

Environmental Working Group update

- Tim Thorpe represented the NZIF at the official signing of the *Principles for Commercial Plantation Forest Management* in Wellington on December 6. The NZIF is not a signatory to the Principles at this stage, subject to a vote amongst members (see separate article on the *Principles*). Those signing were NZ Forest Owners' Association, Royal Forest and Bird Protection Society, Federated Mountain Clubs, Maruia Society, NZ Farm Forestry Association and the World Wide Fund for Nature.
- Database of activities of groups

involved in the environmental arena. Dougal Morrison took this matter to the Ministry for the Environment Professional Bodies Meeting who have indicated that they will be pursuing the idea.

- NZIF position statement on bio-diversity. The EWG has not been able to draft a statement in time for this issue of the journal but will be pursuing the matter.
- A *Greening the New Zealand Forest Industry* seminar in Auckland was held on February 21 with a range of speakers from government, industry and

environmental non-government organisations. A full report on the seminar will appear in the next issue of the journal.

- The EWG and the wood processing sector. John Gifford and Tim Thorpe will be approaching a range of wood-processing-industry groups and environmental groups to ascertain their concerns about wood processing and environmental issues and where the NZIF might be able to assist.

Tim Thorpe
Convenor



NEW INFORMATION



Principles for Commercial Plantation Forest Management in New Zealand

Preamble

On December 6, 1995 the following agreed Principles were signed by the NZ Forest Owners' Association, the NZ Farm Forestry Association, the Royal Forest and Bird Protection Society of New Zealand, the World Wide Fund for Nature New Zealand, the Federated Mountain Clubs of New Zealand and the Maruia Society.

The parties to these Principles agreed to meet from time to time to monitor their implementation and address issues that may arise.

Additional interested parties are welcome to become signatories to these Principles with the full support of the signatory parties.

The NZ Institute of Forestry has called for members' views on whether or not the Institute ought to become a signatory. A decision will be made at the AGM, to be held in Invercargill on April 29, 1996. Members are encouraged to consider the Principles printed here in full, and attend the conference and AGM to express their views and vote.

Objectives

To promote understanding between the signatory parties with a view to New Zealand achieving environmental excellence in plantation forest management and

participating as an effective advocate internationally for the sustainable management of plantation forests and the protection, preservation, and sustainable management of natural forests. These principles are complementary to the New Zealand Forest Accord (August 1991).

Scope

These principles have been written to apply to New Zealand's plantation forest management and do not cover environmental and social issues associated with processing, products and use beyond the forest gate. It is recognised that criteria and standards for plantation forest management are being developed through various processes.

Definitions

Natural Forest – Areas of land which are predominantly covered in indigenous tree species that are naturally established, including managed indigenous forest areas where regeneration is supplemented by planting of indigenous species.

Plantation Forest – Areas of land predominantly covered in trees grown for cropping and managed primarily for commercial purposes and excluding natural forests as defined here.

Natural Areas – Areas of land with a predominant cover of indigenous vegetation, including natural forests as defined above, and also naturally occurring water bodies.

Sustainable Management – In the context of New Zealand's Resource Management Act (1991) sustainable management includes:

Managing the use, development, and production 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 well-being 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 on the environment.

New Zealand Forest Accord

The objectives of the New Zealand Forest Accord form the basis for these Principles. These objectives are:

- to define those areas where it is inappropriate to establish plantation forestry;
- to recognise the important heritage values of New Zealand's remaining natural indigenous forests and the need for their protection and conservation;
- to acknowledge that the existing area of natural indigenous forest in New

Zealand should be maintained and enhanced;

- to 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;
- to 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.

Global Consensus on Sustainable Forest Management

The parties recognise that the process of inter-governmental consensus building on sustainable forestry management is ongoing under the aegis of the United Nations and that non-governmental organisations continue to work towards complementary goals. These Principles represent a New Zealand response with regard to commercial plantation forests.

Principles for Plantation Forest Management

The parties agree that:

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

1 Ecological Principles

Recognising the need for operational flexibility, forest management activities shall be carried out in accordance with the following principles:

1.1 Indigenous Biodiversity

The parties agree that the protection of New Zealand's indigenous biodiversity and, where appropriate, its restoration, are important objectives.

- Indigenous biodiversity will be protected primarily in natural areas.
- The protection of indigenous biodiversity in plantation forests is not the primary objective but should be recognised and provided for where appropriate.
- Where threatened species are known to occur within plantation forests and their presence is considered significant

by the Department of Conservation, plantation managers shall consult with the Department of Conservation on management practices with the objective of conserving the population.

- Plantation forests shall not replace natural forest and other natural areas, as agreed under the instruments of the New Zealand Forest Accord.
- Plantation managers shall take all practical steps to protect indigenous vegetation along the margins of water bodies where appropriate.
- Plantation managers shall take all practical steps to safeguard designated reserved natural areas within or adjoining plantation forest boundaries from any adverse effects of forest operations.
- The spread of wilding trees into natural areas is a matter of national concern. Plantation managers acknowledge their responsibility to prevent, to the best of their ability, the spread of wilding trees from within their plantation forest boundaries, while recognising the property rights of adjacent land owners.

1.2 Air, Water, Soil and Ecosystems

Plantation management shall safeguard the life-supporting capacity of soil, water, and air.

Plantation managers shall maintain or enhance soil quality and minimise soil erosion for the purpose of maintaining site productivity and water quality.

Forestry operations shall be conducted in a manner that safeguards stream margins and water bodies with the objective of achieving healthy aquatic ecosystems.

Any applications of agrichemicals, including fertiliser, will be undertaken in a manner to avoid adverse environmental effects.

1.3 Resource, Energy, and Waste Management

Plantation managers will, to the best of their ability, conduct forestry operations in an energy and resource efficient manner, minimising and disposing of waste in an environmentally acceptable way.

1.4 Agrichemicals, Biological Control, Pests

Animal and plant pests can substantially reduce crop productivity and therefore should be controlled. Plantations can also harbour weeds and other pests that can spread to nearby natural areas.

The application of agrichemicals should be conducted according to the New Zealand Agrichemical Users Code of Practice and minimised to levels essential for ensuring a commercially viable crop without causing adverse environmental

effects.

An integrated management approach to pest control will be adopted, recognising that pest problems can be minimised by appropriate management regimes.

Pest control methods should have minimal and environmentally acceptable impacts on non-target species.

Biological control agents and the introduction of other new organisms are limited to those that have been screened for non-target impacts and a precautionary approach taken with respect to potential adverse environmental effects.

2 Social

2.1 Public Access

Access to some plantation forests for recreation is important to the general public.

Plantation managers should provide for responsible public access to forests where appropriate.

2.2 Tenure and Use Rights

Secure tenure and use rights to land and forest resources are important to provide investor confidence in plantation forestry.

Long-term tenure and use rights to the land and forest resources shall be clearly defined, documented and legally established.

2.3 Landscape, Aesthetics, Recreation and Cultural Heritage

New Zealand contains many distinctive natural landscapes that are important for public use, appreciation and identity.

Landscape, amenity and recreation values should be considered and, where appropriate, provided for in the planning and management of plantation forests.

Plantation management will provide for the protection of discrete sites of important cultural and historical significance on the recommendation of a recognised authority.

2.4 Community Consultation

Community consultation is an important component of responsible forest management.

Plantation managers should consult on management operations that impact on significant public use, environmental, and amenity values of plantation forests and neighbouring areas.

2.5 Social Effects

Plantation management provides both social benefits and costs to communities and society.

Plantation managers shall protect the health and safety of their people and the public through meeting statutory requirements and using codes of practice.

All industry employees will be quali-

fied in the skills that are relevant to the tasks they are performing or be under training to acquire such skills.

3 Economic

Plantation management is primarily concerned with the establishment and harvesting of tree crops for commercial purposes. The industry operates in a market environment and managers need the freedom to change management practices to meet changing consumer preferences in pursuit of maximising economic returns.

Plantation managers will be free to maximise the economic return from plantation forests provided their operations meet statutory requirements and comply with these Principles.

The costs and benefits of environmental effects should be incorporated into forest industry annual statements.



Steepland Forests, A historical perspective of protection forestry in New Zealand, has been written by Professor Peter McKelvey and is published by the Canterbury University Press. The book has a recommended retail price of \$49.95.

Professor McKelvey is Emeritus Professor of Forestry, University of Canterbury. He is a Fellow and past President of the NZ Institute of Forestry.

In this highly readable book Professor McKelvey first sets the scene by describing the composition and distribution of New Zealand's indigenous protection forests. It is in passing a sad indictment on the human management and use of this priceless natural resource that the 23 million hectares of forest that once existed in New Zealand should have been so drastically and rapidly reduced to the current 6 million hectares in less than a thousand years.

Protection forests in this book are defined as the mountain and hill-country forests of the North and South Islands and Stewart Island that serve the role of holding and protecting the soil resource and influencing the quality and quantity of water that flows from the forests.

Professor McKelvey traces the development of the growing appreciation of the values of protection forests by showing how New Zealand has learned from overseas experiences. China pre 250 BC had regulations to protect forested areas, as had Japan from AD 1600. However it has been more from the experiences and research of European countries and North America that an early understanding of the role of protection forests in New Zealand

has been developed.

Forest surveys have been important in developing an understanding of the distribution and ecology of indigenous forest since Sir Joseph Banks and Dr Carl Solender accompanied Captian James Cook, on his first voyage to New Zealand in 1769. The National Forest Survey of the 1920s and the more ecologically focused surveys that were to follow it were operations of epic proportions that deserve to be remembered for their contribution to developing the first truly national description of our forests. The names of William Colenso, Thomas Kirk, Leonard Cockayne and Jack Holloway stand out as pioneers in their capabilities to sustain surveys in remote and difficult mountain country without the aid of modern transport and in the quality of their analyses in the days before computers. Not that they always got it right. Cockayne in 1928 was only half correct in predicting that deer would become a major damaging impact on indigenous forests while at the same time predicting that possums would inflict no significant damage.

Research Programmes

From the 1950s government agencies, and in particular the New Zealand Forest Service developed research programmes that investigated aspects of forest hydrology and the influence of forests on slope stability. The growing body of knowledge that developed led scientists in the early 1980s to conclude that the primary factors in determining long-term regional rates of erosion were geological processes such as mountain building, and climatic factors such as rainfall and the frequency of torrential storms.

It was concluded that in the longer time scale the role of vegetation in controlling erosion is negligible. This re-evaluation has subsequently led to the view that protection forests should be valued not for their supposed usefulness in producing off-site benefits, but for their own intrinsic values as ecosystems of plants, animals and soils.

The protection forests have themselves required protection from the agents of change. First from the insatiable demands for timber and pastoral land in a developing colony and then protection from the animals that were misguidedly introduced for their recreational and commercial value. Professor McKelvey details the early introduction of deer and possums, the early attempts to control these species and the technologies and strategies that were developed and tested. Of particular interest is the human dimension to this saga. That cultural icon, the good keen man, had his origin in the early deer con-

trol operations of the Department of Internal Affairs. From the days of the "skipper", Major G.F. Yerex, onwards these operations moulded and developed strong personalities. In many respects this book is a tribute to those individuals and their work.

As with other aspects of protection forest management the philosophy of wild-animal control has evolved over time as a better understanding has been gained of the impacts of wild animals and the ecology of the individual pest species. Today the philosophy of extermination has been largely replaced by a more pragmatic approach that recognises that for the present time in most situations total removal is impossible to achieve, and that management must focus on strategies that determine and achieve numbers of animals that can be tolerated according to ecological criteria.

The development of national policies for the management of protection forests can be traced back to the Forests Act of 1921-22 and Leon MacIntosh Ellis. Since then legislation has sought to have recognised the role of protection forests, as they were understood at the time, and to have them protected. Regional policies were also developed and Professor McKelvey records seven case study examples of how different types of problems were addressed.

Natural Transition

A natural transition from research into the role of indigenous forests in the protection of soil and water values was the development of programmes that assessed the suitability of exotic species. Many species were tried, some were successful, and a few, such as lodgepole pine, proved to be too successful. Research trials were undertaken at a number of North and South Island sites and large-scale plantings occurred in Marlborough, Hawke's Bay and Gisborne. Professor McKelvey acknowledges the now increasingly sensitive issue of wilding tree spread. It is somewhat ironic that species selected for their capability to seed and spread prolifically at high altitudes under harsh climatic conditions are now viewed as such a threat to the natural environment when they have started to achieve their intended, albeit possibly misguided, purpose.

Professor McKelvey has written a very well-researched and referenced book that contains a detailed and authoritative account of the history of New Zealand's protection forests and of some of the people who in their myriad parts have played a role in their destiny.

Mike Cuddihy