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**MULTIPLE USE MANAGEMENT OF NEW ZEALAND'S  
INDIGENOUS FORESTS;  
A ROSE BY ANY OTHER NAME...**

Presented in partial fulfilment of the requirements for the  
Degree of Master of Science  
in Resource Management

by

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*"Well," said Owl, "the customary procedure in such cases is as follows."*

*"What does the Crustimoney Proseedcake mean?" said Pooh. "For I am a Bear of Very Little Brain and long words Bother me."*

*"It means the thing to do"*

*"As long as it means that, I don't mind", said Pooh humbly.*

*A.A. Milne*

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## **ABSTRACT**

Multiple use forest management was a concept imported to New Zealand from the United States in response to competing demands upon the state owned indigenous forests resource. It was later abandoned in favour of management under single objectives, and the Department of Conservation assumed control of the majority of the indigenous forest estate.

In this report the concept of 'multiple use' and the reasons for its abandonment are reconsidered, to ascertain any contribution it may make to management of the indigenous forest resource today.

The context, in terms of historic influences and attitudes, in which multiple use was interpreted, is identified as being as important as the theoretical base of the concept itself. An examination of current environmental attitudes and ethical directions reveals a mix of values and the emergence of sustainability as a reconciling concept.

An analysis of the Department of Conservation as the organisation with principal responsibility for interpreting national policy on the indigenous forests, reveals some internal inconsistencies as a symptom of the dichotomy in environmental attitudes and suggests some blockages to the Department embracing a broad definition of sustainability.

In light of these findings a deconstruction of the concept of multiple use offers a possible intermediary link between sustainability and the Department of Conservation's management of the state owned indigenous forests.

## **ACKNOWLEDGMENTS**

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I would also like to thank Alan who was not only a constant supplier of dinners but a listener to my rantings and a genuine contributor to the development of my ideas.

Finally I wish to thank Clive Anstey, Lynn Lochhead, Keith Morrison, Stefanie Rixecker, Francis Schmechel, Richard Suggate, Geoff Sweet and Eugenie Sage. These people were invaluable in the advice and comments they contributed at various stages during the year and at the initial discussions outlining the subject I have covered.

## AUTHOR'S NOTE

Today in academic work it is not uncommon to acknowledge the flaws in expecting to approach research from a sterile point of objectivity. It is often said that people enter an investigation with a bias if only their interest in the subject.

My own view point on this is such that I consider this Author's note not simply a supplementary commentary on my perspective as I started this study, but rather an integral part of the methodology of my research. My personal opinion on multiple use forest management or my approach to the general area (since the concept was by no means well understood by me), I suggest is not only an unavoidable starting point of my research, but a vantage point from which I have been able to select the kind of information I wanted to answer the questions I found myself asking.

To begin with, it may seem unusual that with my background as a conservationist and wilderness recreation enthusiast, that I should view the emergence of a Department of Conservation with any concerns other than it should be well resourced to fulfill the preservation role so clearly envisaged for it by the environmental movement in particular. Instead, I found myself wondering about a land management split that seemed to be dividing the land that we cared about from the land we did not. At best this seemed a very simplistic response to the complex issue of dealing with competing demands.

My personal inclination then was against this division and I began to be interested in the concept of multiple use management, what had happened to it and why had it been abandoned in apparent favor of single purpose land management agencies? Was it a concept with some fundamental defect or a practice unsuited to political reality? My anticipation was that I might find some adaptation of 'multiple use' more suited to current expectations of management of our native forest resource. It is to these questions that this study has been addressed.

## **CHAPTER 1. INTRODUCTION**

### **1.1 GENERAL INTRODUCTION**

The Department of Conservation (DOC) was established in 1986 and could metaphorically be described as the phoenix arising from the ashes of the dismantled New Zealand Forest Service and Wildlife Service. In minds of much of the public today, it is the guardian of most of our indigenous forests, a defender of wildlife, cultural and historical values, and a manager of the recreation and tourism that depends upon wilderness. To others, the Department is responsible for the 'locking up' of the land, and for preservation in perpetuity, with no opportunity for economic utilization, of the forest estate.

The new agencies established through substantial government reorganization in 1986 were separated with regard to their roles of 'conservation' and 'utilization'. The creation of a single government department with a mandate primarily based around preservation of the indigenous ecology was considered a hard won success by environmental groups in New Zealand. The division of responsibilities as regards the native forests was clearly drawn on the basis of logging for timber, with a comparatively small portion of the crown indigenous forest estate allocated to the then government Forestry Corporation (later Timberlands), the remainder being under the jurisdiction of the Department of Conservation.

Multiple use forest management was the term used to describe the overall policy of the former New Zealand Forest Service (NZFS). The adoption of a new system involving



single-purpose agencies was a clear rejection of this policy, as it had been practiced by the NZFS. Today the Department of Conservation's stewardship role is defined as the conservation of the natural and historic heritage of New Zealand for the benefit of present and future generations, (DOC Corporate Plan 1992). Whilst this may be the single goal of management of the forest resource it would be misleading to imagine that the forests are managed for a single use. Rather, a variety of competing uses are already impinging on the resource. These range from, both low and comparatively heavy recreation uses, tourism concessions, harvesting of forest resources such as sphagnum moss, recreational and commercial hunting, and a number of small scale craft industries based on forest products, with the possibility of yet more. The Department of Conservation is inevitably involved in balancing development and preservation.

The political circumstance that led to the establishment of DOC was one in which the fears and frustrations of the environmental movement played a significant part. The Department was to a large extent the end product of a long running conflict between the timber industry and the green movement over the fate of the native forest resource.

The question that might be asked now is whether or not the adoption of a single-purpose management structure has made the goals of native forest management any clearer or more easily achieved. Does it today more truly reflect the expectations of the New Zealand public?

The success of any environmental strategy is ultimately dependent on the public perception and interpretation of the policy. This in turn is a function of the values attached to the

environment and in this instance the indigenous forest resource in particular. Values shift over time and at present such concepts as 'sustainability' are emerging, bridging the gap between the previously divided camps of preservation and utilization. Alongside this is the movement towards less prescriptive planning and the challenge to objective rationality in decision making.

Against this backdrop of change in environmental consciousness it is useful to reexamine multiple use management, and the circumstances in which it operated and was ultimately rejected. By gaining an understanding of the concept it is hoped that some contribution can be made to the national strategy concerning our state owned indigenous forests.

## **1.2 METHOD AND METHODOLOGY**

In this section I make a distinction between method as the techniques for gathering evidence and methodology as the theory of how research should proceed (Harding, 1987:2). The method I have employed in this report depends on the use of secondary sources, early and recent critiques of the theory and practice of multiple use forestry and some interviews regarding native forest management today and developing attitudes in this area. An important but often unappreciated part of this method has been the discussion and exchange of information with my associates at the Centre for Resource Management. Where possible references have been acknowledged through personal communication. Frequently, however, the ideas have moved far from their root source, although the contribution has been nonetheless valuable as a stimulus to a new direction of thought.

In the limits I have placed on my subject area I have not chosen to examine the economic aspects of multiple use management excepting where economic conclusions have influenced attitudes towards the concept. The purpose of this report is to consider the broader idea of multiple use and its application under New Zealand's prevailing environmental ethos.

I have also confined my discussion to the state-owned indigenous resource managed by the Department of Conservation - this is not based on any belief that 'multiple use' management can take place only under national control, but rather because the concept has developed in response to the perceived problems of management under national ownership. A national owner is responsible for many constituents such that the pressure to respond to multiple demands is inevitably greater than for the private owner who ultimately has only themselves to consider within the restriction of national legislation and regional control.

I have also not chosen to discuss in any depth the remaining native forest lands managed by Timberlands, the state owned enterprise established essentially as a counterpart to the Department of Conservation with a responsibility for commercial productivity. The utilization policy for these lands is quite different to the approach taken by the Department of Conservation and represents a complex case for study in itself.

The methodology I employ (nominally grounded in phenomenology) rejects the idea that a policy or management strategy such as 'multiple use' is an objective and neutral device employed to fit certain physical and social circumstances. Rather it accepts that strategies for management or policies, are ultimately the products of thoughts and actions of the

individual. This in turn is shaped by personal attitude born of personal experience. How people perceive their world, based on internalized assumptions therefore, is as important (and some may argue the same as) any scientifically defined reality. In explanation I suggest that while a particular policy may be designed at a political level and be later implemented, at all stages it is negotiated and renegotiated and hence reinterpreted, according to the personal biases of the practitioner and the general public.

Furthermore, a historical perspective may give us the grounding for those personal backgrounds that shape any policy, whilst a look at possible directions of our environmental ethic help to define the context in which any future policy must find acceptance.

The approach I have taken therefore in this report has been to attempt to ascertain the values New Zealanders attach to the environment and to native forests in particular, on the basis of historic interaction and possible current ethical directions. Subsequently, I use this context to examine the applicability of multiple use management and the contribution it may make to our current native forest administration.

### **1.3 OUTLINE OF THE REPORT**

Chapter two outlines the historic use of the indigenous forest resource, the emergence of the concept of multiple use management, its origins and application and some consideration of the reasons for its eventual decline in popularity in New Zealand.

Chapter three considers the prevailing attitude to our indigenous forests today, seeing it as a culmination of historic cultural influences and international trends in environmentalism. This defines the context in which any management strategy for native forests must operate.

Chapter four considers the role and identity of the Department of Conservation both as the organization responsible for the administration of the State-owned indigenous forest resource and as a phenomenon of current environmental attitudes.

Chapter five reexamines and deconstructs the concept of multiple use in light of the newly analysed approach to the native forests. It explores the differences and similarities of management today under the Department of Conservation compared with the earlier, multiple use management, of the Forest Service.

Finally, Chapter six discusses the depth and direction of the changes that have taken place in State indigenous forest management, and draws some conclusions as to the applicability of a multiple use approach today.

## **CHAPTER 2. MULTIPLE USE MANAGEMENT**

### **INTRODUCTION**

A number of factors contribute to the emergence of multiple use forest management and to its particular interpretation in New Zealand. This section examines the concept of 'multiple use', its application in New Zealand and the United States, and its ultimate abandonment following the reorganization of the Forest Service. It is also useful to set the context for 'multiple use' by first considering the indigenous forests and their historic utilization, and the origins of the organizations responsible for the administration of the resource.

#### **2.1 NEW ZEALAND INDIGENOUS FORESTS**

The New Zealand forest estate today is comprised of: exotic plantations planted for commercial purposes and land protection; indigenous regrowth (cut over); indigenous and exotic mixed forests (part of an earlier 'enrichment' programme); and virgin forest.

Indigenous forests cover around 23% or 6.2 million hectares of New Zealand. The resource is held in both public and private ownership. The majority of the crown estate is administered by the Department of Conservation and is largely held under some form of reserve or protection status. The remainder of 150,000 hectares or 3% is available for

timber production and administered by Timberlands West Coast<sup>1</sup>.

The split of New Zealand from the original continent of Gondwanaland during the cretaceous period left the islands with a primitive biology that continued to develop in isolation. Consequently, the native vegetation is distinguished by a high degree of endemism, and 90% of tree and shrub species are to be found nowhere else. Similarly the New Zealand forest plants are of great antiquity, illustrated by such species as the Kauri and the podocarps which have ancestry extending back some 250 million years (Halket, 1990). The forests developed without mammal presence, and with few amphibians or reptiles, whilst an unusual array of bird species have evolved to fill the vacant habitat niches.

Modern climatic conditions are considerably different to those in which New Zealand's native forests first evolved. This is the commonly attributed cause of the observed slow growth rate of indigenous tree species, which has made them questionable candidates for sustainable timber yield. Nevertheless, much of the original species composition survived both volcanic eruption and periods of glaciation such that the first human settlers to New Zealand were met by a substantial forest cover of around 80% of the land mass (ibid).

### **Impact of Human settlement**

Human settlement, both Maori and more recently European, combined with the unusual

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Following the privatization of state owned enterprises, Timberlands West Coast Ltd remained the only commercial timber operation under state control.

ecology of the native species, had a substantial influence on the current patterns of forest distribution.

Maori occupation of Aotearoa dates back a thousand years, with the first settlers coming from tropical Polynesian islands from the North East (Froude et al., 1985). Maori interaction with the lands and in particular the forests over the period prior to European arrival included the utilization of timber for various purposes and the clearance of land for the establishment of agricultural practices (later modified). These were largely imported from Polynesia. Indigenous forests and their wildlife inhabitants were absorbed into a mythology and understanding that guided their interaction with the environment, linked the landscape to the people and formed an essential cultural basis.

After 500 years significant ecological changes had taken place. Fires had destroyed much of the forests in the drier parts of both main islands, and short tussock grassland had appeared in its place. Suggestions are that by the arrival of the European settlers in the 1840's, between 40% and 50% of the original forest cover had disappeared (ibid:2).

European settlement of New Zealand began in earnest in the 1840's. In a matter of 50 years the landscape was transformed from one half covered in forests to a predominantly pastoral appearance. For the most part, during this process the timber was wasted. The forested land was considered to be the most fertile and therefore the most attractive for agricultural purposes. At best the forests were considered a valuable but single crop (Roche, 1990) but frequently forests were subject to indiscriminate burning, and the timber was not recovered.



## 2.2 'WISE USE' AND THE NEW ZEALAND FOREST SERVICE

It is useful to a discussion on multiple use forest management, to sketch first the background from which the Forest Service emerged and hence the prevailing ethos under which it managed New Zealand's indigenous forest resource.

The New Zealand Forest Service can trace its origins to the Forestry branch of the Lands Department established in the late 1800's with a responsibility primarily restricted to tree planting activity. It was a time when land settlement activity was peaking and the timber industry was recognized as a legitimate land use only where settlement was uneconomic, or alternatively where sawmilling was seen as a transitional phase, which aided in clearing the land for easier occupation (Roche, 1990:168).

The priority accorded to forestry matters at the time was low, and the forest department was twice temporarily disestablished as part of government retrenchment. Significantly, at a time when the first significant pressures for the preservation of scenery and native vegetation were being felt by government, the Forests Department was not in existence. This coincided with Te Heuheu Tukino's notable gift to the Government of the summits of the central North Island volcanoes in 1887, introducing the national park concept to New Zealand (DOC, 1990:9). The responsibilities for this were consequently lodged with the Lands Department as a minor function alongside the contrasting and conflicting role of land settlement.

The State role in forestry matters, despite the fluctuation in department presence, was

nevertheless expanding. Premier Jules Vogel was a significant political influence in this area, initiating the first Forests Act in 1874 (the *New Zealand Forests Act*) under provincial government control, and later in 1885 with the *State Forests Act*. His concerns were aroused initially by the evidence of the loss of forests in the headlands and the downstream flooding effects, as well as public awareness of the depletion of the native forest resource, particularly the northern Kauri (Roche, 1990).

Vogel was interested in the concept of 'scientific forestry', newly emerging in Europe. This was essentially a 'sustained yield' idea, based on the conversion of tracts of natural forests into blocks of quality timber trees of similar age capable of being worked in rotation to provide continuous timber supply. He saw the role of the state in forestry as important for safeguarding the interests of the community, both in the present and the future (ibid:87).

In 1919 the appointment of Director of Forests went to L. Mackintosh Ellis. A notable figure in New Zealand forestry history, his first task had been to conduct a thorough inventory of the remaining indigenous forests resource. This report formed the basis of the Forests Act legislation of 1921-22, which called for the application of sustained cut management schemes for all state forests, the establishment of protection forests, the expansion of forests by state planting, and the establishment of a State Forest Service responsible for all matters of forest policy.

Interestingly, Ellis had favored the consolidation of the administration of scenic reserves, national parks and Crown forest lands under the Forest Service. Opponents, however,

argued that production forestry and scenery protection were incompatible and that the arrangement would promote inconsistency. Consequently it was not included in the legislation (ibid:83).

The State Forest Service was initially given a mandate for the 'wise use' of forests (ibid). Once again this was generally interpreted as managing for timber production on a sustained yield basis. The Forest Service was experiencing a number of influences. Driven by the political need for job creation in the 1930's and with a growing expert investment in exotic species, in the 1930's and again in the 1950's, there was a considerable boom in exotic plantation in New Zealand.

Whilst afforestation was underway, however, there was a determined effort by the Forest Service to maintain indigenous timber supplies until plantation output was sufficient. This emphasis on management for timber subordinated the value of other forest management strategies, such that the Forest Service was largely unable to broaden the scope of its management (Tilling, 1989:2).

Ellis sanctioned the recreational use of state forest lands and had attempted to widen the view of forest management, extending beyond production forestry. It was not, however, until the 1950's that recreation groups grew in strength sufficient to assert their demands upon the state forest resource. The State Forest Service turned to the concept of multiple use management to address the expanding demands of both the timber industry and preservation interests. Tararua State Forest (followed by Craigieburn Forest Park) was experimentally set aside, in 1954, for a ten year trial to be managed with the objectives

of achieving "optimum land use through multiple use" (Fyson, 1987).

In the late 1960's the utilization of indigenous forests had become a widely debated issue and views were increasingly polarized. Efforts at sustained yield for timber had not met with great success. By 1975 the Native Forest Action Council (NFAC) had emerged as an environmental group more aggressive and less conciliatory than the Royal Forest and Bird Protection Society (Roche, 1990). The Maruia Declaration, the largest petition ever signed in New Zealand (at that time) was presented by NFAC to the government in 1977. It called for a specific agency with responsibility for the conservation of indigenous forests.

Attacks were no longer leveled at elements of Forest Service policy but at the core of the organization itself. In its effort to achieve 'wise use' through 'multiple use' Guy Salmon, Director of NFAC, argued that "the Forest Service had failed both commercially and in terms of conservation" (Roche, 1990;429).

The character of the Forest Service was significantly shaped by the above events. Its management philosophies were based on scientific management imported from Europe with what was later shown to be limited potential application for New Zealand's indigenous forests. At its early stages it was constantly in conflict with the powerful agricultural lobby, and limited in management scope by the allocation of the primary protection role to the Lands Department. Later it was to find itself besieged by both the timber industry and the environmental lobby in a debate over forest land usage. An argument which eventually it was considered impossible for the Forest Service, under its

current structure, to be able to resolve.

### 2.3 MULTIPLE USE - THE CONCEPT

Forestry journal references (spanning four decades of forest management), where multiple use has been debated, suggest that multiple use management has been considered both a **concept** and a **practice** about which opinions have run intensely and in opposite directions. An "ill defined slogan " wrote Medvick and Robert (1960) of multiple use in the United States, whilst Zivnuska (1961) suggested that multiple use was more the symbol of the problems we face than a simple method for their solution. Many references suggest that multiple use has never been clearly defined.

In simplistic terms 'multiple use', when applied to any resource, be it farmland, forest, ocean or air means that this resource is capable of producing more than one 'product' and can be managed to satisfy more than one need. Kirkland (1988) stated of the New Zealand Forest Service's policy that it is:

"implicit in the multiple use philosophy that for any given area of public forest, the benefit to society will be greatest if the manager is able to deliver from a common resource a range of benefits both commercial and non commercial."

Culhane (1981:126) adds to this that "multiple use management means more than just producing amounts of different goods and services". The philosophy also suggests that the relationship between various products and management for multiple use should be such "that any use should be carried out to minimize interference with other uses of the same

area and, if possible, to compliment those uses."

Davis (1964:719) isolated three basic ideas underlying the multiple use concept. The first and most obvious is that forest lands produce many different products and can be managed for varying combinations of these. The second is that the total net benefit can be increased through a combination of uses rather than one single use; and the third is that a harmonious combination of uses with flexibility for future change and without impairment of the land is desirable in the public interest.

This seems relatively uncontentious. Difficulties arise when the concept is applied amongst what is seen as primarily competing users and the task becomes the allocation of an increasingly scarce resource. What is less clearly stated is how multiple use can assist the forest administrator to decide between many uses and determine the managerial effort and finance that should be allocated towards each use (Gregory, 1955:6).

Management of a forest for multiple purposes requires an analysis of inputs of various productive factors, maximization of total output and a determination of the trade-offs necessary between one kind of input or output and another (Clawson, 1978). Production functions may include action or inaction, such as the decision whether to log a particular area, and both deliberate or unplanned events, such as windfall through high winds. Trade-off functions include consideration of uses that are compatible and those that are not, such as recreation and wildlife protection. The difficulty lies in the unquantifiable nature of much of the proposed resource uses and the vagueness in distinction between a use that is complimentary with another, independent of it, or competing and exclusive of

it.

The difficulty in comparing one use with another and in particular in resolving conflicts that arise between 'economic utilization' and non-economic activities or values, pervades the thinking regarding forest management for multiple purposes. Paradoxically 'multiple use' both internalizes this difficulty, and yet has been proffered as the solution.

### **Economic Models**

Economic models of multiple use management have concentrated on tackling the issue of timber extraction and the optimum rate at which this can be pursued whilst taking into account other values placed on the forest resource. The basis of economic models for resource allocation in multiple product systems is that 'maximization' is achieved when resource allocation is such that the marginal return per unit of input for all uses is equal. Whilst various models may be built to represent this, the competing and complimentary relationships lead to substantial operational complexities on application. All models require knowledge of not only productions and cost functions, but also value functions which for many outputs are frequently unknown (Clawson, 1978).

Chisholm and Anderson (1991) recently carried out a comparison of three methods of forest management as conducted on indigenous forests in Australia. These are: sustained yield<sup>2</sup>, economic management for timber alone, and 'scientific' multiple use planning

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Sustained yield is a structured timber harvesting programme which is designed to yield the maximum annual volume of wood from a forest in perpetuity. It is equated with 'even flow' in other resource use terms (Chisholm and Anderson, 1991:116).

procedures (Chisholm & Anderson, 1991:127). Their conclusions suggest surprisingly that sustained yield harvesting could result in greater timber extraction than management for market-determined timber extraction alone. Furthermore, they propose that multiple use management, where resource allocation is determined by bureaucratic agents is no alternative to sustained yield management. Without a comparable valuation of environmental amenities, prices or markets for non-timber uses of a forest, Chisholm and Anderson argue that no model can accurately direct the optimum rotation or harvesting decision. Chisholm and Anderson further suggest that individual property rights are necessary. The idea of multiple use is not abandoned. Rather the market approach is seen as a more accurate interpreter of the public need of forests than the political decision.

## **Zoning**

Whilst economists have placed much effort in finding values for the 'invaluable', zoning has played an important part in putting the concept of multiple use into practice. Conway (1976:16) states that:

"as demand increases [within a resource] conflicts will become increasingly evident because in any given area of forest the attempt to increase one use or value will generally decrease others. Multiple use in the sense of maximizing all of the uses or values in any one area of forest is thus an unattainable objective...[and instead] requires delineation of a number of zones."

As early as the 1940's two possible practical interpretations of multiple use forest management were put forward, known as the Pearson and Dona-McArdle approach respectively. The Pearson approach proposes that multiple use would be applied to large



tracts of forest but some units of that forest area would be managed for specific uses (Leslie, 1976:7; Gregory, 1955:6). Any particular acre therefore would be put to a single use, although the areas as a whole might be producing a variety of goods and services.

This contrasts with the Dona-McArdle approach (Gregory, 1955:6), which specifies the production of several goods and services from the same area, accepting that the combination of two or more 'uses' may result in a sacrifice of output for one of them. Application of the Pearson approach depends on establishing a dominant or primary use for an area with select secondary uses that may be tolerated, only as long as they do not interfere with the primary use.

The Dona-McArdle approach has been considered unworkable due to the fundamental incompatibility of some uses. With the Pearson idea, however, there is much scope for argument over priority in the designation of primary and secondary uses. Kirkland (1975:37) points out that the "definition of zones is the end point of the planning process...in itself it does not solve the problem of having to make value judgements about the nature of the balance needed to achieve the goal of the highest social benefit." His suggestion for reducing the subjectivity of management for multiple use involves a ranking system where the use or values for which the forest area should be considered are defined, and the entire forest is ranked in terms of these values. Areas suited to a particular use are then identified as well as feasible co-dominant uses (Kirkland, 1975:40).

Against the apparent comprehensive rationality of this system it can be argued that the subjectivity of choice is transferred from the use for which any particular area is chosen,

to the selection of valuation criteria by which the forest is ranked.

### **Multiple Use in the United States**

It is from the United States that the multiple use concept first came to New Zealand, and it is worth considering multiple use forest management as the basis of management for North American National Forests.

The United States Forest Service are required by law to manage their 191 million acres of National Forest land for multiple use. This includes timber production, livestock grazing, mineral and energy production, fish and wildlife protection, wilderness protection and public recreation (Chisholm & Anderson, 1991;122).

The concept of multiple use in North America emerged from the late 19th Century utilitarian philosophy of managing "for the greatest good, of the greatest number, in the long run". This was considered by many as political rhetoric - with no serious attempt made to define either what was a 'good', or how long was the 'long run' (Report of the Subcommittee on Multiple Use, 1969:5). The central tenet emerging from this, however, and transferred to the concept of multiple use, was that of 'maximization of the public welfare'.

The ideas behind zoning for various uses, and the economic models based on optimizing timber harvesting to combine with other forest uses, have all emerged from the United States' multiple use policy and practice. But as with New Zealand, it is clear that there

has been more to the guiding 'philosophy' of multiple use management than simply a prescription for management. Zivnuska, (1961:555) identifies another fundamental belief underlying multiple use management and the administration of public resources in general. He stated that "the basic concept here is...that efficiency in the management of varied resources of forest and wildland areas for various purposes are best obtained under a single coordinated administration".

The differences in forest dynamics, legal, administrative and social structures have meant that multiple use management has taken a divergent path in New Zealand and the United States. New Zealand has, to all appearances abandoned the concept in favor of single purpose, whilst multiple use has remained the centre of United States Forest management. To environmentalists and commercial interests alike it has not been a satisfactory compromise and as yet remains in an uncertain position as a policy. Schmechel (1993) suggests that its value so far has been as an intermediate step towards stronger conservation measures, adding that "what multiple use forestry did achieve in the end for New Zealand, Australia, and the United States was preservation of large areas of forest until they could be transferred to a more protected status."

Behan, (1990) articulates some of the concerns regarding multiple use as it has been practiced, namely that little data on joint production has been available; management has focused on timber harvesting in one area, and recreation for instance in another; and the term has become synonymous with timber production. Interestingly, Behan blames this on the "descent to specialization". This is the apparent separation throughout the education system of foresters, recreation managers, wildlife biologists etc, such that he calls

for a reexamination of 'multiplicity' and the emergence of a new paradigm viewing the forest as a single interactive system. The possibilities for this new system will be discussed further in chapter four.

## **2.4 PRACTICING MULTIPLE USE FORESTRY IN NEW ZEALAND**

In 1970 Douglas MacIntyre (MacIntyre 1970:138), then Minister of Forests, stated "I want to refer to the forestry image and to develop the thesis that multiple use is one part of it that has come to stay. The advantages it brings amply justify the change from single purpose management and will ensure New Zealand will be able to offer a better environment for the future."

This might imply that the New Zealand Forest Service was undergoing some radical realignment of policy. In fact concern for multiple use management had run through Forest Service policy for some thirty years (Leslie, 1976:3). The 1944 Annual report for the Forest Service "affirmed that multiple use management is the essence of national forest policy" (ibid:3), although the 1950's was the first time that the NZFS actively set out to manage for uses other than timber (Tilling, 1989:33) with the establishment of the Tararua State Forest Park and later Craigieburn Forest Park. The 1954 Annual report confirmed that the Forest Service believed in the compatibility of many of the diverse uses of the State forests, and that the concept of multiple use had therefore been developed "to widen and make more flexible the methods by which the conservation policy of preserving the production potential of as much as possible for the remaining indigenous resource could

be achieved" (Leslie, 1976:7).

The emphasis on 'production potential' in this last statement is quite clear and largely indicative of the manner in which New Zealand has pursued its policy of multiple use management. The New Zealand practice was based almost exclusively on the Pearson, large tract and dominant use concept. Furthermore there seemed to be a tacit understanding that the primary use in by far the majority of cases was to be timber production.

In support of this a 1961 editorial in the New Zealand Journal of Forestry commented on the Fifth World Forestry conference held in the U.S. at which multiple use forest management was a major theme. The New Zealand delegation expressed at the time disapproval of the recent U.S. move to grant wood production, grazing, wild game habitats, watershed and outdoor recreation, 'equal priority' under law, approving instead a congress paper which gave a definition of multiple use as "accommodation of a maximum of other compatible use with the highest single use of the land" (editorial, 1961). In New Zealand it was evident that multiple use was to be equated with 'maximum use' and the 'highest single use' was felt to be timber extraction.

In New Zealand, papers in the Forestry Journal have debated the concept of multiple use since the 1940's. Most are concerned with its operation in practice, implying that even at this stage some doubts were being expressed. An editorial in the 1959 Journal of Forestry proposed that "until foresters have shown their ability to practice multiple use forestry - eat their cake and have it - reservation of large areas to a single and restricted

use are going to continue." The overall impression is that the ideas around multiple use were characterized by muddy thinking. It is interesting that a survey conducted by Trotman in 1974 (Leslie 1976:5) showed that only 43% of the New Zealand Forest Service personnel classified multiple use as major policy.

The Forest Service was, at least until the 1970's, most concerned with continued indigenous timber supply. It saw the multiple use system as a means of satisfying growing public demand for expression of alternative values in forest management for recreation and other amenities. Through multiple use management this could be achieved without making any sacrifice to National Park status and the transfer of resources to the rival Department of Lands and Survey.

While central policy may have envisaged multiple use as the goal of the Forest Service as early as the 1940's, it was not until 1976 that the Forest Amendment Act included the term 'balanced use' and greatly extended the range of 'uses' for which forest were to be managed. The lag in the length of time from multiple use as a concept to embodiment in legislation was similarly matched in the time taken for multiple use to subsequently enter into practice (ibid:3). Consequently, that multiple use management was seen by a growing environmental movement as an excuse for doing little. To concerned observers multiple use appeared a political scientist's ideal, where interest groups could be played off around the periphery, whilst the control center remained steady in its traditional objectives (Wondolleck, 1988). Leslie (1976:5) suggests, however, that the wrong conclusion was drawn: "as so often happens, the practice had been incorrectly taken as meaning the concept".

## Multiple Use Abandoned

For outsiders viewing multiple use forestry as it was practiced by the NZFS, there were two general sources of dissatisfaction. Firstly, debate raged over the choice of dominant use or the area zoned for its operation, and secondly there was a perceived failure of the practice to live up to the claims made for it.

The approach to public involvement in decision making had not been particularly sophisticated. For example in the case of the Tararua Forest Park, established as a working model of multiple use management, there was an advisory board of interested bodies who were listened to, but which had no real authority (Fyson, 1987:57). Wondolleck (1988) describes a land management paradigm first initiated by Gifford Pinchot (first U.S. Director General of Forests) where, as land management tasks became more complex, professional expertise in various scientific disciplines was increasingly called upon for answers. That this reliance on professional interpretations of problems was prevalent is further supported by Culhane (1981:126) writing again in the United States, who states in response to the problems posed by managing for multiple uses that "land managers must rely on savvy or professional experience to reconcile problems of conflicting use". True to this paradigm, in New Zealand, decisions were ultimately left to 'experts' and 'professionals'. The choice of objectives for management of forests which were fundamentally value judgements, had been approached as technical issues.

The Forest Service was being made aware of its vulnerable position, caught between the pressures of public concern, statutory obligation and political imperatives. The Journal

of Forestry editorial 1975 commented on the recently announced new indigenous Forest

Policy that:

"like most policies which have caused controversy in forestry in recent years, the new indigenous forest policy has not been based solely on forestry principles. It is a compromise molded under pressure between biological, political and social constraints. Forestry has become a profession subject to pressures."

The Forest Service had been charged with reconciling three objectives: commercial, social and environmental. The outputs in these circumstances were bound to appear suboptimal (Kirkland, 1988). As no satisfactory yardstick had appeared in multiple use management for measurement of both commercial and non commercial returns, the 'inadequacy' of the Forest Service accounting practices was highlighted by critics.

Kirkland (1988) attributes the abandonment of multiple use to its failure to eliminate the necessity for political judgement to resolve competing claims, in achieving a balanced use of forests. The Forest Service, aware of dissatisfaction arising from the judgements it made regarding the fate of public lands, opened itself to discussion to avoid criticism. In such circumstances the most articulate group was able to most heavily influence the outcome.

Tilling (1989:33) describes a number of difficulties faced in implementing multiple use in New Zealand; the complexity of indigenous species and their long rotation cycles lead to failure of sustained yield; professional bias within the Forest Service and the influence of sawmillers forcing a continued emphasis on timber; and focus on plantations to the detriment of understanding the full utilization potential of indigenous forests in other areas.



Ultimately multiple use had come to mean 'old forestry' to environmentalists. In addition, with a new government economic emphasis on privatization, it became inevitable that a reorganization of the civil service would focus on a split between the commercial and non commercial aspects of forest management. This satisfied both the now powerful anti-logging environmental movement, and the Treasury Department, who were of the opinion that greater returns could be achieved (or shown to be) were the relevant organizations established with a more narrowly defined objective.

This rejection of old style forest management was widely believed to be a rejection of the idea that forests could or should be managed for multiple use.

## **2.5 SUMMARY**

It is evident from the discussion regarding multiple use management over the last 40-50 years that the concept has lacked a solid theoretical basis. Instead multiple use has been repeatedly defined by the manner in which it was practiced. Thus it has become impossible to separate the concept, (at least in the minds of the public), from the underlying ethos of the bureaucracy that has administered it. The Forest Service both in New Zealand and in the United States, where multiple use forestry emerged, has been primarily concerned with sustained timber yield. Whilst gradually forced to accommodate other uses these have remained as 'additional' to the central purpose. Hence the idea that National Parks might also be termed 'multiple use agencies' through their management for recreation, scenery, soil and water, and wildlife conservation was considered "spurious"

(Zivnuska, 1961).

Multiple use was instead equated with management for consumptive or extractive resource demands. The overall management aims of these bureaucracies may have altered over time, but the institutional memory and ambitions ensured that little changed in practice. Added to this it may be said that multiple use was offered in some cases as a placebo for the agitation the Forest Service was experiencing in response to its policies on native forests. Design of management strategies for multiple use came after the initially stated desire to manage for multiple purposes.

The interest then in the concept of multiple use lies not in what it has been but rather in the opportunities the concept of multiplicity may yet represent. Nowhere in the opposition to multiple use forest management was it argued that forests were not generators of many goods and values; that the total benefit to society would not be greater if forests were managed in acknowledgement of these many values; nor that a combination of uses with flexibility for change and respect for the ecosystem was not a valid goal. Yet these were the central tenets of the concept of multiple use in its broadest sense.

What has been shown is that the multiple use concept has been of less importance than the political, social and ethical situation in which it was born and was expected to operate. In order to consider its value for any future forest management strategy it is necessary to look at the context of the current environmental climate in New Zealand.

## **CHAPTER 3. ENVIRONMENTAL ATTITUDES**

### **INTRODUCTION**

The development of any environmental policy (a forest policy such as multiple use management is no exception) is determined by the paradigm in which it is conceived and must operate. It may be said that "decision makers operating in the environment base their decisions on the environment as they see it and not as it is" (Goodey, 1973:1). In New Zealand the approach to the environment illustrated in policy is a product of a number of influences, national and international, and is based on a set of beliefs, many of which are never clearly articulated. What Frawley (1992:215) states of Australian environmentalism may also be said of New Zealand, that it is related to a "particular national historical experience and cultural context as well as continuing environmental influences."

### **3.1 VISIONS OF THE NATURAL ENVIRONMENT**

It is impossible to ascertain a New Zealand value of the indigenous forests without acknowledging the importance of the historic relationship with the environment.

As with other colonial nations, New Zealand Europeans entered their new land with a body of thought developed over centuries of relationship with a temperate and highly modified landscape. The colonial aspirations brought to the 'new world' were

subsequently shaped in reaction to the environment and conditions found there.

New Zealand settlement began with a period of intensive resource exploitation. Settlers impressed with the apparent unlimited abundance, particularly of the native forests showed little restraint and much eagerness to reshape the new home into a more familiar and comfortable replica of the old. This period, however, was more concentrated than that experienced in North America for instance. Before the turn of the century, calls for scenery protection and preservation of representative species saw recognition in early preservation legislation. Bodies such as the Royal Forest and Bird Protection Society, and the various scenery preservation societies which flourished in many centers by the 1890's (Galbreath, 1993:23), had already formed a lobby to protect the environment on the basis of the distinctiveness of the New Zealand landscape (Lochhead, Pers.comm.).

The New Zealand native forests were impressive in their size, grandeur and uniqueness. At the same time, however, 'forestry' was not a respected British tradition. A developing social Darwinism and the popularized concept of 'survival of the fittest' were readily applied to the forests of New Zealand - seen as poorly adapted relics of a bygone era.

In the early stages of colonization the divisions between preservation and utilization were not so great, and did not evolve into the distinct camps in opposition represented by John Muir and Gifford Pinchot in North America. Although preservationists had supported the early efforts of Pinchot and the forestry profession to establish and manage the public forests, they never adopted the conservation philosophy themselves. "At the time, the conservationist's proposal was simply a more desirable alternative to the non-management

and disposal problems then plaguing the forests" (Wondolleck, 1988:121). Ultimately Muir rejected the scientific management approach to conservation advocated by Pinchot.

In New Zealand the 'Conservation' ethic as a synonym for 'wise use' was readily expounded, even by such noted advocates for the environment as the Botanist Leonard Cockayne. The Forestry League, established around 1916 is an example of an early organization which promoted both conservation and utilization aspects. It wanted bird protection and advocated commercial use of indigenous forests (Lochhead, pers.comm.).

It becomes questionable then, that any one strand of thought predominantly influenced or influences New Zealand's environmental ethic. Frawley (1992) discusses the emergence of Australian environmentalism and hence environmental policy in the light of several overlapping and often conflicting influences. New Zealand has obvious social development parallels with Australia such that it is useful to look at this in detail, bearing in mind also, that the different climate, relationship with indigenous culture, and variation in the immigrant population mix will have had their own unique effect in New Zealand.

A persistent feature of western intellectual tradition is that the human species stands apart from the animal world, for which Christianity as the dominant Western religion has provided a foundation. Within this philosophers have identified three major positions in the relationship of humans with their environment; the idea that there are no constraints on the way in which humans may treat nature; the concept of stewardship or care for nature; and the idea that humans can work with nature to perfect it. To these three strands of thought might be added the lesser influences of primitivism, romanticism and mysticism

(Frawley, 1992: 216).

Frawley (using Heathcote, 1972) develops these ideas into five significant views of nature. These "visions" are the colonial, scientific, national, ecological, and romantic. Collectively these have influenced the development of public policy and have governed the emergence of legislation of either an exploitative or of a protective character.

The 'scientific vision' of nature has been prominent since the development of modern scientific thought in the 16th century, based on the separation of humans from nature (Frawley, 1992:218). What this view promotes is reductionism rather than a holistic emphasis, and it encourages a technically focused approach to environmental management. Interestingly Jeans (1983:21) suggests that the "impressive discoveries of science saw the laws and regularities of nature as evidence of God, further that beyond the Eighteenth Century nature became equated with reason, and the laws of nature replaced the laws of God as the guiding principles of civilization".

In the colonial situation the scientific vision was manifest in the exploration of the natural world, the pursuit of technical mastery of the environment through resource development, forestry and agriculture. Later the scientific influence is evident in providing a rationale for preservation of nature through such concepts as biodiversity.

The 'Romantic vision' is essentially the aesthetic response to the landscape (Frawley, 1992:221). Novak (1980:3) writes of American "appropriation of the landscape for religious and ultimately nationalist purposes". Its sources are in the late 18th century and

19th century picturesque movement and the Romantic vision which led to the early scenic appreciation of nature. Buchan (1980:9) writes, concerning romanticism, that "a gap in environmental evaluation opened and continued to grow between the farmer who struggled against the wilderness and the cultured city dweller who praised its scenic attractions." In New Zealand the farmer - unlike the hunter and trapper of North America was not a romantic figure. The New Zealand bush worker or sawmiller seems to hold a confusing status in pioneer New Zealand, feared as a renegade, and 'man alone', yet acknowledged as a fashioner of the future. As William Baucke wrote in 1905 in praise of the pioneer labouring in the forests "for they lay the best years of their lives at the feet of the ages to come, a willing sacrifice..." (Jones, 1989:192). The romantic vision did much to link our national identity with the natural world and under such a vision only certain forms of resource utilization are consistent with the hallowed status of the environment.

In New Zealand a sense of betrayal of the romantic vision, a foundation for later feelings of national guilt regarding the native landscape, had already emerged by what Jones (ibid) identifies as the late colonial period (1890-1935). Literature of the time makes use of a common theme - the mutilation of the bush. As Jones (1989:191) states, "looking around them, these writers saw a land in which the beauty of the bush had been destroyed, often to be replaced by rough pastures in which stood the burnt skeletons of the forest past." Speaking of more recent times Jeans (1980:179) quotes J.M. Betulla, stating that "the radical critique posed by the core of the environmental movement is thoroughly imbued with Romantic expressions of the overriding value of nature against civilization".

Frawley (1992:223) describes the 'Colonial vision' as the dominant one throughout

Australian history, characterized by an emphasis on progress, improvement of nature and a rejection of native vegetation for its apparent lack of economic value: "Its focus was on rational planning and scientific management of natural resources." The premier status of agriculture and farming (the backbone of the country), was not related to the romantic visions, but was part of the colonial successful conversion of the land.

Closely related to this is the 'National vision' - emerging from a sense of pride and confidence in the development goals of the 'new world'. At the same time national pride stemmed from a concept of a unique landscape, linked with romanticized ideas of the native environment. Lister (1987:190) describes how our valuation of mountains has changed from "intrinsically ugly and evil places" in the 17th Century, to a "source of prowess and identity influenced by nationalism". In New Zealand, early paintings of the landscape often showed the mountains shrouded in romantic glow (Buchan, 1980:26). Wondolleck (1988:67) quoting James Watt makes a comparison between Europe where the symbols of civilization have been the monuments and great cathedrals, with the new nation America. Here "our cathedrals, the monuments of our civilization are the national parks, the great wilderness areas, the wild rivers...".

The 'Ecological vision' (Frawley 1992:224) is the most recently emerged, and is loosely linked to earlier visions, both rejecting them and utilizing them. It is opposed to the careless dominion over nature advocated by the 'Colonial vision' and the 'National' concept of the limitlessness of resource development. The Ecological vision has sympathy with intrinsic values of nature and re-emerging values for the environment held by indigenous people. It also expresses a greater desire for public participation in resource



use decision making.

## **Environmentalism**

If we accept the five visions stated as having all contributed to current attitudes to the environment and policies regarding resource management - where then does 'environmentalism' lead us, and where too does the concept of 'nature' sit in our national psyche?

'Environmentalism' writes Frawley "...advocates a new philosophy of human conduct towards both nature and the cultural artifacts of human civilization as well as towards other human beings" (Frawley, 1992:228). The key elements of it, anti-materialism, and opposition to instrumental valuation of the environment and domination of nature, contrast strongly with the core values of industrial society (ibid:229). Furthermore, to the environmentalist, the view that nature has only instrumental value is an extraordinarily narrow and exploitative view of nature's worth (Scott, 1986:181)

In summary so far, 'nature' has become an entity in its own right, both separate from humanity through anthropocentric dualism, and at the same time essential to humanity through the holistic environmentalist reaction to reductionist science. Our Romantic vision wishes to revere nature, our Nationalist vision takes pride in both its exploitation and its preservation. From our Colonial heritage has come the concepts of 'wise use' to regulate resources and the emergence of a "class of technically qualified professionals who wished to assert their role in managing resources" (Frawley, 1992: 223).

Sense can be made of this apparent hotchpotch of influences by the idea that society is now made up of a hegemonic center to which nature is a commodity, supported by the Judeo-Christian doctrine of anthropocentrism and the scientific 'revelations' which have reduced the natural world to a set of "colorless, odorless...objects...knowable through an analytic method which destroys the wholeness of the natural world" (Jeans, 1983:179).

The periphery to this centre hold the view of nature as superior and sacred, "that the hegemonic centre finds this assault difficult to resist and is forced to make concessions in the form of wilderness reservations and laws to protect that natural environment, can be said to spring from the way in which Nature has been inextricably built into the social foundations of society..." (ibid).

O'Riordan (in Frawley, 1992:219) draws a line between two extremes, the technocentric, with faith in science and material progress, and the ecocentric who calls for more humble lifestyles. This line, however, is perceived as a continuum and individuals contain elements to a degree of both attitudes.

Earlier utilitarian concepts of 'wise use' are treated with a large degree of cynicism by modern environmentalists. Nevertheless they have remained highly influential and: "a century after their introduction are being written anew under the mantle of sustainable development" (ibid:223). The concept of ecological sustainable development has appeal to governments trying to chart a course through often contradictory messages coming from the community. It does provide some common ground for traditional development and newly ascending conservation views. While developers appear to see the concept largely

as a more sophisticated extension of the pragmatic, managerial 'wise use principles' established through this century, many of the conservationists are skeptical of the ability of government to recognize the fundamental ecological constraints within which it is believed economic development must be restricted (ibid:232).

Not just in environmentalism, but in all fields there has been a fundamental rejection of much of what is termed modernism. That is the compartmentalism of life and knowledge, the separation of science and the humanities, and scientific philosophy based on reductionism and positivism. Planning based on this positivism assumes that "by using the right formula the solution can be found. From this basis both the 'problem' and the 'solution' are seen as objective and 'unquestionable' (Puentener, 1993). New theories, on planning and resource management, linked with postmodernist writers, reject the notion of an objective reality as represented by the dominant discourses of scientific, technological and economic rationality, variously described as 'grand' or 'meta' narratives (Whittle, 1993). Cheney, (1989:118) notes that the place objectivity holds in postmodernist discourse is only through the understanding "that 'truth' is simply the result of social negotiation, agreement achieved by the participants in particular conversations."

Alternative to modernism then is the notion of 'contingency' or 'uncertainty', and the unsettling of dominant ways of seeing (Lister 1987). How this works in practice is to raise questions about many of the assumptions upon which our natural resource management decisions have been made.

### 3.2 NEW ZEALAND AND THE ENVIRONMENTAL PARADIGM

A paradigm is a system of professional standards, behavioral norms and conceptual approaches to problem solving that becomes adopted and applied by a community, a profession, or a society (Kuhn, 1970 in Wondolleck 1988:3). No paradigm or ethos can be said to be arrived at on any particular date or specific moment in history, at all stages there is transition, beliefs overlap and merge, even when apparently in opposition to one another. As New Zealand is a colonial nation it is reasonable to expect to find evidence of the five 'visions' discussed above in the attitudes to the environment, expressed in legislation within the 'environmental movement' and by society at large.

Hayward (1988:16) suggests that the *Environment Act* 1986 and the *Conservation Act* 1987 (more recently the *Resource Management Act* 1991 could be included in this) are evidence of a new, New Zealand environmental direction. It incorporates a 'world view' that is different from the traditional Western view, embracing a holistic approach to the environment, in the footsteps of such thinkers as Catlin and Thoreaux who saw that "people were but part of a natural order which controlled them as much as they thought they controlled it."

The rise of importance of environmental values in New Zealand appears to be confirmed by the growth of support for environmental organizations, support for 'green issues' in public opinion surveys and the development of a 'green consumerism' element in industry (Buhrs, 1992:1). Yet a closer look at the increase in environmental support suggests that New Zealanders "continue to adhere to materialist (including authoritarian) values and do

not appear ready for a radical change in their lifestyles and values" (ibid:21). Buchan (1980:38) writes that many middle class people are superficial in the 'conservationist' views they espouse. Often they believe that native forest should be conserved but without asking themselves whether they would be prepared to accept the drop in living standards which it might entail."

Even within the environmental movement, there is evidence that no single dominant value or ethic for nature has emerged. If we look more closely at New Zealand environmentalism we can see a number of issues arising. Waghorne (1976:167) in his thesis on the New Zealand environmental movement, reveals that within the movement "four fifths of respondents agreed that for them (and in their view for all people) nature is a necessity which contains within it spiritual, creative values, serving as a retreat from urban populations." This spirituality of nature is evidence of the romantic ideals discussed earlier. However, Waghorne further points out that "quality of life" is also a driving motivation within the environmental movement - this leads to a dichotomy where "for some the synthesis is achieved by reducing nature to the level of being for the enjoyment of human beings while others believe that the quality of human life can only be achieved by placing the natural ecology as we know it in a position of unqualified priority" (Waghorne, 1976:168).

This assumption that the spirituality of nature is felt by everyone (could or should be felt by everyone), has placed environmentalists on a self-appointed moral high ground. Farmers and forest utilizers, left out of the Romantic visions of the natural world might feel themselves forced to defend their positions. Sir Peter Elworthy of the Queen

Elizabeth II Trust, stated: "farmers are deeply felt conservationists, more so than most city dwellers and certainly more so than most city dwellers would give them credit." (Elworthy, 1981:101). He is referring inadvertently to the urban, rural division. The environmental movement draws by far the majority of its support from urban centers. Furthermore, its members are often wealthier and better able to articulate their needs than the rural 'would-be utilizers' of the natural resource in question.

Elworthy goes on to say "nowadays I perceive that not only my generation but also my children's and younger generations, think and act ecology and conservation as a matter of course ... Natural areas and plants are seen less and less as problems and increasingly as assets. The superb silver tussock (*Poa Cita*) is now recognized in my area for the unique water and land conservation agent that it is," (ibid 1981:101). This suggests that whilst the ends may be the same as that desired by the environmental movement - the preservation of natural vegetation - the justifications are different. The above statement implies the worth of the natural environment is through the contribution it makes to the success of other human activities - a rerun of the 'colonial vision' where the native flora is no longer despised for its lack of economic worth, but appreciated.

One paradigm that has been in operation since the early part of the twentieth century in land management situations is the use of "professionally applied scientific expertise to resolve complex issues and apparent conflicts." (Wondolleck 1988:4). This take-over by scientific expertise was lamented by Leopold (Hayward, 1988:16) when he stated that "the trouble with conservation was that it had become a specialized activity, an official one at that, taken in hand by governments and bureaucracies and conducted by experts who

monopolized the joys of husbanding nature that ought to be the birthright of everyone". This has further implications in the expectation by New Zealanders that conservation and management of natural resource is a government role (Buhrs, 1992:6). It is also notable with reference to indigenous forests, where the Department of Conservation, as a body of professionals with almost exclusive responsibility for substantial state owned resources, has an emphasis on technical expertise which renders them little different, save in name to the foresters of the old State Forest Service (this could be seen as a manifestation of the 'scientific vision' in New Zealand attitudes to the environment).

### **Ethical Directions**

So how do we feel about our native forests? Should we preserve them or not? If so is it for our own utilization or some intrinsic self-contained value? Within New Zealand this question is clearly unresolved. Some might say that the fact that we even have the luxury to consider this question is evidence enough that there has been in society a dominant force to 'preserve' our natural environment.

Our National Parks, however, appear as a testimony to the unresolved conflicts over preservation and use. Booth (1987:60), offers some figures on the public attitude to National Parks; "43% thought New Zealand should have national parks for their preservation function and did not recognize a recreation function while 26% acknowledge recreation but not a preservation role".

Molloy & Wilson (1986:12) present some convincing arguments for the preservation of

wilderness. These include: the perspective it allows us, ie. the chance to see ourselves as a "tiny but integral part of the greater whole"; the diversity it offers; the opportunities for changing social values; and the excitement of the new. Not all of these are based on self-interest, indeed they may seem selfless, as the 'preservation' is for the rewards to be reaped by future generations. What is evident is that whether the value is in simply knowing that such wilderness exists, it is a form of 'utilization'.

There seems to be an unconscious line of inacceptability drawn where the utilization has some economic component. Recreation in the wilderness is welcomed by environmentalists as an essential part of a spiritual and educative process. Commercial recreation enterprises, however, are not greeted so enthusiastically. If nature has become our religion and the native forests our cathedral for spiritual renewal, perhaps an attitude towards economic utilizers has sprung up related to Christian religious repugnance at having the "money changers in the temple".

Scott (1986:172) clearly articulates that in New Zealand we do not have an ethic to "provide an adequate set of prescriptions governing human relationships with nature." He examines the contradictions in the opposing concepts of preservation justified either by our utilization of nature or by some intrinsic value that sets the principles of ecology as paramount.

In the first instance, "preservation of nature in an unmodified state is only justifiable morally if the greatest amount of human benefit is obtainable through this course of action" (ibid:177). However, we frequently encounter a threatened part of nature which



we value for reasons not easily articulated, "the result is often a frantic search for rational reasons for attaching aesthetic, recreational, scientific or cultural value to that part of nature so that the non resource can be transformed into a resource" (ibid:177).

In contrast, Scott points out that what is good for ecology can never be entirely good for humans (witness pests and disease) such that an ethic for land management based on intrinsic worth of nature is bound to failure. To resolve competing value claims on nature requires an understanding of nature's value, either in itself or to ourselves - Scott proposes that we must accept both the human and the eco-centered ethic in our approach to management of the natural environment.

Fox (1990) however, circumvents the difficulties of defining a morality for our relationship with the environment and proposes a 'transpersonal ecology'. As an intrinsic value based approach this advocates an extension of the concept of environment beyond "ones egoic, biographical or personal sense of self" (ibid:197) and renders an 'ethic for nature' redundant: "The reason for this is that if one has a wide expansive or field like sense of self then (assuming that one is not self destructive) one will naturally (ie spontaneously) protect the natural..." (ibid)

Another important issue has entered the debate recently regarding New Zealand's environmental paradigm, which fits in well with Fox's redrawn sense of the self. As there appears to have been a postmodern movement to reject the 'grand narratives' or 'grand plans' of western ideology, so has there become room to include the narratives of the individual and particularly those found in less dominant paradigms, notably of indigenous

people.

For example Hayward (1988:160) states that the Maori idea of the environment is by no means the sole origin of environmentalism but it may provide support for the ideas derived from Thoreau and others:

"Maori thought and mythology were centrally concerned with the human situation and human experience, as all systems of thought have necessarily been, but in their thought as in their way of life, a balance was maintained between human beings and the environment. Their closeness to nature and the immediacy of their dependence upon it, their intimate and profound knowledge of plants, animals, and landscape led to a view of the world that recognized the tapu, the sacredness of other forms and the landscape itself. By seeing themselves in the natural world and thus personifying all aspects of the environment, they acquire a fellow feeling of the life forms and other entities that surround them and they saw a kinship between all things (Orbell, 1985 in Hayward, 1988:16).

Any environmental paradigm in New Zealand cannot be divorced from the fact that there are at least two distinct, interacting and evolving cultures within it. It is no longer appropriate in such circumstances to act upon 'western ideology' apart. Nor is it valid to append the 'maori view' as an alternative, frozen in historic context, rather than developing alongside the changing circumstances of recent times. Whether such a view of the natural environment is based in tradition, or stems from a newly evolving need, it demands to be included in New Zealand's environmental ethos.

Where does this leave us with New Zealand's approach to its native forests. Native forests are part and subject to the generally confused response to our natural environment, but form perhaps a specific case as well. They are highly visible, and their age and the complexity of their ecology render them particularly potent aesthetic images. An initial

prevalent British cohort in the colonial immigrant population meant that New Zealand has become dominated by a people with little traditional experience of forests. The history of consumptive resource use of native forests, and the debate surrounding this has further clouded the issue of their utilization. People's perception of native forests is not as clear cut as some would wish to think.

Furthermore, it is not simply a case of requiring exposure to the natural environment in order to embrace the ideas of 'conservation'. The common call for education of the public by those with a strong interest in environmentalism is often little more than an attempt to impose a new colonizing set of moral values, with scant understanding or acceptance of the individual's interpretation of their surroundings.

As discussed above, people's viewpoints are based on their own reality stemming from a number of visions. The value of this analysis is that it recognizes the multiple and often conflicting attitudes that exist both at a societal level and within the individual. The idea of searching for one common reality as far as our attitude to native forests is concerned is based on the faulty premise that one reality exists. This is admittedly a contentious point, reflective of the challenge that many postmodern theories have put to traditional conceptions of knowledge and interpretation of the world. Feminist epistemology (Rixecker, 1993; Harding, 1987) offers an alternative to positivism and rationality or the idea of one common truth, to be exposed or arrived at through neutral experimentation and/or reasoning. Instead it is asserted that "the critical element of understanding ourselves and the world is to realize that our knowledge is a direct reflection of our experiences within it," (Rixecker, 1993:10). That we might reach agreement is possible,

that we will see things the same way is unlikely. An understanding of this is crucial to the evolution of a new and workable environmental ethic for New Zealand.

### 3.3 SUMMARY

"Humans are animals with ideas as well as tools and one of the largest, most consequential of those ideas bears the name 'nature'. More accurately 'nature' is not one idea but many ideas, meanings, thoughts, feelings, all piled on top of one another, often in the most unsystematic fashion" (Worster<sup>2</sup>,1988:302).

Our attitude to the environment is based on a sum of experiences with several visions in operation simultaneously. We are, at least in part, separate from 'nature': a steward, a utilizer, yet with an awareness of our dependence upon it. As individuals alone it is difficult to convert this complexity or unresolved ambiguities into a coherent attitude to the environment or towards a specific point such as represented by New Zealand's native forests. What becomes apparent, therefore, is the limitation of proposing a 'New Zealand view of the environment' as if the individuals within this culture are uncomplicated and unanimous in their approach (ibid:303).

That our policies and strategies directing our approach to the environment are a reflection of this is described by Fox (190:213) where:

"some 'real world' situations effectively represent equally uncomfortable mixtures of both responsible management and unrestrained resource based approaches [whilst] others represent equally uncomfortable mixtures of both "responsible management" resource based approaches and intrinsic value theory approaches".

What may be said in general of the New Zealand attitude to its indigenous forests is that some new paradigms are emerging with the abandonment of grand or universal narratives and the inclusion of more than one view. The Department of Conservation is the most influential interpreter of our national policy concerning indigenous forests today and has extensive responsibilities in environmental management. It is inevitably influenced by the divergent values and changing attitudes discussed in this section. How the Department is equipped to address this is considered in the following chapter.

## CHAPTER 4. THE DEPARTMENT OF CONSERVATION

### INTRODUCTION

Although the Department of Conservation is responsible for a wide range of New Zealand ecosystems, varying from marine to high alpine, much of the controversy that surrounded the dismantling of the New Zealand Forest Service and hence the emergence of DOC, centered on the management of the indigenous forest resource. The Department today remains a substantial symbol of New Zealand's attitude to its indigenous forests.

#### 4.1 THE ROLE OF THE DEPARTMENT OF CONSERVATION

DOC was established primarily to operate under the *Conservation Act 1987*:

*"An act to promote the conservation of New Zealand's natural and historic resources and for the purpose to establish a Department of Conservation."*  
(short title).

The tasks allotted to the Department through part II, section 6 of the *Conservation Act* include: management for conservation purposes; advocacy for conservation; education about conservation; management for recreation and tourism<sup>3</sup>; and provision of advice to the Minister for Conservation.

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The wording of the Conservation Act 1987 concerning the Department of Conservation's responsibilities for tourism and recreation is quite specific: "to the extent that the use of any natural or historic resource for recreation or tourism is not inconsistent with its conservation, to foster the use of natural and historic resources for recreation, and to allow their use for tourism (section 6(e)), [own emphasis]."

Under part II, section 5 of the Act, DOC is made responsible for administration of some 22 pieces of legislation including the *Reserves Act 1977*, the *National Parks Act 1980* and the *Wildlife Act 1953*. The Department now has jurisdiction over all national parks, and most of the former lands administered by the Forest Service as well as special categories of reserves including scenic and archaeological reserves. This has resulted in DOC managing an estimated 30% of the land surface of New Zealand or some 20 million acres (Williams, 1988:7).

The Department of Conservation's influence and responsibilities in resource management are considerable. Initial perceptions and ideals of establishing the Department as a single purpose agency were largely in reaction to the controversial 'multiple use' stance of the Forest Service. Today it is generally acknowledged that the Department has a primary focus - that of conservation and preservation of natural and historic resources and a secondary purpose of administering those resources to support the needs of public recreation and tourism (Sage, Pers.comm.).

The Department's Corporate Plan for 1992 sets out three primary objectives: the conservation of New Zealand's natural and historic resources; public awareness of, support for and enhancement of a conservation ethic both within New Zealand and internationally; and sensitive and sustainable use of New Zealand's natural and historic resources by the public.

Elsewhere, in the Waikato Conservancy draft Conservation Management Strategy 1993, it is stated that:

"the prime duty of the Department in relation to conservation land is the preservation and protection of natural and historic resources. Consistent with conservation of natural and historic resources it must foster their use for recreation and allow their use for tourism".

In addition the department operates concessions for a number of activities ranging from beekeeping, grazing, taking of plant material, logging, commercial tourism operations, and mining (administered under the Crown minerals Act 1991 and the Resource Management Act 1991). How the rights to these activities are allocated is largely dictated by the Acts administered by the Department, and the objectives outlined in the regional conservation management strategies (CMS).

The Regional Conservation Strategies essentially interpret national Department of Conservation policy for regional circumstances. Whilst the regional approach allows for some flexibility according to local demand, the policy approach toward commercial use of Department land appears generally consistent. Within the draft Conservation Management Strategy for the Auckland Region (1993:313), for instance, objective 48.0.1. is: to "allow land and other resources administered by the Department to be used by concessionaires in a manner which is compatible with the purposes for which the land or resources are held" [own emphasis]. Alternatively, the Waikato Conservancy, (Draft CMS, 1993:43) notes that:

"There may be scope for other uses of land administered by the Department, such as grazing, mining, cultural harvesting, logging and so forth provided they are consistent with conservation of natural and historic resources...However, in general, such non recreational, non tourism uses will have to demonstrate clear conservation advantage before they can be regarded as acceptable on conservation land."



In the region's Conservation Management Strategy, Waikato Conservancy makes an interpretative comment regarding its policy towards concessionaires, stating that their obligations: "cannot be regarded as a 'lock up' of the conservation land. But they very clearly impose a duty on the Department to ensure that all recreation and tourist uses are not inconsistent with conservation and that other uses are consistent with conservation".

#### 4.2. INTERPRETING 'CONSERVATION'

In light of its evident importance, as illustrated above, the term 'conservation' requires some analysis. 'Conservation' as an expression of an attitude to the environment in New Zealand is very familiar although its meaning has changed. In the past it has been associated with 'scientific forestry' and synonymous with 'wise use' (see chapter two). The New Zealand Forest Service divided the estate under its control into a series of 'Conservancies' a reflection upon the approach they viewed themselves taking, as opposed to the more 'consumptive' ethics of other land management agencies (Roche, 1990). Today, however, 'conservation' is synonymous with 'preservation' (the Oxford Dictionary defines one meaning of conservation as "preservation, especially of the natural environment"). The Department of Conservation is representative of the meeting of 'conservation' and 'preservation' where the words have become interchangeable.

This is a clear shift in emphasis away from utilization of such resources as the state-owned indigenous forests. As a protector of the environment, the Department of Conservation embodies a total rejection of our exploitative past. Using Frawley's description of the

influences on environmental policy in a post-colonial situation (chapter three), it may be said that the 'scientific' and 'ecological' visions have had the most profound influence on the development of the Department of Conservation.

The Department has been allocated responsibility for our natural resources, as a conscience-keeper of the nation with allegiance almost exclusively to ecological sustainability. What is also important to note is that the Department itself is not a neutral body. It has its own perspectives, brought about by a combination of historical influences, and the values and beliefs held by the present employees.

The situation the Department operates under is one in which no clear ethic for the environment has emerged. In addition, its own position has some inconsistencies. Management of the forest resources for tourism is a growing role for DOC, and both recreation and tourism have long been thought of as 'soft option' solutions to the problems of economic and social development in isolated regions. However, as Rackham (1989:104) points out, the type of development needed to provide an economic alternative to activities such as mining and tourism will have significant impacts on the environment.

An influence on the Department which cannot be underestimated is its requirement to recoup a percentage of the costs of managing the estate. The emphasis on financial recovery has been perceived as causing a redirection of staff effort from tasks such as conservation advocacy and concession processing, towards tourist administration (Sage, Pers.com.). The opposition to the Department engaging in commercial activity by environmental interests is clear. Sage (Pers.com.) noted an inconsistency between the

Department using its park interpretation centres to supply snack foods through vending machines, and administering bookings for commercial recreation activities. This is again a reflection of the perceived incompatibility of commercial utilization with the sacred status of the indigenous forests.

The Department is given a mandate both to preserve and utilize the natural resources. In such a situation it is inevitable that DOC is facing criticism from a number of quarters. Its response to this is an interesting reflection of the still prevailing influence of the scientific paradigm discussed earlier, where resource management is perceived as being the domain of technical experts. The Department takes various actions to achieve an overall 'conservation gain', where areas may be traded for development purposes in exchange for greater preservation status of higher value areas elsewhere. Such decisions are based almost entirely on a scientifically defined scale of ecological importance (Suggatte, Pers.comm.).

Furthermore, Williams (1988:43), a visiting U.S. Forest Service Supervisor, noted, at the early stages of operation of the Department of Conservation, the "high degree of ownership [of DOC] by environmental organizations who will no doubt seek to influence its future management". He goes on to add that "it does not appear that the Department of Conservation is ready to deal with this external influence."

Although this is a comment from an outside observer, the impression that the Department was already having to prepare itself to resist external persuasion is clear. It implies that DOC had not shaken the cultural exclusivity attached to the Forest Service. In support

of this, the term "siege mentality" has been used to describe the attitude of the Department of Conservation on the West Coast of the South Island, where the demands upon the Department's estate are amongst the most controversial in the country (Sage, Pers.comm.).

Quoting from Kaufman's study of the United States Forest Service, Halket (1987:21) noted that "functionaries imbued with the spirit of an organization...indoctrinated with its values, committed to its aspirations and goals and dedicated to its traditions are unlikely to be receptive to ideas which threaten the integrity of its mission or its autonomy". The Department of Conservation is in the powerful position of interpreter of our environment, not the least of our indigenous forests. A likely outcome of the Department's exclusivity is what Cheney (1989:120) describes in postmodern terms as a 'totalizing' or 'colonizing' discourse, based on scientific management and ecological sustainability, where policies "cut through individual differences when these are irrelevant to its purpose" (ibid). The result is that the public is at risk of being disenfranchised from the very environment it seeks to protect.

### 4.3 SUMMARY

The Department of Conservation represents a specific case as a phenomenon of 'modern' attitudes toward the indigenous forests. The conflicting anomalies within that approach converge within the Department. Both intrinsic and extrinsic valuation is evident, as the Department is instructed to both preserve and utilize. Furthermore DOC is influenced strongly by the scientific management paradigm of the past, which renders it poorly

adapted to respond to the increasingly vocal calls for public involvement and recognition of the multiple claims and values attached to the native forest resource. The Department of Conservation faces a considerable challenge, and a reassessment of the concept of multiple use may contribute some understanding of the changes necessary to respond to this.

## CHAPTER 5. MULTIPLE USE REVISITED

### INTRODUCTION

Multiple use as it has been applied in New Zealand has been a tool for prescriptive planning based on limited politically and technically defined criteria for the use of indigenous forests. To reassess its value in the new environmental context described in chapter three it is necessary to deconstruct the term and detach the concept from the associations that its application in practice has developed.

#### 5.1 'MULTIPLE' AND 'USE'

Firstly the word multiple implies 'many', it may mean many 'uses' but may just as well imply many interests, interest groups, values or perspectives. This multiplicity is fundamental and is contrary to the supposed single purpose nature of today's management of state-owned indigenous forests. Management for 'many' does not of course imply management for 'all'. In the instances where some values, interests, or 'uses' are excluded it is done so by making a decision, based on a judgement. What appeared unacceptable to many about the former Forest Service multiple use management, was that ultimately, the decision as to what function should take place and where, had to be made politically and was therefore subject to the pressures of private interest groups through lobbying. The decision to manage for a 'single use' however, has (as is inevitable) been a decision made at a political level. What is emerging is a paradox.

The establishment of DOC with a remit for conservation of the state owned natural environment has not denied multiplicity in management, rather it has buried it. In seeking to settle the question once and for all regarding the future logging of the forests under DOC's control it has not been considered that multiple use may also imply many alternative services based on both consumptive and non-consumptive forest use.

Part of the difficulty with multiple use has been the word 'use'. As discussed in chapter three there are some associations with the concept of utilization which make it in many ways an unacceptable word to apply to our indigenous forests. The idea of 'utility' is different to 'use' in that, it can imply either consumptive or non-consumptive use, such that sometimes the highest utility will be seen to lie in not using a resource at all (Morton, 1986:123). The perception of the Department of Conservation is that it has been established as a 'non consumptive' user of the natural resource (in fact as has been shown it also regulates for a number of consumptive uses of native forests). It is, however, a utilizer and "utility is a human related variable according to how much we desire a product, what we want to do with it and the amount there is of it" (ibid:123).

So should the word 'use' be substituted for the idea of 'utility'? Perhaps a more appropriate term would be 'values'. Underlying any utilization objective is a 'value' attached to both the use and the resource in question. Of 'values' Morton (1986) states "we mean the considerations arising from the properties of a system that create in us an esteem for the thing itself". These are separate to the economic idea of values as 'benefits', but are instead those attributes a resource holds that directs us in our decision to utilize it. Since all decisions to manage for one use or another are ultimately dependent

on a value judgment it seems reasonable to acknowledge this in any management strategy adopted, thereby establishing an obligation to seek out and recognize these values in the decision making process.

In North America where multiple use is ostensibly still practiced, a recent paradigmatic challenge has arisen which lies in the distinction of 'multiplicity'. Behan (1990:15) states that sustained yield multiple use has sought to perpetuate the physical supply of several independent substances and services. In other words it has concentrated on what has been and is to be removed from the forest ecosystem. An alternative offered is 'multi resource forest management' which concentrates on the production of interdependent substances and services, "viewing the forest as a single, interactive system of plants, animals, soil and water, topography and climate". The manager no longer concerns her or himself about the question of running out of a resource, but rather considers what will happen to the system as a whole when one or other factor is manipulated.

This idea is further supported by Rolston and Coutal (1991:38), who suggest a removal to 'multivalue forest management'. Rather than listing the 'uses' for which native forests are to be managed such as recreation, timber, watershed, wildlife - they list ten values including life support, economic, scientific, aesthetic, and spiritual. Neither Behan, nor Rolston & Coutal advocate a denial of the concept of multiplicity but choose to rather reapply it. Whilst there are obvious disadvantages in importing concepts to New Zealand as witnessed by the complications of applying 'sustained yield' in the New Zealand indigenous forests, it can be argued that the concept of 'multiple value' is less an exclusively North American idea, but rather one belonging to the more international shift



to a more sophisticated and holistic view of the natural environment.

There is another advantage in using the term 'value' rather than 'use'. If any management strategy is to retain the idea of multiplicity and yet be acceptable to the public it must recognize the associations and the symbols connected with a concept. We may well use our native forests but at least part of us does not like to think so. Native forests have in many ways become a symbol and focus of the nation's guilt concerning its environmental record.

The idea of 'zoning' as part of a grand plan for resource use, that has been associated with multiple use is also rejected under this view. Zones separating 'conflicting' uses is based upon a system of law which has an emphasis on discrete judgement and the division of protagonists, not upon the resolution of conflict. A system which advocates a 'multiple value' approach to forest management also recognizes that the concept of conflict in the first instance is subjectively defined. Ironically, policy makers who rejected the multiple use of New Zealand's native forests, have in fact zoned the resource into 'productive' and protected areas and established dominant uses for each, a replica of the old Forest Service practice, albeit on a grander scale.

Alternative to the word 'value' might be the word 'perspective'. Similarly this acknowledges the complexity of approaches to the native forests identified in chapter four. A management approach that embraced the concept of multiple-perspective makes a significant step towards participatory democracy and requires more inclusive dialogue within policy making. The advantages of this must be that not only is their

acknowledgment of the validity and rights of all individuals in determining the fate of their native forests, but also there is increased opportunity to seek creative solutions to management dilemmas.

## 5.2 MULTIPLICITY AND SUSTAINABILITY

Multiple use, although more specific in its intentions than 'wise use' has nonetheless evolved as a wise use concept, stemming, from the developmentalist viewpoint (Frawley, 1992). As stated earlier (chapter three) wise use has found new life, incorporated in the recently popular notion amongst resource managers, business and community at large, of sustainable development. Sustainable development is seen as a compromise between the humble lifestyles advocated by those such as the deep ecologists of the environmental movement and the continued emphasis on materialism and growth which is part of the developmentalist ethic (ibid). Sustainability in its broadest sense is a phenomenon of the meeting of the various visions of the environment, and represents a desire to resolve the conflicts of the past through acceptance of the validity of all of those attachments.

Sustainability, can, and arguably should embrace social, cultural, ecological and economic dimensions, as well as issues of inter- and intra-generational equity. In New Zealand legislation, the definition of sustainability has not been broad. Perkins et al (1993) notes, in concern for the sustainable development of cities, that "while the new environmental management regime of the Resource Management Act gives local and regional communities the opportunity to enhance the quality of the natural and built environments

of New Zealand's urban areas, we are concerned that the future of the social and cultural urban fabric has been relegated to the status of a non issue." Similarly, ecological rationality alone, as forms the basis for the management policies of the Department of Conservation, will not lead to sustainable development (Candy, 1990:54). Sustainability without a cultural component has no commitment to recognize values of a resource other than its biological continuity. To the acknowledgment of a more embracing concept of sustainability, multiple 'use,' or rather its possible successor multiple 'values', may make some contribution.

Another relationship that can be drawn between multiple value management and sustainability is in the notion of intragenerational equity. Sustainability includes a responsibility to future generations, to manage a resource with as limited foreclosure on options for the future as is possible. To manage indigenous forests for a single use is to presuppose the needs or values of future generations. To manage instead for a multiplicity of values injects fluidity into a strategy, such that it must constantly reassess and respond to changing circumstances.

In addition single use management makes implicit judgements in intergenerational equity. Ostensibly, the Department of Conservation estate is available and free (at present) for all to enjoy, yet there are many actual and potential users of the estate whose requirements are not proactively considered. It is difficult to imagine how a nation such as New Zealand which increasingly is being brought to realize its obligations to recognize the rights of its indigenous people under the Treaty of Waitangi, can manage its indigenous forest estate without some notion of multiplicity. In a specific case, how such issues as

cultural harvesting -a utilization of the forest resource - may be resolved without acknowledging the multiple values impinging on the resource.

One of the great challenges to multiplicity has come from Garette Hardin's theory referred to as the 'tragedy of the commons'. This has been readily and simplistically adopted particularly by the environmental movement and used to reason that independent users of a resource are not capable of managing that resource to even their own long term advantage, and certainly not for the long term survival of the resource itself. It is furthermore the implication that where there are many users of a resource, there is competition between unreconcilable interests in which instance everyone acts to maximize their own personal benefit.

Snyder (1990:30) challenges the idea that over exploitation of common owned land occurs through the demands placed on it. The crucial factor is more the manner in which those demands are controlled. Crown-owned land, he describes as de facto public domain that has displaced native people or people with a sense of place and commitment to the resource. By far the greatest exploitation has occurred under central government control or management by central economy 'entrepreneurs' with the incentive to exploit that resource and invest elsewhere for a higher return. What Hardin advocated was control of the commons by an independent, objective law-maker. There is, however, no truly objective knowledge of nature, set apart from the political and economic perspectives from which people view it (McEvoy, 1988:226) and such a body - immune to political forces, as Hardin envisaged does not exist. Instead management is under the jurisdiction of an oftentimes remote bureaucracy, besieged by various factions with varying degrees of

organization and articulation in a struggle for the resource (ibid).

A true commons, Snyder argues is managed by local inhabitory people with a high degree of social control (Snyder, 1990:34). Hardin's farmers of the common's are portrayed as "profit maximizing automatons, without culture, without feeling for their work and without community" (McEvoy, 1988:229). In calling for a "recovery of the commons" yet with a world wide scale - 'multiple value' as a concept allows for the complex interlinkages necessary to reinstate public involvement and personal commitment to a resource.

### 5.3 CIRCUMSTANCES TODAY

If we compare the management circumstances under the Forest Service using multiple use, with the Department of Conservation pursuing single objective management, there are some interesting parallels. As stated earlier, the subjective and political nature of management decision making is still present in Doc's policies today.

When we consider the structure of the bureaucracy involved in that decision making we see that the kind of complaints made about the Forest Service as an isolated, technocratic body of experts, may well be levelled at the Conservation Department, and the analysis made by Guy Salmon of "a unique dominance of a single professional group over one of New Zealand's main natural resources" (Halket, 1987:21) may just as reasonably be applied.

Similarly, there is a lack of clarity in the remit of the Department of Conservation and an apparent incompatibility of roles. Management for intrinsic worth is not the overriding ethos of the Department of Conservation. It may however be the personal philosophy of many of its employees, as noted by Hislop (1989), "a personal philosophy that needs from time to time to be restated is that of 'parks for parks sake', recognizing that the great ecosystems represent all that left of that from which we have evolved, thus truly acknowledging our parenthood". Since any organization operates as a collective conscious the possibility that DOC may be established to manage for use, yet contains within it an ethos of management for intrinsic values, suggest it must be an organization with a troubled psyche!

That the Department is currently not under siege by the dissatisfied public in these circumstances may be partly a reflection on its comparative youth as much as its ability to satisfy public expectations in the long run.

#### **5.4 SUMMARY**

Multiplicity as discussed in this chapter is not an end concept in itself (Morrison, Pers.comm.) but rather a linking concept bridging the gap between management of the forest resource by the Department of Conservation and the rather elusive notion of sustainability. That the notion of sustainability may be defined and interpreted in many ways becomes less of a concern if its application is mediated through a process involving multiplicity. In practice, as noted earlier, management for multiple values does not mean

that any one area must accommodate all uses, rather it requires that those needs are not automatically presupposed. In this way interpretation and ownership of the forest resource is returned not just to the unidentifiable 'public' or 'nation', but to the individuals to whom it belongs.

## CHAPTER 6. CONCLUSIONS

The task initially set in this report was to analyse the theory and practice of multiple use management to ascertain what value, if any, the concept had to offer management of the state owned indigenous forests today.

The first issue that has emerged questions the foundation of the management shift that took place. The change from multiple use forestry under the New Zealand Forest Service to supposedly less divergent objectives under the Department of Conservation carried with it some expectations, not only of greater efficiency, but of the end to the struggle between utilization and preservation interests in the indigenous forest resource. By attempting to cater to the rights of such apparently incompatible groups it was felt that multiple use created multiple problems.

How much, however, has really changed? The argument surrounding multiple use might be said to be one of semantics. Multiple **values** are attached to the native forests and the Department of Conservation is involved in the management of the indigenous estate for multiple **purposes**. 'Multiple use' emerged more as a reflection of the reality of the demands placed upon the resource than as a guiding management tool, and the elimination of the term has not taken management of the indigenous forests as far away from that reality as it might at first appear. The Department of Conservation is left in the position of managing for utilization and preservation without a clear philosophy to support the policy it is pursuing.



Writing of new trends in North American forestry, Timothy O'Keefe (1989) challenges "what is holistic (new) forestry?". He is right both to pose the question and to be cynical of the advantages in the creation of a new term, particularly if by adopting a change in terminology, we are prevented from close examination of the underlying precepts and underpinning assumptions of the old one.

In seeking to resolve the conflicts of interest inherent in multiple use, reorganizers of the government bureaucracy concentrated on the apparent difficulties with the management theory and neglected to address a more fundamental organizational problem. Public disaffection with the New Zealand Forest Service had arisen, at least in part, as a result of exclusion or perceived exclusion from the decision making process. The NZFS failed to respond to a changing New Zealand environmental ethic. The Department of Conservation remains an organization whose decisions are primarily scientifically based. It has not challenged the patriarchal ethos of the NZFS bureaucracy, that through exclusive management practices, led to disenfranchisement and ultimately dissatisfaction at a local and national level.

In light of this, in what way can the concept of multiple use assist the Department of Conservation in philosophical or pragmatic terms? The fact that multiple use management is no longer acceptable relates principally to the word 'use', which has been shown to be highly contentious from the perspective of current values attached to the indigenous forests. Multiplicity, however, remains a true reflection of the range of values attached to the forests and it should be remembered that such values exist whether they are incorporated into a management regime or externalized. Multiplicity represents a

substantial challenge to the managers of the state owned indigenous forests and it is useful to develop a process that works with this concept rather than seeking to resist it.

The terms 'sustainability' and 'integrated resource management' have emerged as phenomena of the need to reconcile utilization and preservation values today (just as multiple use may be said to have been a phenomenon of the need to reconcile competing uses). Sustainability in its broadest sense (encompassing social and cultural sustainability) is part of the replacement of the paradigm of positivism and prescription, acknowledging that to define is to limit and to exclude. To replace prescription with contingency it is necessary to open the decision making discourse to all viewpoints. If sustainability is to be one of the founding elements of a theory of management for native forests, multiplicity offers the bridge between the decision makers and the theory.

In substituting the term 'values' or 'perspectives' for 'use', linked to the word 'multiple' - a new concept emerges that moves away from the prescriptive planning based tool of the NZFS. This allows for a changed emphasis in attitudes from utilization to preservation, and new ethical directions which seek a greater sense of the intrinsic.

Embracing such a concept requires the Department of Conservation to be reflexive, examining its own standpoint, and the values and viewpoints upon which it is based. In this way the idea of multiple values or perspectives may be used to reassess the meaning of Conservation. Asking 'of what and for whom?' and broadening responsibilities potentially to encompass social and cultural meanings and issues of rights and ownership. It may be included in the mission of the organization, replacing the emphasis on separation

of demands and allocation of resources to suit separate needs, with an acknowledgment of the tensions and the acceptance of a mix of viewpoints as a positive starting point.

Finally multiple 'values' or 'perspectives' has a place in resource decisions. If the Department is to strive for a more democratic discourse, it must actively pursue values other than the ecological. In this way it may proactively, and positively rather than defensively, involve itself in cultural and social development. New Zealand has established a national approach to the indigenous forest and whilst in many ways it is not possible to return ownership in the traditional sense to a local level, multiplicity can be used to restore the indigenous resource to a form of collective ownership based on individual responsibility.

The discussion in this report on multiple use forest management began by recognizing that historic and current attitudes and events impart a continuous influence on the development and interpretation of any policy. Strategies for indigenous forest management will continue to evolve under these influences. Past associations with the practice of multiple use forestry represent a substantial barrier to the future usefulness of the concept. They should not, however, cloud the real issues of the manner in which we deal with the many values, visions, perspectives, uses and desires, that are a valid part of our relationship with our indigenous forests.

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