Section 3

Barriers and Opportunities

3.1 Introduction

This discussion paper has attempted to canvass current attitudes and management practices with regard to native plants on private land, with the objective of stimulating and widening the debate over their future roles and place in New Zealand landscapes.

In assessing the current situation with regard to ecologically sustainable roles for native plants on private land, this section identifies various barriers, difficulties and gaps, and opportunities. A number of important issues are highlighted. These may not be the full range of relevant issues, and in the feedback process in response to this discussion paper, it is hoped that you will bring forward any other matters of concern, and identify additional opportunities for extending and diversifying native trees and plants on private lands (See section 4).

3.2 Barriers

Values and mindsets

Underpinning the debates about native plants is a fundamental difference of view about the appropriate types of relationships that New Zealanders can and should have with indigenous ecosystems and their constituent plant species. A major reason for the PCE investing in the development of this discussion paper is the belief that more open dialogue and debate about the fundamentally different views, is essential to the sustainable futures of New Zealand's native plants on private land.

A range of values underpinning different beliefs and points of view about ecological sustainability are explored in this discussion paper. The most commonly asserted ideas tend to fall into two basic areas.

The first generalised view is that New Zealand's indigenous species and habitats are now after 1000 years of exploitation of inherently high conservation value. There is a perception that any management of these species and ecosystems other than for protection purposes, would involve unacceptable levels of risk to their existence and their associated values. Therefore, it is believed that the only appropriate approach is to manage native plants and ecosystems for conservation outcomes; any other uses must be limited to those that present minimal or no risk to the primary conservation objective (for example, eco-tourism, recreational use) and ecosystem services such as the enhancement of biodiversity.

The second view is that native plant species occur in a range of contexts, and their management can and should reflect the diversity of values attributed to them (including existence values, ecosystem services including biodiversity and the various values that require extractive use to realise). In some cases it will be appropriate to manage native trees and plants solely for conservation purposes. In other cases it will be appropriate to manage for a range of uses including those that involve the removal of plant material or plant derived products (e.g. timber, fibre, oils, chemicals, honey). This view considers that conservation values can be safely provided for at the same time as other multiple uses and services of native plants and ecosystems.

These different opinions often depend on an individual's fundamental beliefs about human nature and human fallibility in the context of New Zealand's ecology and its management. They are often related to the extent to which people insist on a regulatory approach to environmental management, and the extent of trust in voluntary and flexible adaptive mechanisms.

Language

Discussions undertaken for the development of this paper have shown that differences of views over language and terminology are more than just a debate about semantics. Many of the words commonly used in the debate on the roles of native plants on private land have acquired powerful associations and implicit meanings, often negative or dismissive, often extreme. Many of these overtones reflect the difficulties and frustrations experienced by people attempting to advance their particular concepts or views about native plants and their roles on private land. Some of the loaded terms include: conservation, production, sustainability and sustainable use, harvest, logging, greenie, property rights and regulation. These words and others instantly raise hackles, making it very difficult to have further discussion and to progress understanding.

Mediation over issues relating to native plants on private land will often require a specific process to redefine and detoxify the connotations attached to language, and to clarify the actual issues and management options that are to be addressed.

Legislation and institutions

An important question for readers of this discussion paper to consider is whether the current legislative frameworks, and the agencies with responsibility for implementing that legislation, are adequately supporting and facilitating management frameworks to increase the occurrence and diversity of native plants on private land.

Currently one central government agency (MFE) has a mandate to consider the implications of the full spectrum of human interactions on the environment. The ministry is, however, primarily a policy agency, and the balancing of conservation and production goals in actual situations has been delegated to regional and local government. Local authorities have varying capacities, and have taken varying approaches in dealing with the complex issues surrounding native plants on private land.

At present, apart from MFE, New Zealand's central government agencies with responsibilities in relation to native plants are structured to focus on

promoting either conservation or production values. Official initiatives reflect this polarisation - for example the New Zealand Biodiversity Strategy and the Biodiversity on Private Land policy package are strongly oriented towards an ethic of protection, while the Primary Production Committee's inquiry into Sustainable Forestry Management is considering ways to improve production outcomes. There are few opportunities at central government levels to take an integrated approach that brings together both kinds of values.

The single-focus mandates of current institutional structures have resulted in agency cultures, mindsets, and skill sets that are not amenable to considering a wider range of values with respect to the future roles of native plants on private land. Attitudes and values within central government departments, and in some areas within councils, have impacted on the relationships between the various agencies and landowners, tangata whenua, communities and special interest groups with interests in native plants and ecosystems.

Economic constraints

Most native plant species are slow growing in comparison to exotic plant species. This fact is often used to justify the view that planting new areas in native species, especially timber species, will not be an economically viable land use option. This has resulted in the current emphasis on the sustainable harvesting of existing stands and remnants.

Many of the costs and silviculture requirements currently facing landowners considering establishing native plants are much higher than for establishment of monocultures of exotic species. Taxation at both national and local levels often does not take account of the different management requirements and cost structures required for native species.

Lack of markets

One of the major economic constraints is a lack of 'green' markets for ecologically sustainably managed native plant species or for the environmental services they provide.

At present there is no domestic market that places a premium on ecologically sustainably managed native timber. In addition, those domestic producers that are producing sustainably managed timber face competition from imported timbers and timber products derived from unsustainably managed forests. This indicates a significant difference between New Zealand's domestic policies and those applied to international trade, a difference that appears to limit and reduce the value of our indigenous plant products.

Except for New Zealand's fledgling ecotourism market, there are currently no market structures that recognise the substantial environmental benefits provided by having native plants and ecosystems *in situ* on private lands. These benefits include biodiversity maintenance and wildlife habitat, carbon sequestration in response to global climate change trends, and improved downstream water quality from native riparian strips. The lack, to date, of comprehensive markets, and of awareness of the economic values of such ecosystem services, limits the options for landowners to derive an income and to offset the costs involved in retaining or extending native plant coverage on their properties.

Limited knowledge and awareness

The majority of current research on native plants focuses on studying their ecology with the primary objective of supporting native species recovery, protection and biodiversity outcomes. Research programmes aimed at other management outcomes are a very small proportion of current efforts. The extent of knowledge regarding indigenous plants on private land in New Zealand is characterised by:

- minimal investment in exploring the economic potentials and capacities of New

Zealand's native plants

- little social and economic research into the full range of values associated with native plants and the acceptability of various uses and management approaches
- concern that much of the existing knowledge of the ecologically sustainable use of native plants is being lost as the personnel with expertise move on to other positions or retire.

Raising awareness amongst landowners about opportunities and alternative management approaches for native plants on private land is very limited. A few programmes are being undertaken by research and academic institutes, regional councils, and special interest groups.

Soured relationships

The strongly held, adversarial positions and passionate debates about native plants on private land have resulted, in some cases, in soured relationships between landowners, government agencies, and various special interest groups. Communications have become strained, or failed altogether. Opportunities for practical working partnerships - for example to undertake research or develop adaptive management models for native plants and ecosystems - have stagnated.

The lack of an open and informed debate, the tendency to focus on entrenched positions rather than to explore the issues, and the general unwillingness of some parties to consider alternatives, have perpetuated the view that there is limited potential for native plants within New Zealand's production landscapes.

3.3 Opportunities

This discussion paper seeks to move thinking about native plants on private land beyond the current polarised debates into a more constructive examination of the issues. New Zealand's capacity to maximise the many opportunities with native plants on private land will largely depend on first accepting the existence of and then overcoming the various barriers outlined above.

This discussion paper documents some of the potential uses and services of native plants and ecosystems. It is likely that other uses and services could be developed or recognised as New Zealand gains more practical experience with these species and ecosystems. Maintaining and increasing the occurrence and diversity of native plants on private land will present a range of new opportunities for landowners and communities.

The following benefits are by no means a comprehensive list. The PCE wants to hear your ideas about the opportunities with native trees and plants, and the kinds of benefits that could assist in achieving more sustainable future land management in New Zealand (see section 4). One fundamental assumption, however, is that all such opportunities need to be realised in an ecologically sustainable manner.

Diversification of production species

At present New Zealand's economy relies predominantly on a relatively small number of introduced plant species for production purposes. The contribution of indigenous species and ecosystems to the economy occurs primarily through tourism and the various poorly recognised ecosystem services discussed above. Diversifying the range of species the nation can utilise, within ecologically sustainable management frameworks, for economic returns would also provide a range of other benefits, many of them highly significant (see sections 2.1 & 2.9). An increased number of plant species, managed in an ecologically sustainable manner, has the potential to provide a greater range of products and services. A stronger presence of indigenous species in the productive landscape would also increase the resilience of these ecosystems to threats from any new biological or physical hazards.

It could be argued that extending the range of production species would be achieved with lower environmental risk by greater use of native plants than through the introduction of new exotic

species either from global sources or genetic modification. Most of New Zealand's current pests and weeds were introduced deliberately for what seemed, at the time, good economic or social reasons.

Increased use of native plant species presents the opportunity to change existing and potentially unsustainable land use practices. For example, there is currently considerable pressure to develop riparian strips on intensive pastoral farms with the objective of improving water quality. Native species offer an opportunity to achieve this primary objective and also provide a range of other uses and services as discussed above (see section 2.1). The returns from a 'mixed portfolio' of various benefits could present additional incentives for landowners to protect existing areas of native bush, wetlands and riparian areas, and to create new areas of native trees and plants on their properties.

Role of ecosystem services

Extending the native plants and plant associations on private land offers a unique opportunity to develop public understanding and awareness of the range and value of ecosystem services. At present many of New Zealand's programmes providing such services use a very small range of exotic species, such as the poplars and willows still commonly used for soil and water conservation.

There is also potential for native trees and plants to play a major role in the creation of carbon sinks, thereby assisting New Zealand in achieving its climate change commitments. In terms of carbon sequestration, the creation of new native forest areas has a number of advantages over using exotic species, including the ability to absorb more carbon per hectare over longer periods of time (see section 5.8). New native forests established as carbon sinks would also provide biodiversity and other conservation values. [1]

New markets

There is an opportunity to change the values of native plants on private land, from what many landowners now consider to be a financial liability to being an asset.

Creating new ecologically sustainable management options for native plants on private land implies that the landowner will be able to benefit financially from making these types of landuse changes. New market structures could evolve to recognise and maximise the benefits from currently undervalued uses and services of native trees and plants (see section 5.8). Beyond the direct returns to landowners, there could be valuable secondary markets in expertise and research, evaluation and certification, plant propagation and nurseries, ecosystem advice, pest and weed control, economic and marketing services for sustainably derived products and ecosystem services, and other support systems at the practical level.

The financial returns derived from a range of new markets for the various services and values of native plants on private land could usefully contribute to high-priority work for ecological sustainability. An obvious example would be the ongoing demands in most New Zealand landscapes for active management of pests and weeds.

Development of New Zealand's knowledge base

There is currently a strong emphasis on the importance for New Zealand's future of knowledge-based industries and the development of centres of intellectual excellence. Developing our understanding of ecologically sustainable land management, using native plant species, could offer a valuable knowledge resource for the future. Methods and techniques for practical application of the principles of sustainability, trialled and refined in New Zealand's production landscapes, could become highly marketable information, as global environmental stresses increase and climate

change intensifies demand for ecologically resilient land-based production methods.

Support for biodiversity

Increased occurrence of native plants on private land, either in near natural or modified assemblages, will help towards achieving the nation's biodiversity objectives. New farm management practices such as those being trialled at Kowhai Farm, Lincoln University, could provide significant benefits in terms of increasing indigenous biodiversity in areas where there are currently low biodiversity values (see section 2.2).

A range of private initiatives could be developed, extending networks of native trees and plants through the landscape to provide ecological corridors, wildlife habitats and food sources for all seasons. Locally or regionally distinctive species and associations could be featured, as appropriate for the particular birds and other species of each area. Increased community awareness of indigenous biodiversity, and appreciation of New Zealand's unique plants and animals, would be one important outcome of encouraging such programmes.

Facilitating Kaitiakitanga

The relationships of tangata whenua with native trees and plants, and the cultural, historical and spiritual significance of indigenous plants, are briefly outlined in this discussion document (see sections 2.7 & 5.6). There are potentially far-reaching implications for the future management and utilisation of native species from the eventual outcomes of the WAI 262 claim to the Waitangi Tribunal in respect of indigenous flora and fauna. The rights and interests of iwi and hapū in regard to indigenous species, and in relation to particular sites and landscapes featuring native trees and plants, are as yet poorly appreciated by many non-Māori. Working more widely and proactively with native plants within New Zealand's production landscapes could provide opportunities to increase understanding of the traditional and practical values of these taonga for tangata whenua.

Involvement of iwi and hapū in partnerships with landowners, local communities and councils could help to achieve a range of tangible and societal benefits.

For iwi and hapū, the extension of native plant species on their lands, and the opportunities for deriving income from the establishment of appropriate markets for the various uses and services indigenous species provide, could enable the development of land uses more directly supportive of tikanga and kaitiakitanga than the current reliance on exotic forestry and other production uses dependent on exotic species. Non-commercial purposes, such as the enhancement of rongoā resources and the provision of traditional materials for carving, wānanga and other cultural purposes, could also be strong opportunities.

A closer relationship with native plants and habitats

Increased occurrence of native plant species on private lands also presents opportunities for realising less tangible, less quantifiable values than those mentioned above. It can be difficult to define these other kinds of values with the same sort of precision that scientific or economic benefits can be assessed. But the various heritage and aesthetic values are no less powerful, and no less important to individuals' and societies' well-being and identity. A sense of place - the spontaneous human response to the unique qualities, moods and feelings associated with each district's hills, rivers, valley systems, coastal plains and bays - is a critical part of who we are as New Zealanders, and how we define ourselves and our nation relative to the rest of the world. Our native trees and plants are essential to this sense of belonging.

Native trees and plants, and the distinctive ecosystems they form, are too central to our heritage and identity to be encountered primarily only on conservation lands. Extending the range and diversity of native plants within landscapes

that at present are dominated by exotic species is an important opportunity for all New Zealanders.

The PCE's forthcoming study on the management of peri-urban lands [2] highlights how important native plants are, as one of the core values that New Zealanders place on their landscapes. The striking landscapes of the Waitakere ranges, the Coromandel Peninsula and Banks Peninsula may be seen as New Zealand's cathedrals - the natural equivalent of the built heritage that nations with much longer histories of human settlement possess.

1 It is also likely that these forests would produce very little, or no, timber thus avoiding many of the carbon accounting problems faced by the owners of production forests.

2 PCE 2001.