Theme: Environment & Social

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Adding Value to New Zealand Forests

Authors:
Tim Barnard[1], Harley Spence[2], Kirsten Crawford[2]

Research Provider:
Scion[1] and Coastline Consultants[2]

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Leadership in forest and environment management, innovation and research

TABLE OF CONTENTS

EXECUTIVE SUMMARY

Background

This report is the result of a series of seven workshops undertaken across New Zealand with representatives of community forest user groups from May to June, 2009. The workshops were carried out concurrently with workshops involving representatives from the forestry industry and management authorities. The overall project links to existing research on how the Montreal Process Criteria and Indicators relate to the New Zealand forestry context, particularly at a regional level.

The aim of this workshop series was to build on existing knowledge about the values New Zealanders hold in forests, and to generate a series of community level indicators of sustainable forest management. The objectives of the research were to:

- Gather impressions on previous research about the values New Zealander's hold for forests;
- Gauge whether there are values that are of higher priority in local areas and what these are;
- Develop a set of community generated indicators for sustainable forest management, and highlight any opportunities to further develop these.

Key results related to each value and associated indicator set

Participants were presented with results from the 2004 and 2005 research into what New Zealanders value about their local forests[1], and asked whether they were relevant to their local area and whether there were any missing. This led on to the main activity of the workshops, which was to develop community level indicators for locally relevant forest values. Key results are described under each value below.

Access

Access to forests for recreation is a high priority for community groups and businesses. There were several consistent discussion themes and indicators across the workshop locations. Key aspects of this access were proactive relationships between forest managers and user groups; the availability of areas of forest and infrastructure that support a wide variety of pursuits over the long term; a coordinated approach to managing user conflicts and dissemination of information; and the opportunity for user groups to take some responsibility for their recreational activities. The range of indicators described by user groups across the country for monitoring access values related to:

- A description of forest area by ownership in (public and private);
- The number and location of permanent open ways as well as the number, location, timing and reason for forest closures;
- The area of forests available to be used for what activities and when;
- A description of the full range of activities being undertaken including where, when and what for;
- A register of all tracks, changes to tracks and whether they are useable;
- Provision, adequacy and usage of amenities;
- Consistency of information, signage and maps;
- Satisfaction surveys, complaints and accident registers;
- Noise levels;

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[1] Barnard et al., 2006

- Damage to forest environment (via vandalism, use etc);

- Consistency of management documents;

- The opportunities for consultation and participation in forestry related forums;

- Existence of formal access agreements, such as Memorandums of Understanding (MOUs);

- The level of coordination and management of access;

- Costs of access.

Soil and Water Resources

Management of soil and water resources was a priority for participants across the country. Key discussion themes were that there is evidence of waterway protection in forests; that the nature of water within forests is protected and maintained, particularly for the purpose of protecting freshwater biodiversity; and that forest managers take responsibility for downstream affects. The range of indicators described by user groups across the country for monitoring soil and water values related to:

- Water clarity

- Whether water in forest streams is drinkable

- Water temperature

- Sediment levels in water

- Surveys of freshwater biological diversity

- Placement of culverts, roads and access points

- Identification of the best use of land for forestry (e.g. for soil erosion and waterway protection) vs. other land use

- Existence of and adherence to rules

Biological Diversity

A further priority for user groups was a commitment by forest managers to maintaining/creating healthy forest ecology and indigenous biological diversity. Key themes were to protect and manage any changes within existing indigenous ecosystems and species in forests, as well as broadening the management focus of pest control programs to include these values. The range of indicators described by user groups across the country for monitoring biological diversity values related to:

- Evidence of protecting biological diversity through management plans and funding allocation;

- Surveys and species counts of indigenous ecosystems (such as remnants in gullies, riparian margins, wetlands etc) and species analysed on the basis of trends over time and age distribution;

- Infestations of pests.

Forests as Part of Local Communities

Much of the discussion about forests as part of local communities was interlinked with other values such as access and landscape, and few groups specified indicators for this value. The discussion themes largely related to the protection of specific sites that are important to the community, such as pa sites and patches of iconic species (e.g. the Rotorua Redwoods). Participants also talked about an overall approach to managing forests for multiple purposes which reflect wider community

values. The range of indicators described by user groups across the country for monitoring forests as part of local communities related to:

- The content of management plans;
- Publication of logging plans;
- Species surveys for biological diversity values;
- The degree of managed recreation infrastructure/access;
- Forest user surveys to gauge satisfaction and any issues;
- The level of investment into infrastructure maintenance.

Involvement in Managing Local Forests

Involvement in managing local forests was talked about throughout the workshop series in the context of other values, such as access and management of freshwater ecosystems. Key discussion themes were the opportunity to participate in forums and workshops about user-related issues, and the opportunity to develop agreements (such as MOUs) between user groups, local authorities and companies for managing certain sites and/or interests.

Results suggest that forest user groups would be more interested in being involved on specific issues (such as determining how to manage recreational areas) rather than overall forest management, provided they have evidence that a full range of values is being managed and assessed. The indicators described by user groups as a means of showing their level of involvement in management were:

- A full range of values is being assessed;
- The existence of agreements such as MOUs and opportunities to be involved.

Forest Productivity

Few indicators were developed related to forest productivity, although there was a general understanding across the workshops that production forests were planted for economic purposes and that they would be cut down. This level of understanding varied between individuals within the workshops. The indicator developed was that:

- Forests continue to grow wood of economic value.

Forests as Carbon Sinks

Whilst forests as carbon sinks was one of the original values (from the forest values research in 2004 and 2005), it did not feature strongly in this round of workshops. General comments were made that forests were important because they absorb carbon and that they would be part of the carbon accounting policies, particularly in the future. However, there were a number of comments made that people don't really understand the policies and how they actually relate to forests and communities in the landscape. No indicators were developed for this value.

Forests as Landscape Features

The landscape value of forests was not frequently discussed at this round of workshops, which suggests there were other values of a higher priority to the participants involved. One of the points made was that views of landscape are largely subjective at an individual level, which makes them very hard to describe and therefore measure. Landscape views were also raised in terms of the "downstream" affects of wilding pine spread. Indicators for wilding pines are included within the biological diversity indicator set. There was a general theme that landscape issues are pronounced when forests are felled.

Further Work

A concurrent workshop series with industry and management authority representatives was carried out during the course of this research to assess the existing Montreal Process Criteria and Indicators for their relevance to New Zealand forests. It is intended that the results of both workshop series be considered collectively, along with relevant empirical assessments, in any further development of criteria and indicators for the sustainable management of New Zealand forests.

INTRODUCTION

This report is the result of a series of seven workshops undertaken across New Zealand with representatives of community forest user groups from May to June, 2009. The workshops were carried out concurrently with workshops involving representatives from the forestry industry and management authorities. The overall project links to existing research on the how the Montreal Process Criteria and Indicators relate to the New Zealand forestry context, particularly at a regional level.

The aim of this workshop series was to build on existing knowledge about the values New Zealanders hold in forests and to generate a series of community level indicators of sustainable forest management. The objectives of the research were to:

- Gather impressions on previous research about the values New Zealanders hold for forests;
- Gauge whether there are values that are of higher priority in local areas, and what these are;
- Develop a set of community generated indicators for sustainable forest management and highlight any opportunities to further develop these.

It is intended that this report and the report from the concurrent workshop series be considered together in any further development of criteria and indicators for sustainable forest management within New Zealand.

The Montréal Process

The Montréal Process is the commonly used name for the Working Group on Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests. It was formed in Geneva, Switzerland, in June 1994 to develop and implement internationally agreed Criteria and Indicators for the conservation and sustainable management of temperate and boreal forests.

Membership in the Working Group is voluntary, and currently includes countries from both hemispheres, having a wide range of natural and social conditions. New Zealand is one of twelve member countries whose combined land area contains about ninety per cent of the world's temperate and boreal forests. This amounts to sixty per cent of all of the forests of the world[2].

In February 1995 in Santiago, Chile, the above countries endorsed a comprehensive set of Criteria and Indicators for forest conservation and sustainable management for use by their respective policy-makers. The Criteria and Indicators are intended to provide an international reference for policy makers to formulate national policies and to provide a basis for international cooperation to support sustainable forest management. The Criteria and Indicators are not weighted or prioritised, and are intended to be considered as a 'package' rather than individual measures of sustainability. It is intended that member countries assess the relevance of the international criteria and indicators within their own national forest management context. This research provides material to be integrated into this assessment process.

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[2] Montréal process Working Group. 1998. *Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests.* http://www.mpci.org/criteria_e.html

METHODS

A qualitative research approach was used to assess how participant's interpreted values related to sustainable forest management and to generate indicators relative to those values. Facilitated small scale workshops (around eight to fifteen participants) were chosen as a forum that would enable discussion as well as allow participants to record their own opinions.

Deliberative research approaches (such as workshops and discussions groups) are founded on the basis that participants are able to reflect on various issues and topics and make judgments through reasoned dialogue with others[3]. These approaches were considered more relevant to the aims of the research than relying on survey questionnaires, which limit people's responses to questions and do not allow discussion and consideration of similar and differing perspectives between the participants themselves. This was seen as particularly relevant for participants from different and often conflicting user groups to be able to hear others' perspectives, and deliberate ideas together.

A purposeful sampling strategy was used to engage an 'information-rich' sample - being representatives of community forest user groups.

QSR NVivo8 (a qualitative computer package) was used to manage and analyse the data.

Selected Study Areas

Seven study areas were chosen on the basis of their regional forestry interests and differing geographic, environmental, economic and social conditions. Each of the study areas has plantation and indigenous forests as well as public and privately owned forests of differing scales within the region. The areas range in their population sizes and degree of forest use, either managed or unmanaged. All of the areas had a mix of community groups with interest in forest use and/or management. The same study areas were used for the concurrent research program into industry and management authority perspectives on indicators for the sustainable management of forests[4].
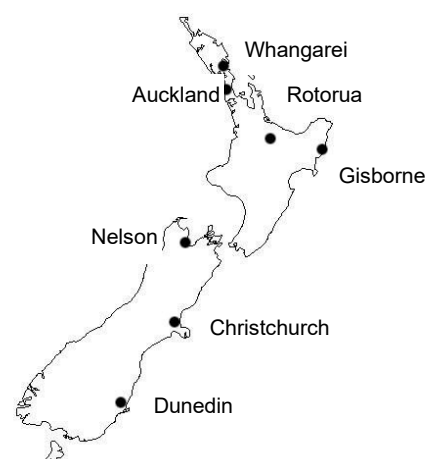
Workshop Participants

The intention of the methodology was to involve participants who were members of local forest user groups and would therefore have knowledge of both forest usage and management. Contact lists were developed using internet research, citizens' advice and information centre community group lists, and by contacting national organisations to obtain local contacts. The majority of invitations were sent with at least six to eight weeks lead-in to allow time for the group to hold a monthly meeting and select representatives to attend. All contacts were telephoned within four days of the local event to prompt attendance. During this process, the researchers were provided with contacts for additional groups to follow up, many of these at late notice to the event (within two to three weeks). In these cases researchers rang contacts directly and emailed or faxed invitations. An email address, text messaging system and a landline were established specifically to allow participants to RSVP within their own timeframes using technology that suited them. Members of the project team were available during the lead up to the workshops to discuss any direct queries.

A range of user groups were represented at each workshop which allowed discussion from

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[3] O'Brian, 2003

[4] FFR F60201

differing perspectives. Many participants were involved in more than one community club or organisation; but in Table 1 below each participant is only recorded once, representing the primary club/ organisation the invitation went to. As such there are likely to be a wider range of interests involved in each workshop than are represented in the Table. Most of the community clubs were also affiliated with national organisations which are noted in brackets (see Appendix 1 for a full list of organisations represented).

Table 1: Type of organisation represented at each workshop

TYPE OF ORGANISATION REPRESENTED	WHANGAREI	AUCKLAND	ROTORUA	GISBORNE	NELSON	DUNEDIN	CHRISTCHURCH
Sporting Clubs: Multisport; Triathlon (NZTA); Athletics (ANZ); Harriers; Orienteering (NZOF)		▓	▓	▓	▓	▓	▓
Hunting and Fishing: Local Clubs; Game and Forest NZ; NZ Deerstalkers Association; Fish and Game NZ			▓		▓	▓	▓
Tramping: Recreational and/or Federation of Mountain Clubs (FMC) or NZ Alpine Club)			▓	▓	▓	▓	
Mountain Biking: Local clubs (NZMBA)	▓	▓	▓			▓	▓
Horse Riding: NZ Horse Recreation Group, Pony Clubs (NZPCA) NZ Endurance Club	▓	▓			▓		
Motor sports: 4WD (NZWDA) and motorcycling clubs (Motorcycling NZ)	▓	▓					
Environmental Organisations: Royal Forest and Bird Protection Society of NZ; Landcare Groups; Water Quality Groups etc	▓	▓	▓				
Other Community Organisations: Forest Trust; Maori Trust; Information Center; NZFFA; Sports Council		▓		▓			▓
Commercial Business: Horse trekking, Guiding etc		▓			▓		
Individual Neighbours – NB individual neighbours were not specifically a target audience		▓					

Workshop Process

Each workshop was facilitated by the same professional social science facilitator to ensure consistency within the process. After introductions, participants were shown results from previous research into the values New Zealanders hold in forests[5] (see Figure 1). The purpose of this activity was to provide some background to the project and stimulate discussion as to whether the set of values was applicable to their location and whether there were any values missing. Participants were then asked to select the values that were most important to them and were then facilitated through a process to develop indicators for those values.

Participants were asked two key questions; from their perspective, what would be happening if the value was being managing sustainably and, what would be an indicator(s) or way of measuring this that would show them it was being managed. A definition of an indicator was discussed if required.

The purpose of asking participants to self-select values was to get an impression of which values were the most important in each study area. If time permitted, participants moved on to other indicators, and a full group discussion was held at the end of the workshop to provide participants with an opportunity to raise any other thoughts or concerns.

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[5] Barnard et al., 2006

Results were recorded on paper by participants themselves and discussion throughout each workshop was recorded by a designated independent member of the project team. All results were transcribed using intelligent verbatim, managed and analyzed within a qualitative computer package (QSR NVivio8).

Data were methodically read through and coded into similar ideas, which were then related to the original forest value themes. The following sections present the results of this analysis.

What New Zealanders Value about Forests!
- Biodiversity at species and ecosystem level
- Productive capacity of forests for timber
- Non polluted drinking water and waterways
- Forests as carbon sinks
- Forests as part of local communities (including intrinsic values, history)
- Access for recreation (passive and active)
- Forests as landscape features
- Opportunity to be involved in managing local forests
- Forests contribution toward soil consevration

Figure 1. Presentation slide showing the list of values New Zealanders hold for forests[7].

IMPRESSIONS OF THE FOREST VALUES PRESENTATION

Participants were presented with a brief description of previous research about what New Zealanders valued about forests (see Figure 1). The values presented were not ranked or prioritized in any way. The research was undertaken in 2004 and 2005[6] to provide a social context to the initial assessment of the Montreal Process Criteria for New Zealand. The research approach was qualitative, using deliberative methods, and involved community forest user groups and management authority staff. Some of the participants at the 2009 workshops had taken part in the 2004 and 2005 workshops.

The aim of the presentation for this research process was to provide some background as a means of introducing the workshop activities and to build on existing research outcomes. Participants were asked for their impressions of the values list, and whether they thought the values were locally relevant and if there was anything missing.

In general, participants across the study areas agreed that the list was relevant and a thorough representation of local community values in forests. Three groups raised specific activities or values that they acknowledged were generally included in the existing list of values but believed should be made more explicit for their local area.

In Gisborne, participants said the values list was 'good overall' but that hunting was particularly important because it was highly productive and they considered it could be listed as a separate local value. The Rotorua group also believed hunting should have more emphasis, and that beauty and clean air were important. These participants also suggested that forest values were different in Rotorua because the forests were so accessible. Participants in Nelson noted that employment opportunities, and peace – a place to get away from noise, and wilderness experience, required local emphasis.

The most common theme of discussion was about access values. Participants in Dunedin questioned what the forestry companies would think of the list, and noted that companies had different views on access than the community. Differing values between companies and user groups were also raised at Whangarei, particularly in relation to the nature of offshore forest ownership and how that affects local community access. The Auckland group also raised changes in ownership as affecting their access values, and suggested that there should be value on having forests in New Zealand ownership. Nelson participants also talked about ownership and how forest access has become more and more restricted over recent years. They expressed frustration about the public inability to access what is still public land.

Access was also raised in Auckland and Rotorua, where participants noted the pressure on forest resources because of the high levels of usage and land use changes (such as dairy conversion and subdivisions). Both groups talked about the issues that arise because of conflicting values between different users.

The discussion on general forest values allowed each group to decide which values were most relevant to work on for them. This led directly into describing aspects of the chosen values, and subsequently developing indicators for them.

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[6] Barnard et al., 2006

COMMUNITY INDICATORS FOR SFM: NATIONWIDE THEMES

This section presents the research results from the user group workshops under the eight values that were discussed across the country. The data from the workshops were analyzed by methodically reading through the transcripts and coding segments firstly to the value that was being discussed and then into groups of similar ideas to compile themes. As such the discussion and indicator themes within each value are generated from the data and not predetermined by the research team. Many of the themes are interlinked with each other and across the values set which represents the discursive nature of the methodology. These links are noted throughout the text.

The results are arranged firstly by general discussion about the value, the key themes that arose, and a table setting out the community level indicators developed for each key theme. Due to the amount of information generated about access, there are several tables set out to improve readability.

The indicators have been combined where, for example, two workshop groups wrote the same idea, but are otherwise presented as written by participants. There are two values – 'forests as carbon sinks' and 'forests as landscape features' – where participants discussed aspects of the value generally but did not develop indicators for them. Discussion points related to these values are provided at the end of this section.

Impressions of Value 'priorities'

Participants were asked to choose the values they considered most important as a means of starting the process, and to provide an indication of priorities for each area. Most groups worked through three values, whilst others concentrated on fewer, as shown in Table 2.

The values most frequently chosen were access, soil and water resources, and biological diversity. Discussion and indicators associated with 'forests as part of the local community' and 'managing local forests' were most often discussed in terms of the other values. For example there were several management-related indicators described within the value 'access', and participants tended to see access as one of the most important features of 'forests as part of local communities'. The degree and often intensity of discussion as well as the consistent choice to develop indicators for access highlights the high priority this value has for local communities.

Table 2: Values chosen at each location

INDICATORS DESCRIBED FOR VALUE	WHANGAREI	AUCKLAND	ROTORUA	GISBORNE	NELSON	DUNEDIN	CHRISTCHURCH
Access	■	■	■	■	■	■	■
Soil and/or water resources	■		■		■		
Biological diversity	■			■	■	■	
Forests as part of the local community			■			■	
Managing local forests							■
Productivity				■			

Access

Participants at all of the workshops discussed forest access in depth, most bringing personal experiences into the discussion. All of the workshop groups developed indicators for access as part of the sustainable management of forests, many of them dedicating the majority of workshop time to this topic.

It was apparent that in most of the workshop locations there are existing tensions between the different user groups about their respective access to and use of forests, and in many cases tensions between the user groups and local companies and/or management authorities.

Because of the amount of data generated under this value, the following section is separated into tables related to each key theme rather than one key theme table as in the subsequent sections.

Key theme: General Management Approach to Forest Access

In general, participants were concerned that public access and the quality of that access to forests has decreased significantly over time, and will continue to become more limited, particularly in areas where there are no existing managed recreational sites and in back country areas. These concerns most often related to issues of land ownership, particularly the lack of continuity between owners and managers, as well as the belief forests are managed for investors based on economic returns. In Nelson, participants were frustrated that they had difficulties accessing publicly owned production forest lands.

> Twilight zone between private and public ownership
> **Auckland**

> It's publicly owned land yet the public can't access it.
> **Nelson**

> The only reason for plantation forestry is monetary gain, is this any better than pastureland?
> **Whangarei**

> Forests owned by multinationals, hell bent on keeping New Zealanders out.
> **Whangarei**

Many participants acknowledged the economic purpose of planted forests and had an understanding of the rotational forestry cycle. However, in general participants considered that forestry was managed on short-term time frames (by rotation) rather than for longevity, which has resulted in their values for long-term access being compromised.

All the participants considered that forests should be managed for multiple purposes that balanced recreational aspirations with production and other values (such as soil and water conservation). Participants also considered that there should be more consistency between management of access between different companies and management authorities within all forests.

Table 3a: Community indicators for access – general management approach to forest access

Theme	Description	Indicators
General management approach to forest access	Similar access rules across all government and companies across the country	*More consistency in management documents over time*
	No net loss to publicly accessible areas of forests for all legitimate activities	*No's of permits issued* *No's of closed areas/closed times* *Increase/no less access points* *Length/number of access points or roads* *Practical and reasonable access available*
	Continued free and practical access to forests and public land without "commercialism" squeezing users out	*Number of permits issued* *Permanent open ways (managed like state highways)* *Number of closed areas/closed times* *Increase/no less access points* *Practical and reasonable access available* *Increase in usage figures* *Surveys of user satisfaction* *Travel times and "comfort" levels into forests* *Useable maps and information of access available* *Amount of hectares of publicly owned forest Communication on accessibility - identify legal access/ owners*
	Financial cost of access to community groups	*Access charges DROP* *Reduce costs of/for access*
Scope of forest	Access to wide ranging/ large areas both production and recreation with an understanding that the forests change in time and space	*Availability of permits* *Changing routes to meet production areas, areas are felled then re-planted for continuous use* *Public/ club feedback*

Key Theme: Proactive and Communicative Relationship Between Forest Managers and Forest Users

In general, forest users want to have an open and communicative relationship with forest managers. Participants considered that a productive relationship would achieve a number of positive outcomes including: a step towards solving conflicts; gaining better understanding of forest activities; being able to have more involvement and take more responsibility in managing their own usage (such as maintaining tracks and running events); having better experiences in forests (for example through good signage or better user segregation); and being able to participate in taking care of forest environments.

Some participants acknowledged the good relationships they had with local companies and the benefits they get from access to production forests. However, in many cases participants noted that this was not guaranteed over the longer term because of changing management regimes, changing ownership and land use.

> Landlords' [of forests] wishes are paramount for leased land, [it is] good to see [company name] willingness to entertain other users.
> **Dunedin**

> Land area forest provides us with large area that wouldn't be available in smaller fragmented blocks [such as] city parks
> **Auckland**

> Forest roadways are very important access routes for recreation, but forestry can also restrict access previously available
> **Nelson**

> Scope of [planted] forests important, shrinking because of dairy farms
> **Rotorua**

> If there are community values, then you have to ask the community
> **Dunedin**

Participants had ideas on how this relationship could be managed or formalized. Participants in Christchurch raised the idea of having a Memorandum of Understanding (MOU) between the user groups, business, forestry companies and Council (or other authority) where-by the user groups take responsibility for maintaining their own tracks, the Council provides some funding and coordination, and the companies commit to an agreement on what access would look like over time.

In Nelson, participants suggested having a website coordinated between local Councils (and other authorities), companies and user groups that is updated weekly to provide information on forest closures and other useful information. This coordinated approach was also noted in Rotorua, particularly because of the numerous events being held in local forests and 'huge numbers' of users which requires a level of coordinated input. They suggested Council has this responsibility. One of the more frequently mentioned reasons for having a coordinated approach was to provide prior warning of any closures and track changes due to forestry (or other) activities.

13

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Table 3b: Community indicators for access – proactive and communicative relationship between forest managers and forest users

Theme	Description	Indicators
Proactive and Communicative Relationship between Forest Managers and Forest Users	Ongoing productive relationship between recreation groups and forest managers to enhance access Increased involvement of recreational user groups in forest management	*Participation in Forum and management* *Amount of hectares of publicly owned forest* *Practical and reasonable access available* *Useable maps and information of access available* *Travel times and "comfort" levels into forests* *Changes in numbers and placement of access points* *Number of closed areas/closed times* *Numbers of permits issued* *Surveys of user satisfaction*
	Communication to/between commercial and recreational users.	*No surprises*
	Long standing covenant that guarantees continued access	*Areas are not reduced in size (compare map areas)* *Access available or denied* *Access is managed* *Crown Forestry Act – access rights improved – not just walking* *Uncertainty – business recreation groups don't want to invest* *Not sold to Iwi*
	Recognition that not-for-profit groups are not a commercial entity, therefore the requirements for access need to reflect that	*More user-friendly, plain English agreements and access requirements*
	Recognition of smaller groups	*Liaison officer within [company/organisation managing access] and/or information sheets*
	Consideration of neighbours Boundary access – development and subdivision of neighbouring farms Boundary with farms – could be maintained for horse riding access, has significant affect on property values (increase or decrease when access changed), reduce horse truck/float use on roads	*Neighbours consulted/ access ways planned* *OSH/ ACC report accidents*

Key Theme: Responsibilities of Forest User Groups

Participants in most workshops talked about the need for users to take responsibility for their own activities and safety in forests. Examples of user responsibilities included horse riders not using the same tracks constantly to lessen environmental damage, keeping to tracks, adhering to safety and closure signage, maintaining tracks, reporting damage and managing conflicts. Participants in some locations noted that a lot of forest access was formalized by local companies and they had to sign waiver agreements before being allowed any access.

Participants in Whangarei talked about creating a culture of forest users that asked 'how can I get a key?' instead of thinking 'I have a big hammer!'. Participants also questioned whether the public were good about using tracks and generally agreed that it is not the general public and clubs that are causing damage (such as vandalism, rubbish dumping) but certain individuals (most often not affiliated with local recreation groups). This was a common discussion point amongst most of the workshop groups who considered that very few individuals cause most of the vandalism and damage.

Many participants considered that the more people were allowed access to use forests, the more they would be cared for. One example was given of recreational users removing stolen cars from forest areas in their weekends. In several workshops participants talked about 'self-policing' of their own activities, reporting vandalism and managing keys provided to clubs by the forestry companies.

Table 3c: Community indicators for access – responsibilities of forest user groups

Theme	Description	Indicators
User responsibility	Users are acting responsibly while in the forests Users agree to be responsible for own safety	*MOUs*
	Users will be identifying environmental damage/ vandalism/ fire and maintenance issues on a regular basis	*Public/ Club feedback to managers/ owners*
	Users minimize the impacts of use - not altering landscape	*No physical or visual damage after use*
	No damage by horses - protect plantings and trees	*No damage to flora and fauna.*

Key Theme: Access to Forests for a Wide Range of Pursuits

The ways in which participants want to use forests is fairly consistent across the country. Common activities are mountain biking, motor sports, horse riding, tramping, walking, fishing and hunting. Whilst most users acknowledged the multiple user interests in forests, they were primarily concerned with their own activities, or at least making sure that other activities don't cause forest managers to limit their own access.

In general, users agree that all legitimate (i.e. not illegal) pursuits should be able to be undertaken in forests, but some activities are not compatible with others, particularly motor sports with most other pursuits. Many participants noted that segregated areas are, or would be, a useful way to allow a full range of interests.

Participants in Rotorua discussed the need to limit access numbers and have an understanding of the timeframes access was permitted for, for example based on forestry cycles.

> Can be the issue of 'over accessed' with environmental degradation and loss of quality of experience (e.g. Blue Lake)
> Have to deal with this with facilities
> Do we want to get like Heaphy Track with only limited numbers at one time?
> How many can you push through the Tongariro Crossing? What quality is there?
> **Rotorua**

Participants at many workshops talked about the fact that forests are productive and will be cut down. Most participants understood this, but had concerns about cutting of certain areas (such as the Blue Lake in Rotorua) and with how they would be affected immediately (e.g. closed access) and in the longer term (e.g. restoration of tracks). Participants in areas of high use (such as Rotorua and Auckland) talked about the need to balance commercial and public recreational demands, particularly during busy periods. Participants in Rotorua noted that the Council, rather than the companies, must manage this.

The indicators generated relate to gathering information about the full extent of forest use for recreational and other access purposes and how these occur over space and time, as well as people's satisfaction level of use.

Table 3d: Community indicators for access – access to forests for a wide range of pursuits

Theme	Description	Indicators
Access to use for wide range of pursuits NB these have a spatial and temporal component	Access to and through forests in total for all legitimate (i.e. not illegal) activities Access is freely available to all parts of the forest to meet the demand for recreational use Number of users and range of activities in forests e.g. runners, bikers, sledge dog racers, orienteers, hunters, trampers etc	*Identify and measure the range of recreational activities* *Identify and measure areas available/ used for different recreational activities* *Measure development of infrastructure for recreation increasing i.e. MTB tracks, fishing or walking access tracks* *Monitor the number of people using forests including people in organised events, registration books and permit holders, for what activity and where* *If freely available – carry out regular head counts* *Measure user hours in forests* *Record range of organised events* *Survey users on their satisfaction* *Register of complaints to independent agent* *Relate to national surveys e.g. Active N.Z. Survey*
Access for specific group or activities	Use by locals	*Number of community groups using.* *Visitor books/road counters/permits.*
	Trout fishing	*Fishing rates/ water quality*
	Quality horse riding	*Rider numbers – registered/permitted and visually (head counts)* *Enjoyment level - survey*
	Variety and length of walking tracks	*People enjoyment – survey*
	Ease of operation for organised events (e.g. horse riding, multisport, motor sport etc)	*User satisfaction survey* *Number of events* *Number/ content of complaints* *Races still being run*
User satisfaction	People are satisfied with the experience	*Workshops/ focus groups* *Survey of satisfaction*
	Keeping out undesirable users	*Damage to forest is less*

Key Theme: Continuity and Consistency of Infrastructure and Amenities

Many participants commented on the importance of maintaining tracks and access ways over the long term, particularly after logging and during replanting. In several workshops, participants were frustrated that tracks were not restored or relocated after logging operations, and that trees were planted across signed tracks. Participants in many of the workshops stated that they do, or could, take responsibility for maintaining tracks in between times of harvest and planting.

Participants also noted that access required clear signage, car parking and basic amenities. Some participants considered that there could be more consistency in the quality of signage through forests, particularly directional signage.

Table 3e: Community indicators for access - continuity and consistency of infrastructure and amenities

Theme	Description	Indicators
Continuity and consistency of infrastructure and amenities	Continuity of access/ tracks over forestry rotations/ activities Usage of tracks is stable or increasing	*Register of tracks, kilometres of track in a forest, types of track (e.g. walking, biking)* *The time each track is useable measured over the long term* *Restoration or renewal of tracks to replace tracks that have been logged (to similar standard)* *Level of planting on access ways/ tracks (should be no planting)*
	Standard of access and allocated tracks/roads are maintained including grooming and signage	*Consistent and ongoing road and track quality once reopened on public and private land* *No conflicts with users*
	Visitor information panels should be clear	*Consistency of signage* *More and better signage (especially public land and directional on tracks)*
	Provision of amenities	*Adequate picnic tables/ toilets /rubbish bins etc*
	Parking – availability, access & numbers	*Vehicle numbers, parking areas and variety*

Key Theme: Management of Forest Closures

Participants generally understood that at certain times the forests have to be closed for operational and Occupational Safety and Health (OSH) reasons. The main discussion points for closures around the country were that people are frustrated with gates being locked, particularly on main access routes that they have traditionally used, and the lack of coordination of information about how to gain permission to enter or pass through locked areas.

Several participants noted that they see no reason for forest closures outside of harvest times and many comments were made about what participants perceive to be 'unjustified' closures. Participants also thought that often more of the forest is closed than they understand is necessary. The indicators generated reflect these concerns.

One suggestion in Nelson was setting up a website to coordinate forest closures, access and other information between agencies, community groups and companies that is updated weekly. They talked about an initiative already operating in Marlborough for this purpose.

Table 3f: Community indicators for access - management of forest closures

Theme	Description	Indicators
Management of forest closures	Issues of local closures	*No locked gates on key public routes*
	Permanent locked gates and lengthy closures, especially for access to areas that are 'further on'	*Central coordination of what access is available and how to gain permission* *Easily available information on how and who to get access permission from*
	Access to and uses of forests not unreasonably denied via 'unjustifiable excuses'	*Number of closed areas and closed times* *Increase or no decrease in access points* *Practical and reasonable access available*

Key Theme: Managing User Conflicts

Conflicts amongst user groups, particularly those resulting from incompatible activities, were a theme at every workshop. In some workshops, participants were frustrated and angry about other users' activities and the conflicts that have arisen. Issues that participants frequently talked about related to safety (e.g. horse riders being thrown after being scared by motorbikes), noise (e.g. from motorsports), track damage (e.g. by motorbikes and horses), over-use of facilities and tracks by some groups (e.g. commercial operators) and inconsistencies in granting user access (e.g. hunters allowed access but others declined). Motorsports were most frequently mentioned as having negative impacts on other users' values.

Conflicts appear to be amplified in regions where there is high use within limited forest areas, such as Auckland. Conflicts appear to be less intense in areas where there are dedicated facilities and activities are managed or coordinated between companies, agencies and users, such as Rotorua. Many participants were strongly motivated to manage these conflicts effectively for the benefit of all users.

Participants talked about the need for better communication and coordination between users, and the pros and cons of having segregated areas for incompatible activities, or specialist areas for particular activities (such as motorsport). Some participants in Auckland noted that if areas were segregated then they would have access to smaller and smaller pieces of forest. They suggested that compatible activities are zoned together meaning they all have larger areas of forest to access.

The indicators derived to measure the compatibility of activities related to monitoring accidents, damage to tracks or infrastructure, satisfaction of users and complaints registers.

Participants also noted the importance of balancing recreational versus commercial access (e.g. mountain bike companies, events companies etc). Two common discussion points were the impact of commercial users on facilities such as filling up car parks and the costs of forest access, i.e. if commercial users pay access fees, then will non-profit users end up having to pay as well? Participants in areas where there are currently no general forest access charges (e.g. Rotorua) discussed how 'lucky' they were in comparison to other parts of the country.

A further theme that participants described indicators for was the need for some mechanism to solve user conflicts. There is no clear indication of what this process would look like or who would manage it, but in discussion about involvement in forest management participants noted the importance of having an independent agency with which to lodge complaints.

Table 3g: Community indicators for access – managing user conflicts

Theme	Description	Indicators

Managing user conflicts	Multiple user groups can use forest without conflict and without domination by any one group:
	    – affordable/ free continued access
	    – encouraged multiple users
	    – co-existing/ co-ordination
	    – communication
	    – less restricted
		No accidents e.g. horse vs. motorbike
		Satisfaction of individual user groups (surveys), including questions such as parking availability

	Usage is not having negative effects on other values or users Motorbike/quad/vehicle noise vs. quiet, silence, isolation Rutting (moguls) on tracks – after motorbike events. Trees fall over, can't ride horses or cycles on it afterwards	*Hunters vs. horse riders safety – measure complaints.* *Walkers vs. vehicles – measure accidents and complaints* *Decibels/ complaints/ policing* *Tracks are managed/ grades – motorbikes limited* *Damage to fire breaks*
	Specialist areas to segregate incompatible user groups (hunters/ motorbikes)	*Monitor non-authorised forest users* *Monitor problems affecting other users*
	Good mix between commercial and non-commercial users	*Access for all, including public – not just businesses* *Monitor parking usage*
	Forest multi-access areas are being managed by Health and Safety issues (i.e. horse riders vs. motorbikes).	*No accidents/incidents* *Shared areas for groups that work well together – bigger areas for both*
	Mechanism where conflicting claims on use could be resolved	*Issues resolved conflicts minimized* *Decrease in complaints i.e. positive reporting of outcomes*

Key Theme: Building Community Capacity and Knowledge through Active Involvement in, and Access to, Forests

Aspects to building knowledge within the community about forests and forestry activities appeared throughout many of the main discussion themes. Participants in two of the workshops talked about access being a mechanism for people to be actively involved in and build experiential knowledge about forests. Some participants suggested this would lead to more community ownership and a better understanding of forest environments.

A further aspect of this theme discussed in Nelson was that if people were allowed and enjoyed forest access, then more people would join local clubs, thereby increasing memberships and making the clubs more sustainable. This in turn would allow the clubs greater resources to take responsibility for their own activities such as maintaining tracks.

Table 3h: Community indicators for access – building community capacity and knowledge through active involvement in, and access to, forests

Theme	Description	Indicators
Building community capacity and knowledge through involvement active in/ access to forests	Greater environmental awareness through using/ involvement with forests leading to a cultural shift in the community: e.g. Coronation Forest planting/ weeding, Arbor day, adopt an area/ walking track/ lookout/ stream in forests	*Better outcomes: less damage to forest environment, less rubbish dumped* *Self policing policy* *School groups planting/ education* *Involvement in forest (management) husbandry*
	Greater opportunity to enjoy forests	*Increase in memberships*

Soil and Water Resources

Most of the workshop groups discussed indicators for water and soil resources. Participants generally related experiences and knowledge to waterways and the impacts that soil run-off and other activities had on these. Participants talked about the quality of the water they see in production forests in terms of its clarity, whether or not it was drinkable, what was able to live in it and impacts downstream or within the wider landscape. Many of the participants were very knowledgeable about the science behind management of freshwater ecology. The ideas about soil and water were very interlinked and often overlapped with conversations about biodiversity.

Key Theme: Nature of Freshwater Resources within Production Forests

Participants talked about water in terms of what they saw in forests and what they understood was necessary for healthy streams (e.g. those with riparian habitat and freshwater ecology). One of the indicators generated was about water clarity, particularly related to sediment. Another important quality of water in forests was whether or not it was drinkable.

Key Theme: Evidence of Waterway Protection

In discussion, participants in Dunedin said they had seen evidence of clear felling gullies and stream margins without adherence to their understanding of riparian management guidelines. They questioned whether the environmental reports coming out of some companies were accurate. Participants in a number of groups stated that environmental services such as water and soil resources should be well managed, regardless of land use type.

Other groups talked about forests being managed in a way that incorporated freshwater ecology protection such as careful placement and construction of culverts and roads, harvesting timed to avoid sensitive fish times, adequate water flows and temperatures for species populations to survive.

Key Theme: Protection of Freshwater Ecology and Biodiversity

Participants talked about freshwater ecology from a range of perspectives, including a landscape approach of entire watersheds, waterway management within forests and during forestry activities, and specific riparian management. The indicators generated reflect these differing perspectives.

The indicators mainly related to maintaining healthy fish populations through reducing sediment and ensuring streams have characteristics that allow fish to spawn in them.

Related to this topic, there was some discussion in Whangarei about how the understory of vegetation affects waterways and freshwater ecology. Participants commented on the changes in understory over subsequent rotations, as it generally changes from native (such as ferns and mahoe) to weeds such and pampas and gorse) and the possible impact of this on waterways.

Key Theme: Taking Responsibility for Downstream/Landscape Impacts

Participants raised general queries and concerns about the downstream impacts of forestry. They generated several indicators that would highlight the impacts of forestry downstream in general and compared with other land uses. These largely related to water quality and flow (adequate for downstream use or flooding). Participants in Gisborne noted the importance of forests in the landscape to reduce soil erosion, and Rotorua participants talked about the need to manage sewage disposal in forests carefully.

Table 4: Community indicators for soil and water resources

Theme	Description	Indicator
Nature of freshwater resources within production forest	Discoloration of waterways prevented.	*Silt content.*
	Water clarity monitored	*See if water clarity is declining.*
	Felling and road making – erosion impacts into waterways affecting clarity.	*Rules and enforcement – sediment in lakes e.g. Rotoiti has 100mm in 120 yrs – Rotorua has 800mm in 120 years – phosphorus.*
	Water quality (drinkable).	*Test water quality.*
	Drinkable (potable) water within forest	*Health and sickness of forest users.*
	Production by-product control monitoring shows reducing contamination.	*Potability of receiving waters (lack of toxins/chemicals, etc.).*
Evidence of waterway protection	Native forest — if water good.	*Keep water temperature below 19 degrees* *Harvesting timed to avoid sensitive times for fish* *No skidder harvest except on flat*
	20-metre riparian protection of streams through forest.	*Maximum coupe size*
	Baseline measurements to begin with in order to monitor change e.g. scientific testing – data	*Scientific testing – data accumulation*
Protection of freshwater biodiversity	Fish can spawn in streams through forest.	*No/low fine sediment in stream. Maintain oxygen levels.*
	Biodiversity within waterways in forest	*Observations/measurements (NIWA) to see if this is changing.*
	Felling and road making – erosion impacts into waterways affecting biodiversity.	*Rules and enforcement e.g. sediment and phosphorus in lakes* *Appropriate river crossings e.g. no culverts without fish access.*
Downstream/landscape impacts monitored and managed	Adequate water flows from forest to maintain streams/rivers.	*Identify unstable ground and maintain high standard of land management.*
	Maintain water quality standards downstream.	*Independent measurement of water quality.* *No didymo in forests.* *No road/skid site failure.* *Different tree species in watershed to stagger harvest times.* *Appropriate river crossings - no culverts without fish access.*
	Flooding downstream prevented.	*Historical records of height/regularity, etc.*
	Comparative measurements of streams coming from within forests and streams outside forests.	*Undertaking measurements.*
	Forests contribution towards soil conservation.	*Existence of forests on erosion-prone land.*
	Sewage disposal forestry needs to be managed sustainably to be effective.	*Needs to be cut and re-established – measurements for nutrient leaching.*

Biodiversity – Taking Care of Plants, Animals and Forest Health

Participants at each of the workshops except Auckland described indicators for managing biological diversity. Many of the conversations started with participants talking about what species they saw or heard in production forests and what the forests would be like if biological diversity was being well managed.

> [There is a] limited range of species being planted/grown in the plantation, but a wide range of species living there – galaxids, birds, insects, native plants as well as weeds
> **Dunedin**

> [Well managed forest would have] healthy riparian margins, wetlands, bush, mobile species, no wilding pines or old man's beard
> **Nelson**

> [It would be good if there was a] bit more birdlife – [the birdlife] would increase if [there was] more biodiversity in gullies and streams
> **Gisborne**

Some groups talked about the timeframes involved with measuring biological diversity, discussing when measuring should start – whether it should be what is in forests now, what would have been in forests at the start of production forestry development or originally. Most groups talked about the current situation of species and ecosystems in forests and their aspirations to maintain or enhance these. Some participants noted that if biodiversity was well maintained then water quality would also benefit.

Many participants were knowledgeable about concepts related to biological diversity and ways of monitoring this. Similar indicators were generated across the country (see Table 5) and three key themes emerged.

Key Theme: Commitment to Healthy Forest Ecology through Managing Biological Diversity

Participants talked about the need for forestry companies and the wider industry to commit to managing forests in a way that encourages healthy forest ecology. When discussing forest ecology and biological diversity, participants talked about specific native species, native ecosystems and issues with exotic species. Several participants noted the importance of having pest control programs that actively manage for these native species and ecosystems, not just productive forest species. Conversations included concepts of biological diversity at both a species and ecosystem level. Some participants noted that while monitoring during key rotational periods (e.g. development and felling) was important, longer periods and particular types of information were also important to reflect biological timeframes and show forest health trends:

> Walking up to [a] forest, [you] can't answer that question [of sustainable management]; [you] need to do it over a 75-year period
> **Whangarei**

> Can look at age distribution of species [this] will indicate change in environmental conditions; Count regularly, noting trends
> **Dunedin**

Key indicators participants discussed were companies committing to managing biodiversity within management plans and funding these plans, as well as the existence of and adherence to rules that have real consequences.

Key Theme: Protect and Manage changes within existing Indigenous Ecosystems and Species

In general, participants considered that there is much less biodiversity in production forests than in native forests, but that the biodiversity found in production forests is important and should be protected over the long term. Participants across the workshops commented that native biodiversity in production forests is found in riparian, wetland, freshwater (streams, lakes etc), remnant or understory areas. They talked in terms of specific species as well as ecosystems. Some participants commented on the need to manage for migrant/mobile species such as kaka.

Participants generally considered that native species and ecosystems should be protected and retained during felling and rotation activities, particularly riparian margins along waterways, remnant vegetation and significant species.

When talking about measures of sustainable management, participants most often talked about species surveys to find out what was in forests. These included identification of all species, age distribution of specific species, and maps of habitat. Some participants had a more extended view of managing biodiversity past identification and maintenance, to forest managers enhancing habitat and encouraging biodiversity. For example, one suggestion was diversifying the tree species grown in production forests to include more native species and other exotic production species (such as eucalypts) to benefit biodiversity.

The key indicators generated were to survey sites for species diversity and health on a regular basis and prior to and post felling. Participants considered that indicators should be able to show trends in environmental conditions over time, and as such would be able to show degradation to species and overall forest health.

Key Theme: Active pest control programs for wider outcomes

Participants talked about the need for pest control within forests. This was raised in various ways, sometimes because of an aversion to pest control techniques (particularly 1080), and other times because of the types of exotic species that participants have seen in and alongside forests, particularly weeds (such as wilding pines, old man's beard etc).

Comments about biosecurity management and indicators suggested that forest managers need to have active pest control programs that manage for a wider range of outcomes. These would include the health of native species and ecosystems both within and in close proximity to production forests, as well as recreational tracks and access points.

The indicators discussed for measuring biosecurity outcomes included general comments about 'less pests' as well as more specific ideas related to the outcomes participants preferred. For example, comments were made that wilding pine removal should be prioritized in significant natural areas, not necessarily all lands. Comments about native ecosystems within production forests focused on carrying out monitoring of key pest species (such as old man's beard) and active pest control programs aimed towards maintaining and improving the health/diversity of these areas.

Table 5: Community indicators for biological diversity

Theme	Description	Indicator
Approach and commitment to managing biodiversity	Manage biodiversity at species and ecosystem level. Commitment to healthy forest ecology.	*Funds allocated to landscape protection.* *Management plans for harvesting that regard native species* *Rules and consequences - clearance setbacks.*
Protect and manage changes in existing remnant native ecosystems and species	Indigenous vegetation in general and in marginal areas be maintained/retained including: — Riparian Margins. — Wetlands. — Forest Margins.	*Measure area of indigenous vegetation pre-post harvesting.* *Survey all riparian margins, wetlands, forest margins, remnant bush (minimum standard). Rules and consequences — clearance setbacks.*
	Flourishing/ variety of flora and fauna continues to exist in the forests. Forestry harvest takes mobile species into account (e.g. kaka, bats, weka) Biodiversity would be enhanced by diversifying indigenous plantings vs. exotic.	*Regular species counts – animals, bird life, key indicator species* *Analyse on a trends basis* *Age distribution of the above to highlight environmental condition change, need baseline long-term indicators* *Management plans for harvesting that regard native species*
	Freshwater ecosystem would be abundant in species	*Freshwater species surveys for native fish, eels, etc as well as trout, carp etc* *Specific counts on regular basis* *Observations/measurements (NIWA) to see if this is changing*
Active pest control for wider outcomes	Reduction in pests. Remnant bush - protection from destruction - weed invasion. Number of wilding pines, e.g. mineral belt.	*Less caught.* *Weed/pest control in remnant bush.* *Monitor health of natural remnants (old man's beard).* *How many wilding pines — monitor.* *Key areas — mineral belt — alpine areas —- granite/karst —- tussock lands.*
	Minimise area within forest covered by invasive weeds that restrict access (e.g. gorse, blackberry, broom).	*Proportion of area in invasive weeds.*
Information about animals for hunting	Animal population (wanted animals)	*Number of animals* *Ease of permission to access/hunt*

Forests as Part of Local Communities

Ideas about forests as part of local communities were often interlinked with discussions about access and forest management. Participants in several groups made general comments about their interaction with forests. There were some similar ideas about how the proximity of forests to townships can affect those townships because people see them, work in them and recreate in them. The indicators generated under this value relate to forest management in general and people's aspirations to protect important community sites within forests.

Key Theme: Acknowledgement and long term protection of species/ sites of community importance

Participants considered that sites of community importance within forests should be documented and protected or maintained over the long term. These included specific iconic species (such as the Redwoods in Rotorua) and historical sites.

Key Theme: Active management for multiple purposes

Overall, participants considered that forests (production or non-production) should be managed for multiple purposes that include native biodiversity, soil and water protection and in well managed access (depending, for example, on proximity to townships, aspirations of local communities and other agency support). The need for active management was emphasized.

Table 6: Community indicators for forests as part of local communities

Theme	Description	Indicator
Long term protection of species/ sites of community importance	Redwood trees (being amongst them)	*They continue to exist!*
	Points of historical interest are documented and protected	*Protection plans are in place*
Active management for multiple purposes	Active management for commercial, recreational and educational interests	*Publication of logging plans over a 5-10-year period*
	Wildlife continues to exist in the forests	*Surveys of animal and birdlife*
	Traditional access and usage rights are maintained (i.e. as forests are privatized rights diminish)	*Documented policy by company* *User surveys – measure user satisfaction and compare change over time* *Regional social surveys*
	Reasonably open access to forest	*No unreasonable access rules – people are happy*
	Avoiding conflicts of use	*Designated areas of use for particular user interests*
	Tracks and roadways are maintained	*Investment in maintenance*

Involvement in Managing Local Forests

Similar to the value 'forests as part of local communities', discussion and ideas about 'involvement in managing local forests' are intertwined within most of the other values. The Christchurch participants were the only group to specifically record indicators for managing local forests, and these relate largely to the approach to management, rather than general involvement.

Other groups talked about involvement in management as it related to specific values (such as access). For example, participants wanted to be involved in forestry forums/ workshops with forest managers as a means of developing or improving relationships between the parties for the purpose of managing access. Similarly, participants saw MOUs as a means of being a recognised and involved party in managing forest access. Participants in several locations wanted to be part of forums to help resolve user conflicts.

Many participants took the opportunity to be involved in this workshop series as a means of participating and talking through their general concerns and aspirations for sustainable forest management. A recurring theme throughout the discussions was the need for information. Participants wanted to see evidence of the commitment, effort and outcome of management for biological diversity, soil and water, sites of community interest and access. One participant suggested that people need to discuss the longer term view of forestry in New Zealand; particularly the types of species planted and approaches to felling.

Participants may be more interested in being involved in specific issues management rather than forest management per se, provided they see, or have access to, clear information showing evidence that forests are being managed to protect the full range of values.

Table 7: Community indicators for involvement in managing local forests

Theme	Description	Indicator
Managing local forests for a full range of values	Commitment of forest owners to forestry.	*Area of forest cover and mean age distribution of forest.*
	Minimise area within forest covered by invasive weeds that restrict access (e.g. gorse, blackberry, broom).	*Proportion of area in invasive weeds. Aim reducing.*
	Number of tracks available to the public.	*Increasing or decreasing per year. Change of length per year +/- each year and funds made available from District and Regional Council to maintain them.*
	Maintain character of forests by minimising windrowing.	*Change in length of windrows. Aim: reducing.*
	Commitment to healthy ecology of forest.	*Funds allocated to landscape protection.*
	Sensitive harvesting methods.	*Clear fell areas per unit cut. Duration (time) of bare clear felled land.*

Forest Productivity

Ideas about the productivity of forests were discussed at some of the workshops, but were not the main focus, and few indicators were generated for this value. Participants in Dunedin noted that the volume and quality of timber, the costs and income of forestry operations were useful indicators of productivity. They also noted the importance of accounting for contributions forestry companies could/should make towards the upkeep of roads. Gisborne participants noted that it is important that forests continue to grow wood of economic value.

Several comments were made that production forests are managed solely for productivity and economic value, and that whilst some community forest values are contrary to productivity, the industry needs to achieve a balance.

Table 8: Community indicators for productivity

Theme	Description	Indicator
Productivity	Productive capacity of forests for timber	*Forests would continue to grow wood of economic value*

Forests as Carbon Sinks

Few comments were made about forests as carbon sinks, and no indicators were generated about this value. Some statements were recorded about the importance of forests for managing carbon and adhering to the Kyoto Protocol, particularly for the future. Several participants indicated that they understood forests absorbed carbon and were an important part of the landscape but that they were confused or misinformed about the relationship between carbon initiatives, particularly carbon taxes, and deforestation, particularly in the North Island as large tracts of land have been turned into dairy farms.

Forests as Landscape Features

Participants had a broad range of views about forests in the landscape, and many of them acknowledged that views of landscape are largely subjective, not just between individuals but culturally within organisations. One example was given that the Department of Conservation does not like wilding pines, but that some of the participants didn't see them as a big issue. Some participants noted that it is difficult to measure landscape values because of this breadth of views. Statements were made across most of the workshops that the landscape looks destroyed when forests are clear felled.

No specific indicators were generated about forests as part of the landscape.

RESULTS BY REGION

This section presents the results on a regional basis in geographical sequence from north to south. Key workshop themes from each study location are outlined followed by results of the forest values discussion and development of indicators for chosen values. Indicators are presented in similar tables to the previous section.

Whangarei Case Study

Participants at the Whangarei workshop represented two four-wheel drive clubs, a mountain biking club, a pony club and Forest and Bird.

Key workshop themes

- Results indicate that biodiversity, access and water quality are the key issues of concern to forest user groups at the workshop.

- Participants recognized the difficulty of measuring whether a forest was sustainably managed over time because of the long timeframes required to gain good baseline information about biodiversity and water quality.

- The group was generally keen to be involved in managing access, with users maintaining tracks, aiming to foster a positive culture around forest access for recreation.

- Participants acknowledged the need for user education and the potential for conflict between different types of forest users. They generally considered that the more access permitted, the better the forest will be looked after by users.

- The need for similar access rules for all forestry across the country was raised.

Impressions of the forest values presentation
There was little discussion amongst the group about forest values. The key point made by participants was that forests are largely managed by multinational companies, which seem 'hell-bent on keeping New Zealanders out'. Discussion quickly progressed on to specific values and indicators.

Indicators for locally relevant values
Participants concentrated on developing indicators for the three values set out in Table 9 and discussed below.

Table 9: Locally relevant community indicators for Whangarei

WHANGAREI		
VALUE	DESCRIPTION	INDICATOR
Biodiversity	Flourishing flora and fauna.	*Need base long term indicators.*
	Reduction in pests.	*Fewer caught.*
	Fish/[other species] - life preserved.	*Specific counts on regular basis.*
Access	Keeping out undesirable users.	*Damage to forest is less.*
	Allocated walking tracks, trails.	*Head counts.*
	Above is maintained on groomed/signage.	*No conflicts with users.*
	Fewer padlocks found in future.	*Increase in usage figures.*
	Free access to large areas more available.	*Public/club feedback.*
	Users will be identifying environmental/vandalism/fire/maintenance issues on a regular basis.	*Public/Club feedback to managers/owners.*
	Similar rules across all Government or corporates across country.	*More consistency in management documents over time.*
Water Resources	Discolouration of waterways prevented.	*Silt content.*
	Flooding downstream prevented.	*Historical records of height/regularity, etc.*
	Water quality (drinkable).	*Test water quality.*
	Production by-product control monitoring shows reducing contamination.	*Potability of receiving waters (lack of toxins/chemicals, etc.).*

Biodiversity
Participants noted that a 25-year forest rotation allows considerable native undergrowth to develop. They commented that it was difficult to measure whether a forest has been sustainably managed if you just look at it over a short time period – one participant asserted it would need to be monitored over a 75-year period. Another asserted that you should be able to tell just by walking through forest but this was disputed as being only a snapshot in time.

The group also noted that areas that were farmland 60 years ago are now all forest, with the land use change being based primarily on monetary gain. One participant questioned whether forestry was any better than pasture land.

The group considered that if biodiversity was maintained well, water quality should be okay.

Access
The group discussed the idea of having fewer padlocks in the forest in the future as an indicator that more people have access. They noted that users needed education, and talked about maintaining tracks for users and sustaining access. The group talked about a culture of users asking 'how can I get a key?' instead of thinking 'I have a big hammer!' [for the aforementioned padlocks].

The question was also posed 'Are the public good about using the tracks?' Participants responded that walkers sometimes go the wrong way up mountain bike tracks. Four-wheel-drive users noted that DOC says they run down toitoi but considered that sand blow covers toitoi up naturally anyway. They also asserted that you couldn't see where four-wheel drives had been a few hours later, because sand covers the tracks up.

Other participants commented that it is not the public or clubs but individuals who are doing damage. Concern was expressed about avoiding injuries as a result of a clash of user types (walkers, horse riders, mountain bikers). Damage to mountain bike and walking tracks by motorbikes and four-wheel drives was also raised as an issue.

Some participants suggested that there were different attitudes down south to forest access, with DOC mapping 4WD access. This is different to 'up here' because the population of Auckland places too much pressure on forests. One participant gave the example that previously forest users numbered around 10 a week, whereas there can now be up to 100 users on a good summer weekend.

The group also considered that generally the more people who are allowed access to use the forest for recreation, the more the forest will be cared for. One example given was of recreational users finding and removing stolen cars from forest areas in the weekend. Others suggested that 'cash croppers' wouldn't use an area if others are allowed access and that user clubs would feed back information about any vandalism to forest owners. Participants suggested that gates are padlocked and clubs are provided with keys, which they could self-police.

The need for similar access rules for all forestry across the country was raised. Rotorua was noted as an area which manages to mix various interests very well in terms of forestry users, compared to Northland where 'we just don't get in.'

Water Resources
The group discussed the idea of baseline indicators of water quality, with some considering that every ecosystem needs its own separate baseline, while others supported the need for overall baseline indicators. One participant noted that an environment court judge could be convinced of anything because there were no baselines available, while another emphasized that to get a good baseline, monitoring is needed over a 25+ year time span.

There was some discussion around the understory in plantation forestry in relation to water quality. One participant noted that for the first planting the understory will be ferns and 'whiteywoods', while the understory of the second planting will be a mix of species, and the third planting will be gorse and pampas. Pest species (both flora and fauna) move in when the native understory dies out. The group agreed that it is important to see a reduction in pests, with fewer caught over time.

Participants also talked about wanting to be able to drink water. Some mentioned that the local landfill was not adhering to drinking water standards, and considered it important that national environmental standards are adhered to.

Water resources were also talked about in terms of access. The question was posed 'How do we know if access is desirable?' Participants responded by suggesting that flora and fauna will be flourishing. Some noted that forest companies themselves do damage to the environment, such as damage caused during harvesting, damage to waterways, logs over waterways and erosion. One participant gave the example of Kaeo where siltation and blockages of waterways as a result of forestry clearance has resulted in flooding. Others pointed out that companies aren't allowed to cut 20 m either side of waterways, and where the forest is part of a government land bank, they will be subject to more than just regional council requirements.

Involvement in Management
Participants talked about the fees they pay for access to the forest, and that these were starting to become an issue.

One participant who is a mountain bike club representative discussed their role in managing and maintaining trails within a forestry area. They noted that they are developing 5-6 km of trails each year and increasing numbers of people are using them, with the clear understanding that this will end when harvest time comes. They noted there is no charge for access, but they ask for a $2 donation towards maintenance.

Another participant involved in four-wheel driving commented that when a forestry block was sold, access fees began increasing even though the club maintains the tracks. They said that fees were for fire watch costs incurred by the company.

Another participant noted that each mountain bike event has a $250 'royalty' per event to the company and that it is starting to become an issue.

They noted that one company had caused significant damage after harvesting and considered that they were only interested in production and health and safety issues, and the 'mess left afterwards was someone else's problem'. Participants considered that companies needed to account for other issues as well.

Auckland Case Study

The Auckland workshop was one of the larger workshops with representation from local residents and community groups, local businesses (including off road vehicle and mountain bike parks), horse riders, orienteering and athletics clubs, mountain bike clubs, off road vehicle businesses and clubs.

Key workshop themes

- The most important value for the Auckland participants was access for recreation and use. There is an obvious tension between user groups about differing access priorities and impacts. There is also a tension between local forestry managers and some forest user groups about access issues.

- Auckland's high population density exacerbates access issues because of the number of people wanting to access forests for a wide range of pursuits.

- Participants recognize the importance of taking responsibility for their activities in forests, particularly looking after tracks and managing user conflicts.

- The lack of continuity of forest ownership and management concerns forest users because it affects their access rights. Users are worried that they may not be allowed access to the forests in the future or will have to pay high fees to do so.

Impressions of the forest values presentation
Discussions about values and throughout the workshop confirmed that the Auckland forests are highly significant to local users and residents. The main theme generated from the value discussion was the tension and frustration caused by the scarcity of the forest resources versus the high population density and associated recreational pressure of the Auckland region. Discussions indicate that these conflicts affect individuals, user groups and the forestry companies.

Indicators for locally relevant values
All of the participants chose to work on the issues and indicators associated with forest access. Aspects of other values emerged but were most frequently talked about in terms of access values – for example, protecting flora and fauna by keeping to tracks and restoring any damage after use. Indicators are set out in Table 10 and discussed below.

Guarantee/ formal acknowledgement of access
Participants showed frustration about the lack of continuity of ownership and management regimes between different companies, different owners and forests in public or private ownership. Some participants were very concerned about local forests being sold to iwi as they perceived this would restrict their access rights even further. They were also sceptical about the future ownership or management regimes that might occur under Treaty of Waitangi claims. Many participants talked about the need for formalized access agreements that guaranteed long term access regardless of management changes. These were talked about both from a public and commercial perspective (i.e. recreation businesses). One participant noted that businesses need security of access so they can invest in forest improvements (i.e. tracks/ facilities) and in capital (e.g. bike trailers). Within these discussions, many participants commented that access needs to be managed.

Table 10: Locally relevant community indicators for Auckland

AUCKLAND		
VALUE	**DESCRIPTION**	**INDICATOR**
Guarantee and/or formal acknowledgement of access	Long standing covenant that guarantees continued access.	*Access available or denied.*
	Forest access is continued for recreation groups.	*Level of investment and certainty (uncertainty means business recreation groups don't want to invest).* *Ownership – Not sold to Iwi.* *Access is managed.* *Areas are not reduced in size* *Crown Forestry Act – access rights improved*
	Communication to/between commercial and recreational users.	*No surprises.*
Access & facilities for variety of pursuits	Lakes – trout fishing.	*Fishing rates/ water quality*
	Still quality horse riding	*Registered rider numbers and enjoyment level*
	Woodhill '100' motor race	*Race still running*
	Walking – variety and length of walks	*People enjoyment – survey.*
	Parking – availability, access & numbers	*Vehicle numbers and area and variety.*
	Organised events – ease of operation.	*User satisfaction survey/no. events/ complaints*
	Access ways staying open	*Days of year open.*

Managing user conflicts	Multiple user groups can use forest without conflict and without domination by any one group.
	   – affordable/free
	   – continued access
	   – encouraged
	   – multiple users co-existing/co-ordination
	   – communication
	   – less restricted
		No accidents e.g. horse vs. motorbike
		 Satisfaction of individual user groups (surveys), including questions such as parking availability

	Forest multi-access areas are being managed by Health and Safety issues (i.e. horse riders vs. motorbikes).	*No accidents/incidents* *Shared areas for groups that work well together – bigger areas for both.*
	Harmony/Co-operation between forest users	*Accidents & complaints – hunters vs. horse rider's safety; walkers vs. vehicles.*
	Motorbike/quad/vehicle noise vs. quiet, silence, isolation.	*Decibels/complaints/policing*
	Rutting (moguls) on tracks – after motorbike events. Trees fall over, can't ride horses or cycles on it afterwards.	*Tracks are managed/grades – motorbikes limited.* *H & S fire breaks access damaged.*
	Good mix between commercial land non-commercial users.	*Access for all, including public – not just businesses. Parking.*
	Mechanism where conflicting claims on use could be resolved.	*Issues resolved conflicts minimized.*
Managing environmental impact of recreational use	Minimizing impacts of use, not altering landscape.	*No physical or visual damage after use.*
Managing boundaries/ access points	Consideration of neighbours Boundary access – development and subdivision of neighbouring farms.	*Neighbours consulted/access ways planned.*
	Boundary with farms – could be maintained for horse riding access [and to] reduce horse float use on roads. Can increase or decrease values significantly when access is taken away.	*OSH/ACC report accidents.*

36

Access & facilities for variety of pursuits
The majority of participants agreed that local forest access should be available for a full range of pursuits. A key point was that this needs to be managed so that no group/pursuit dominates the area or decision making, and/or diminishes the recreational experience of others.

Managing user conflicts
A key theme discussed as a means of managing user conflicts was segregating users into different parts of the forests. Some participants stated that they didn't want to be 'jammed in to smaller and smaller areas' because their experience is lessened and there can be safety issues. Many of these users were horse riders, and noted the benefits they get from having access to production forest areas.

> 'Land area forest has provided us with large area that wouldn't be available in smaller fragmented blocks (city parks etc).'

Others contradicted their views stating that segregation would mean users weren't 'treading' on each other. Some participants suggested that it would be most beneficial to put 'like use groups together so we both have larger areas'.

Associated with this, some participants suggested that forest managers could run harvesting plans to better accommodate user groups which in effect would lessen user conflicts and conflicts with company staff.

> 'If [harvesting was] done in small blocks then if we can get access around in areas still available. Location is different, but still within the area. Lose one [area], gain another.'

Some specific conflicts exist, particularly between horse riders and motorized vehicles. Comments were made that in the 'Forest Service days' staff used to maintain the tracks and roads but now nobody does, and tracks are rutted to the point where they can't be used. Participants noted that there is a need for users to take some responsibility for looking after tracks, particularly those users who cause more damage in certain environments (such as motorised vehicles).

In discussion about managing conflict, a key point was made that communication needs to be improved not just between the forest managers/owners and user groups, but between user groups themselves. This would give groups an appreciation for how and where they were using forest areas and provide some forum for preventing and/or dealing with conflict.

Managing environmental impact of recreational use
Managing damage caused by recreational activities was raised as an important part of sustainable forest management, to protect the forest environment and as a tool to lessen conflict amongst users. Participants noted that some activities cause significant damage (such as rutting, track widening and exposing or breaking tree roots) that should be managed and restored.

Managing boundaries/ access points
There were a few individual forest neighbours who attended the workshop who were concerned with property boundary management. A key point made was that the existence of access points off their boundaries could influence their property values. They noted that there needs to be early warning and better communication about any changes or opportunities to change boundary access points.

Rotorua Case Study

The Rotorua workshop was one of the larger workshops, with participants representing three local horse riding clubs, a horse trekking business, athletics clubs, hunting clubs (representing individuals and several groups including Deerstalkers, local Maori Trust hunters), a tramping club, Forest and Bird, Fish and Game, and the Lakes Water Quality Society.

Key workshop themes

- The impact of forest harvesting and roading on water quality was a significant issue for the Rotorua workshop because of the need to protect lake water quality. Rules and enforcement were viewed as important tools to address this.

- Access was also a key issue, with much discussion about the need for clear information well in advance from forest companies about harvest plans, so that user groups can prepare for changes to access and tracks. The group valued open, honest and timely communication.

- The potential for 'over-access' was raised, given the popularity of local forests for users both within and outside the region, and the number of large events being staged in local forests on a regular basis.

Impressions of the forest values presentation

When asked what values were missing from the 2006 research, participants raised beauty, hunting and clean air (although these did in fact come within the nine value groups listed). One participant questioned whether the values reflect both public and private forests.

Participants commented that there are conflicts between values, e.g. hunters like forests cut down and hunting in young forests that re-grow. Others noted that the scope of forests across the landscape is important, particularly as this is currently under threat from dairy conversions. The group pointed out that Rotorua is unique, because 'everyone' uses the forests and they are close to townships, and they considered that forest values were different from elsewhere because of this accessibility. They noted that many people travel from other parts of New Zealand to visit the Rotorua forests.

Indicators for locally relevant values

Participants concentrated on developing indicators for the four key values set out in Table 11. Note that there were two groups both working on access indicators.

Table 11: Locally relevant community indicators for Rotorua

ROTORUA		
VALUE	**DESCRIPTION**	**INDICATOR**
Water resources	Baseline measurements to begin with in order to monitor change e.g. scientific testing – data	*Scientific testing – data accumulation.*
	Drinkable (potable) water within forest	*Health and sickness of forest users.*
	Water clarity monitored	*See if water clarity is declining.*
	Biodiversity within waterways in forest	*Observations/measurements (NIWA) to see if this is changing.*
	Sewage disposal forestry needs to be managed sustainably to be effective.	*Needs to be cut and re-established – measurements for nutrient leaching.*
	Felling and road making – erosion impacts into waterways affecting clarity and biodiversity.	*Rules and enforcement – sediment in lakes e.g. Rotoiti has 100mm in 120 yrs – Rotorua has 800mm in 120 years – phosphorus.*

	Comparative measurements of streams coming from within forests and streams outside forests.	*Undertaking measurements.*
Forests as part of local the community	Redwood trees (being amongst them).	*They continue to exist!*
	Points of historical interest are documented and protected.	*Protection plans are in place.*
	Active management at commercial, recreational and educational interests.	*Publication of logging plans over say a 5-10 year period.*
	People continue to use the forest.	*Satisfied public – no letters to editors!* *Regional social surveys.*
	Reasonably open access to forest.	*No unreasonable access rules – people are happy.*
	Avoiding conflicts of use.	*Designated areas of use for particular user interests.*
	Wildlife continues to exist in the forests.	*Surveys of animal and birdlife.*
	Tracks and roadways are maintained.	*Investment in maintenance.*
Access (mainly Fish and Game and hunters)	Access forests with no net loss to publicly accessible areas of forests for all legitimate activities.	*No's of permits issued.* *No's of closed areas/closed times.*
	Ongoing productive relationship between recreation groups and forest managers to enhance access.	*Increase/no fewer access points.*
	Continued free and practical access to forests without 'commercialism"'squeezing users out.	*Practical and reasonable access available.* *Surveys of user satisfaction.*
	Access and uses of forests not unreasonably denied via 'unjustifiable excuses'.	*Travel times and "comfort" levels into forests.*
	Users are acting responsibly while in the forests.	*Useable maps and information of access available* *Number of hectares of publicly owned forest.*
Access (mainly horse riders)	Ride horses in forest any time safely for pleasure.	*No. of riders – usage – access visually and permitted.*
	Access to all areas = production and recreation.	*No damage to flora and fauna.*
	No damage x horses protect plantings and trees.	*Changing – routes – to meet production areas.*
	Areas that minimise conflict with other recreational users.	*Areas are felled then re-planted for continuous use.*

Water Resources

The group working on water resources was made up mainly of Lake Water Quality Society members, who had a good grasp of the science involved in this topic. Wider group discussion on the topic focused on the impact of felling and road-making as the main issue, and to how to ensure that clarity and biodiversity are maintained. Suggestions included rules and enforcement, because sediment in the lakes is a significant issue and no deterioration in water quality should be allowed. Other suggestions included planting more forestry around water areas. The group noted the importance of having baseline data to monitor from.

Forests as part of the local community

This group was made of up a mix of participants, who focused on visual indicators. They identified the need for good signposting to let users know what's in the forest and where they can go. The issue of 1080 was raised – 'how do we know it is managed safely?' – and the group discussed the

need for checks and balances to ensure sustainability across all areas. During discussion, other participants noted the importance of recording points of historical interest and iconic species and making sure these remained in existence. They noted that social surveys would be useful. Participants on the whole were genuinely interested in forest in the landscape and noted that they were generally confused about the links between carbon taxes, deforestation and dairy conversion.

Access

The group made up mainly of horse riders emphasized that they can't use the same tracks all the time as it will cause long-term damage. Their key indicator of sustainable management was being able to ride horses in the forest at any time safely for pleasure, minimizing conflict with other recreational users. This would mean that riders were actually visible and permits were issued.

The group made up mainly of Fish and Game representatives and hunters had very definite ideas and had a lot of discussion around these. They defined sustainability as no net loss in access, but noted they'd like more access. They also acknowledged that they are lucky forest use is free in Rotorua, as this is not the case further north.

This group was concerned about unjustifiable excuses to prevent access (such as safety). They also felt that users need to give something back, noting that 1 in 50 are not responsible users. They suggested using a ratio of public to private ownership be used as an indicator/measure of accessibility.

When asked to choose the main point to ensure sustainability, this group opted for no net loss of public accessibility to forest. However, the wider group raised a number of issues around 'over-access' leading to environmental degradation and loss of quality of experience, giving the Blue Lake as an example. Some raised the idea of limiting numbers at any one time, while others considered more facilities were required to deal with this issue.

The wider group also discussed the idea that productive forests will sometimes need to be cut and asked whether people could accept that. Some people considered that most local user groups understand this but individuals may not. One participant considered that having 80% of the forest useable at any one time would be ideal.

The need for good advance information about harvesting plans and times to be available to users was raised, with the wider group noting that if everyone knows what is going on, they can work together much better. One participant noted that forest owners don't want the 'flak' of carrying out activities without letting people know, so they need to be open and up front. Early warning of track changes is needed so groups can work through a process of changes with forest companies, rather than getting to harvest time with no notice.

Safety was identified as a big issue for users, who need to know when felling will be happening. Some used the example of Kaingaroa, where the whole forest is determined an unsafe area when one area is being felled. Others noted that some people get permits and think that means they can ignore safety signs and closed areas.

The wider group also raised the issue of commercial interests using forests for big events every weekend, which needs better management by the local council. Some people consider that if large areas are being used by huge numbers every weekend, it will push out other users.

Gisborne Case Study

Participants at the Gisborne workshop represented Sports Gisborne, Forest and Bird and a local canoe and tramping club.

Key workshop themes

- Access to production forests for hunting was identified as a significant issue for the Gisborne workshop participants. Concerns were raised about forest companies restricting public access to maintain hunting opportunities for forest owners and staff.

- Participants were divided as to whether forestry was a positive part of the local community and economy, but acknowledged that it was an important land use for erosion-prone land. Concerns were raised about rural depopulation and the impact of forestry on historic pa sites and the local landscape.

- The need for protection of indigenous remnants and biodiversity within production forests was emphasized, particularly during harvesting.

Impressions of the forest values presentation

Participants considered the past values research provided a good list of values overall. However, they noted that hunting was very important for the Gisborne region and considered it could be listed as a separate value, given that it is such a productive activity.

Indicators for locally relevant values

Participants concentrated on developing indicators for the three key values set out in Table 12. They also discussed a range of other values, as set out below.

Table 12: Locally relevant community indicators for Gisborne

GISBORNE		
VALUE	**DESCRIPTION**	**INDICATOR**
Access	Access is freely available to all parts of the forest to meet the demand for recreational use.	*Number of permits issued.* *If freely available – regular head counts* *Relating permits to area of forest.* *Relate to national surveys i.e. Active N.Z. Survey.* *Monitor access permits related to activity i.e. permits for tramping/hunting etc.* *Development of infrastructure for recreation increasing i.e. MTB tracks, fishing or walking access tracks.*
	Forests contribution towards soil conservation.	*Existence of forests on erosion-prone land.*
Productivity	Productive capacity of forests for timber.	*Forests would continue to grow wood of economic value.*
Indigenous biodiversity	Biodiversity at species and ecosystem level.	
	More bird life.	*Regular bird counts – key indicator species, such as kereru, tui.*
	Freshwater ecosystem would be abundant in species.	*Freshwater species surveys for native fish, eels, etc. trout, carp.*
	Indigenous vegetation is maintained/	*Measure area of indigenous vegetation pre-post*

41

GISBORNE		
VALUE	DESCRIPTION	INDICATOR
	retained.	*harvesting.*
	Biodiversity would be enhanced by diversifying indigenous plantings vs. exotic.	
	Hunting is valued and high participation in this region.	*Access readily available to all parts of forests for hunters.*

Access

The group emphasized that the Gisborne region is unique in that hunting is in the top 10 of recreational activities.   Many of the comments about forest access were made in relation to hunting, even though there were no deerstalkers or pig hunters present at the workshop.

Participants noted that local planted forests have roads all over them for hunting access, but indicated that local foresters can tend to restrict hunting access to owners and staff, in some instances releasing deer and pigs into forests specifically for hunting. Some participants contended that because considerable local forest is on Crown land, access should be guaranteed through the Forest Accord[7].

The group felt that forest companies use all sorts of excuses for restricting access – fire, etc – but consider that some of this is related to protecting their own hunting patch. The result is 'a lot of aggro' around access with gates being blown off hinges or cut in half in some cases.

A large area of local forest is also on private land (Hikurangi). Some blocks are privately owned and managed locally, with participants noting that on Maori land especially, hunting is reserved for the owners.

Some participants considered that access is much harder to get for hunting than activities such as walking. People suggested that information about forest use could be picked up from some of the existing surveys, such as active participation (hunting, walking, cycling). Others suggested it would be useful to look at the number of tramping vs. hunting permits, to see what was more popular and how it was changing over time.

Access through production forests for trout fishing is also important in the Gisborne area. Walking up rivers can be an option for freedom of access. Participants stated that evidence of tracks forming in production forest for mountain biking or fishing access indicates that there is increasing demand for access.

Participants noted that mountain bike use of production forests in Gisborne is small compared to other regions, as there are not a lot of recreational areas close to town. However, those areas close to town are well used because of ease of access.   Walking tracks don't appear popular either, with the example given of tracks established in one local forest by a range of organizations being unused and eventually removed.

Productivity

The group discussed that productive capacity is important because it is how we know if forestry is economic. They noted that taking forests out isn't necessarily bad, but rather a reflection that something else is a more economic use of land.

Participants raised the issue that some areas in the north of the region can't be harvested because they are not economic due to distance for transport.

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[7] The workshop scribe later checked the Accord and considers this provision probably only relates to conservation issues. The Forest Access Act 1989 may also contain relevant information on this issue.

Some noted that because Gisborne Port is not big compared to neighbouring ports, any local decline in forestry will have a significant impact on the port. In contrast, others considered that the forest industry won't do much for the district at all, citing a Lincoln University study which reports that the forestry benefits to the district will only be bigger than farming if timber is processed within the district. The study was apparently undertaken when forestry returns were good and farming poor.

Indigenous Biodiversity
The group discussed the idea of indigenous biodiversity in production forestry as significant in the understory, riparian areas and native remnants. Participants noted that the original plantation forests don't include any waterway protection, but considered that the next planting (if there is one), should be set 20 metres back from waterways. They also considered that bird life and freshwater ecosystems would improve if there was more biodiversity in gullies and streams within forests.

Participants felt that indigenous flora and fauna should be protected and retained during harvesting. Some suggested measuring the area of indigenous vegetation before and after harvesting, as well as conducting freshwater fauna surveys and bird counts/bird calls (tui, bellbird, tomtit, kereru).

The group also discussed the idea that there is a lack of biodiversity in production forestry, which is a monoculture. They considered this could be an issue in the long-term and could be addressed by planting more species, not just radiata, e.g. eucalypts, which have a good understory.

Soil Conservation
Participants suggested that if Gisborne didn't have exotic forests, they would have eroded land. They agreed that forestry was the only option on eroding pasture land and noted that past forest subsidies had facilitated the planting of exotic forestry in the area.

Forests as landscape features
Some participants didn't consider forests as a positive landscape feature, making comments such as 'Don't know where I am sometimes in bloody pines', 'Spoil attractiveness, don't see anything', 'Could be in the steppes of Russia!' and 'Pines aren't interesting.'

Forests as part of local community
Some participants didn't consider that forestry was a positive part of the local community, citing research that shows forestry destroys local communities because of depopulation, but at the same time they acknowledged the need for land cover for soil conservation.

Others raised the issue of forestry that has been planted on old pa sites, covering up part of the region's history and destroying views of pa sites. They considered it wasn't appropriate to plant or remove plantings from these areas judiciously.

Nelson Case Study

Participants at the Nelson workshop represented Fish and Game, Forest and Bird, motorcycle and trail riding clubs, horse-riding, two tramping clubs, trout fishing, harriers, walking and cycling interests and a triathlon club.

Key workshop themes

- Access to forest areas is a significant issue for forest user groups in the Nelson area, users feeling concerned that access options are becoming more restricted over time and forest roads are not as well maintained as previously.

- Forest users would like easily available clear information about where access is available and who to talk to about obtaining permission to enter locked areas etc. There appears to be confusion about who to talk to about access issues.

Impressions of the forest values presentation

During the values discussion, participants talked about how forest access has become more and more restricted over recent years, expressing frustration about the public's inability to access what is still public land. Concern was also expressed about restricted access to forest roads, which are often important access routes for recreation.

Participants suggested three key values they considered were missing from the previous values research: employment opportunities ('forestry is the number one earner for Nelson'); peace – a place to get away from the noise; a wilderness experience (forests allow people a sense of remoteness even though they're still close to town in reality).

Indicators for locally relevant values

Participants concentrated on developing indicators for the three key values set out in Table 13. They also discussed "local communities" as a value, as set out below.

Table 13: Locally relevant community indicators for Nelson

NELSON		
VALUE	**DESCRIPTION**	**INDICATOR**
Access	Decrease conflict between user groups.	*Decrease in complaints i.e. positive reporting of outcomes.*
	Access to a wide ranging area	*Permits available? Yes or No.*
	Increased involvement of recreational user groups in forest management.	*Participation in Forum and managements.*
	Greater opportunity to enjoy forests (increase clubs membership)	*Increase in memberships.*
	Greater environmental awareness - cultural shift — community.	*Better outcomes — less damage to forest environment — rubbish dumped. Self policing policy.*
	Able to be used by locals.	*Number of community groups using. Visitor books/road counters/permits.*
	Financial cost to community groups to access forests.	*Access charges DROP.*
	Recognition that not for profit groups are not a commercial entity. Therefore the requirements for access need to reflect	*More user friendly. Plain English agreements. Access requirements.*

44

NELSON		
VALUE	**DESCRIPTION**	**INDICATOR**
	that.	
	Recognition of smaller groups.	*Liaison officer and/or information sheets.*
	Services — amenities.	*Picnic table/Toilet/Rubbish tins.*
	Coronation Forest — Arbor day.	*School groups planting/education.*
	Adopt an area — walking track - lookout — stream.	*Involvement in forest (management) husbandry.*
	Can get into the forests/public land.	*Permanent open ways (managed like state highways).*
	Issues of local closures.	*No locked gates on key public routes.*
	Permanent locked gates.	*Information on how/who to get access is easily available.*
	Lengthy closures — especially access to 'further on'.	*Central coordination of what access is available/gaining permission.*
	Visitor information panels should be clear.	*Consistency of signage. More and better signage (especially NCC land and directional on tracks). Public/private consistency on road/track quality once reopened and ongoing. Maintain standard of access.*
	Access to and through forests in total for all activities — agree to be responsible for own safety — variation to forests in time and space.	*No. of permits where relevant. Communication on accessibility —- identify legal access/owners. Survey users on their satisfaction. Register of complaints to independent agent. Measure/identify range of/for different recreational activities. Reduce costs of/for access. Length/number of access points or roads.*
Water quality	Native forest — if native water good.	*Keep water temperature below 19 degrees — timing of harvest avoids key timing. No skidder harvest except on flat.*
	Fish can spawn in streams through forest.	*No/low fine sediment in stream. Maintain oxygen levels.*
	20-metre riparian protection of streams through forest.	*Maximum coupe size.*
	Adequate water flows from forest to maintain streams/rivers.	*Identify unstable ground and maintain high standard of land management.*
	Maintain water quality standards downstream.	*Independent measurement of water quality. No didymo in forests. No road/skid site failure. Different tree species in watershed to stagger harvest times. Appropriate river crossings — no culverts without fish access.*
Biodiversity	Riparian Margins. Wetlands. Forest Margins.	*Survey all riparian margins, wetlands, forest margins, remnant bush (minimum standard). Rules and consequences — clearance setbacks.*
	Remnant bush — protection from destruction — weed invasion.	*Weed/pest control in remnant bush. Monitor health of natural remnants (Old man's beard).*
	Mobile species — native animals. Kaka, bats, weka — forestry harvest takes this into account.	*Monitoring of native animals. Management plans for harvesting re. native animals.*
	No. wilding pines, e.g. mineral belt.	*How many wilding pines — monitor. Key areas - mineral belt — alpine areas — granite/karst — tussock lands.*

Access

The group addressing access discussed the idea that Nelson, as an urban area, is bordered completely by pine forest, which means that forest closures are a real issue for users. They considered that clear, easily available information was needed about how to get access to different areas of forestry, because often no-one knows who to talk to. One suggestion was a website co-

ordinated between agencies and companies and updated weekly, based on an initiative already operating in Marlborough.

There was also some discussion in the wider group about forest management being focused on the next immediate activity, meaning that tracks are not maintained at a high standard across the forest. Helicopter access to address fire risk has also removed the need for well-maintained roads, which affects access for user groups. The wider group also discussed the trend over time towards user exclusion from forest areas.

Water Quality
The group identified what would be happening if water quality was being well managed. Key points included: no didymo; careful replacement of culverts; fish spawning; riparian protection where there is no planting to protect streams; adequate water flows; appropriate river crossings for heavy vehicles; no culverts. The group thought these indicators of good management could be measured by making sure water temperatures were low enough, harvesting was timed to avoid sensitive times for fish, the amount of fine sediment in streams was low, careful road and skid designs were used, and harvests were staggered.

Biodiversity
The group identified what would be happening if biodiversity was being well managed. Key points included: healthy riparian margins, wetlands, bush etc.; mobile species; no wilding pines or old man's beard. The group thought these indicators of good management could be achieved by making sure remnants are surveyed, there are rules around encroachment of forestry on native remnants, set-back zones are required, active weed and pest control is undertaken, and management plans are in place to maintain biodiversity in pine forests.

Local Communities
The group identified what would be happening if forests were being managed to take account of local communities. Key points included: locals are able to use forests for fun (measure numbers using); financial costs dropping for forest use; access agreements are simple and appropriate to not-for-profit groups; greater services and amenities are available to the public; areas are available where kids can plant on Arbour Day, e.g. Coronation Forest in the Spooner Range; increased community participation leading to less anti-social and illegal behaviour.

Christchurch Case Study

Participants at the Christchurch workshop represented the Game and Forest Foundation, Canterbury Athletics, Hanmer Forest Heritage Trust, the Farm Forestry Association, and orienteering and mountain biking clubs.

Main issues rising from the workshop

- Access was a key issue of concern for participants at the Christchurch workshop. It is difficult to measure forest use and the level of access available. The need for monitoring of user compliance with forest rules and of forest damage was raised, along with the idea of focus groups or workshops for forest users.

- Local involvement in the management of forests was also a significant issue, with concerns raised about the ability of current forest owners to meet multiple objectives rather than just focusing on production   Forests need to be recognised as multi-faceted resources that are part of the local community and require sensitive management.

Impressions of the forest values presentation
Participants didn't consider any values were missing from the previous values research.

Indicators for locally relevant values
Participants concentrated on developing indicators for the two key values set out in Table 14. They also discussed a range of other values, as set out below.

Table 14: Locally relevant community indicators for Christchurch

CHRISTCHURCH		
VALUE	**DESCRIPTION**	**INDICATOR**
Access	Count the number of people using forests. Range of events, organised events.	*Measure user hours in forests - organised events (count) – registration books, permits.*
	The number and range of activities — runners, bikers, sledge dog racers, orienteers, hunters, trampers.	
	Usage is stable or increasing.	*Kilometres of track in a forest. Types of track (walking, biking). Renewal of tracks to replace tracks that have been logged (to similar standard).*
	People are satisfied with the experience.	*Survey of satisfaction. Workshops, focus group.*
	Usage is not having negative effects on other values or users. Specialist areas to segregate incompatible user groups (hunters/ motorbikes).	*Monitor non-authorised forest users. Problems affecting other users.*
Managing local forests	Commitment of forest owners to forestry.	*Area of forest cover and mean age distribution of forest.*
	Minimise area within forest covered by invasive weeds that restrict access (e.g. gorse, blackberry, broom).	*Proportion of area in invasive weeds.*
	Number of tracks available to the public.	*Increasing or decreasing per year. Aim reducing. Change of length per year +/- each year and funds*

CHRISTCHURCH		
VALUE	**DESCRIPTION**	**INDICATOR**
		made available from District and Regional Council to maintain them.
	Maintain character of forests by minimising windrowing. Links to forests as part of local communities (including intrinsic values).	*Change in length of windrows. Aim: reducing.*
	Commitment to healthy ecology of forest.	*Funds allocated to landscape protection.*
	Sensitive harvesting methods.	*Clear fell areas per unit cut. Duration (time) of bare clear felled land.*

Access

The group working on access indicators discussed various indicators to measure forest use, agreeing that it would be useful to know the range of activities being undertaken and the number of users. They noted that users were not making great use of forest tracks and that it would also be useful to know if kilometers of track were stable or increasing (per square km) in different regions, as most users apart from hunters are on tracks.

One participant in the wider group commented that forest use was difficult to measure, noting that in Hanmer they have been trying to do this using organized event numbers which are not very accurate. They suggested comparative surveys at the same place and time each year. It was noted that it is easy to measure scientific things but intangibles are not so easy.

Participants talked about the need to redesign and/or rebuild tracks after harvesting, so that the amount of access for recreation is sustained. They also noted that the standard of tracks was important – 'they need to be good to be sustainable, don't want it just turning to sand' – while acknowledging that remote areas will have different uses and levels of use.

One participant raised an issue where a local business has taken over access to all MTB tracks in one forest, so that users have to pay that business for access –'don't want that happening more widely!' Participants noted that they didn't want a situation where whomever 'pays the big bucks' to the forest owners gets access.

The group discussed the idea of access agreements where users maintain their own tracks, citing an MOU between forestry and a council, where the council provides the funding. Others commented that funds are available for tracks from regional and district councils, but there needs to be commitment to maintaining the tracks.

There was some discussion around conflict between different user groups, with some participants saying they didn't like motorbikes in the forest and others mentioning users in zones they weren't meant to be in. Participants agreed they didn't want negative effects on other users. The need for monitoring of both user compliance and forest damage was identified. Focus groups or workshops for users were suggested.

Managing local forests - opportunity for involvement

Discussion around this issue focused on the responsibilities of forest owners to meet multiple objectives, with one participant noting that in the Forest Service days there were reports on forests. The group suggested that the commitment of forest owners needs to be measured, noting that owners need to maintain the character of forests over a lifetime, minimising damage to landforms and minimising waste wood (from windrows). The need for sensitive harvesting was raised, with the suggestion of only a limited percentage of clear fell per area cut, and not leaving clear felled areas for too long. Participants noted that they wanted to maintain the character of forests over the long term and show commitment to healthy ecology of the area.

It was noted that some forest values are contrary to production, but it is important to achieve a balance. The Forest Service aims of balancing soil and water conservation with recreation and production were lauded. In this context one participant noted that the Forest Stewardship Council certification is having little effect on the ground. Participants consider forests should be recognised as multi-faceted resources that are part of the local community and are not solely about production.

General discussion
General discussion about forest values and indicators touched on the need to survey bird, insect and plant life in forests to measure biodiversity, and to test water in forest waterways to ensure it is drinkable.

Participants also talked about forests as carbon sinks, with one person giving the example of an area where pines have been closed up and left unpruned. The issue of the Kyoto protocol's failure to recognise that felled timber remains a carbon sink for another 50-100 years after harvest was also raised. The carbon issue was recognized as being very important for the future.

Dunedin Case Study

Participants in Dunedin workshop represented a range of harriers, tramping, mountain biking, deerstalking and hunting clubs.

Key workshop themes

- Participants noted that the privatization of forests has affected their access rights over time as areas have been closed off. They noted that the quality of access is important and that there are specific actions companies could take that would improve this quality, such as clearing tracks after felling, providing vehicle (rather than foot) access to remote areas.

- Participants recognised that there are conflicts between forest users and that they need to take some responsibility for these by respecting other users. They noted that they could be involved in local forest management to assist with user conflicts. Participants considered that some (but very few) users are irresponsible and increase the risks of fires and safety. They noted that there needs to be a process to deal with irresponsible users.

- Participants noted that people's perceptions of landscape values differ, and that the value placed on landscape differs across organisations (such as councils). Because of this, landscape values are difficult to measure, although they did show some agreement that clear felling on tops of hillsides is adverse to landscape values.

- Participants noted that soil and water conservation was important and that this is relevant across all land use types – not just forestry.

Impressions of the forest values presentation
Participants questioned what the forestry companies would think of the forest values list and suggested that each company has a different view on access, and often these differ from community perspectives. One participant noted that they have had 'good and bad experiences' with companies. They noted that in one case the contractors planted trees over one of the defined and clearly signposted walkways. One participant noted that there is an attitude in the community (particularly with some environmentalists) that forestry companies are 'plunderers', and 'the lowest of the low according to some'.

Indicators for locally relevant values
Participants concentrated on developing indicators for the three values set out in Table 15. They discussed other values as a group, set out below.

Forests as part of local communities
Participants noted that 'if there are community values, you have to ask the community'. With regard to access, they noted that a lot of forest land that used to be in the public domain (when there was a Forest Service), are now owned privately, so the traditional access and use rights people had or perceived have changed. They suggested a need to measure whether traditional access and rights are maintained or are changed. They suggested a need to carry out satisfaction surveys through time and have surveys/policies that are standard for each company and are documented.

Table 15: Locally relevant community indicators for Dunedin

DUNEDIN		
VALUE	**DESCRIPTION**	**INDICATOR**
Forests as part of local communities	Traditional access and usage rights are maintained i.e. as forests are privatized rights diminish	*User surveys and documented policy by company i.e. measure user satisfaction and compare change over time*
Access	Continuity of access/tracks.	*The time each track is useable measured over the long term* *Level of planting on accesses (should be no planting)* *Register of tracks* *Restoration of tracks after logging*
Biodiversity	Animal population (wanted animals)	*Number of animals* *Ease of permission to access/hunt*
	Variety of flora and fauna	*Regular species counts* *Analyse on a trends basis* *Age distribution of the above to highlight environmental condition change*

Access

Participants discussed not only having access to forest areas but the quality and specific needs of different users. Trampers, runners and mountain bikers noted the preference for having tracks that are registered and cleared after felling so that they can still be used. Hunters noted that access which requires long walk-in times rather than vehicle point access makes it difficult to carry out animals, particularly from remote areas. Participants noted that an indicator that measured the percentage of time during the forestry cycle that they could access and use areas would be useful for them. They noted that access should be closed during harvest and within about five years afterwards. Hunters noted that they put a lot of value on the animals they hunt and that hunting keeps animal numbers down. Participants also noted that vandalism can be an issue for them.

Participants recognised that there are conflicts between user groups; for example runners, trampers and mountain bikers use the same tracks and they all 'need to respect other users'. They noted that sometimes a different age of forest can mean different types of users. They noted that the '1-5% of bad users bugger it up for everyone' by vandalizing areas and exacerbating fire risk etc. They noted that there needs to be a way of dealing with these few users 'swiftly' so that everyone else can still use forests. One participant noted that it is up to the forest owner to decide whether or not people can access their forests, and that it is good to see that some companies are willing to allow access to other users.

Biodiversity

Participants noted the difficulty in measuring biodiversity, particularly what reference conditions to use, i.e. when to measure from because 'we don't know what it was originally like'. They noted that whilst there is a very limited range of species being planted and grown in production forests, they do see a lot of species, specifically galaxids, birds, insects, native plants and weeds. They suggested that biodiversity indicators that show changes in environmental conditions and showed trends are relevant – such as age class distributions for some species.

Forests as landscape features

Participants recognised that people and organisations have very different views on landscape values, and because of this they are very difficult to measure. One participant noted that, landscape architects have done a lot of research on what people will pay to 'look at pretty views'. One participant noted that DoC has an issue with wilding pines, but many other people don't. Another participant said that the landscape used to be beautiful with tussocks lands but that forestry and particularly clear felling has produced 'ugly hillsides'. One participant noted that beech forests and gullies (with native species) that are either regenerating or have not been felled are beautiful and spreading. Another participant noted that councils can demonstrate protection zones, but how do they value these?

Public participation in managing forests

Participants noted that they would like the opportunity to be involved in some aspects of forest management, particularly in helping solve some of the user conflict identified. One participant suggested that people need to discuss the longer term view of forestry in New Zealand, in that perhaps the future of New Zealand forestry could be mixed forests with economical harvesting but no clear felling.

Soil and water conservation

Participants discussed soil and water conservation in relation to forestry. Participants noted that they had seen evidence of forestry operations clear felling gullies and stream margins without adhering to riparian management guidelines, and questioned whether the environmental reports/newsletter some companies provide are accurate. They noted that regardless of land use type (stating forestry, dairy farming, beef farming), environmental services such as soil and water should be well managed.

Productive capacity of forests

Participants noted that the volume and quality of timber are useful indicators of productive capacity as well as the costs and income of forestry operations. They also noted the importance of accounting for 'offsets' where the forestry industry could/should make contributions to roading or direct payment to councils for road upkeep.

Carbon sinks

Participants noted that discussions and current policies relating to carbon cycles seem 'artificial' and 'bureaucratic'.

SUMMARY AND NEXT STEPS

This section provides a summary of the key themes and associated indicators developed for each forest value.

Access

Access to forests for recreation is a high priority for community groups and businesses. There were several consistent discussion themes and indicators across the workshop locations. Key aspects of this access were proactive relationships between forest managers and user groups; the availability of areas of forest and infrastructure that support a wide variety of pursuits over the long term; a coordinated approach to managing user conflicts and dissemination of information; and the opportunity for user groups to take some responsibility for their recreational activities. The range of indicators described by user groups across the country for monitoring access values related to:

- A description of forest area by ownership in (public and private);
- The number and location of permanent open ways as well as the number, location, timing and reason of forest closures;
- The area of forests available to be used for what activities and when;
- A description of the full range of activities being undertaken including where, when and what for;
- A register of all tracks, changes to tracks and whether they are useable;
- Provision, adequacy and usage of amenities;
- Consistency of information, signage and maps;
- Satisfaction surveys, complaints and accident registers;
- Damage to forest environment (via vandalism, use etc) and noise levels;
- Consistency of management documents;
- The opportunities for consultation and participation in forestry related forum;
- Existence of formal access agreements, such as MOUs;
- The level of coordination and management of access;
- Costs of access.

Soil and Water Resources

Management of soil and water resources was a priority for participants across the country. Key discussion themes were that there is evidence of waterway protection in forests; that the nature of water within forests is protected and maintained, particularly for the purpose of protecting freshwater biodiversity; and that forest managers take responsibility for downstream affects. The range of indicators described by user groups across the country for monitoring soil and water values related to:

- Water clarity
- Whether water in forest streams is drinkable
- Water Temperature
- Sediment levels in water

- Surveys of freshwater biological diversity

- Placement of culverts, roads and access points

- Identification of the best use of land for forestry (e.g. for soil erosion and waterway protection) vs. other land use

- Existence of and adherence to rules

Biological Diversity

A further priority for user groups was a commitment by forest managers to maintaining/ creating healthy forest ecology and indigenous biological diversity. Key themes were to protect and manage any changes within existing indigenous ecosystems and species in forests, as well as broadening the management focus of pest control programs to include these values. The range of indicators described by user groups across the country for monitoring biological diversity values related to:

- Evidence of protecting biological diversity through management plans and funding allocation;

- Surveys and species counts of indigenous ecosystems (such as remnants in gullies, riparian margins, wetlands etc) and species analysed on the basis of trends over time and age distribution;

- Infestations of pests.

Forests as part of local communities

Much of the discussion about forests as part of local communities was interlinked with other values such as access and landscape, and few groups specified indicators for this value. The discussion themes largely related to the protection of specific sites that are important to the community, such as pa sites and patches of iconic species (e.g. the Rotorua Redwoods). Participants also talked about an overall approach to managing forests for multiple purposes which reflect wider community values. The range of indicators described by user groups across the country for monitoring forests as part of local communities related to:

- The content of management plans;

- Publication of logging plans;

- Species surveys for biological diversity values;

- The degree of managed recreation infrastructure/ access;

- Forest users surveys to gauge satisfaction and any issues;

- The level of investment in to infrastructure maintenance.

Involvement in managing local forests

Involvement in managing local forests was talked about throughout the workshop series in the context of other values, such as access and management of freshwater ecosystems. Key discussion themes were the opportunity to participate in forums and workshops about user-related issues and the opportunity to develop agreements (such as MOUs) between user groups, local authorities and companies for managing certain sites and/or interests.

Results suggest that forest user groups would be more interested in being involved on specific issues (such as determining how to manage recreational areas) rather than overall forest

management, provided they have evidence that a full range of values is being managed and assessed. The indicators described by user groups as a means of showing their level of involvement in management were:

- A full range of values is being assessed;
- The existence of agreements such as MOUs and opportunities to be involved.

Forest Productivity

Few indicators were developed related to forest productivity, although there was a general understanding across the workshops that production forests were planted for economic purposes and that they would be cut down. This level of understanding varied between individuals within the workshops. The indicator developed was that:

- Forests continue to grow wood of economic value.

Forests as Carbon Sinks

Whilst forests as carbon sinks was one of the original values (from the forest values research in 2004 and 2005), it did not feature strongly in this round of workshops. General comments were made that forests were important because they absorb carbon and that they would be part of the carbon accounting policies, particularly in the future. However, there were a number of comments made that people don't really understand the policies and how they actually relate to forests and communities in the landscape. No indicators were developed for this value.

Forests as Landscape Features

The landscape value of forests was not frequently discussed at this round of workshops, which suggests there were other values of a higher priority to the participants involved. One of the points made was that views of landscape are largely subjective at an individual level, which makes them very hard to describe and therefore measure. Landscape views were also raised in terms of the "downstream" affects of wilding pine spread. Indicators for wilding pines are included within the biological diversity indicator set. There was a general theme that landscape issues are pronounced when forests are felled.

Next Steps

It is intended that the results of this workshop series be considered collectively with the concurrent workshop series with industry and management authorities, along with relevant empirical assessments, in any further development of criteria and indicators for the sustainable management of New Zealand forests.

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Web based references

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The Montreal Process   http://www.rinya.maff.go.jp/mpci/

Australian Forests   http://www.australianforests.org.au/

APPENDIX 1: LIST OF ORGANISATIONS REPRESENTED

The following organisations were represented by one or more members in the workshop series.

NZ Forest and Game Federation

Canterbury Athletics

Hanmer Forest Heritage Trust

NZ Farm Forestry Association (local representatives in multiple workshops)

Peninsula and Plains Orienteering

Canterbury Mountain Biking Club

Leith Harriers

Otago Mountain Bike Club

Taieri Recreational Tramping Club

NZ Deerstalkers Association (local representatives in multiple workshops)

Individual Hunters

Sports Gisborne

Royal NZ Forest and Bird Society (local representatives in multiple workshops)

Gisborne Canoe and Tramping Club

Helensville Information Centre

NZ Horse Recreation Group (local representatives in multiple workshops)

Auckland Orienteering Club

South Kaipara Landcare

Auckland Mountain Bike Club

South Kaipara Horsetreks

Woodhill Mountainbike Park

Jeep Woodhill

Auckland 4WD Club

Auckland Woodhill Endurance Club

Individual Residents

Northwest Orienteering

Rotorua Horse and Pony Trekking Club

Lake City Athletics Club

Rotorua Hunting Club (individuals also represented local Maori Trusts)

Ngongotaha Pony Club

Rotorua Tramping and Skiing Club

Peka Horse Treks

Rotorua Western Riding Club (2)

NZ Fish and Game Council (local representatives in multiple workshops)

Lakes Water Quality Society

Kauri Coast 4WD club

Northland Area Pony Club

Whangarei 4WD Club

Parahaki Mountain Bike Club

Nelson Motorcycle club

Nelson Riding Club

Nelson Tramping Club

Waimea Tramping Club

Recreational Trail Ride Commissioner, Motorcycling NZ

Nelson Trout Fishing Club

Waimea Harriers

Walk Nelson/ Tasman/ Bicycle Nelson Bays

Nelson Triathlon Club

FIGURES, TABLES AND ACRONYMS

List of Acronyms

SFM	Sustainable Forest Management
NZFFA	New Zealand Farm Forestry Association
DoC	Department of Conservation
MAF	Ministry of Agriculture and Forestry
QSR	Qualitative Social Research – QSR is the company trading name
FSC	Forest Stewardship Council
NZ	New Zealand
RMA	Resource Management Act (1991)
NZTA	New Zealand Triathlon Association
ANZ	Athletics New Zealand
FMC	Federated Mountain Clubs
NZMBA	New Zealand Mountain Bike Association
NZPCA	New Zealand Pony Club Association
NZWDA	New Zealand Four Wheel Drive Association
NZDA	New Zealand Deerstalkers Association