

Can profitable forest management incorporate community values?

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Abstract

Historically, New Zealand's plantation management models have focused on meeting commercial and scientific values. Limited attention has been paid to the role plantation regimes can play in realising wider community aspirations and values.

A shift in management thinking is starting to be seen however, as forest managers address an increasing variety of stakeholder and community concerns. Reconciling these community concerns with plantation management practices can be a significant challenge. Meanwhile, the rules and regulations around forestry operations are becoming increasingly complex and costly, as public opinion persuades stricter guidelines for resource management.

Currently, forest managers have models to predict the economic and environmental impact of their regime decisions, but no such tools exist to ascertain the social impact or public reaction to forest management decisions. Therefore, developing a greater understanding of how plantation forestry enables or constrains community values is a new but essential frontier for those engaged in forestry.

This presentation will discuss the benefits of developing better methods of social impact assessment, present an existing case of profitable multiple-use forestry and discuss an emerging method for defining stakeholder values in plantation forestry.

Introduction

Forestry science was and is an application-orientated science that aims to render forests utilisable for nations and industries in a constant and predictable manner (Werland, 2008). Historically the components of forestry science and the practice of forest management have changed in parallel with changes in the values society consider important (Kimmins, 2008; Miller, 2001). In today's developed countries, rapidly changing social values, exemplified by the rise of environmentalism, has in turn expanded the entire frame of reference of the forestry profession. The emergence of ecological considerations late last century cast a harsh light on some forest practices (Baker & Kusel, 2003). This subsequently increased public awareness about forest values including social and cultural values (Reynolds, *et al.*, 2007).

Notable international initiatives aimed at least in part at forest management have included the 1992 Rio Earth Summit (UNCED)¹ and the subsequent regional directives such as the Montreal Process and Pan-European Process, the Convention of Biological Diversity (CBD), the Framework Convention on Climate Change (FCCC) and the Kyoto Protocol. Internationally, forestry science has matured to varying degrees, and in many countries forest management goals now incorporate the objectives espoused in the above initiatives. Sustainable yield, the once hallowed principle of forestry science, is steadily losing ground to the principle of 'sustainable forest management', which endeavours to further incorporate ecological and social principles into forest management.



The analysis of social impact and human values is currently an emerging discipline in forest science (Baker & Kusel, 2003; Johnson, 2007; Kouplevatskaya, 2007; Malcolm, 2004; B. A. Shindler, *et al.*, 2003b). Thus, the role of a present day forester is once again changing. The previously self-contained group of traditional silvicultural actors (forest owners, forest researchers) with close ties to forestry science no longer hold a monopoly on forest management goals and policy (B. Shindler, *et al.*, 2003a). The application of forestry science now has local, national and international responsibilities even though foresters are often private employees.

Present day social and ecological challenges therefore require the science of forestry to adapt to provide an improved understanding of the potential consequences of people's dynamic relationship with forests. Such an understanding however requires prediction, but prediction over time, in environmental and social complexity is difficult (Kimmins, 2008). This paper will outline some potential methods for foresters to start thinking about stakeholder values, which can in turn be included when developing forest management regimes.

¹ United Nations Conference of Environment and Development.

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The aim of every forester - particularly in New Zealand's plantation forestry - is to realise the value of the trees they plant. Generally (in today's operating environment at least) realising value means harvesting trees. The decisions about establishment and silviculture are made many years before the tree is harvested. In the year prior to forest establishment, much effort is put into modelling the economic viability of various regimes. Furthermore, consideration and time is spent in modelling or at least considering the environmental impact of the forest regime. Predicting the social and cultural values of, and impacts on, future generations of stakeholders is not an easy task and often not undertaken, but it should receive far greater consideration.

When comparing management options at a high level (e.g. changing rotation length, move to bio-fuels, species composition, proposed extraction methods and routes) community acceptance of such regimes will reduce the likelihood of later opposition to harvesting and hence enhance the forest's chance of being profitable. There are examples apparent today, where foresters are walking away from planted areas because territorial authorities have placed conditions on harvest that make it the operation uneconomic. Moreover, forest companies are forced to incur major time and cost in dealing with territorial authority draft rules, stakeholder issues, and even ending up in the Environment Court battling for the right to harvest. There is every indication that operating conditions will be more constrained in 30 years time. Therefore, any efforts that can be made to predict social and cultural impacts of forest management decisions at the start of a rotation may considerably improve subsequent profitability.



Forest management incorporation of stakeholder values - an example

In 1969 the owners of 66 Maori land blocks, agreed to form a single Trust, the Lake Taupo Forest Trust (LTFT), with a mandate to negotiate with the Crown for the creation of a plantation forest on their lands. This was successful and led to the creation of the largest, and among the first, of the Crown's Maori lease forests established throughout the country.

The lease terms reflect the priorities of the Maori land owners, their attitude toward land, and their role as kaitiaki or stewards of the land. The first three objectives of each lease stipulate the requirement to prevent erosion in order to protect the streams, rivers and lakes; to protect wildlife and fish habitat; and to protect the wahi tapu (sacred) sites on the lands. Only after these conditions have been satisfied was the objective of establishing and managing a forest on the land stated. These requirements, and in particular the recognition of the importance of protecting the rivers and lakes, have resulted in around a third of the land remaining unplanted. Rather than an annual rental, the Maori owners opted to receive a share of stumpage from the eventual harvest. As demonstrated in the formation of the Trust, and in the signing (and subsequent renegotiation) of the lease, the Maori owners are prepared to plan for the long term, and to forego short term profit for long term benefit.

The owners' attachment to the land, and their recognition that their decisions will affect future generations of owners, is always at the forefront of the Trustees' minds. There are both statutory restrictions and general owner opposition to the sale of Maori land - in effect the lands will be in Maori ownership for eternity. At the same time there is a strong belief, instilled in Maori over the centuries, that each generation should manage their lands in a sustainable way to ensure the future generations can continue the physical and spiritual relationship with the lands. Together these factors lead to land use decisions being taken with a view to the very long term.

From a forestry perspective, this long term ownership

approach contrasts strongly with many plantation owners. The last two decades has seen some sales and re-sales of plantation forests in New Zealand, and today the larger forest owners are international investment funds. These institutions see forestry as part of a wider investment portfolio, and the re-sale value of the forest estate at some future date is likely to be an important component of such investment. However, for intergenerational land owners such as the Lake Taupo Forest Trust, the forest value is effectively irrelevant, with emphasis instead being on maintaining financial, cultural and spiritual relevance to the owners, and on ensuring a healthy future for the land and forest in 20, 50 and 100 years time.

For Maori owners, having lived on the lands for centuries, there is a lot of important history connected with specific locations. These historic events on the land are recognised in management decisions, resulting for example in specific areas being excluded from plantation development, and others being absorbed into the ongoing forest management only after appropriate cultural consideration. While not having a large impact on the overall forest operations in Lake Taupo Forest, maintaining appropriate cultural considerations is an essential component of the Maori view of sustainable land management.



Historically all of the land centred about Lake Taupo, around 1.2 million hectares, was owned by the Ngati Tuwharetoa tribe. Today some 80% is owned by non-Maori (including the government), but Ngati Tuwharetoa nevertheless maintain a spiritual connection with all the land. In contemplating land use options for the lands they retain, such as the Lake Taupo Forest lands, consideration of the impacts of that land use on the wider environment - other lands, waterways and lakes - is taken into account. The very decision to use these lands for forestry rather than farming - which was in a major growth phase in the late 1960s - was largely due to concern from the owners of the environmental impacts farming would have on the wider environment - particularly the lake itself.

The establishment of Lake Taupo Forest is a living example of this desire for long term and sustainable land use. The impacts of such land use decisions are seen today in the recent assessment by Taupo District Council of what they term 'natural values', being areas which have ecologically valuable reserves of native flora and fauna. Their assessment determined that excluding public conservation land, some 90% of the natural values

areas remaining today in the Taupo district are on Maori land. While not using modern terminology for such characteristics, Maori have understood their value and have protected them for centuries.

In-depth research on Maori resource management values in plantation forestry is currently being undertaken with Lake Taupo Forest Trust used as a test case. The research is looking for evidence of the promotion of these values along with evidence of constraints or compromises of these values in their forest regimes. Identifying such values will enable the Trust to weigh up against possible economic impacts the value of incorporating them into their management regimes.

This study is being undertaken using research approaches predominantly in the form of document analysis and interviews and is summarised below:

1. Interviews with key participants and document analysis to understand the histories, tenure arrangements and define the resource management values most important to Maori at the time of the Trust's establishment.
2. Following up these findings with interviews involving today's beneficial owners as participants. The questions are based on the above resource management values and the aim is to find evidence of these values being



met or evidence of these values being constrained or compromised by the forest regime.

3. Analysis of the impact of the forest management on Maori realising their aspirations for land use.
4. Development of recommendations for forest managers, government and industry to create management scenarios that are inclusive of Maori motivations and national requirements.

Can these methods be used for defining community values on other forest estates?

Looking for evidence of stakeholder values being constrained or enabled by forest regimes presents many challenges for forest owners. Significant hurdles include defining who stakeholders are, and ascertaining whether their values are intergenerational. In terms of defining stakeholders, generally speaking for every forest there are influential individuals or groups of people impacted by or interested in forest operations. These groups can be divided into useful categories in which to undertake interviews or surveys. These people could for example be grouped by locality, recreation type or occupation type. Interviews or surveys within these groups will provide an insight into today's community values. In terms of defining intergenerational values, there is a school of thought that all basic human needs are few, finite and classifiable (Max-Neef, 1991). These include such things as recreation, identity, subsistence, participation and inclusion. It therefore may be important to base the interview or survey questions around such topics.

Summary

People have a dynamic relationship with plantation forests whether they are involved with forest management decisions or live well outside the forest gate. Although methods to define the social and cultural impact of forest management decisions on communities are in their infancy, the aim is to start investigating such relationships to provide forest managers with tools for making informed regime decisions. A method to define community values and the level of compatibility of such values to forest regimes is both a potential resource for the forest sector and an essential component of profitable forestry.

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