The Intergovernmental Panel on Forests
and
The Intergovernmental Forum on Forests

Proposals for Action

Tools to assist countries in measuring their progress
and establish priorities
for sustainable forest management

New Zealand Status Report 2002

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INTRODUCTION

The Intergovernmental Panel on Forests (IPF) and the Intergovernmental Forum on Forests(IFF). The IPF and the IFF have examined a wide range of forest-related topics over a five-year period and have recommended more than 270 proposals for action to be adopted by the international community.

Although the IPF/IFF proposals for action are of a non-legally binding nature, participants of these processes are under a political obligation to implement the agreed 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.

The main functions of the United Nations Forum on Forests (UNFF) established in 2000 under the auspices of ECOSOC is overseeing the implementation of the IPF/IFF proposals for action as well as enhancing co-operation and maintaining forest policy dialogue. The UNFF has to develop a plan of action for the implementation of the proposals for action and then support and monitor progress with the implementation of this work[1].

This report is based on New Zealand's 2002 country report that was submitted to the United Nations Forum of Forests (UNFF) in late 2001. That report followed the original outline set out by the IFF. This report has been reformatted to a structure developed by Agriculture, Fisheries and Forestry – Australia (AFFA) in February 2002 following a redesign of the reporting structure at the first session of the UNFF in June 2001.

This report will be used as a base document for assessing any gaps in the way New Zealand is implementing the IPF/IFF Proposals for Action, leading to identification and prioritisation of any work programmes that might be needed to fill any gaps.

NEW ZEALAND'S FORESTS

New Zealand lies in the southern Pacific Ocean, 1,600 km east of Australia. It is made up of the North and South Islands and a number of smaller islands, with a total land area of 26.8 million hectares. In the relatively short time of human influence, and particularly during the last 200 years, New Zealand's forest cover has changed rapidly.

About 80% of New Zealand was forested before the first human settlers arrived. Polynesian inhabitants cleared large areas, a process that continued after European settlers arrived in the mid-19th century and into the 20th century. Over time the forest area was extensively cleared and modified through trade in forest products, expanding agriculture and settlement, and the establishment of human-introduced animals and plants.

Today, forests cover approximately 8.2 million hectares, or 30.6%, of New Zealand's land area. Of this, 6.3 million hectares (23.5%) are indigenous and 1.8 million hectares (6.7%) are planted forests. The balance is mainly regenerating shrubland.

[1] These first three paragraphs are reproduced from a booklet *Summary of Proposals for Action* published by Agriculture, Fisheries and Forestry – Australia 2000

Most timber production (over 99% by volume and by value) comes from New Zealand's planted forest estate. Management of private plantations is generally left to the private sector owners and managers, but is subject to legislation that covers sustainable resource use.

The New Zealand plantation forest industry is characterised by the:

- dominance (89% by area as-at April-01) of radiata pine;
- high levels of overseas ownership or control in forest growing and wood processing;
- rising importance of small-scale forest ownership;
- pivotal nature of the sawmilling industry that, in addition to processing around 7.5 million cubic metres of wood per year, on-supplies about 3 million cubic metres of residues per year to the pulp and paper and panel sectors.

SUMMARY

Forestry in New Zealand is characterised by two features that are fairly unique among the forested nations of the world.

Firstly, there is a very clear separation between the predominantly production estate (over 99% of the annual production volume), which is based on plantations of exotic species (chiefly radiata pine - *Pinus radiata*), and the predominantly conservation estate of natural indigenous species.

Secondly, the production forestry sector is predominately privately owned, with 92% of plantations and 100% of processing facilities in private ownership.

These, plus the fact that New Zealand does not have a single, overarching national forest programme as in most other countries (see section 1.1 for a description of this situation) are threads that weave throughout this report, and have a bearing on the way New Zealand approaches the IPF/IFF Proposals for Action.

A major vehicle through which sustainable forest management is implemented in New Zealand is the Montreal Process. Montreal Process encompasses many of the IPF/IFF proposals for action. The first implementation report of Montreal Process criteria and Indicators was completed in late 2003.

New Zealand's responses to the IPF/IFF Proposals for Action are described in the following sections. The heading and sub headings in each section are taken from the *Summary of Proposals for Action* published by Agriculture, Fisheries and Forestry – Australia 2000. Following these is a table describing the government departments chiefly involved with the topic, any NGO (civil society) involvement and a listing of relevant legislation. To keep the report to a manageable length, acronyms are used extensively. These are described in Annex B, and it is hoped that their use will not detract from the readability of this report.

1. FORMULATION AND IMPLEMENTATION OF NATIONAL FOREST PROGRAMMES

1.1: Develop and implement a holistic national forest program which integrates the conservation and sustainable use of forest resources and values in a way that is consistent with national, sub-national and local policies and strategies.

IPF[2]	IFF[3]	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements[4]
17a, 58b(i)		MAF/MfE/DoC	NZIF, FOA, FIC	RMA, NZFA, NZPCPFM, NZFCOP, FA, HSEA, BA, GPP, CA, FHTF, NWR, NPSP

Forests cover 8.2 million hectares, or 30%, of New Zealand's land area. Of this, 6.3 million hectares are indigenous forest and 1.8 million hectares are planted production forests. The Crown is the major indigenous forest owner. Through the Department of Conservation (DoC), which operates under the Conservation Act, it manages about 77% of the estate for conservation, heritage and recreational purposes.

Overarching legislation which covers the sustainable management of all natural resources including forestry (see Annex C), combined with private sector initiatives, largely private ownership of exotic forests and 77% of the indigenous forest estate entirely in conservation, have made a specific National Forest Programme (NFP) unnecessary. Most (over 99% by volume and by value) timber production comes from New Zealand's planted exotic forest estate (1,798,700 ha), which is mostly (92%) privately owned. Development of, and investment in, planted forests is generally left to the private sector, but is subject to legislation that covers sustainable resource use (see Annex C).

New Zealand has adopted an approach that makes the need for a single national forest plan or program (NFP) less of a requirement. In 1987 substantial administrative changes in natural resource management resulted in most Crown-owned indigenous forests being fully reserved and placed under a new Department of Conservation. Such forests are subject to plans and strategies relating to biodiversity and conservation. Twenty-three % of the indigenous forest estate is privately owned. Production is allowed on private indigenous forestland, but the Forests Act requires these production areas to be managed in a way that maintains their ability to provide products and amenities in perpetuity while retaining the natural values. The government established the Forest Heritage Trust Fund and Nga Whenua Rahui (fund) to help fund and achieve the government's objectives of preserving private indigenous forests.

Crown Production forests largely comprising planted forests were progressively sold to private companies. Subsequently, further laws were passed to provide requirements for sustainable management of production forests in all ownerships. These legislative policies and provisions are considered adequate to manage forestry activities. They include: the Resource Management Act 1991, which regulates use of privately owned, land-based resources, particularly through the use of environmental impact assessments; the Forests Act 1949 (amended in 1993), which enables Government to assume stewardship of privately owned forests; biosecurity legislation; and conservation legislation

[2] Report of the Ad Hoc Intergovernmental Panel on Forests, March 1997 (E/CN. 17/1997/12)

[3] Report of the Intergovernmental Forum on Forests, March 2000 (E/CN.17/2000/14)

[4] International and national governmental (including legislation) and non-governmental (see Annex B for explanation of acronyms).

The Government believes it has a vital interest in the role of forestry and the involvement of our indigenous peoples in formulating strategies and measures to counter biodiversity loss and also monitor impacts. There are some unique features about the direction New Zealand has taken regarding forestry; notably the shift to a reliance on planted forests for much of its commercial timber production resulting from administrative changes to forestry made in the 1980s. This course of action means that less emphasis is needed on developing a national forest plan.

The New Zealand forestry sector has negotiated a number of national initiatives with environmental groups focused on forestry environmental issues, which help to ensure that production forestry is sustainable. These include the New Zealand Forest Accord 1991 and Principles for Commercial Plantation Forest Management 1995 (see Annex A). 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 under FSC and/or ISO (see Annex D).

Other New Zealand legislation that facilitates sustainable forest management, in both planted and natural forests, include the Health and Safety in Employment Act 1992 (health and safety being a function of sustainability) and the Biosecurity Act, 1993. Other legislation that regulates planted exotic and planted indigenous production forestry is listed in Annex C. Under a MAF/ MfE Green Package Programme, the government has funded projects that contributed to the adoption of best management practices (BMP's) by land managers, including foresters.

Other policies and strategies include New Zealand's full participation in the Montreal Process and Environmental Indicator Programmes.

The centrepiece of the promotion of sustainable management in New Zealand is the RMA. 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.

1.2: Assess, develop and implement an appropriate combination of legislation, economic instruments and tax policies for promoting sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	115a, b, c	MAF/Tsy		FA, RMA

New Zealand has a number of key pieces of legislation supporting the sustainable management and conservation of its planted and indigenous forests. Two key pieces of legislation are:

- Forests Act 1949, amended in 1993 to require timber milling in New Zealand's privately owned indigenous forests to be carried out on a sustainable basis.
- Resource Management Act 1991, the intent of which is to promote sustainable management of natural and physical resources and is the primary legislation for resource management planning. Implementation is primarily at the local government level.

New Zealand's legal framework provides, through the RMA and other supporting pieces of legislation, a strong basis for the sustainable development of New Zealand's planted and indigenous forests estates and ensures the conservation of the environment generally. It also has a strong policy and planning component that is utilised at local authority level. Conservation of indigenous forests is also specified under the Conservation Act 1987.

A full list of legislation affecting forestry in New Zealand is appended as Annex C

The only direct economic instrument used in New Zealand for directly promoting SFM is applied through 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 (or see the need for) tax policies specifically addressing SFM. Some local councils have (and others are considering) policies providing relief from rates (locally applied property taxes) for areas set aside under covenants for conservation purposes. There are some provisions that allow some production plantation establishment costs to be deducted from other taxable income, thereby reducing tax liability. This can encourage investment in plantations, which then come under all the codes and SFM 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.

1.3: Develop and implement appropriate policies and mechanisms to secure land tenure, recognize access to and use of forest resources by local and/or indigenous communities in order to support sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
29c	64c,d, 66, 115d	LINZ, DoC/MfE	MFA	LTA, TTWMA

All privately owned land in New Zealand is subject to the Land Transfer Act 1952. This Act sets down the method of creating and terminating property rights in land, records title to land and gives a guarantee of title by the State. Registration is the official recording of all relevant dealings with the land and results in the issue of a new Certificate of Title or the reissue of an existing amended Certificate of Title to the land. With regard to Maori land, Part 1 of Te Ture Whenua Maori Act 1993 outlines the constitution of the Maori Land Court, along with its objectives, jurisdiction and powers. Section 6 (2) of this Act binds the Maori Land Court to the definitions of Te Ture Whenua Maori Act 1993. In Te Ture Whenua Maori Act 1993 Maori Land means Maori customary land and Maori freehold land.

Maori are significant players in the New Zealand forestry sector. There are approximately 7,000 hectares of Maori-controlled exotic production forest, with a further 140,000 hectares being on Maori-owned land. Maori are able to share in the financial benefits through the direct sale of wood products and/or land rentals, and/or stumpage sharing arrangements. Increasingly, Maori see forestry as an important vehicle for sustainable capital development to benefit both current and future generations and, in some Maori areas, new tribal-based forest companies are emerging.

The Waitangi Tribunal was established as a permanent commission of inquiry under the Treaty of Waitangi Act in 1975. The purpose of the Act is to provide for the observation and

confirmation of the principles of the Treaty of Waitangi and to determine claims about certain matters (including land-related issues) that are inconsistent with those principles.

Planted exotic production forests owned by the Crown were privatised in the late 1980s and early 1990s. This constituted approximately half of the exotic production forest estate at the time. While the trees were sold, the land is retained in Crown ownership. Crown Forestry Licences that were negotiated at the time of the sale secure access to the land. They are transferable and subject to periodic review (mainly regarding the rental). They are for 35 or 70 years (depending on individual circumstances), slightly more than one or two normal commercial rotations of radiata pine (the most common species). At the end of the licence period, licence holders will have a right of renewal, other things being equal.

Licences for former Crown exotic production forests that had some form of public access rights (e.g. for recreation) contain provisions for maintaining those rights. Many private exotic production forest owners and managers provide for public access, on a voluntary (i.e. non-legislative) basis, usually through providing specific set-aside areas, or by having a system for issuing permits on application.

Access to the Crown's indigenous conservation forest estates (managed by DoC) is also through the provision of a large number of set-aside areas, tracks, etc. DoC also have a system for issuing permits (e.g. for recreation activities) and concessions (e.g. for tourist activities).

Generally, there are no free and/or general right of access to exotic planted production forests (on freehold or Crown leased land) or to private indigenous forests. A major reason is public safety and the provisions of OSH legislation (which makes landowners responsible for ensuring safety of those on their land). Also, there is no great demand for free and general access. Many forestry companies make provision for public access to plantations they own and/or manage (see Annex E).

1.4: Develop and implement codes of conduct to encourage private sector activities consistent with sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
69a, 128c		MAF		NZFCOP, HSEA, NZFA, NZPCCPFM

The *New Zealand Forest Code of Practice* in was produced in 1990 and revised in 1993. It is an industry standard for achieving efficient and environmentally acceptable forest operations and is used by the forest industry as a guide to forestry planning and practice.

Safety is part of sustainability and in 1999 the Occupational Safety and Health (OSH) group of the Department of Labour issued an *Approved Code of Practice for Safety and Health in Forest Operations.* This is a statement of statutory requirements, rules and provisions, based on preferred work practices and arrangements, to ensure the health and safety of forestry workers. The code is supported by guidelines containing safety, health, training and operational information and outlining preferred work practices or arrangements on the major components related to each part. This provides practical information for those carrying out or directly associated with the work.

Other codes relevant to sustainable forest management that have been adopted are the *Forest Accord and Principles for Commercial Plantation Forest Management*. Most private forestry companies have in-house codes of practice for environmental and worker safety.

A *Code of Practice for the Management of Agrichemicals* 1999 covers the application, distribution, transport and storage of agrichemicals. Information is identified in the code as appropriate for the three different user groups: applicators, contractors and distributors. This reviewed Code incorporates legislative changes and has a comprehensive coverage of animal remedies and spray drift management issues. It incorporates an earlier "Code of Practice for the Use of Pesticides On Plantation Forestry Operations" which covered a wide variety of operations arising from the use of pesticides. These include: policy and planning, controlling on- and off-site environmental effects, storage, transport and disposal of chemicals, property rights, risk control, emergency procedures, and audit procedures.

At the time of endorsing the *Code of Practice for Forest Harvesting in Asia-Pacific* in 1998, the Asia-Pacific Forestry Commission (APFC) recognised that major efforts would be required to effectively implement the Code. To ensure more co-ordinated, focused and effective implementation, the APFC *ad hoc* Working Group on Sustainable Forest Management (of which New Zealand is a member) will develop a comprehensive regional strategy for implementing the Code

An *Environmental Management System* (EMS) for forestry contractors was developed in 1996 with funding from the Ministry for the Environment. This manual is not a true forestry code of best practice although it is widely used by forestry contractors and organisations. The EMS targets harvesting and other forestry operations such as spraying and roading. It provides a checklist for to assist contractors on such issues as harvest planning, compliance with legislation and environmental monitoring.

The Forest Code of Practice is a useful tool for local authorities when developing plans and considering resource consents. Self-monitoring through Codes of Practice is encouraged by many regional councils and the Ministry of Agriculture and Forestry, as these Codes promote "ownership" of resource consents, provides councils with a consistent base for gathering information, and is cost effective.

Standards and Guidelines for sustainable management of New Zealand indigenous forests have been developed by the Ministry of Agriculture and Forestry to reflect the statutory requirements under Part IIIA of the Forests Act and specify structured indigenous forestry standards for approval and administration of sustainable forest management plans and permits. Each criterion and subset of goals, indicators, benchmarks and verifiers provides guidance on how MAF will apply provisions of the Forests Act. The objective of the MAF Standards and Guidelines is to present detailed procedures and practice standards for sustainable forest management

1.5: Conduct a systematic national assessment of the IPF and IFF proposals for action involving all stakeholders and plan for their implementation within a national forest program.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	9d	MAF/MFAT/MfE/DoC		All in Annex A

This exercise is the method New Zealand is using to address this proposal, bearing in mind that New Zealand does not have a national forest programme (see 1.1 for an explanation of this).

1.6: Provide general, cross-sectoral and specific advice to countries on forest policies and the design and administration of economic instruments and tax policies to promote sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	115f, 142b			

New Zealand provides country reports to a number of international bodies, which outline New Zealand's forest policies and other tools used to promote SFM. For example, New Zealand furnished a report called "National Forest Policy Review" to the 19th session of the Asia-Pacific Forestry Commission, August 2002,Ulaanbaatar, Mongolia. The comments made in section 1.2 also applies here

2. PROMOTING PUBLIC PARTICIPATION

2.1: Establish a coordinated, integrated and participatory approach to the implementation of the IPF/IFF proposals for action and the forest-related work of other international instruments.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
144	9b,e,f	As 1.5		As B1

Reply to 1.5 applies here also.

2.2: Establish improved mechanisms to consult stakeholders on the identification of the full range of forest goods and services and to make forest-related information and progress reports widely available to policy makers and relevant stakeholders.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
30a, 58b(ii), 78a,b, 89h	17b, 18,122d	MAF/TPK/DoC, MFAT		CBD, BS,CA

As a developed country, New Zealand has a well-researched and well understood knowledge of the full range of forest goods and services available from its forests that have been built up over many decades. Identification of secondary products (e.g. medicinal uses of forest plants) is being identified through the development of New Zealand's Biodiversity Strategy (see section 2.3). Traditional uses of forest products by Maori are being identified and developed by Maori (see section 4).

On the domestic front, access to and the interpretation of information on sustainable forest management is through several channels. An *Indigenous Forestry, Sustainable Management* handbook is readily available at a nominal charge from MAF or FFA. A comprehensive set of instructions and guidance booklets about applying for indigenous SFM plans or permits under the Forests Act is readily available from MAF free of charge. A series of 8 handbooks on exotic production forestry management, called the "Small Forest Management Series" covering everything from species/site selection, through management, to harvesting and marketing was published by the (then) Ministry of Forestry. These are freely available from MAF and are some are available on MAF's web site (an improved information mechanism). FR also has a readily available and very comprehensive range of authoritative literature on SFM. The Forest CoP is readily available in handbook form.

In the international arena, New Zealand is a founding member of and on-going participant in the Action Strategy for Nature Conservation in the Pacific. New Zealand provides assistance to the "Donor Round Table", established under the Action Strategy, which promotes donor co-ordination for natural resource conservation in the Pacific region. This process includes sharing of information, lessons and techniques for sustainable resource use. New Zealand is also assisting the South Pacific Regional Environment Programme (SPREP) with the development of a Pacific regional focal point for Pacific countries and communities to share and access such information.)

2.3: 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	Involved NGOs	Legislation and Agreements
	84, 85b,c,d	MfE/DoC, TPK		BS, RMA, NPSB

Forest conservation areas are an important component in the management of New Zealand's biodiversity. DoC and MfE developed the Biodiversity Strategy (BS) 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 BS 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 RMA 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 NPSB has been publicly notified. This is expected to happen early in 2002.

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

2.4: Involve relevant interested parties in the extension, planning, implementation, monitoring and evaluation of forest research and ensure appropriate prior consents are obtained for research programs.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
17e, 94d	96d	MAF	FR, LCR	

The primary provider of forestry research in New Zealand is Forest Research (FR), a crown research institute (CRI). FR operates a number of research co-operatives, which involves all interested parties in the extension, planning, implementation, monitoring and evaluation of forest research. Government research monies are distributed through FRST, who invites comment on research proposals from research providers from interested parties before allocating funds. These mechanisms ensure that the research that is funded is relevant to the needs of the forestry sectors, which will be applying the results of the research.

2.5: Enhance Government, community and forest owner financing to facilitate local participation in sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
70c, 77f	64f	MFAT/MAF		NZODA

Some of the smaller plantation forestry aid projects such as in Aneityum, Vanuatu, are being developed for community management. In addition sustainable harvest of indigenous forest resources is being assisted.

2.6: Increase public awareness of the direct and indirect benefits from forests at the regional and global levels.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements

	142a			

A popular vehicle for increasing public awareness of forestry is a website called Forestry Insights (www.insights.co.nz). This site is managed by Forest Industries Training, New Zealand's main industry training organisation. Forestry Insights has been created for students (particularly senior secondary), teachers, industry trainees and the general public. Its major features include indigenous and plantation forestry, major wood products, environmental and social issues, statistics and graphs and up-to-date industry information.

MAF's website also has information and data on this topic freely available.

The NZ FOA each year runs a comprehensive multi-media forest fire awareness programme, which highlights the multi-use role of plantations.

There are several programmes that highlight the conservation values on (particularly) indigenous forests. Part of DoC's community relations work is an annual programme of events including an Arbor Day (June 5) and a Conservation Week in the first week of August. A number of national and regional awards are presented by DoC to acknowledge and encourage community involvement in conservation. The Conservation Corps is a programme run by the Ministry of Youth Affairs. It has been established to give young people a chance to have a go at the hard but rewarding work of conservation.

2.7: Improve cooperation, coordination and partnerships in support of sustainable forest management within a national forest program, by involving relevant stakeholders including indigenous people, forest owners, women and local communities in forest decision making and utilizing appropriate expertise in international and regional organizations.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
17b,f,h,i, 40e	19b, 64b, 66, 140a	TPK/MAF	FOA, FIC, MFA	RMA, NPSB

New Zealand does not have a single national forest programme (see 1.1). An important aspect of the RMA is the involvement of individuals and communities in decision-making that affects the environment. The Act requires both central and regional government to consult quite widely with the public when environmental policy decisions are made. Public participation is also part of the framework for developing national and regional plans and policy statements under the Act. Any activity that needs a resource consent from local government (who apply the provisions of the Act) also requires stakeholder participation under the consent application process.

Development of a biodiversity National Policy Statement (NPS) (which will include forest land) will involve an extensive public consultation process.

The development of national forest standards that are FSC-recognised required extensive community and indigenous consultation (under FSC guidelines).

Maori, are significant players in the New Zealand forestry sector. There are approximately 7,000 hectares of Maori-controlled exotic 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

capital development to benefit both current and future generations and, in some areas, new tribal-based forest companies are emerging.

3. COMBATING DEFORESTATION AND FOREST DEGRADATION

3.1: Study and analyze historical and underlying causes of deforestation and forest degradation, including the impacts of transboundary pollution, poverty, fuelwood collection and processes outside the forest sector.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
27a,b,c	64a, 122c			

Deforestation is not a significant issue in New Zealand as there is a net increase in forest cover (due to expansion of the plantation estate) and deforestation is not permitted under the Forests Act and is tightly regulated against under the RMA. Current concerns relate more to forest degradation. Before the first Maori settlers arrived in the 11th Century, 75% of New Zealand's 27 million hectares were covered in natural forest. The rest of the land was unsuitable for forest growth, being too wet, too high or too dry. By the time European settlement began to intensify in 1840, the forest cover had fallen to 53%. Today, 24% of New Zealand remains under natural forest. Most of this forest decline occurred between 1880 and 1930, while New Zealand's strong agriculture-based economy was being developed[5].

Since then, natural indigenous forest degradation was a function of lack of management and/or conversion of cutover remnant (though often regenerating) forest into pasture. Introduced pests (especially deer and possums) aggravated the situation. Extensive commercial control and management has largely removed the deer problem, but possum damage remains a large problem. There are now many programmes in place, e.g. QEII Trust, Nga Whenua Rahui, (a fund set up to enable Maori to protect their indigenous forest land) etc. to address indigenous forest restoration.

Transboundary pollution, poverty, and fuelwood collection are not significant issues in New Zealand.

Processes outside the forest sector are dealt with under the RMA systems.

3.2: Develop and implement integrated national policies, strategies, economic instruments and mechanisms for supporting sustainable forest management and addressing deforestation and forest degradation.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
29a,b	115c,g	MfE/DoC/MAF	FOA, FIC, TLAs	NZFA, RMA, DLE, NPS, CA

The principal national policy tool supporting sustainable resource use in New Zealand is the RMA. Regional plans under the RMA require resource consents for the clearing of vegetation (of any type, including natural and planted forests, and for any reason) above prescribed limits (which vary according to the region, but are rarely above 10 hectares). This helps address deforestation situations

MfE carries out work on Degraded Lands and Environments (project series 3000). Funding in this topic area seeks to address the need for management strategies to mitigate threats to the environment. Funding is allocated to projects that develop socially acceptable and cost-

[5] MfE website

effective management strategies to achieve environmental enhancement of ecosystems. The major areas of work which are allocated funding include regional or national risk assessment and assessing environmental enhancements necessary to achieve sustainable eco-systems.

DoC manages the public conservation estate, including indigenous forests, in accordance with a national strategic business plan, regional conservation management strategies, species recovery plans, and pest management strategies and plans. The policy goals and strategies are developed in consultation with relevant stakeholders.

The first steps in developing a national policy statement on biodiversity (NPSB) were undertaken in 2001. A full round of public consultation is required before a full NPSB can be ratified.

The New Zealand Forest Accord 1991 (see Annex A) is a strategic agreement between conservation groups and major plantation growers and users. It requires signatories to:

- define areas unsuitable for exotic plantation forestry;
- acknowledges that existing natural forest should be maintained;
- recognise commercial plantation forest as essential;
- ensure any use of wood for indigenous forest is on sustainable, value added basis; and
- ensure new plantation forests will not disturb areas of natural indigenous vegetation.

Apart for various grants that are available for indigenous forest preservation, and grants under the East Coast forest project, there are no economic instruments directly associated with SFM. New Zealand's macro-economic polices are intended to treat all sectors as evenly as possible, so that non are able to claim specific weighting.

3.3: Create awareness of the importance of issues related to deforestation and forest degradation and the multiple values of forests.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
30a	64e, 142a	MAF/DoC		NZFCOP, RMA

While deforestation is not an issue specifically applicable in New Zealand, action is being taken in other areas. MAF has sponsored a number of best management practice (BMP) guidelines to assist land managers be aware of and avoid, remedy or mitigate adverse environmental impacts such as deforestation and forest degradation. They include such publications as "Harvesting Contractor Environmental Management System" and "Indigenous Forestry Best Management Practices". The New Zealand Forest Code of Practice also describes how to avoid adverse environmental impacts.

A web-based information programme called *Forestry Insights* (www.insights.co.nz) is an easily accessible resource designed to provide easy-to-read material on many aspects of forestry. It includes sections on the multiple values of forests. Many DoC and MfE publication also highlight the multiple values of forests.

4. TRADITIONAL FOREST-RELATED KNOWLEDGE

4.1: Collaborate with and enhance the capacity of indigenous people to identify, map and promote the understanding and application of traditional forest-related knowledge at the local, national and international levels.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40a,g,j,n	75	MED/TPK/DoC		BA, CA

New Zealand is a signatory to the Convention on Biosecurity (CBD). The Government has set up a fund (managed by DoC) to increase iwi and hapu participation in managing biodiversity (including on Maori forest land) in ways that are consistent with customary knowledge (Matauranga Maori) with the knowledge remaining the property of the particular iwi or hapu. This funding is part of a comprehensive five-year package involving conservation to support the Government's Biodiversity Strategy.

Other projects in the package provide opportunities for Maori involvement as well as protecting biodiversity of value to Maori and biodiversity on Maori-owned land, such as the increased funding going to Nga Whenua Rahui, (the fund set up to enable Maori to protect their indigenous forest land). This funding links to the strategy's goal relating to the Treaty of Waitangi and halting the decline in New Zealand's biodiversity and will also support Government's strategic goals of protecting and enhancing the environment, and strengthening national identity and upholding the principles of the Treaty of Waitangi.

4.2: Develop and implement national legislation and policies, including the application of intellectual property rights, to respect, maintain, protect and apply traditional forest-related knowledge.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40b,c,d,p	74d	MED/TPK/DoC		PVRA, CA(copy), Wai262

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 comprising representatives from four iwi lodged a claim with the Waitangi Tribunal that became known as the Wai 262 – 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 Tribunal granted the claim urgency in 1995; however, the research and hearings have not yet been concluded.

Matauranga Maori asserts group ownership of intellectual property rights in knowledge or the expression of thought that is passed down from one generation to another. Matauranga Maori means the knowledge and understanding founded on Tikanga Maori (custom, culture and protocol), whether in document or other form.

The Copyright Act has no express provisions for the protection of Matauranga Maori. Its implications for Matauranga Maori issues are noted where they may arise. DoC deals with Matauranga Maori issues with respect and consultation with iwi on a case by case basis.

4.3: Develop and implement policies and mechanisms to support traditional resource use systems and ensure equitable sharing of forest-related benefits, including use of forest genetic resources, with local communities and indigenous people and document successful approaches.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40c,f,h,i,r	56j, 64c, 66, 74b, 122d			

In mid-2000 the government set up a five-year fund for Maori to develop appropriate frameworks to preserve customary knowledge about nature, Matauranga Maori. The new funding will enable the Crown to work with appropriate Maori experts during the next five years, to develop an appropriate framework for the retention and promotion of Matauranga Maori, with the knowledge remaining as the property of the particular iwi or hapu.

The Matauranga Maori project will establish 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 will also help increase tangata whenua 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.

The existing Nga Whenua Rahui committee will administer the new fund. In the first year, the committee will establish criteria and administrative arrangements, and will call for applications. From year two, funding will cover administration and grants to selected projects. Funding will allow the development of more partnerships between iwi and the Department of Conservation, and therefore more meaningful involvement of Maori in biodiversity management.

4.4: Assist networks that promote sharing of traditional forest-related knowledge and include traditional forest-related knowledge in forest management training programs.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40i,m		MED/DoC/TPK		PVRA

DoC's Matauranga Maori initiatives (see 10.3) also apply here. Relevant Maori networks include The Federation of Maori Authorities.

4.5: Facilitate work under the Convention on Biological Diversity and other relevant organizations (WIPO, UNCTAD) to implement measures to recognize, respect, protect and maintain traditional forest-related knowledge including the application of intellectual property rights, sui generis or other systems for its protection.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40o	56j 74a,c 75			

New Zealand participates in the national reporting process to the Convention on Biological Diversity (CBD). Two such reports have been completed and these require generally short answers to questions related to national programs on biodiversity conservation and sustainable use. New Zealand is generally in able to report positively on these issues given the state of our environmental legislation and specific strategies such as the National Biodiversity Strategy and earlier Environment 2010 Strategy. The national reports are co-ordinated through MFAT and include input from departments such as the DoC, MAF, and TPK.

New Zealand's national biodiversity program has primarily focused on addressing the loss of indigenous species biodiversity through the National Biodiversity Strategy Action Plan and National Policy Statement on Biodiversity.

Matters related to biodiversity and sustainable use relating to productive landscapes under agriculture and forestry have been less prominent in the New Zealand response to the CBD, although these issues are becoming increasingly prominent in the SBSTTA and COP discussions. The main theme at the seventh meeting of the SBSTTA was forest biodiversity and MAF has focused on this and the growing issue of sustainable use in agriculture.

It is important that New Zealand continues to have input into the CBD forestry decision making process to ensure that the New Zealand viewpoint and, information about the integration between New Zealand's planted forestry and natural forests, are reflected in it.

New Zealand will need to ensure that its trade interests in primary production are not compromised but also recognise the commitments to, and reporting, for the CBD, such as the expanded program of work on forestry.

It will also be necessary for New Zealand to ensure that there is consistency and no duplication in work between the various international discussions and programs concerning forestry. This includes forestry work covered by the Intergovernmental Forum on Forests, the FAO Committee on Forestry, the Montreal Process, and the newly established United Nations Forum on Forests (UNFF).

5. FOREST-RELATED SCIENTIFIC KNOWLEDGE

5.1: Identify and prioritise interdisciplinary forest research needs at the national and eco-regional levels.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
94a	96a	MRST/FRST	FR and other CRIs	

The Ministry of Research, Science & Technology (MRST) is a New Zealand Government Department that develops research and innovation policies and manages the publicly funded part of the RS&T system on behalf of the Government. MRST works on policies, strategies and statistics. It contracts other agencies such as the Foundation for Research, Science and Technology (FRST) to manage the actual funding of research and innovation projects.

FRST invests in research, science and technology (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.

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

The Foundation has worked 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 have been prepared, for each industry. The objectives for the wood fibre industry include:

- Developing new and improved product lines and processes to maximise the value from timber;
- Creating production and processing regimes to achieve greater efficiency gains throughout the value chain (including energy efficiency);
- Development of environmentally sustainable and economically viable production and treatment regimes;
- Breeding the next generation of the planted resource – including alternative (non-radiata) species;
- Developing new areas of endeavour, based around technologies employed in forest related activities (including electronics, machinery and biofuel production);
- Identifying technologically based opportunities for horizontal linkages with other sectors, such as the development of secondary crops and extracting value from waste products;
- Determining the influence of the sector's activities on the environment and immediate communities; and
- Achieving a greater understanding of environmental sustainability and the integration of forestry in multiple land use applications.

The Government, FRST 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 plantation 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 bio-security; 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 R & D investment in New Zealand forestry over the medium- to long-term.

5.2: Strengthen forest research by formulating national policies, programs and strategies and by coordinating the implementation of research programs.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	96a			

The comments in 5.1 also apply here.

5.3: Mobilize resources, foster public and private sector joint ventures, build capacity and strengthen research institutions, networks and consortia to extend forest research at the local, national and international levels.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
94a,d	96b, 97b,d	MRST/FRST	FR, FIC, other CRIs	

The forest industry announced its research, science and technology strategy in mid-2001. It was developed following widespread consultation within the industry and with government agencies, particularly with the FRST. 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 plantation based 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, bio-security, etc.

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

5.4: Further develop and enhance widespread access to forest research and information systems making best use of existing mechanisms and networks.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
94a	97c	FRST/MAF	FR	

Technical information transfer is an integral requirement of government research monies distributed through FRST. 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 (through MAF).

5.5: Improve the linkages between forest science and forest policy processes.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements

58b(vii)	96c	MAF/FRST	FR	

Research priorities for forestry must align with government priorities and FRST criteria in order to secure a portion of the contestable research budget. MAF sponsors forestry research projects to provide information for forest policy development.

5.6: Improve support for forest-related research programs, strengthen linkages between forest policy and research and explore the possibility of a global forest information service.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
94c	98a,b,c	FRST/MAF	FR	

Research priorities for forestry must align with government priorities and FRST criteria in order to secure a portion of the contestable research budget. MAF sponsors forestry research projects to provide information for forest policy development.

5.7: Promote research and analysis by forest-related Conventions to address gaps in existing knowledge.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
94b				

No report at this stage.

5.8: Extend research into forest inventory and monitoring techniques, as well as the development of efficient methods for the valuation of all forest goods and services, and for the identification of costs and benefits of sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
89c, 104c	107b,c	MAF/MfE	FR, LCR	CMS, FCC

Development of a carbon monitoring system for New Zealand's indigenous forests and soils is being planned and researched. In addition to monitoring carbon stocks the proposed forest and scrub system will provide key national statistics on New Zealand's indigenous forests.

MAF is investigating the use of a GIS platform for the storage of NEFD inventory data.

Research, development and management of the two primary growth, yield and supply models used in New Zealand - Standpak (per hectare growth and yield) and FOLPI (Forest-orientated Linear Programming Interpreter – an estate-level model), is carried out by FR.

MfE is the lead agency for research into the Crown's requirements in a LCDB2 update.

The NZIF has developed a Forest Valuation Standard that registered members are expected (under the Institute's Code of Ethics) to abide by.

6. FOREST HEALTH AND PRODUCTIVITY

6.1: Develop national assessment and monitoring methods, extend regional programs for monitoring impacts of air pollution and provide factual information about transboundary air pollution.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
27c, 50c,d				

Air pollution is not an issue specifically applicable in New Zealand.

6.2: Strengthen international cooperation and action with respect to reducing long-range air pollution.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
50b,e				

Air pollution is not an issue specifically applicable in New Zealand.

6.3: Adopt a preventative approach to the reduction of damaging air pollution.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
50a				

Air pollution is not an issue specifically applicable in New Zealand.

7. CRITERIA AND INDICATORS OF SUSTAINABLE FOREST MANAGEMENT

7.1: Further develop, field test and promote the use of criteria and indicators for sustainable forest management, including appropriate criteria and indicators for traditional forest-related knowledge and air pollution, and support efforts to harmonize associated concepts and definitions.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40l, 50d, 115a,b,d	17d	MAF/MfE		MP, FRA2000, EIP

New Zealand is an active (and founding) member of the Montreal Process and is fully involved in all of the Process's initiatives and work relating to C&Is. The EIP has 15 indicators on which reporting occurs.

New Zealand is also closely involved in promoting ITTO C&I and is taking part in global initiatives through 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.

Field testing, implementation and promotion are an integral part of New Zealand's commitment to, and execution of, the Montreal Process, FRA, the EIP and the carbon monitoring system.
The EIP has 15 indicators on which reporting occurs and reporting on air indicators has already begun. New Zealand is an active (and founding) member of the Montreal Process and is fully involved in all of the Process's initiatives and work relating to C&Is.

The Biodiversity Strategy identifies the under-use and ongoing loss of Matauranga Maori about New Zealand's biodiversity as a key issue that needs to be addressed for the strategy to be successful. The Matauranga Maori project will allow the development of more partnerships between iwi and DoC, and therefore more meaningful involvement of Maori in biodiversity (including forest biodiversity) management. The link between Matauranga Maori and biodiversity will feature in the Biodiversity indicator

7.2: Encourage, within the work of the Convention on Biological Diversity, the development of biodiversity indicators that are complementary to existing forest criteria and indicators as well as the compilation of legal mechanisms related to the protection, use and benefit sharing of traditional forest-related knowledge.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40q, 115f		MFAT, DoC, MAF, TPK		

As a signatory to the Convention on Biological Diversity, New Zealand has prepared a Biodiversity Strategy which establishes national goals to "turn the tide" on the decline of biodiversity. The Strategy reflects concern about loss of endemic biota and the goals focus on conserving and sustainably managing New Zealand's biodiversity.

New Zealand completes the national reports to the CBD. Two such reports have been completed and these require generally short answers to questions related to national programs on biodiversity conservation and sustainable use. New Zealand is generally in able to report positively on these issues given the state of our environmental legislation and specific strategies such as the National Biodiversity Strategy and earlier Environment 2010 Strategy.

The national reports are co-ordinated through MFAT and include input from departments such as the DoC, MAF, and Te Puni Kokiri (TPK).

New Zealand's national biodiversity program has primarily focused on addressing the loss of indigenous species biodiversity through the National Biodiversity Strategy Action Plan and National Policy Statement on Biodiversity.

Matters related to biodiversity and sustainable use relating to productive landscapes under agriculture and forestry have been less prominent in the New Zealand response to the CBD, although these issues are becoming increasingly prominent in the SBSTTA and COP discussions. The main theme at the seventh meeting of the SBSTTA was forest biodiversity and MAF has focused on this and the growing issue of sustainable use in agriculture.

It will also be necessary for New Zealand to ensure that there is consistency and no duplication in work between the various international discussions and programs concerning forestry. This includes forestry work covered by the Intergovernmental Forum on Forests, the FAO Committee on Forestry, the Montreal Process, and the newly established United Nations Forum on Forests (UNFF).

New Zealand's reporting of *Criteria and Indicators for Sustainable Forest Management* occurs in three areas: the Montreal Process, FRA and the EPIP run by MfE. The EPIP has 15 indicators on which reporting occurs. Reporting on Land, Air and Fresh Water indicators has already begun and work is about to start on a Biodiversity indicator. Currently MAF and MfE are looking to co-ordinate the forestry indicators reporting work between the EPIP and Montreal Process requirements. The EPIP is a way to encourage compatibility of criteria and indicators implemented at national level.

8. ECONOMIC, SOCIAL AND CULTURAL ASPECTS OF FORESTS

8.1: Improve the collection of quantitative data on values of all forest goods and services and environmental and social impacts of changes in forest use to assist policy and investment decisions.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
104a	107a,c	MAF/MfE	FOA	CMS, FCCC, EIP, RMAM NZIF-NPF

The NEFD programme has been in operation since 1983 and is New Zealand's NFI for planted production forests. The NEFD system includes quantitative yield data at a national and regional level. Planned improvements to the NEFD are to enhance the collection of planted forest area data on smaller forest holdings (<40 ha) and possibly migrate the database into a GIS with a cadastral linkage. Another planned development is to use NEFD yields and croptypes, coupled with existing cost/revenue data, to produce a realistic NPV of the national exotic planted production forest estate.

New Zealand has developed a nation-wide GIS-based Land Cover Database (LCDB). The database was developed from a forest-mapping project to a complete land cover database with applications to a number of Crown monitoring and reporting obligations, both domestic and international. MfE are the Crown's database steward for LCDB1 and will co-ordinate the Crown's requirements in a proposed LCDB2 update. Satellite imagery was acquired during 1996/97 and national mapping of 17 vegetation categories was completed in July 2000. This database provides a "snapshot" of the location of New Zealand's forest resource as at the date of the imagery. Users of the database favour a five-yearly update cycle and another set of imagery will be acquired over the summer of 2001/02. Satellite-based land cover inventory improves the accuracy of core MAF statistical databases, assists in monitoring changes in land use and government's ability to meet a range of international reporting requirements.

One of the foremost non-wood good of New Zealand's forests (natural and planted) is carbon sequestration, which is measured through the carbon monitoring system. Development of a carbon monitoring system for New Zealand's indigenous forests and soils is being planned. The proposed system will improve New Zealand's ability to more fully report changes in greenhouse gases under the FCCC. The significant carbon pools contained in indigenous forests, scrub and soils are not currently monitored or reported. This is in contrast to the well-refined methodologies for monitoring carbon 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. MfE are the lead agency in the development of the carbon monitoring system. Following 4 years of research and developing it is planned to begin implementing the indigenous forest, scrub and soil monitoring system in 2001/02

Planted forests in New Zealand are not merely a source of wood. They provide a number of other goods and services including watershed protection, recreation, and rehabilitation of degraded land as well as serving as a basis for regional and national economic growth and development (MED and Industry New Zealand hold data on this last point).

8.2: Prepare information on methods and data requirements for the valuation of all forest goods and services.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
104b				

The NZIF has developed a Forest Valuation Standard that registered members are expected (under the Institute's Code of Ethics) to abide by.

1. Wood resources

The three data requirements for valuation of wood resources are yield, costs and revenue.

1. **Yield:** Research, development and management of the two primary growth, yield and supply models used in New Zealand - Standpak (per hectare growth and yield) and FOLPI (Forest-orientated Linear Programming Interpreter – an estate-level model), is carried out by FR. These models are used extensively by forest management practitioners
2. **Costs:** MAF periodically monitors (by survey) the cost components of exotic production plantation management, which are available on request.
3. **Revenue:** Similarly, MAF monitors export and domestic log prices by grade, which are available on the MAF website.

2. Other "forest goods and services".

Statistics New Zealand, in association with the Ministry for the Environment, is currently preparing stock and flow estimates for five of New Zealand's significant natural resources: forestry, fishing, water, land and subsoil resources. Technically, the physical estimates are referred to as natural resource accounts, while the monetary estimates are referred to as environmental accounts. However, these terms are often used interchangeably. The initial impetus to begin compiling natural resource and environmental accounts came about as a result of decisions stemming from the *Budget 2000* where it was decided that more information was required on complex relationships between the economy, environment and society.

The forestry accounts are based on an international framework called the System of Environmental and Economic Accounts (SEEA). This framework is an extension of the System of National Accounts (SNA), which Statistics New Zealand uses to compile the national accounts, including Gross Domestic Product (GDP). The SEEA is designed to measure the use of natural resources and the resulting effects on the environment. The forestry account utilises SEEA to focus on the stocks and flows of the forestry resource from an environmental and economic perspective.

The release of natural resource and environmental accounts reflects an international trend towards compiling information beyond the traditional measures of economic activity. The accounts reflect the view that the environment has a finite capacity to supply materials and absorb wastes. This environmental information is collected under a framework that allows for adjustments to conventional measures of GDP to reflect environmental degradation and depletion. Existing measures of GDP do not currently account for the degradation and depletion of environmental assets. For example, if all of New Zealand's native forests were commercially harvested, GDP would increase due to an increase in the output of the forestry industry. However, the loss of the asset and therefore of any future production (due to this

depletion) is not accounted for[6]. Regardless of whether the information is used to adjust GDP[7], the accounts provide an important record of the state of the resource over time, and its significance to the New Zealand economy.

Source: Statistics NZ website
http://www.stats.govt.nz/domino/external/web/prod_serv.nsf/Response/Forestry+Natural+Resource+Account

8.3: Undertake systematic collection and analysis of forest sector financial flows data to assist informed policy decisions.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	30d	MAF		

MAF collects and provides a comprehensive range of forestry statistics, information, forecast data, analysis and advice on technical and economic issues affecting the forestry sector. This involves monitoring and forecasting of forestry performance from stump to market. It is also responsible for monitoring changes and advising the government on trends within the forestry sector, including the impact of government policies on industries and communities.

8.4: Undertake reviews of contemporary forest revenue collection systems and the relation of land tenure to deforestation and forest degradation.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	67, 115e			

Since the government does not directly own any production forests, these activities are undertaken by the private sector on a normal financial transaction basis, usually employing a billing system. The use of e-trading is gaining popularity. Government revenues from the forestry sector are collected through New Zealand's normal taxation system (income tax, company tax, GST, etc). The latter is reviewed from time-to-time as part of normal taxation reviews.

Land cover and land-use changes will be measured through differences between the LCDB and LCDB2 projects. These are GIS platforms, and so it is possible to link them to New Zealand land tenure GIS cadastral records.

8.5: Explore ways to establish full cost internalization of wood products and non-wood substitutes, as well as externalities, and share information on findings and implementation.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
134a,b		MAF		RMA

The centrepiece of the promotion of sustainable management in New Zealand is the RMA. 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.

[6] New Zealand's native forests are sustainably managed at present, so in practice the forestry account does not include any depletion estimates. Depletion estimates are normally produced as part of the stock accounts (and can be derived on a physical or monetary basis).
[7] To date, no country has produced an official fully adjusted GDP using the SEEA framework.

Forest resource managers have, under the resource consent process, to fully account for any costs that may arise in meeting the RMA requirement to avoid, remedy, or mitigate adverse effects. This is the primary mechanism for cost internalisation. The forest industry operates in a free market environment that also has environmental constraints imposed through legislation and voluntary arrangements. Meeting these constraints require funding, which has to come from forest revenues. Because of competition (in the free market) the manager cannot just "pass on" these costs, so they have to be internalised. Also, New Zealand is a small player in the world market and so is a price taker.

It is worth noting that under the RMA, sustainable management means managing the use, development, and protection of natural and physical resources in a way, or at a rate, which enables people and communities to provide for their social, economic, and cultural wellbeing and for their health and safety while—

(a) Sustaining the potential of natural and physical resources (excluding minerals) to meet the reasonably foreseeable needs of future generations; and
(b) Safeguarding the life-supporting capacity of air, water, soil, and ecosystems; and
(c) Avoiding, remedying, or mitigating any adverse effects of activities on the environment

8.6: Improve data collection and information dissemination on the supply and demand of wood and non-wood products including the prices of these products and their substitutes.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
28a, 131a	121a,c,d	MAF/MFE/DoC	FOA	NEFD, FA

Demand for wood products is a function of consumption and trade, which is estimated by MAF in 5-year forecasts, as part of the Treasury's national forecasting system. Long-term consumption for pulp and paper products is predicted, as exports are generally the balance of production minus consumption. Consumption is not forecast for other wood products, as the supply data show that consumption constitutes only a small proportion of the wood supply. It could, however, be predicted if necessary, as consumption in a developed country like New Zealand is a function of population.

Data on supply and demand of, and prices for, wood products are collected under MAF's NEFD, forestry statistics and economic forecasting processes. Improvements to the NEFD process have been discussed elsewhere in this report. Improvements to the collection of forestry statistics (postal survey and from Statistics NZ) are on-going, while those for statistics dissemination are based around MAF's web-site developments. Improvements to MAF's forecasting systems (volumes and prices) are based around revising and updating forecasting models.

A MAF operational research project for 2000/01 reported on a literature review identifying available international information on life cycle analyses of wood products and non-wood substitutes. It identified research to-date and models or studies useful in facilitating a New Zealand life cycle study.

8.7: Analyze the full life cycle costs and benefits, including environmental impacts, of forest products and their substitutes as a basis for reviewing policies that affect their

relative prices and for developing incentives to support sustainable forest management and combat deforestation and forest degradation.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	41c,d,e 64h, 121e, 122f	MAF/DoC		BS

A MAF operational research project for 2000/01 reported on a literature review identifying available international information on life cycle analyses of wood products and non-wood substitutes. It identified research to-date and models or studies useful in facilitating a New Zealand life cycle study.

The key basis for price setting in New Zealand is the free operation of a well-informed and open market. At present, there are no reasons to move away from that process.

New Zealand has very few financial incentives (as such) to support SFM (or much else). In the 1980s, New Zealand moved from being a county with high levels of government-financed financial incentives to one with hardly any. Similarly, for tax-based incentives. The view is that these distort market situations and can (and in the 1970s and 1980s probably did) lead to unwise (and unsustainable) land-use decisions. The correct interpretation of undistorted market signals is see as a primary incentive for practising SFM, e.g. market demands for certified wood has lead to the New Zealand forest industry to adopt the principles of SFM as supported by the FSC.

New Zealand makes use of non-financial incentives, such as the provision of best management practice guidelines for land managers (including foresters), detailing what is expected of "good environmental citizens". The New Zealand Biodiversity Strategy encourages "sympathetic management" of private land (which includes forestland). A type of "reverse incentive" is that provided through legislation, such as requiring resource users (including foresters), through the RMA, to practice sustainable management and avoid, remedy or mitigate harmful activities, with penalties for contravening resource use consents.

9. FOREST CONSERVATION AND PROTECTION OF UNIQUE TYPES OF FORESTS AND FRAGILE ECOSYSTEMS

9.1: Develop and implement appropriate planning and management strategies for the representative protection and conservation of the full range of forest values on an ecosystem basis within and outside protected areas.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
46c	85a,b	DoC	TLAs	CA, RMA

Central government has devolved much of the responsibility for environmental planning and policy making to local authorities through the Resource Management Act 1991. Regional and district plans developed under the Resource Management Act control adverse effects of resource management activities including the effects of forestry on the environment. They are required to provide protection for significant indigenous vegetation, and "have regard to" trees with significant amenity or heritage value.

Under the Resource Management Act, every regional council must have a regional policy statement (RPS) with which regional and district plans must be consistent. A full review of all plans and policy statements is required every 10 years.

Considering the needs of relevant sectors prior to establishing district and regional plans and policy statements is achieved through an extensive consultation process. Public submissions must be called before policy statements and plans are finalised. Consultation with affected parties is also required before a resource consent may be granted[8]. Any submitter who is not satisfied with the Council's decision may appeal to the Environment Court, and then to the High Court (on points of law only).

The Conservation Act 1987 requires the Department of Conservation to develop Conservation Management Strategies in accordance with the legislation under which the Department operates. These strategies provide an overview of conservation issues and give direction for the management of conservation areas. Conservation Management Strategies are reviewed every ten years.

The Resource Management Act requires all persons exercising powers under it to protect areas of significant indigenous vegetation and significant habitats of indigenous fauna. In determining what is significant, environmental, cultural, social and/or scientific values are considered.

The Forests Act provides for the sustainable management of indigenous forests through restrictions on the harvesting, milling and export of indigenous timber and forest products. Forest owners who wish to harvest trees must obtain a Sustainable Forest Management Plan or Permit. 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 natural values.

[8] A resource consent gives a person or organisation permission to develop a natural or physical resource, and/or carry out an activity that affects the environment in some way for a stated period.

The Forests Act recognises many values of indigenous forests including flora and fauna, soil and water quality protection, amenity and commercial values.

The New Zealand Forest Accord is a voluntary agreement between members of the New Zealand Forest Owners' Association and environmental groups under which protection is provided for indigenous forest owned by Association members.

The majority of indigenous forest in New Zealand is held in public ownership under the Conservation Act, or National Parks Act. Conservation Act land is managed for conservation purposes, while the National Parks Act requires such parks to be preserved as far as possible in their natural state.

9.2: Develop and implement innovative mechanisms and improved co-ordination of donor activity for effectively financing, encouraging and implementing integrated cross-sectoral policies to support forest conservation.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	85f, 90	MAF/MFAT/DoC		CA, FA, RMA

Domestically, policies to support forest conservation are contained in (and implemented through) the Conservation Act and the Forests Act. Other policy vehicles include the Biodiversity Strategy and the RMA, e.g. through provisions of some regional and district plans developed under the RMA. DoC also works in partnership with associates and communities for conservation on private land. The New Zealand government does not generally favour financial mechanisms for encouraging any particular type of land management (also see section E2). There are a couple of minor exceptions of financing support of forest conservation, as follows.

1. Nga Whenua Rahui was established as a fund in 1991 to protect indigenous ecosystems on Maori land by providing some financial assistance as incentives for voluntary conservation. The Nature Heritage Fund, (formerly the Forest Heritage Fund) was established in 1990 to assist the protection of indigenous ecosystems also by providing similar incentives for voluntary conservation.

2. The East Coast Forestry Project 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.

On the international front, in relation to donor activity, New Zealand is a founding member and on-going participant in the Action Strategy for Nature Conservation in the Pacific Island region, a regionally mandated process of donor co-ordination for nature conservation an sustainable resource use. This is an innovative approach, which lists six objectives listing key actions at two levels - local/national and regional/ international levels. Pacific Island country leaders have asked donors to co-ordinate their assistance on the regional/international key actions and the Donor "Round Table" process, established under the Action Strategy, has developed specific mechanisms and evaluative tools for this. In the Pacific, land resources are typically limited and relied upon for day-to-day subsistence and income generation. Sustainable, community-based use of forest resources is therefore a central focus. NZODA is also assisting SPREP to establish a regional resource centre for collation and dissemination of sustainable resource use practice and lessons.

9.3: Develop and implement methodologies and criteria to assess the adequacy, consistency, condition and effectiveness of protected areas and their management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	85e, 88, 89	DoC/MfE		CA

DoC looks after about one third of New Zealand's land area protected for scenic, scientific, recreational historic or cultural reasons. This includes national parks and forest parks, reserves, river margins, some coastline and many offshore islands. Active conservation management of New Zealand's special protected places is undertaken including pest, weed and predator control, eco-system restoration, and mainland island management.

The Government will spend an extra $57 million on controlling animal pests and weeds on public conservation lands and protected areas (managed by DoC) over the next five years. This funding is part of a comprehensive package involving conservation, environment, and biosecurity to support the Government's Biodiversity Strategy. It will increase the current work in controlling animal pests and weeds. Specific actions planned include assessing the adequacy of invasive weeds and pest control techniques, two vital elements in the management of protected areas.

9.4: Establish joint protected areas and guidelines for collaborative management of ecologically important or unique transboundary forests.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	86	MfE/DoC		BS, NPSB, BA, CA

Ecologically important or unique forests are identified through the process of developing a National Policy Statement on biodiversity, and through the Biodiversity Strategy. Insofar as trees are a recognised and important part of New Zealand's biodiversity, Objective 4.1 of the NPS on biodiversity is to promote and encourage partnerships and co-operation between central government, regional and district councils, iwi, community groups and individuals in the management of indigenous biodiversity. Those exercising functions under the Act should actively encourage and support collaborative approaches with other agencies, groups and individuals to:

- the collection and dissemination of information
- the development of plans and policy statements dealing with indigenous biodiversity
- active management programmes for maintaining or enhancing indigenous biodiversity
- monitoring the state of indigenous biodiversity, pressures on it, and responses to management

New Zealand is an island country bounded by the South Pacific to the east and the Tasman Sea to the west. As such, there are no transboundary forests in New Zealand.

9.5: Encourage cooperation and coordination of activities concerning forests and trees in environmentally critical areas, including systematic data collection and analysis.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	129a			

See section 9.4, which also applies here.

9.6: Give high priority in national forest programs to the rehabilitation and sustainable management of forests and trees in environmentally critical areas.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	129b	MfE/DoC		

New Zealand does not have a single national forest programme (NFP), see section A1.

See sections 9.4 and 12.3 for further comments on environmentally critical areas.

10. MONITORING, ASSESSMENT AND REPORTING; INCLUDING CONCEPTS, TERMINOLOGY AND DEFINITIONS

10.1: Report on the assessment and implementation of the IPF/IFF proposals for action.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	17c	MAF		

This exercise is the direct method New Zealand is using to address this proposal. Reporting on the implementation of Montreal Process C&I also covers a large number of IPF/IFF proposals for action.

10.2: Contribute national data on timber and non-timber values to the FAO Global Forest Resource Assessments.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
89d		MAF		FRA, CMS, FCCC

New Zealand has supplied the Forest Resource Assessment 2000 (FRA) with estimates on non-wood good aspects of forests. Despite New Zealand lacking data, the feedback from the reviewers in Geneva has been very positive. While there is a lot of research that could be done on the multiple benefits of forests in New Zealand, MAF has difficulty in seeing who would champion further studies, especially as New Zealand is a developed country and would be supplying its own funding.

10.3: Participate in the international development of global guidelines for consistent national interpretation and implementation of IUCN categories of protected areas.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	89	DoC/MfE		

It is unclear if an international development of global guidelines is underway that New Zealand can contribute to. Clarification is needed.

10.4: Develop harmonized, cost-effective, comprehensive national forest reporting formats and data systems incorporating relevant criteria and indicators for sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
89g, 115c	19a, 142c	MAF/MfE		

New Zealand's reporting of criteria and indicators for sustainable forest management occurs in the Montreal Process (MAF) and the EPIP (MfE). The EPIP has 15 indicators on which reporting occurs. MAF and MfE are working together to co-ordinate and harmonise the forestry indicators reporting work between the EPIP and Montreal Process requirements. The EPIP is a way to encourage compatibility of criteria and indicators implemented at national level. Formats for the first comprehensive implementation report of the Montreal Process, due in 2003, are well underway.

MAF is investigating the use of a GIS platform for the storage of NEFD inventory data and MfE is the lead agency for research into the Crown's requirements in a LCDB2 update. This opens a possibility of harmonising the Crown's forest-related data through a GIS interface.

10.5: Consult with countries about forest assessment definitions as well as the collection and analysis of forest information, including the global forest resource assessment, and provide feedback on the results.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
89c, 89f	18	MAF/MFAT	FR	

New Zealand has participated on the UN-ECE Temperate and Boreal Forest Resource Assessment (TBFRA) 2000 Team of Specialists (TOS) since 1996. A major focus of the TOS meetings has been the discussion and harmonisation of forest definitions. The mandate of the TOS group has been extended to 2004. New Zealand wishes to continue to be involved on the TOS. The dialogue with other countries has improved New Zealand's understanding of each countries situation and history in relation to forest inventory.

Through the influence of the TBFRA process and other international processes such as the UNFCCC and Montreal Process New Zealand is beginning to expand its forest inventory programmes and refine the definitions of forest that are used. New Zealand will also be participating in the expert meeting on forest definitions organised by FAO for early 2002.

10.6: Monitor, evaluate and report on implementation progress of a national forest program, incorporating the use of criteria and indicators to assess trends in the state of the forests and progress towards sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
17a,d, 89a, 115a	17d, 19a	MAF	FOA, FIC	MP

New Zealand does not have a single national forest programme (see section 1.1). 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 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 will require a collaborative effort between government agencies and the forestry sector.

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

10.7: Prepare national information on sustainable forest management, including forest resource assessments and forest statistics on wood and non-wood forest products and services.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
89b	17a, 121a,b	MAF	FOA	NEFD, FA

Other than the Montreal Process, there is no national information on SFM, per-se.

Forest resource assessments and forest statistics for New Zealand's planted production exotic forests is through the National Exotic Forest Description (NEFD), which is New Zealand's

national forest inventory (NFI). This comprises tabulated area-age and yield table databases, which calculates long-term trends in national wood supply. Spatial information is captured through a GIS system that is more fully described in section 8.1 of this report.

There is not a NFI system for indigenous forests, although a system is planned in conjunction with carbon sequestration monitoring (see 8.1).

10.8: Contribute to a global and regional comprehensive assessment of the current status of protected forest areas, to assist in the establishment of bio-geographically balanced protected area networks.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	85g	DoC/MfE		

It is unclear if a global and regional comprehensive assessment is underway that New Zealand can contribute to. Clarification is needed and has been sought. If there is a need New Zealand is in a position to undertake such work.

11. REHABILITATION AND CONSERVATION STRATEGIES FOR COUNTRIES WITH LOW FOREST COVER

11.1: Analyze and take into account the related social, economic and environmental implications, costs and benefits of non-wood substitutes and imports of forest products.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
58b(iv)	41h			

Low forest cover is an issue not specifically applicable in New Zealand.

A MAF operational research project for 2000/01 reported on a literature review identifying available international information on life cycle analyses of wood products and non-wood substitutes. It identified research to-date and models or studies useful in facilitating a New Zealand life cycle study. Further research would be needed to measure the costs and benefits of using non-wood substitutes or imported wood instead of domestically grown wood.

The latter option would need to demonstrate major benefits because imports are only around 8% of production (in roundwood equivalent – rwe – terms). By far the greatest imports are paper and paper products (90% of imports in rwe). This is paper other than newsprint and tissue (of which New Zealand is a net exporter) i.e. so-called "speciality paper".

Government has a process in place to develop a procurement policy that will require timber (domestic or imported) used for government purposes to come from sustainably managed forests.

11.2: Establish and manage plantations to enhance production of forest goods and services, taking into account relevant social, cultural, economic and environmental considerations in the selection of species, areas and silviculture systems.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
58b(ii)				

Low forest cover is an issue not specifically applicable in New Zealand.

It was recognised by New Zealand in the 1890's that if felling natural forests for agricultural development and to meet wood needs continued, they would all be cleared well before the close of the 20th century. It was due to (documented)[9] foresight that New Zealand now has an alternate resource of nearly two million hectares of planted forests. The primary (and stated) reason for planting exotic forests in the first place was to enhance the production of plantation-based wood products

The choice (mostly in the early 20th century) of radiata pine as the main exotic production species was initially on environmental (it grew in the type of soils and climates available) and economic (it grew well, this shortening the economic rotation) considerations. Other early economic considerations with social implications included:

- Supply of domestically produced timber as a (relatively) low-cost house-building material.

[9] Ministry of Forestry *Indigenous Forestry, Sustainable Management*, Ministry of Forestry, Wellington, 1998, p 5 - 8

- Industrial wood processes in centralised locations, supporting local communities (e.g. mill towns and forest villages).
- Improvement of the national economic well-being through import substitution.

There is a range of environmental benefits that radiata plantations can provide. These are well documented in a Forest Research bulletin number 198 "Environmental Effects of Planted Forests". It would be wrong to say that radiata plantations do not have any effects on an environment, which are also covered in the same publication. Whether they are bad or not depend of the type and scale of both the effect and the environment. New Zealand recognises the possibility of adverse environmental effect for any activity and the purpose of the RMA is to ensure the effects are avoided, remedied or mitigated while still allowing the activity.

11.3: Promote research into the rehabilitation and extension of dryland forests as well as into traditional forest-related knowledge with the full involvement of indigenous peoples and local communities.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
40k, 46g		DoC/TPK	FR, LCR	

Dryland forestry is not an issue in New Zealand.

The Government Matauranga Maori fund (managed by DoC) is designed to increase iwi and hapu participation in managing biodiversity (including on Maori forestland) in ways that are consistent with customary knowledge.

11.4: Consider the needs of developing and low forest cover countries, support forest programs and integrate forest-related aspects into poverty, population, food and environmental programs.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	143, 144			

The approach taken by New Zealand Official Development Assistance to developing and small island countries in the Pacific is very much in keeping overall with the principles of the sustainable management and development of resources. In particular the aim is to assist rural communities to maintain and enhance the productivity of their forest and other resources whilst developing some additional small-scale livelihood.

11.5: Undertake integrated and coordinated actions to address dryland forest issues at the international, national and local levels.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
46a,f				

Dryland forests are not specifically applicable in New Zealand.

11.6: Develop and support partnerships which include indigenous and local communities and management approaches, including those that embody traditional lifestyles, to reduce pressures on dryland forests and promote their sustainable management and regeneration.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
46d,e				

Dryland forests are not specifically applicable in New Zealand.

12. REHABILITATION AND RESTORATION OF DEGRADED LANDS AND THE PROMOTION OF NATURAL AND PLANTED FORESTS

12.1: Enhance the role of plantations as a mechanism for reducing deforestation and forest degradation of natural forests.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
28b	64g	MAF	FIC, FOAM FFA	IFF, CA

It was recognised by New Zealand in the 1890's that if felling natural forests for agricultural development and to meet wood needs continued, they would all be cleared well before the close of the 20th century. It was due to (documented)[10] foresight that New Zealand now has an alternate resource of nearly two million hectares of planted forests. That has taken the pressure off natural forests, which now contribute less than one half of one percent to the 19 million cubic metres of wood currently produced annually. For New Zealand, these natural forests have far more value than providing wood. The primary (and stated) reason for planting exotic forests in the first place was to replace indigenous harvesting.

In 1987 almost five million hectares of natural forests under state ownership (77% of the total natural forest area) was put into a conservation estate by the government. One thing which made this possible is an alternative source of wood supply.

The governments of Chile, Denmark, India, New Zealand 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. 74 participants attended the meeting from 31 countries from all regions representing governments as well as the private sector, international and non-governmental organisations. A number of recommendations for further deliberation by the IFF (see Annex A) were made.

A follow-up intersessional meeting on "The Role of Planted Forrest in Sustainable Forest Management." to be held in New Zealand in early 2003.

12.2: Take positive action towards reforestation, afforestation and conservation, using native species where appropriate, including regeneration of degraded forests, management of plantations and trees outside forests and the expansion of protected areas.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
58b(ii, iii, v),c	30b, 129c			

Low forest cover is an issue not specifically applicable in New Zealand.

Prior to a policy change in the mid 1970s, some of New Zealand's planted exotic production forest was planted on harvested (and usually degraded or degrading) indigenous forests (a form of reforestation, sometimes called conversion). While difficult to measure, it has been estimated at about 17% of the then planted exotic estate. Some "conversion" by private forest

[10] For example, Ministry of Forestry *Indigenous Forestry, Sustainable Management*, Ministry of Forestry, Wellington, 1998, p 5 - 8

companies carried on through to around 1990 (the Forest Accord was signed in 1991) but it is estimated to still total about 17% of the 1990 exotic estate.

Since then afforestation has mostly been on farmland not needed for profitable pastoral farming. Some afforestation has occurred on degraded and/or eroding land with low vegetation cover (e.g. coastal sands and, to a lesser extent, scree slopes and mine tailings).

Most (estimated at over 95%) of the harvested planted exotic production estate is restocked after harvesting, usually in the winter after harvesting, but rarely more than two winters later (due to weed control requirements, and the cost of carrying non-producing capital land). In New Zealand, all exotic forest establishment is by planting, rather than regeneration, as planting is the only sure way of improving the forest through tree breeding.

Degrades indigenous forest restoration by planting indigenous species is common in areas under QEII or Nga Whenua Rahui schemes, and is promoted by government through the handbook "Indigenous Forestry – Sustainable Management".

12.3: Raise awareness and disseminate data on the ecological, social, cultural and economic contributions of planted and natural forests in the rehabilitation and sustainable management of forests in environmentally critical areas.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	129a,d	MfE/DoC		BS, NPSB, BA

In the absence of a definition of "environmentally critical areas" it is assumed that New Zealand does not have extensive areas in such a category. However, New Zealand carries out widespread activities to raise awareness and disseminate data on the ecological, social, cultural and economic contributions of planted and natural forests in the rehabilitation and sustainable management of forests.

The Ministry of Agriculture and Forestry compiles statistical and other information in fulfilling its responsibilities to government and makes this available to the forest industry, forestry interest groups, and the public. The information is available in printed, and increasingly in electronic, forms, with much of the information available (sometimes in summarised form) on the Ministry's web site www.maf.govt.nz

The Ministry has a specific focus on the collection and dissemination of information and statistical data concerning plantation forests (forest areas, areas by age classes, new planting, harvesting, restocking, and woodflow forecasts), the primary processing of wood products, and international and domestic trade of wood products.

A series of small forest management publications is available that provides information for those with modest plantation forestry interests. Another series provides national and regional overviews of the forest industry. There is also a range of information available to forest owners regarding the sustainable management of private indigenous forests.
The Ministry also provides information and displays on sustainable forest management at national field days and exhibitions.

Conservation in New Zealand is increasingly becoming a collaborative effort between the public, non-government organisation, businesses, and all levels of government. The

Department of Conservation focuses on biodiversity and ecosystem protection, rather than on forests as an ecosystem type.

The Department relies on partnerships with the community to achieve its mission to conserve New Zealand's unique indigenous biodiversity. These partnerships include:

- A Treaty partnership with iwi Maori (New Zealand's first people)
- Work with regional and district councils to implement their responsibilities for biodiversity conservation in regional and district plans and coastal plans under the Resource Management Act 1991
- Work with private landowners for the protection of natural areas through covenants and other conservation measures such as Nga Whenua Rahui
- Work with universities and research institutions to improve knowledge and techniques of conservation
- 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
- Joint programmes for protection of biodiversity, such as Project Crimson and organisations such as the Nature Heritage Fund.
- Involving the community in caring for their heritage through education, sponsorships, awards, community involvement programmes, partnerships and events such as Conservation Week are a key part of the Department's work. Public involvement activities range from national level initiatives to locally-run community programmes.

The Department provides a range of levels of engagement for the public. Its visitor information centres provide interpretation of New Zealand's indigenous ecosystems. There are volunteer programmes and annual events such as Arbor Day. Information about New Zealand's biodiversity is also made available through a number of different mechanisms such as educational resources for schools, fact sheets, scientific papers, public discussion documents, maps, and media articles. The Department's website (www.doc.govt.nz) provides access to these resources. In addition, the Department supports community-initiated conservation projects, either on conservation land administered by the Department or other land with significant conservation value.

The New Zealand forest industry is comprised of corporate and private forest owners and processors (as individuals and collectively represented in a range of industry associations), forestry practitioners, professional associations, research organisations, education and training institutions, and service providers. The different groupings provide forestry and forestry related information through a variety of mechanisms such as web sites, publications, conferences, seminars, field days, working demonstrations, tuition, and training courses.

Forestry Insights was a major educational initiative originally between the former Ministry of Forestry and the forest industry to provide free educational resources to all schools at all levels. This was achieved between 1992 and 1996. The project is now co-ordinated by Forest Industries Training and the original material has been revised. It is focused on students, teachers, industry trainees and the general public. All material is on the Internet at www.insights.co.nz. Forestry Insights has five themes:

- At a glance (an overview of forestry in New Zealand);

- Forests and people (how people use forests and their products);
- The magic habitat (forest ecology, water and soil benefits, etc);
- Plantations and natural forests;
- Processes and markets.

The New Zealand Institute of Forestry has prepared a National Policy on Forestry and an Indigenous Forest Policy based on a forest ecosystem approach to sustainable management. The corporate owners of planted forests often provide for various forms of public recreation on their forests. This commonly includes walking, cycling, picnicking, and hunting where this is not in conflict with other uses.

New Zealand has several environmental organisations that are active in sustainable forest management issues, particularly with respect to indigenous forest. These organisations provide written information to their members, convene field days, and participate in statutory planning and political processes for the sustainable management of natural and physical resources.

12.4: Analyze past experiences and monitor trends in dryland forests, including biophysical, social, economic and institutional factors.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
46b				

Dryland forests are not specifically applicable in New Zealand.

13. MAINTAINING FOREST COVER TO MEET PRESENT AND FUTURE NEEDS

13.1: Implement public and private sector policies and programs to meet increasing demands for wood and non-wood products and services, including fuelwood and wood energy, from sustainably managed forests.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
28a	122a,b,c,d	MAF		

The primary policy and programme implemented by New Zealand was the establishment of a planted exotic production forest resource (see section 12.1). These forests now supply all New Zealand's current demands for wood products, with sufficient remaining to supply all future demands out into the foreseeable future. There is an excess of wood product supply over domestic demand, which is exported.

Initially the government set up the exotic planted production forest programme early in the 20th century. Private forest companies were established from the 1920s and 30s. The government privatised it's exotic forest estate in the late 1980s and early 1990s. All programmes are now on commercial lines, with 92% of plantations and 100% of processing facilities being managed by the private sector,

In relation to non-wood services see section 10.7

The use of bio-fuels and the evaluation of wood waste and the optimal use of biomass co-generation are areas of research being pursued by the wood industry. Bio-energy is a very viable option for the industry, given the large increases in available wood over the next decade and the carbon neutral status of the residues from processing plantation-grown timber.

14. FINANCIAL RESOURCES

14.1: Explore and expand innovative financial mechanisms including concessional lending, debt relief initiatives and an investment promotion entity to support sustainable forest management and national forest programs.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
17c, 67e,g, 71c	30e, 64j	MFAT/Tsy		NZODE, PIE

Through recent initiatives such as the PIE, but also more generally within the policy framework of NZODA, increasing priority is given the imperative of working within the context of community-based projects. This requires greater time frames and overall project flexibility, as well as a shift from up-front provision of technical assistance to assisting with the facilitation of community process.

14.2: Encourage private sector investment and reinvestment of forest revenues into sustainable forest management and environmentally sound technologies, through appropriate policies, legislation, incentives and mechanisms.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
69b,c,d,e 70b 77d	30c 56b 115a,b, 122b	MFAT/Tsy		RMA, FA, NZFCOP, NZFA, NZODA

The New Zealand planted forest industry is mostly privately owned (92% of plantations and 100% of processing facilities), entirely market driven and the government does not provide assistance or incentives. This encourages the free flow of capital and unhindered private sector investment, within the bounds of existing legislation. Forest products are traded on a competitive global market, with domestic prices being in parity with export returns. The financial rewards are increasing as advances in management and technology make wood product enterprises more efficient and yields greater.

The government sees its primary role as providing a macro economic environment that encourages private business development and opportunities for expansion in a sustainable manner. This is a model example that New Zealand encourages other (e.g. developing) countries to follow

All forest growing and wood processing operations in New Zealand are subject to the legislative requirements and voluntary codes described previously, such as the RMA, Forests Act, Forest CoP, Forest Accord, etc. A primary outcome of this, plus following normal sound forest management practices, ensures social and environmental costs are minimised.

MFAT's NZODA initiatives described in 14.4 also apply here.

14.3: Strengthen transparency of decision making in international financial institutions and ensure their policies and structural adjustment programs support sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	65, 115g	MFAT/Tsy, MAF	IMF, WB	

On-going work by MFAT and MAF, supported by a Trade Access working group of the Wood Processing Strategy, includes:

- Actively build support for the launch of a new round of multilateral trade negotiations in the WTO which will include non-agricultural products such as forest products
- Identify other opportunities to advance trade liberalisation in the forest products sector at a bilateral and multilateral level in particular reduction of escalated tariffs regimes that prevent development of value added product markets
- Identify ways to address Non-Tariff Measures imposed on the New Zealand forestry sector
- Undertake further analysis of the relationship between trade liberalisation and regional and industry development in the forest products sector
- Undertake bilateral negotiations with countries where particular problems exist in market access for New Zealand's wood products.

14.4: Identify and prioritise resource needs for sustainable forest management, including the implementation of the IPF/IFF proposals for action.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
67b,c 30b, 133b	17e, 30b	MFAT/Tsy		NZODA

NZODA was the single largest funder of the process leading to the development of the Action Strategy for Nature Conservation in the Pacific Islands Region 1999-2002. This is a regionally developed and owned strategy that identifies the priorities for nature conservation, including forests.

14.5: Create or strengthen partnerships and international cooperation to facilitate the provision of increased financial resources to implement sustainable forest management including the IPF/IFF proposals for action.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
17c,67a	9a,c,g 30a, 84, 87, 97a, 129c	MFAT/Tsy		NZODA, PIE

Pacific Initiative for the Environment (PIE) is a new NZODA contestable grant scheme for Pacific island countries. It has five focal areas, one of which is sustainable resource use. PIE criteria favour regional priorities including community-based approaches to integrated resource use and conservation including forests.

14.6: Enhance coordination and collaboration between donors, international institutions and instruments related to forests and explore appropriate indicators for monitoring and evaluating donor funded forest programs.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
71a,b		MFAT		NZODA

New Zealand participates actively in donor co-ordination on forest conservation in the Pacific region.

14.7: Support coordinated deployment of resources for sustainable forest management through national forest programs to improve efficiency and effectiveness of available funds.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
17g 70a,d	30a	MFAT		NZODA

New Zealand supports the co-ordinated deployment of resources for sustainable forest management through assistance to forest programmes that seek to ensure full participation by local communities. For example, New Zealand contributes through participation in and assistance to Aneityum in Vanuatu, consistent with and part of implementation of Vanuatu's National Forest Policy. Assistance focuses on building the capacity of communities to manage and own what was originally a commercial forest plantation and to develop locally appropriate solutions to soil erosion initiated by the removal of sandalwood in the nineteenth and twentieth centuries.

15. INTERNATIONAL TRADE AND SUSTAINABLE FOREST MANAGEMENT

15.1: Study the environmental, social and economic impacts of trade-related measures affecting forest products and services.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
128a		MAF/MFAT		UNCED, OECD, JEG, WTO-CTE, WPS

As a country heavily dependent on trade, New Zealand is fully committed to the liberalisation of the multilateral trading system. New Zealand also recognises that strong protection of the global and national environment is necessary to maintain its natural resource base in order to ensure long-term economic vitality. New Zealand strongly supports multilateral efforts to make trade and the environment mutually supportive. New Zealand's position is based upon the principles endorsed by the international community at UNCED and successor fora and enshrined in relevant trade agreements.

New Zealand participates in the OECD Joint Session of Trade and Environment Experts (JEG) and the World Trade Organisation's Committee on Trade and Environment (WTO-CTE) (preceded by the GATT Group on Environmental Measures and International Trade (EMIT). At the national level, MFAT co-ordinates consultations with interested business and industry and environmental non-government organisations on trade and environment issues.

MFAT and MAF constantly monitor international trade agreements to assess possible environmental, social and economic impacts.

15.2: Undertake measures to improve market access for forest goods and services, including the reduction of tariff and non-tariff barriers to trade, in accordance with existing international obligations and to promote a mutually supportive relationship between environment and trade.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
128b	64i	MFAT/MAF/MfE		WTO, APEC

New Zealand, along with most of it's trading partners, is a member of the World Trade Organisation (WTO) and, as a result of the Uruguay Round of negotiations signed in 1994, have agreed to significantly reduce tariffs on many wood products, particularly pulp and paper, and solid wood products.

In New Zealand's view, however, the Uruguay Round did not do enough to reduce or eliminate tariffs facing our forestry products industry. New Zealand will continue to work towards reducing barriers to forestry products trade through the WTO and through other mulilateral and regional trade arrangements, in order to maximise market opportunities for the sector. New Zealand firmly believes that free trade, with due recognition of environmental and social parameters, helps promote sustainable forest management.

A recent initiative is a Wood Processing Strategy project to address forest industry development issues. It is a partnership approach, endorsed by Cabinet that involves "the whole of government" - eleven relevant central government agencies involved with the issues being addressed, plus the industry, plus local government. A Steering Group made up of industry and government representatives and chaired at ministerial level directs the Strategy. The broad goal is to formulate and implement integrated response strategies targeting

identified development barriers that dramatically improve the business case for investment in value added wood processing in New Zealand. This includes trade and market access issues.

15.3: Improve market transparency for trade in forest products and services and consider measures to reduce illegal trade in wood and non-wood forest products.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
135a,b	41e,f	MAF/MFAT		FA, WTO, APEC

The forest industry in New Zealand operates in a free market environment. As part of its processes and requirements in servicing the government, MAF produces very comprehensive sets of statistics on New Zealand's trade in forest products. These are published quarterly and annually, and are readily available to anyone. These statistics are collected and published under the authority of the Forests Act. Similarly, MAF surveys quarterly indicative log prices for export and domestic grades. These are published on MAF's web site, along with most of MAF's forest products trade statistics.

Part IIIA of the Forests Act prohibits export of indigenous timber in any but its fully finished form (except for sawn beech and rimu). Exporters require authorising documentation that is inspected by MAF's border inspection services. MAF and NZ Customs inspect imports and they police illegal trade according to internationally accepted definitions. New Zealand is a member of the WTO and APEC and pursues the objectives of fair and legitimate trading through these memberships

15.4: Implement policies and actions to facilitate trade in wood and non-wood products from sustainably managed forests and to minimize negative effects of short term market changes.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	41a,g	MAF/MFAT	FIC, FOA, FFA, RF&B, GP, WWF	

The forest industry in New Zealand operates in a free market environment. Within this, a number of activities are being undertaken to promote trade from sustainable managed forests.

In May 2001, a New Zealand National Initiative to develop forestry management performance standards for 3rd party audit and certification was successfully launched. This was organised by Greenpeace NZ, NZ Forest Industries Council, NZ Forest Owners Association, Royal Forest & Bird Society and WWF NZ and involved industry and non-industry stakeholders from economic, social, environmental and Maori groups. Industry representation came from both the plantation and indigenous forestry sectors.

The National Initiative is developing standards to meet Forest Stewardship Council criteria, which can be used by forest owners wishing to join the FSC certification system. A number of forest owners in New Zealand have already gained FSC certification (see Annex D). This is an important step for the future marketing of New Zealand's forest products and for providing those markets with the assurance that New Zealand forest management is ecologically sound and socially beneficial while maintaining economic viability.

With regard to imported tropical timber there is a voluntary forum of importers, distributors, NGOs and other interested parties (including the ITTO) that promotes imports from sustainably managed forests.

The New Zealand government is also planing to put in place measures to ensure its own procurement policies favour timber from sustainably managed forests.

See section 10.7 for notes on non-wood products ("other forest goods and services").

15.5: Undertake further cooperative work on voluntary certification and labelling schemes, including studying their link with criteria and indicators and their effectiveness in promoting sustainable forest management and exchange information and experience on these schemes.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
133a,d,e,g	41b	MAF?MFAT	FIC, FOA, FFA, WWF et al	ISO, FSC

Several timber certification schemes have been adopted internationally and regionally while a number of countries are developing their own national schemes. Industry groups lead certification development in New Zealand, with officials co-ordinating and undertaking international representation.

At an New Zealand industry level there are two main approaches to certification: the ISO 14000 Environmental Management System (EMS) and Forest Stewardship Council (FSC). In general the industry is pursuing a mix of FSC and ISO certificates (see Annex D). A joint industry + NGO + government process is underway to develop a national forestry standard to FSC level (see section 15.4).

New Zealand participates in the OECD Joint Session of Trade and Environment Experts (JEG) and the World Trade Organisation's Committee on Trade and Environment (WTO CTE).

15.6: Support the application of accessibility, credibility, equivalence, cost-effectiveness, transparency and participatory concepts to certification and labelling schemes and ensure they do not lead to unjustified obstacles to market access.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
133c,f	41b	MAF/MFAT	FIC, FOA	FSC, ISO

FIC is working internationally on a mutual recognition system, which will promote comparability and avoid duplication of efforts among such schemes.

15.7: Intensify efforts and implement policies to promote the sustainable use of all economically viable lesser-used species in domestic and international markets.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
132a,b		MAF	FFA, HR	

The FFA has a number of working groups on special purpose timbers, notably Acacia and Cypress species. These groups focus on research and development of the specie through experiments on, and measurements of, members' existing plantations. FR has a small research team supporting the FFA work. Hort Research (a CRI) has an extensive poplar research programme developing and promoting poplar as a multi-use tree (soil/water protection, timber, shelter, and fodder).

Government has set up a Sustainable Farming Fund to support community-driven programmes aimed at improving financial and environmental performance of the land-based

sectors, including "farm-forestry". Some of the forestry projects about lesser-used species include:

- Promotion and development of planted indigenous forestry (for timber and other uses) as a viable landuse option for farmers
- Blackwood: A handbook for users and managers
- Trees for profit and soil conservation
- To define the North Island manuka chemotype resources

16. INTERNATIONAL COOPERATION IN CAPACITY-BUILDING, TRANSFER OF AND ACCESS TO ENVIRONMENTALLY-SOUND TECHNOLOGIES FOR THE SUPPORT OF SUSTAINABLE FOREST MANAGEMENT

16.1: Develop and adapt technologies, including traditional forest-related knowledge, for increasing sustainable utilization of lesser used species.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
132C				

The FFA has a number of working groups on lesser-used species, notably Acacia and Cypress. These groups focus on research and development of the specie through experiments on, and measurements of, members' existing plantations. FR has a small research team supporting the FFA work. It also carries out research into growing eucalyptus (a secondary species in New Zealand). Hort Research (a CRI) has an extensive poplar research programme developing and promoting poplar (a lesser-used species in New Zealand) as a multi-use tree (soil/water protection, timber, shelter, fodder).

Traditional forest-related knowledge is not widely used as the lesser-used species attracting research funding are usually exotics, relatively new to New Zealand.

16.2: Assess, taking into account gender disaggregated data, the technological requirements necessary to achieve sustainable forest management.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
77b	56c.o	MFAT/MAF		NZODA

No report at this stage.

16.3: Enhance cooperation and financing to promote access to and transfer of environmentally sound technologies.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
77a,c	56a,e,g,h,i,l 129e	MFAT/MAF		NXODA

NZODA assistance to sustainable forestry is strongly focused on capacity building in appropriate technologies for future sustainability of projects which are currently designed to be sustainable without the need for long term New Zealand assistance. Plantation and indigenous forest uses vary from tree harvesting to ecotourism. Most NZODA emphasis is on non-harvesting alternatives to previous or beckoning unsustainable extraction activities and as such the emphasis is on appropriate and environmentally sound technologies. For example plantations in Aneityum utilise portable mills and large tyre 4-wheel bikes and trailers to avoid the need for roading.

The project is also utilising indigenous species including sandalwood in both agroforestry and erosion control. Family/community-based small enterprise development (e.g. ecotourism) is a careful balance of demand and supply in the local context, and invariably incorporates community wide attention to development and support for networked small businesses.

As the basis of all forestry projects, commercial or community, NZODA requires environmental, social, economic and institutional capacity to be provided for in project design and management.

16.4: Facilitate capacity building within national forest programs to implement sustainable forest management and the IPF/IFF proposals for action, including strengthening and supporting institutions involved in forest and plantation management and supporting indigenous people, local forest dependent communities and forest owners.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
17g, 28a, 58b(vi), 70e, 77e,f 89b, 115c	17a, 19b, 56d, 64e,i 107d	MFAT		NZODA

No report at this stage.

16.5: Support developing countries to increase downstream processing and community based processing of wood and non-timber forest products.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
131b		MFAT		NZODA

NZODA assistance to forest resource projects has as a basic premise the maximising of return at the community level. The community-based emphasis is generally to assist with small scale, sustainable, enterprises as an alternative to large scale extractive resource use. These tend to be by their very nature, innovative, and value adding.

16.6: Promote the dissemination and sharing of environmentally sound technologies to end-users, particularly in local communities, including through efficient use of extension services.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
77e	56f,h	MFAT/MAF		NZODA

Forestry extension services provided by the government were almost completely stopped in the early 1980s, when the last remaining forestry encouragement scheme ceased. The Ministry of Forestry (the successor to the New Zealand Forest Service, prior to merging with the Ministry of Agriculture) carried out some limited extension services until they were stopped by the government in the mid 1990s. It was considered that forestry extension should be provided by the private sector, which is generally the current situation.

Research providers carry out some forestry extension services, mainly through the sale of publications, but it is not seen as a core activity. Forestry sector organisations provide extension services for their members. The New Zealand Farm Forestry Association is very active in this area.

16.7: Strengthen education and training for women in community development programs including the growth and use of fuelwood and the use of energy efficient cooking technology and ensure women benefit from the transfer of environmentally sound technologies.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	56m,n	MFAT		

Women in New Zealand have equal opportunity in access to education and training in all areas relevant to all types of forestry. The Ministry of Women's Affairs makes a significant contribution to the Government's goals for women and to the Government's social and

economic objectives as expressed in the Key Government Goals to guide public sector policy and performance.

With regard to energy efficiency, the National Energy Efficiency and Conservation Strategy (NEECS) sets out the Government's policies in relation to the promotion of energy efficiency, energy conservation and the use of renewable sources of energy.

These policies are put forward internationally as examples of how other (particularly emerging) countries might benefit.

16.8: Support the forest work undertaken by international and regional organizations and under relevant international instruments and encourage them to contribute to forest policy dialogue and to support inter-agency cooperation on the implementation of the outcomes of UNCED and the IPF/IFF processes.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
146a,d,e	139a,b 141a	MAF/MFAT		

Through its membership of, and active participation in, the

- WTO;
- APEC;
- UN FCCC (Climate Change – land use and forestry inventory, policies & credits or debits under Kyoto Protocol for forest sinks & associated projects);
- ITTO;
- CSD;
- Convention on Biological Diversity (CBD);
- IPF/IFF and Montreal Processes and
- the UNFF;

New Zealand amply demonstrates its commitment to supporting forest work by international and regional organisations.

16.9: Clarify the forest-related roles of international institutions and instruments to improve integration and coordination and eliminate duplication of their efforts.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
146b,c	139c	MAF/MFAT		

Reply to 16.8 applies here also.

16.10: Strengthen national arrangements to provide guidance to multilateral forest-related organizations

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	140b	MAF	FIC, FOA, FFA	

An International Forestry Contact Group (IFCG), convened by MAF comprises major forestry industry stakeholders from government departments, and industry and environmental NGOs. It provides a regular forum for the exchange of information and discussion on international forestry initiatives. The information exchanges help MAF and MFAT form positions relative to contacts with multilateral forest-related organisations.

16.11: Continue collaborative work to support the implementation of the IPF/IFF proposals for action and the provision of information to assist the forest sector.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
78c, 145				WTO, APEC, FCCC, ITTO, CSD

New Zealand has a comprehensive approach to co-operating in the implementation of the IPF/IFF proposals, including this exercise. Another example is a proposed intersessional meeting on "The Role of Planted Forrest in Sustainable Forest Management." to be held in New Zealand in early 2003. New Zealand is also working is support of IPF/IFF implementation initiatives by its South Pacific island neighbours.

16.12: Develop institutional synergies with other partners and prepare a comprehensive directory of organizations and instruments engaged in forest-related activities.

IPF	IFF	Lead/ Assist Agency	Involved NGOs	Legislation and Agreements
	143, 144	MFAT		

No report at this stage.

ANNEX A: AGREEMENTS AND ACCORDS

1. Principles for Commercial Plantation Forest Management 1995

Environmental excellence in plantation forest management is the primary objective of these Principles. Signed by major plantation growers and users and conservation groups, the parties agree that:

- inter-dependence of ecological, economic and social sustainability must be recognised;
- efficient and effective Principle implementation monitoring is required;
- rural land users should be treated equitably, based on environmental effects of their activities; and
- management practices must meet or improve on all statutory requirements and accepted best practices.

2. The New Zealand Forest Accord

This Accord was signed in August 1991, between representatives of New Zealand environmental organisations, wood growing and wood processing industries (listed below). The Objectives of Accord are to:

- define those areas where it is inappropriate to establish plantation forestry;
- recognise the important heritage values of New Zealand's remaining natural indigenous forests and the need for their protection and conservation;
- acknowledge that the existing area of natural indigenous forest in New Zealand should be maintained and enhanced;
- recognise that commercial plantation forests of either introduced or indigenous species are an essential source of perpetually renewable fibre and energy offering an alternative to the depletion of natural forests;
- acknowledge the mutual benefits emanating from an accord between New Zealand commercial forestry enterprises and conservation groups and the example that this unique accord can provide for the international community.

Signatories were:

- Beech Action Committee
- Environment & Conservation Organisations of New Zealand Inc
- Federated Mountain Clubs
- Friends of the Earth
- Japan Tropical Forest Action Network
- Maruia Society
- NZ FFA
- NZ FOA
- NZ TIF
- NZ Wood Panel Manufacturers Association
- Pacific Institute of Resource Management
- Royal Forest and Bird Protection Society of NZ
- World Wide Fund for Nature (NZ)

3. The Role of Planted Forests in Sustainable Forest Management

The governments of Chile, Denmark, India, New Zealand and Portugal sponsored an international meeting of experts entitled “The Role of Planted Forests in Sustainable Forest Management” to support the Intergovernmental Forum on Forests (IFF) in implementing

actions to promote sustainable forest management. Eight invited papers and case studies formed the basis of deliberations held in Santiago, Chile from 6-10 April 1999.

The meeting made the following recommendations for further deliberation by the IFF:

(i) Countries should recognise that the boundary between planted and natural forests is often indistinct. The roles fulfilled by planted forests are diverse, and a continuum of forest types exists from highly protected conservation forests to productive, short rotation planted forests.
(ii) When considering the definition of planted forests, the international community, especially FAO, and individual countries should take into account the need to reflect both the differing degrees of management as well as the different objectives of planted forests.
(iii) To promote policies to reduce unsustainable consumption of forest products in developed countries, focussing on reduction, reuse, recycling and eco-efficiency, while recognising the environmental acceptability of many wood products compared with some alternatives. Efficient and sustainable utilisation should be encouraged in all countries.
(iv) To promote policies to increase forest area, by planted forests and other means, including trees on farms, in order to meet the rising demand for wood, non-wood forest products and services including carbon sequestration.
(v) To note IPF recommendation 58.b.ii 'taking all practicable steps to avoid replacing natural ecosystems of high ecological and cultural values with forest plantations, and preferring native species, where appropriate'.
(vi) To encourage countries, especially with low forest cover, to use planted forests and other means, including trees on farms, as an option for rehabilitating degraded areas and, where possible, as a basis for re-establishing natural forests.
(vii) To encourage the use of environmental impact assessments and other tools to facilitate the development and implementation of sound land-use decisions.
(viii) To take due consideration of environmental, economic, and social principles of SFM, at appropriate levels, in the planning and management of planted forests.
(ix) To encourage the development of strategies utilising planted forests, where appropriate, for the conservation and management of forest genetic resources. The utilisation of reproductive material of high genetic quality should also be encouraged.
(x) To urge countries to involve stakeholders effectively in decision making and policy implementation relating to planted forests.
(xi) To request FAO to undertake quantitative studies on the supply and demand for fuel wood, fodder and non-wood forest products and to continue to support countries in capacity building.
(xii) To urge countries to engage in awareness raising of the ecological, social, cultural and economic roles that planted forests may fulfil, and their impacts.
(xiii) To encourage appropriate two-way technology transfer mechanisms for the sustainable development of planted forests. In addition, appropriate means to ensure the sharing of technologies between and within countries should be developed, including effective links between research, extension and implementation.

A follow-up expert meeting on the role of planted forests in sustainable forest management is to be held in New Zealand in March 2003.

ANNEX B: ACRONYMS

APEC.....Asia Pacific Economic Commission
BA .....Biosecurity Act 1993
BS .....NZ Biodiversity Strategy
CA .....Conservation Act
CA (copy).....Copyright Act
CBD.....Convention on Bio Diversity
CMS .....Carbon Monitoring System
CRI .....Crown Research Institute
CSD .....Commission for Sustainable Development
DLE .....Degraded Lands and Environments project (MfE)
DoC .....Department of Conservation
EIP.....Environmental Indicators Programme (MfE)
EPI.....Environmental Performance Indicators (MfE)
FA.....Forests Act 1949 (and Section IIIA 1993)
FCCC.....Framework Convention on Climate Change (UN)
FFA.....NZ Farm Forestry Association
FHTF .....Forest Heritage Trust Fund
FIC.....NZ Forest Industries Council
FR .....NZ Forest Research Institute Ltd
FRA .....Forest Resource Assessment 2000
FRST .....Foundation for Research Science and Technology
FSC.....Forest Stewardship Council
FOA.....NZ Forest Owners Association
GP.....Greenpeace NZ
GPP.....Green Package Plan (MfE)
HR .....Hort
HSEA .....Health and Safety in Employment Act
IFF .....Intergovernmental Forum on Forests
IMF.....International Monetary Fund
IPF .....Intergovernmental Panel on Forests
ISO .....ISO 14000 environmental management system process
ITTO.....International Tropical Timber Organisation
JEG.....Joint Session of Trade and Environment Experts (OECD)
LCDB .....Land Cover Data Base (MAF/MfE)
LCR .....Landcare Research NZ Ltd
LINZ.....Land Information NZ
LTA .....Land Transfer Act
MAF .....Ministry of Agriculture and Forestry
MED .....Ministry of Economic Development (formerly Commerce)
MFAT.....Ministry of Foreign Affairs and Trade
MfE.....Ministry for the Environment
MP .....Montreal Process
MRST .....Ministry of Science, Research and Technology
NEFD .....National Exotic Forest Description (MAF)
NFI .....National forest inventory
NPS.....National Policy Statement

NWR.....Nga Whenua Rahui (fund)
NZFA .....NZ Forest Accord
NZFCOP.....NZ Forestry Code of Practice
NZIF-NPF .....NZ Institute of Forestry National Policy on Forestry
NZODA.....NZ Overseas Development Aid
NZPCPFM.....NZ Principles for Commercial Plantation Forest Management 1995
NZTIF.....NZ Timber Industry Federation
OECD.....Organisation for Economic Development and Co-operation
OSH.....Occupational Safety and Health Service
PIE.....Pacific Initiative for the Environment
PVRA .....Plant Variety Rights Act 1987
RF&B .....Royal Forest & Bird Society (NZ)
RMA.....Resource Management Act 1991
SFM.....Sustainable Forest Management
SPREP .....South Pacific Regional Environment Programme
TLAs.....Territorial Local Authorities
TPK .....Te Puni Kokiri (Ministry of Maori Development)
Tsy.....NZ Treasury
TTWMA.....Te Ture Whenua Maori Act 1993
UNCED .....UN Committee on Economic Development
Wai262 .....Waitangi Tribunal claim 262
WB .....World Bank
WPS.....Wood Processing Strategy
WTO.....World Trade Organisation
WTO-CTE.....World Trade Organisation's Committee on Trade and Environment
WWF .....World Wide Fund for Nature (NZ)

ANNEX C: KEY LEGISLATION AND INTERNATIONAL AGREEMENTS

This annex describes the key legislation and international agreements affecting forestry in New Zealand

Statutes and regulations
The following listing excludes amendments except for the Forest Amendment Act 1993.

Directly relevant
- Co-operative Forestry Companies Act 1956
- Crown Forest Assets Act 1989
- Forest & Rural Fires Act 1977
- Forestry Encouragement Act 1962
- Forestry Rights Registration Act 1983
- Forests Act 1949 (amended by the Forests Amendment Act 1993)

Indirectly relevant
- Biosecurity Act 1993
- Conservation Act 1987
- Fencing Act 1978
- Historic Places Act 1993
- Land Act 1948
- Maori Reserved Land Act 1955
- Misuse of Drugs Act 1975
- National Parks Act 1980
- Native Plants Protection Act 1934
- New Zealand Walkways Act 1990
- Pesticides Act 1979
- Plant Varieties Rights Act 1987
- Plants Act 1970
- Reserves Act 1977
- Resource Management Act 1991 (Common abbreviation RMA)
- Tarawera Forests Act 1967
- Te Ture Whenua (Maori Land Act) 1993
- Transport Act 1962
- Treaty of Waitangi Act 1975
- Trespass Act 1980
- Wild Animal Control Act 1977
- Wildlife Act 1953

Relating to forestry as a commercial venture or business
- Commerce Act 1975
- Companies Act 1955
- Companies Act 1993
- Contracts Employment Act 1956
- Employment Contracts Act 1991
- Health and Safety in Employment Act 1992
- Holidays Act 1981
- Land Transfer Act 1952

Local Government Act 1974
Machinery Act 1950
Minimum Wage Act 1983
Overseas Investment Act 1973
Public Works Act 1981
Sale of Goods Act 1908
Trade Marks Act 1953

Regulations

Forest and Rural Fires Regulations 1979
Forest Disease Control Regulations 1967
Forest Produce Import and Export Regulations 1966
Forest Encouragement Grants Regulations 1983
Forestry Encouragement Loans Regulations 1967
Forestry (East Coast Grants) Regulations 1992
Indigenous Forest Timber Advisory Committee Regulations 1966
State Forest Parks & Forest Recreation Regulations 1979
Timber Floating Regulations 1955
Timber Industry Training Centre Advisory Committee Regulations 1979
Timber Production Advisory Committee Regulations 1949
Timber Regulations 1948

International Agreements and Initiatives Affecting New Zealand Forestry

Rio Declaration on Environment and Development

New Zealand is a signatory to the Declaration. The Declaration is concerned with inter-generational equity issues, participation of all society sectors in decision making, access to information for all society sectors, polluter pays principles, precautionary approaches and community responsibilities for protecting global environments.

Agenda 21 for Achievement of Sustainable Development.

Agenda 21, to which New Zealand is a party, is primarily concerned with developing a common framework of action for all countries to achieve sustainable development including the management and conservation of natural resources.

Convention on Biological Diversity (CBD

New Zealand signed the CBD in September 1993. The CBD has three objectives; the

- conservation of biological diversity;
- sustainable use of its components;
- fair and equitable sharing of the benefits arising from the utilisation of natural resources.

Framework Convention on Climate Change (FCCC)

New Zealand signed the FCCC in 1993. Under the FCCC, New Zealand is committed to reduce net emissions of CO2 and other greenhouse gases by the year 2000. New Zealand's approach to achieve reductions is based on enhancing sinks and reducing gross emissions.

Forest Principles for Management, Conservation and Sustainable Development
The Principles to which New Zealand is a signatory, cover all types of forest and require that all forests and forest lands are sustainably managed (but with rights to develop and use according to country needs).

Montreal Process
The Montreal Process is an international initiative to advice the development of internationally agreed criteria and indicators for the conservation and sustainable management of temperate and boreal forests at the national level. Participants include, New Zealand, Australia, Canada, Chile, China, Japan, Republic of Korea, Mexico, USA, Russian Federation, Uruguay and Argentina.

ANNEX D: NEW ZEALAND FOREST CERTIFICATION

		Forest Stewardship Council	
COMPANY	**Area (ha)**	**Vol m3 (rwe)**	**Vol m3 (sawn)**
Fletcher Challenge Forests	360,000	450,0000	
City Forests, Dunedin City Council	14,500	150,000	
Craigpine	3,400		
Timberlands West Coast	28,400	260,000	
Ernslaw One	28,500	225,000	
Winstone Pulp International	17,255	260,000	
Pan-Pac Forest Products	43,000	250,000	
Gowen Hills	551	2,750	
NZ Forest Managers	25,000	250,000	
Niagara Sawmilling		69,000 (1)	40,000
Millstream Lumber		60,300 (1)	35,000
Claymark Rotorua		86,200(1)	50,000
McAlpines – Rangiora mill		86,200 (1)	50,000
Stoneyhurst Timbers		69,000 (1)	40,000
FSC total	**520,606**	**6,268,450**	
Percent of total NZ	**29%**	**30%**	
		ISO 14000 EMS	
Fletcher Challenge Forests		327,600 (1)	190,000
Weyerhaeuser NZ	78,000	495,000	
PF Olsen & Co	45,000	350,000	
ISO total	**123,000**	**1,172,600**	
Percent of total NZ	**7%**	**6%**	
Grand total	**643,606**	**7,441,050**	
Percent of total NZ	**36%**	**36%**	
Total NZ (@ March 2002)	**1,799,000**	**20,701,000**	

Sources: FIC May 2002 (FSC) and May 2001 (ISO)
MAF March 2002

Notes:

(1) Assumes a 58% average conversion rate

- For radiata pine plantations only – a few small eucalyptus operations are not shown
- Under New Zealand's National Initiative for forestry certification launched in May 2001, there are two separate Technical Committees developing national performance standards for (a) plantation forestry, and (b) indigenous forestry - for 3rd party audit and Forest Stewardship Council (FSC) certification purposes.
- FSC provides two types of certification (a) for forestry operations against a specified performance standard, and (b) for processing operations, certification of chain-of-custody to ensure segregation of wood from certified and non-certified sources.

ANNEX E: RECREATIONAL USE OF PLANTATION FORESTS

(Source: Richardson, B., Barnard, T., Brockerhoff, E., and Dunningham, A. 2001. *Defining Montreal Process…* Forest Research, Rotorua, revised 2002)

Special provision is made for land held under a Crown Forest Licence. The License states that:
''The Licensee acknowledges that so long as Her Majesty the Queen is Licensor hereunder the public shall at all times during the term of this Licence have the right to enter and use the land for recreational purposes. Such entry shall, unless the licensee expressly permits otherwise, be limited to access on foot.''

The Licensee shall have the discretion to control such entry and use only for the reasons relating to the safety of the public or of those working on the land or for the protection of trees, buildings, plant, equipment, related items and covenants on recreational areas.

Contrary to the spirit of the license agreement quoted above, plantation forests in New Zealand have traditionally been seen as having little benefit other than crop production. However, anecdotal evidence suggests that this is an over-simplification. Some plantation forests have become valued local recreational assets. Many serve large urban areas, meeting recreational needs not met elsewhere by national parks. They take recreational pressure away from more sensitive landscapes and habitats and are frequently more accessible. Private land should not be excluded from the reporting process.

The following are examples of the types of recreational activity have been recorded within plantation forests:
- Mountain biking
- Horseriding
- Running
- 4WD
- Filming
- Hunting and shooting
- Camping
- School trips
- War games
- Motorcycling
- Community activities
- Orienteering
- Picnicking
- Pistol shooting

A preliminary survey of forestry companies revealed only limited information relating to the percentage and area of forest used for recreational/tourist purposes. However, subsequent approaches to local authorities and forestry companies revealed the following potential case studies:

- Riverhead (25 minutes from central Auckland) - " heavy usage'' from urban areas.
- Woodhill (35 minutes from Auckland) - " very heavy usage" from urban and rural communities, possibly as may as 500,000 visits per annum.
- Mahurangi (50 minutes from Auckland) - medium usage from urban and rural communities.
- Mangawhai (1 hour 30 minutes from Auckland) - medium usage from urban and rural communities.
- Tairua Forest (Coromandel) attracts ''several thousand visitors a year'' and provides recreational opportunities linked to its gold mining heritage. Other activities include passive recreation, motorsports etc.
- Maramura (Hauraki District) is popular for motorsport.
- Whitfield Forest (Hauraki District) is popular with mountain bikers and horse riders.
- Athenree Gorge (Hauraki District) is popular for passive recreation.
- Opotiki (Bay of Plenty) has two forests with ''high'' demand for entry.
- Whakatane (Bay of Plenty) is regularly used by an orienteering club.
- Kinleith Forest (Taupo) is widely used for a variety of activities including hunting, birdwatching, tramping, camping, school groups etc. Also hosts community events including wood chopping competitions. Strong community interest in the forest and the 'rights' of the local community are jealously guarded.
- Waikoau Forest (Hawkes Bay) has strong hunting and shooting groups and occasional horse and motor sport events.
- Hira Forest (Nelson) located close to the urban area is widely used by city residents. A Forest User Policy has been developed by the forest's owner.
- Fringed Hill (Hira Forest, Nelson) is popular for walking, mountain biking and passive recreation.
- Foothill Forests (North Canterbury) are used for walking and passive recreation.
- Hanmer Forest (Christchurch) extremely popular for a wide variety of activities, forms a sub regional park for the 350 000 occupants of Christchurch. It forms part of a larger recreational unit with adjacent Department of Conservation lands.
- Whakarewarewa Forest (Rotorua) is New Zealand's oldest plantation forest and highly valued for its scenic and recreational quality. It also attracts considerable overseas tourist interest especially in the Redwood Grove and nearby visitor centre. Recreational use has been actively encouraged on the site.
- Bottle Lake (Christchurch) is a 1000ha pine plantation. Forestry operations are managed by Selwyn Plantation Board, and recreation/tourism is managed and paid for by the Christchurch City Council. It receives approximately 400 000 visitors per annum. An information centre will soon be completed on the site.

Some local authorities reported very small-scale activities in some forests, for example Clutha District.

The provision of recreation and tourism facilities is a function of demand, the amount of suitable forest available to meet the demand, aesthetic attraction of the forests and the resources available to provide facilities. Different recreation and tourism uses of forest land may require different levels of facilities, depending on the nature of the activity, forest management policies and tourism demand.

The recreational (and to a lesser extent the tourist) use of plantation forests may have an increasingly important role to play in meeting recreational demand at the sub-regional level. Ideally, a spatial analysis of the location of recreational facilities with regard to significant areas of population would reveal some interesting information with regard to existing and potential usage. This area of research will require further analysis and the application of a broader range of skills and disciplines.

Case studies of forests with significant recreational usage:
Kinleith Forest (South Waikato District)
The population of South Waikato is approximately 25 000. Ethnicity is 60% European, 31% Maori, 9% Pacific Island. The area suffers relatively high unemployment almost twice the national average. Activities in the forest include: pig hunting, deer stalking, mountain biking, road cycling, trail bike riders, motor sport rallies, horse riding, rock climbing, running, tramping, walking and water skiing.

There are several roadside picnic areas for public use. Strong expectations over user rights have emerged over time due to extensive usage by the local community. As a consequence user groups have differing opinions over management prescriptions. The area does appear to serve the community as a major recreational facility at the sub-regional level. The importance of forests such as this and the role they play in meeting the needs of local communities requires additional research (source withheld).

Forests of the Hauraki District
These forests are widely 'owned' and used by the local community. Maramarua and Whitfield Forests are appreciated for a variety of activities including passive recreation and motor sport. These forests are certainly valued by their users but little quantifiable information is available to support anecdotal evidence.

Forests of 'Auckland'
The role of plantation forests in meeting the recreational needs of urban populations in New Zealand merits particular attention. Most of the larger indigenous forest reserves and National Parks lie at some distance from major centres. They are generally less robust than plantation forests in accommodating recreational pressure and generally harder to access. Therefore plantation forests in close proximity to

major cities have a particular value. Examples include the Riverhead and Woodhill Forests. Both these forests experience heavy usage from a variety of recreational activities. They also serve to deflect potentially damaging recreational pursuits away from sensitive areas such as coastal dunes and native bush. Auckland Regional Council has even considered planting some of its estate in exotic forest for this purpose.

These forests, together with Mahurangi and Mangawhai forests, appear to have sub-regional importance. No detailed figures for recreational use or recreational resource provision have been found to date or reliable research undertaken.

Auckland Regional Council, as part of the preparation of their Draft Regional Parks Management Plan have considered the role that their own land, including plays in meeting the recreational needs of the city. (This includes the ranges, incorporating some exotic forestry. These areas are comparatively small and would be difficult to extrapolate.

Tasman District Council
It's not only larger local authorities and forestry companies that have an interest in recreational management of exotic forests and provision of recreational resources. Tasman District Council has seven forests totalling about 3000ha. Generally, public access is by permit for hunting and other activities. Joggers, dog walkers and mountain bikers extensively use Kingsland Forest.

Rabbit Island has about 1000ha of forest and 100ha of reserve land around the forest. Rough Island is used extensively by the public for general seaside activities. The only facilities are toilets and changing rooms along with picnic facilities. No commercial activity is allowed on the island. Rough Island has equestrian rings for events and toilet and picnic facilities

Whakarewarewa Forest - Rotorua
Whakarewarewa Forest is New Zealand's flagship multipurpose forest. It was visited in 2000 by over 187 000 users. It is serviced by an information centre which in the same year received 75 500 visitors. Research by ARC Consultants also revealed that 46% of the visitors came from the local Rotorua area, although this figure should be regarded with some caution. A research report into the recreational use of the forest is currently in preparation. Fletcher Challenge Forests manage a small picnic site at Te Awa in Kaingaroa and some access roads for hunters and fishermen, but no data on usage is collected.

Dunedin City Forests
City Forests is a Local Authority enterprise, wholly owned by the Dunedin City Council. They own and manage approximately 13 500ha of plantation forests in the Otago region.

All of their forests lie within a 70km radius of the city boundary. There is a long history of plantation forest management linked to recreational use going back to the early

1900s. The population of Dunedin is approximately 118 000, so the forests have a relatively large catchment. City Forests actively promote recreational use of their forests. Facilities include trails and tracks, opportunities for horse riding, mountain biking, and organised activities including rally car and trial bike races. Their website (www.cityforests.co.nz) includes maps and plans to their forests highlighting trails and recreational opportunities.

Expenditure on track maintenance is in the region of $10 000 per annum. A further $60 000 was spent recently on the construction of a track at Ross Creek Forest. There are also two picnic grounds within the forests.

Bottle Lake Forest Park, Christchurch

Bottle Lake Forest Park is situated approximately 10 km north-east of central Christchurch. It receives approximately 400 000 visitors per annum. The Forest Park itself is comprised of *Pinus radiata* on coastal sandlands. It is an excellent example of multi-purpose forestry and is shortly to be served by a new visitor centre with interpretative material and displays. The cost of the visitor centre is in the region of $100 000 with a further $40 000 spent on interpretation. The Park has major importance as a recreational facility for the city.