting on harmonizing forest-related definitions held in Rome in 2002. The dialogue with other countries has improved New Zealand's understanding of each country's situation and history in relation to forest inventory.

Through the influence of the TBFRA process and other international processes such as the UN Framework Convention on Climate Change and Montreal Process, New Zealand is beginning to expand its forest inventory programmes and refine the definitions of forest that are used. New Zealand also participated in an expert meeting on forest definitions organised by FAO in 2002.

CRITERIA AND INDICATORS OF SUSTAINABLE FOREST MANAGEMENT

Develop, test and implement criteria and indicators at national, subnational and operational levels

Develop, field test and promote the use of criteria and indicators for sustainable forest management, including by integrating them into national forest programmes and national forest assessments and using them to monitor trends and promote best forest management practices.

New Zealand is an active (and founding) member of the Montreal Process and is fully involved in all of the Process's development and promotion initiatives and other work relating to criteria and indicators (C&I). This year New Zealand takes responsibility for leading the Technical Advisory Committee

(TAC), the group that undertakes analysis and advice to the Montreal Process Working Group on technical issues.

New Zealand is also closely involved in promoting International Tropical Timber Organisation (ITTO) C&I. It is taking part in global initiatives through the UN Food and Agriculture Organisation (FAO) and ITTO in promoting their use in countries that have not yet adopted any C&I processes and in efforts to harmonise concepts and descriptions.

Development, field testing and implementation of criteria and indicators are an integral part of New Zealand's commitment to, and execution of, the:

- Montreal Process;
- UN-ECE Temperate and Boreal Forest Resource Assessment 2000;
- Ministry for the Environment's Environmental Performance Indicators;
- New Zealand carbon monitoring system (see the section on *Improved and streamlined international reporting and information systems on forests* in this report); and
- international reporting requirements related to CBD, UNFCCC, UNFF and FAO.

Promote the use of criteria and indicators at regional and global levels

Support international and regional initiatives to achieve a common international understanding of concepts, terms and definitions related to criteria and indicators, mutual recognition among sets of criteria and indicators, and methods for the measurement of indicators and the collection and dissemination of data.

The Montreal Process represents the prime international arrangement for New Zealand to demonstrate its commitment to sustainable forest management nationally and internationally.

The Montreal Process benefits New Zealand by recognising sustainable forest management at a national level and recognising that New Zealand's planted forests are an integral part of sustainable development and economic growth.

The New Zealand Country Report 2003 on the Montreal Process Criteria and Indicators includes comment on all seven criteria and 67 indicators. Some of these are extensive both qualitatively and quantitatively while others are more descriptive. The Ministry of Agriculture and Forestry is responsible for co-ordinating information gathering and the writing of the report.

Further develop biodiversity indicators

Encourage, within the work of the Convention on Biological Diversity, the development of biodiversity indicators that are consistent and complementary to existing forest criteria and indicators.

The concept of sustainable management of the environment is now well established in New Zealand law and environmental policy. In line with this concept, the Ministry for the Environment will implement an *Environmental Performance Indicators Programme* to develop and establish a core set of nationally standardised environmental indicators. It is envisaged that this programme will help assess the state of the environment⁶ and help monitor the outcomes of environmental policies and key legislation, including the Resource Management Act 1991. The programme will compliment existing forest criteria and indicators.

⁶ State of Environment reporting encompasses systematic monitoring, gathering, and analysis of environmental data, and the dissemination of reliable, scientifically based, easily understood information about the condition (state) of the environment, the pressures on it, and the effectiveness of the measures taken to correct any problems.

The proposed framework of this programme follows the issues-based “pressure-state-response” model developed by the OECD and focuses on developing indicators for major ecosystems. The issues to be included in the framework are national environmental issues. However, the framework is flexible and can be modified to include issues that are significant at regional, local or community levels and to address emerging issues. It could be expanded to include indicators of sustainable development and environmental accounts. In this regard, the Ministry of Agriculture and Forestry is promoting the inclusion and alignment of international initiatives such as reporting on the Montreal Process criteria and indicators.

Means of implementation

Technical and financial resources: donor countries and multilateral organizations to provide adequate technical and financial assistance to countries for further development, field testing and implementation of C&I.

Resources for domestic implementation of criteria and indicators (C&I) are made available through the regular budget of the Ministry of Agriculture and Forestry. Technical assistance to other countries takes two forms. One is the provision of expertise and information mainly to South Pacific countries in developing and promoting criteria and indicators in the region. The other is not specifically targeted to C&I but at forming a part of aid provided through NZ Agency for International Development (NZ Aid), which is focused on sustainable development, good governance, capacity building and poverty eradication. New Zealand’s support is concentrated on Pacific Island states and the poorer East and South-East Asian countries. It also provides support to selected countries in southern Africa and Latin America and to a range of multilateral and regional institutions.

Public participation

Encourage the formulation and implementation of criteria and indicators of SFM with full participation of all interested parties.

At the national level a form of “criteria and indicators” are being developed as part of national standards for the sustainable management of New Zealand’s planted forests and small areas of production indigenous forests. The process for developing these standards is following Forest Stewardship Council (FSC) principles and processes, which will support forest certification by FSC and other international certification bodies. The standards are being drafted by four groups representing Maori, economic, environmental and social interests.

This is a dynamic process and wide stakeholder participation is envisaged as the national standards are implemented. Currently, implementation of C&I is limited to the national level, rather than at the forest management unit level. The Montreal Process Working Group is working on progressing the implementation to the forest management unit level. Once that work is completed New Zealand will address the issue of aligning and where feasible merging Montreal Process C&I with national forest management standards and adopting them for domestic use.

APPENDIX 1: IPF/IFF PROPOSALS FOR ACTION

New Zealand assessment method (example only)

Develop and implement partnership mechanisms to engage forest owners, private sector, indigenous people and local communities in the planning and management of forest conservation areas.

IPF	IFF	Lead/ Assist Agency	Legislation and Agreements
	84, 85b,c,d	MfE/DoC, TPK	BS, RMA, NPSB

(Descriptive text describing examples of work underway)

Forest conservation areas are an important component in the management of New Zealand's biodiversity. The Department of Conservation (DoC) and the Ministry for the Environment (MfE) developed the Biodiversity Strategy in association with 13 other government departments. Many other organisations, groups and individuals with interests in biodiversity participated in the consultation and submission processes. The ideas and opinions in over 900 submissions helped shape and refine the final Strategy. Work on the Biodiversity Strategy began in 1996 and a draft strategy was released for consultation in January 1999. This was then revised based on feedback during consultation and from submissions. The revised strategy was adopted by the Government in February 2000 and released in March 2000.

The Resource Management Act promotes the sustainable management of natural and physical resources (including forests) through a series of national policy statements and standards, regional policy statements and plans and district plans. The Act requires that the development of these instruments follows a thorough public consultation process, through which the private sector, indigenous people and local communities have opportunities for input.

Development of a National Policy Statement on Biodiversity (an important part of forest conservation management) was undertaken in the first half of 2001. A full round of public consultation will begin when the proposed National Policy Statement on Biodiversity has been publicly notified.

Other partnership mechanisms mentioned elsewhere in this report include the Forest Accord, Principles for Commercial Plantation Forest Management and the National Forest Standard.

(Scoring system)

New Zealand is:	Tick
1. Fully implementing the proposals for action in this section.	
2. Partially implementing the proposals for action in this section and could/should fully implement if commitment and/or resources were available.	
3. Partially implementing the proposals for action in this section and can't/shouldn't go any further.	
4. Not implementing the proposals for action in this section and could/should fully implement if commitment and/or resources were available.	
5. Not implementing the proposals for action in this section and can't/shouldn't go any further.	
6. Not applicable to the NZ situation.	