

THE CONSERVATION MOVEMENT AND FOREST MANAGEMENT

IN NEW SOUTH WALES

by

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TABLE OF CONTENTS

	<u>Page</u>
Acknowledgements	1
Table of Contents	ii
List of Tables	v
Abstract	vi
Chapter 1 A History of the Conservation Movement	1
1-1 Introduction	1
1-2 Definition of Terms	1
1-3 History	3
1-3-1 Early history - reaction to the alien Australian environment	3
1-3-2 History 1900 - 1960	11
1-3-3- Recent history post 1960	12
1-4 Scientific and Professional Involvement in Conservation	16
Chapter 2 History of Forest Management in New South Wales	18
2-1 Introduction	18
2-2 Phase 1: Early Forest Exploitation	18
2-3 Phase 2: The Formation of the Forest Service	24
2-4 Phase 3: The Start of Forest Management	29
2-5 Phase 4: Intensification of Silvicultural Management	31
2-6 Phase 5: The Present Public Reaction Phase	33
Chapter 3 The Conservation Concept	36
3-1 Introduction	36
3-2 The Ideological Basis for Conservation	36
3-2-1 Causes of the environmental crisis	37

	<u>Page</u>	
3-2-2	Attitudes to Conservation	38
3-3	Sociological Basis for Conservation	45
3-3-1	Conflict and its Role in Conservation	47
3-3-2	Human Ecology and Conservation	51
3-3-3	Class Structure and Conservation	52
3-4	Conservation Concepts	58
3-4-1	Extreme Conservation Concept: Emphasis on Utilisation	60
3-4-2	Extreme Conservation Concept: Preservation	63
3-4-3	Middle or Compromise Conservation Concept	67
3-4-4	Intermediate Concepts of Conservation	73
Chapter 4	Case Study of a Forest Management Conservation Conflict	76
4-1	Introduction	76
4-2	Brief Description and History of Wiangerie	77
4-3	Wiangerie Case Study	79
4-3-1	Phase 1: Pre-media	79
4-3-2	Phase 2: The Public Controversy	81
4-3-3	Phase 3: Media Involvement	83
4-3-4	Phase 4: February 1973	89
4-3-5	Phase 5: March 1973	90
4-3-6	Phase 6: April 1973. Involvement of Local Government	96
4-3-7	Phase 7: May - June 1973	101

		<u>Page</u>
Chapter 5	Options for Forest Management	107
5-1	Introduction	107
5-2	Forest Management and Conservation Movement	107
5-3	Management Options	114
5-3-1	Management Option: Ignore Conservation Pressures	115
5-3-2	Management Option: Concede to the Conservation Movement	118
5-3-3	Management Option: Compromise	121
5-4	The Management Decision	130
Chapter 6	Conclusion	133
Appendix 1		137
Bibliography		143

LIST OF TABLES

		<u>Page</u>
Table 1	Percentage of Conservation Organisations founded in various time periods	9
Table 2	Conservation organisations and population distributions in N.S.W. 1970-1971	14
Table 3	Social Class classified on Occupational Status	55
Table 4	Occupational Status	55
Table 5	Visitor-use Survey of Lamington National Park, Queensland	57
Table 6	Support for the various Conservation Concepts	72
Table 7	Local Newspaper Reports of Wiangerie Conflict	86
Table 8	Support for national park proposal and retention of state forest	99

ABSTRACT

An outline of the general history of conservation in New South Wales is traced from a meagre literature. Despite the rapid increase of interest in conservation in recent years, there has as yet been little attempt to document it. Some background information on the conservation movement is given. A history of forestry and forest management has been prepared from an almost equally sparse literature. From this background different concepts of what the term "conservation" means have been identified and described. Different concepts are held by different groups with the inevitable result that conflict occurs. A recent case of such a conflict involving the management of forests in N.S.W. is described and analysed. Despite different concepts of conservation, conflict in any given situation may be minimised by selection of an appropriate management strategy. A number of strategies available to a forest service are suggested and discussed.

CHAPTER 1

A History of the Conservation Movement

1-1 Introduction

During the past decade there has been a proliferation of government, nongovernment and scientific organisations interested in various aspects of the world around us - man's environment. In America, historical studies of the movement with this interest in environmental matters, generally called the conservation movement, have been made to help formulate policies to protect the environment when it is threatened with change by the actions of man himself. In Australia, both Federal and State governments now consider environmental factors in planning, although this is largely a direct response to pressure groups rather than deliberate response to historical facts. The following brief history of the conservation movement is intended only as an outline, to try and demonstrate changes in emphasis over time, and changes in the popularity of conservation expressed as a social grievance.

1-2 Definition of Terms

Before a history of the conservation movement can be presented, it is appropriate that the meaning of the terms "conservation" and "conservation movement" in the

context used in this essay is understood.

Most writers of articles about conservation try to define its meaning. There is no universal agreement, for conservation groups with different aims accept and use definitions appropriate to their causes. In most recent articles conservationists recognise the difficulty of any definition they may propose being universally accepted.

Previously acceptable general definitions such as the Churchillian: the greatest good for the greatest number, have fallen into disrepute. The Australian Conservation Foundation (A.C.F.), recognised as being a major conservation body, accepts the simple definition: "the wise use, over the longest possible time, of natural resources for the benefit and survival of Man, viewed both as a user and a custodian of Nature". (A.C.F. 1970).

The ideal expressed by almost all definitions is the same. The most comprehensive definition I have seen which should satisfy most conservationists is a rather lengthy one attributable to the geologist, Professor C.K. Leith, in 1935, (Ellis, 1970). For the purposes of this study, it is used as the concept behind the term "conservation" wherever it occurs. Leith's definition is as follows:

Conservation is the effort to ensure to society the maximum present and future benefit from the use of natural resources. It involves the inventory and evaluation of natural resources, calls for the maintenance of the renewable resources at a level commensurate with the needs of society, and requires the substitution, where the conservation of human energy permits, of renewable or inexhaustible resources for those which are non-renewable, and of the more abundant ones. It not only seeks to eliminate waste of resources if use be economically feasible, but also looks forward to improvements in techniques of production and use, and requires that there be prompt

and proper adjustments to advances in technology. It thus appears that conservation involves the balancing of natural resources against human resources and the rights of the present generation against the rights of future generations. It necessitates moreover, the harmonizing of the procedures and objectives of conservation with the conditions of the present or future economic order, and calls for the allocation of duties and powers among private and public agencies.

Many conflicting ideals are expressed in this definition. However, it will be used, for it encompasses a balance of the extremes of conservation, preservation and utilisation.

The conservation movement is therefore simply the large number of organisations or groups which adheres to one, some or all of the expressed ideals. It is a comprehensive term used to describe any and all groups, irrespective of individual objectives.

1-3 History

1-3-1 Early History - Reaction to the Alien Australian Environment

Marshall (1966) refers to the attitudes expressed by early visitors to the Australian (mostly north-western) coasts. Many of these people did not like the country. Dampier's reaction was typical. In his voyages in the 17th century, he described the peoples of the Kimberleys as 'the miserablist....in the world'. After settlement, the dislike of the country's natural attributes continued. Marshall says that one writer described it as 'a mere sea of harsh trees'. Another described the Blue Mountains

as 'a dreary monotony of form and colour', while the European plant species in Tasmania 'made it like being on the right side of the earth again'. Other earlier settlers found other aspects of life in the new country tiresome; with seasons reversed, the traditional Christmas was out of place in 100° Fahrenheit temperatures; trees shed bark instead of leaves.

Many people, even long after settlement, remained a little frightened of the country. Artists, as can be seen from early drawings, did not truly represent the vegetation, the scenery, or even the native people. It was not until the late 19th century that the distinctive nature of Eucalyptus trees was depicted. Even writers and artists of the 20th century have exaggerated aspects of the Australian environment.

Despite these earlier attitudes, there were some individuals who felt strongly about the quality and intrinsic value of the environment surrounding the settlement centres. One, T. J. Maslen in 1830 proposed that parks one mile wide be established around every town. As can be seen now in Adelaide, this suggestion may have been taken up seriously in developing some town or city plans. There is no clue to the type of park envisaged for this greenbelt - whether a park retaining the natural species, or whether the traditional park of mostly introduced species, that we now see in towns and cities. The first formal attempt at improving environmental quality in New South Wales apparently came in 1854 with a Public Parks Act, aimed at

systematically preserving open spaces for recreation. Although the individuals responsible for these conservation moves have been recorded, there does not appear to have been any general public support for the proposals put forward in the Act.

Within the literature of the conservation movement in both the United States and Australia, much is made of the dedication of the world's first national park - Yellowstone, in the United States - in 1872. It has been idealised as a milestone in conservation history, the start of a true conservation movement. Australian conservationists take pride in that Australia soon followed with the world's second national park. The National Park, later to be renamed the Royal National Park, was dedicated to the south of Sydney, in 1879. Those responsible for the dedication of this park almost 100 years ago, recognised that the population of Sydney would expand to such an extent that settlement would encircle the park, a prediction which has now virtually been realised. It was thought the park would serve the growing city as a playground for the leisure and pleasure of the multitudes of Sydney. Again, there was not much evidence of public pressure behind its dedication, just pressure from a few individuals concerned about the future. From its earliest days the National Park was both extensively and intensively used by the public, for what could be called commercial sports and for what now are traditional park pastimes, such as bushwalking. (Royal National Park, 1902).

The same session of State Parliament that enacted The National Park Act of 1879 also passed two other pieces of legislation that should be of interest in any history

of the conservation movement - of interest because they now appear to counter the ideals of conservation and the ideals that were expressed at the time of the dedication of the National Park. These were:-

1. A bill called the Marsupial Destruction Bill, permitting the killing of native animal species - to foster the concept of conquering the wilderness, no doubt; and
2. an Animals Protection Act, which permitted the introduction of non-indigenous game animals - to bring a touch of old-country charm to the new land, no doubt. Once again, there is no evidence that there was any public opposition to these legislative proceedings.

Conservation measures of protecting specific fauna and flora came later still, and even today a great number remain unprotected by law. (Branagan 1970). Legislation to preserve some native birds was enacted in the 1880's. Specific native animals were protected in law, when a Native Animals Protection Act was proclaimed in December, 1903. The formation and work of the Wildlife Preservation Society of Australia in 1909 led to later amendments to the Native Animals Protection Act to afford protection to more animals. Wildflower protection did not begin until 1927, and even as recently as 1970 there were still only about 4% of the native species protected, that is, 4% of approximately 12,000 species. (Turner, 1966).

Some idea of the historical development of an active conservation movement can be gleaned from foundation dates

given for some of the recognised societies and groups. The Australian Conservation Foundation Conservation Directory of 1970 (A.C.F. 1970) lists most, if not all, the organisations with interests in conservation existing in 1970. These organisations have been placed in several categories, depending on their scale of activity, their location, and their affiliations. These categories are:

1. International.
2. Australian
 - a) Government
 - b) Private
3. State
 - a) Government
 - b) Private
4. Tertiary Educational

The term "private" is used to separate the organisations formed outside government departments and agencies, from those made up of government - paid employees. The term non-government will be used throughout this essay in place of private, to make distinctions easier.

A brief resumé is given in the Directory on the activities, publications and sometimes the foundation dates of a large proportion of these organisations. Some organisations have changed names one or more times during their histories, but the Directory does not provide this information or a resumé of prior history. Considering only the Australian non-government, New South Wales government, and New South Wales non-government organisations, a classification based on foundation dates is given in Table 1 (page 9).

Some qualifications have to be made before this

table is interpreted, however. The recording periods shown in the table were quite arbitrarily chosen to demonstrate the proliferation in the number of conservation groups in recent years. In total, there were 37 Australian non-government groups, 105 N.S.W. non-government groups, and 32 N.S.W. government groups listed in the Directory. Of these, twenty four percent (24%) of the Australian and forty five percent (45%) of the N.S.W. non-government groups, were listed without foundation dates. The percentages in the table refer only to those groups with foundation dates given in the Directory. In the non-government categories, no attempt has been made to distinguish those groups which are professional associations, and those which are primarily associations of concerned private individuals. Also within the non-government categories there are probably a number of associations or societies which "true" conservationists (if there is such a thing) would consider unworthy of listing. For example, there are a number of speleological societies whose interests are concentrated in a highly specialised area, although conservation in general may be a mere passing interest.

In the government category, it is likely that quite a number of organisations were actually established before the noted dates, but because of name changes, amalgamations of departments, and changes in appropriate Acts, the foundation dates have been recorded much later than they actually were founded. For example, the foundation date of the Forestry Commission of N.S.W. is recorded as 1916,

TABLE 1. Percentage of Conservation Organisations Founded in Various Time Periods

	Pre-1900	1900-1919	1920-1949	1950-1959	1960-1970
Australian Non-Government Organisations	4%	7%	21%	21%	47%
N.S.W. Non-Government Organisations	3%	2%	17%	29%	49%
N.S.W. Government Organisations	5%	19%	19%	10%	47%

whereas there was a Forests Department before that time, which carried out many of the functions of the subsequent Commission. It is particularly noteworthy that almost 50 percent of organisations represented in Table 1 were formed in the period 1960 to 1970, and ~~the~~ growth in the government sector has surprisingly kept pace with growth in the non-government category.

The first Australian societies expressing concern for environmental conservation were formed in 1874, in New South Wales. These were the Linnaen Society, and the Royal Zoological Society of N.S.W. However, it must be realised that ⁱⁿ the days they were founded both of these had a strong scientific and professional support, with only limited public following coming from amateur but well-informed people. The only other non-government organisation formed before 1900 was another scientific organisation - ANZAAS, the Australian and New Zealand Association for the Advancement of Science. All are still strong and respected organisations. The general paucity of conservation groups formed by public or non-professional action does not mean that there was no general concern for the environment. Plenty of individuals lamented the excessive destruction caused by early settlers. For example, John Gould, writing in 1863, deplored the loss of native mammals (Marshall, 1966) and there are even earlier references to animal destruction (Marshall 1966).

The period before 1900 saw active interest in conservation by the government sector. A Forestry Department was set up to bring controlled logging on forests. A

following chapter (Chapter 2) describes in more detail the history of forestry activity. Also in earlier periods of land settlement, Lands Department surveyors, in the normal course of duty, sometimes noted outstanding areas, and placed reserves on them (Mosley, 1972).

The surveyors were instrumental in making the earliest reservation of many scenic and recreational areas, the subsequent bases for dedication of some forests, national parks and other types of reserves. From the earliest times of land settlement in New South Wales, water courses and a coastal strip of various distances from water have been reserved for public rather than private use.

1-3-2 History 1900-1960

An increase in conservation movement activity from the turn of the century till 1960 can be noted from Table 1., in both the non-government and government sectors. It appears that government realised a need for environmental protection sooner than the non-government bodies, although it may have been responding or over-reacting to pressures of a small but none-the-less convincing conservation movement. Government may have perceived a need for action before public concern intensified, although Mosley (1972) suggests that during this period management objectives of multiple use (arising from environmental concern) were more the exception than the rule.

Apart from the forests, major areas of conservation concern during this period were nature conservation

(that is, flora and fauna), water conservation, soil conservation, minerals and aesthetics (scenery).

During the past decade though, with the more intensive interest in conservation, emphasis has also been placed on total quality of (man's) life. Pollution of man's environment, for example, in all its forms, has escalated in importance in conservation concern.

Nature conservation in this century has been built on the groundwork of the few individuals who achieved some conservation success in the last century (see Section 1-3-1). The relatively few conservationists who formed some of the earliest registered groups recorded in the A.C.F. Conservation Directory (A.C.F., 1970) were instrumental in making progress in conservation. The Wildlife Preservation Society, formed in 1909 was one of the earliest active groups in nature conservation. However, the majority of organisations were not formed until after the Second World War. Organisations such as the National Trust, the National Parks Association and the Nature Conservation Council of New South Wales, all respected and generally well known groups, were formed between 1945 and 1960. A few counterparts at least, of these organisations had been formed earlier in the government sphere.

1-3-3 Recent History Post 1960

The greatest increase in conservation activity has occurred within the past ten years or so. Almost fifty percent of conservation organisations have been founded

in the period 1960-1970 (Table 1). The majority of the recently formed organisations have been "ad hoc" action-type groups opposed to specific government actions, for example, the shooting of kangaroos, exploring for oil on the Great Barrier Reef, limestone mining at Colong, various forestry activities, beach sand mining at the Myall Lakes, and mining beach sands at Cooloola destroying the coloured sands. In most cases these ad hoc groups tend to agitate for the declaration of a national park without considering the possibility of rational use of the particular natural resource at stake. Unlike the longer established and professionally based organisations, these newer groups tend to gather interest in a diverse number of activities, particularly in local matters rather than regional, state, or national issues. As a result, they may lack overall efficiency and effectiveness in each cause they pursue.

The Conservation Directory (A.C.F. 1970) gives the addresses of every organisation listed. A subjective analysis of the non-government group addresses indicates about 63 percent are Sydney-based, 26 percent have N.S.W. country town addresses, while the remainder (11 percent) have addresses in other major population centres, Newcastle, Wollongong and Canberra. A large proportion of the N.S.W. country-addressed organisations are established in the Sydney commuter zone centres of the Blue Mountains and Gosford-Wyong. (See Table 2, page 14). It is useful to compare the approximate distribution of population through N.S.W. with that of the conservation organisations for it is often claimed that the conservation movement is the

TABLE 2. Conservation Organisations and Population Distributions in N.S.W. 1970-1971

(Expressed as percentages)

	Major Population Centres			N.S.W. Country		
	Sydney	Newcastle Wollongong Canberra	Total	Blue Mtns Gosford- Wyong	Other Country Towns	Total
Conservation Organisations	63%	11%	74%	24%	2%	26%
Population Distribution	59%	21%	80%	2%	18%	20%

spare time hobby of the suburban population. Table 2 is a simple table making this direct comparison. The latest census of population was taken in N.S.W. in June 1971, and the figures used were derived from a newspaper report sometime after that (Sydney Morning Herald, unknown date, 1972; also Commonwealth Bureau of Census, 1972). Table 2 shows that the claim is true but not to the extent implied by those who use the claim in emotional arguments with conservationists.

Cities develop because of business and industrial activities, and it is here that the relatively strong industrial unions have won shorter working hours, more leisure time, and better facilities for suburban populations. As a result, conservation has become a respectable cause in the last decade or so (Webb 1973), when it received the patronage of reputable and respected people, for example, the Duke of Edinburgh who was appointed to Presidency of Australia's foremost conservation body, the Australian Conservation Foundation. Close examination of membership of conservation organisations would reveal that quite a few leading personalities in public service, government and the higher professions (law, medicine, research science) have found places in the upper echelons of conservation - for example, Sir Garfield Barwick, Sir Macfarlane Burnet and Dr. H.C. Coombs. Leading industrialists are apparently not as readily acceptable, supposedly because it would sometimes involve them in dual roles or conflicts of interests, for they are often portrayed as the conservationists' rivals.

1-4 Scientific and Professional Involvement in Conservation

Scientific and professional groups have always played a role in the conservation movement. (Sections 1-3-1, 1-3-2). Many individual naturalists, explorers, scientists, botanists and zoologists expressed anxiety about the conservation of particular species long before formal organisations having the same interest were formed. Most of the conservation legislation now in force originated from the efforts of these individuals. However, informed professionals may now be in the minority where conflicts over conservation of particular natural resources arise.

Professionals tend to recognise the academic disciplines as the basis for the formation of a conservation ethic. For example, Danserau, a well known American ecologist and conservationist, saw four stages in the development of an ethic. These were legislative, biological, ecological and sociological stages. (Branagan, 1970). All are disciplines followed closely by the scientific and professional groups of our modern society.

In Australia and New South Wales a similar four stage pattern can be recognised, except in a slightly different order - biological first, followed by legislative, then ecological, then sociological. Compared with the history already described, the biological stage coincides with the pre-1910 period when this new country and its natural wonders were being discovered and described in a proper, scientific, systematic way. The legislative stage followed. After that the ecological interactions gained greater attention and the sociological stage belongs to the present

where there is a conservation commitment to the "total environment". Stage development is probably not a correct description, for no doubt, interest is still maintained in these four main disciplines, plus many more.

There has been a proliferation of scientific interest in "total" approaches to conservation, arising out of increased publicity given to environmental problems. In 1970, the Conservation Directory listed very little in the way of Tertiary education available in the conservation field. The Department of Forestry, Australian National University was the only operative body offering wide range of courses in aspects of conservation. Now most universities and other higher education institutions offer units and complete courses in natural resources studies.

CHAPTER 2

History of Forest Management in New South Wales

2-1 Introduction

Forest management is not static but has changed progressively with time. The pattern of change in New South Wales has differed very little from the pattern established in both old world and new world countries. Even in long settled or inhabited countries, manipulation of forests over time has followed a distinctive sequence, observable, though much compressed in the new world countries such as America and Australia. New South Wales shows little departure from the pattern, but is far enough behind in development when compared with the United States, that mistakes made there might be avoided.

An history of forest management can best be summarised by recognising a series of evolutionary stages. Danserau's recognition of four stages in the development of a natural resource concern is the main theme used by most writers in this field. Marshall, Turner and Webb in separate articles (Marshall, 1966) all examine natural resource conservation in an historical sense. Florence (personal communication) uses a five stage sequence and this sequence will now be followed in tracing the history of forest management in New South Wales.

2-2 Phase 1: Early Forest Exploitation

Australian histories usually begin at the time of white settlement, and this convention has been followed

in the previous chapter. However it could be conceded that aborigines practised a form of forest management for production of game, foods, weapons and shelters long before white settlement in this country.

In this first phase, forest management as such was virtually non-existent. Exploitation of forests for timber products by the first settlers in this "new" land were essentially destructive whereas the previous aboriginal population had hunted through and burned but not destroyed the forests. It was not until the continuing destruction of forests was seen as imposing finite limits on the amount of the timber resource remaining and available for future use, was it recognised that management should be imposed to control the resource base. Most conservationist do not condemn this early destruction, for it was obviously a means to the end of making the land available, and suitable, for white man's present and future habitation, although similar developments nowadays are thoroughly questioned.

The earlier history of forestry in New South Wales is more closely identified with the history of the red cedar industry than with any other sector. Cutting of timber, especially red cedar, for export was an initial basis for settlement and the beginning of a new economy, and this in turn encouraged the setting up of other industries, particularly after self-sufficiency based on grazing and agriculture had been achieved (Forestry and Timber Bureau, 1966). Some action, perhaps it can be called management in its most rudimentary form, was taken

as early as 1795, to prevent indiscriminant cutting of red cedar. This was in the form of licensing of cedar cutters and agents as well as government employed convict labour, presumably to benefit state coffers rather than to protect "the bush".

The work "Cedar and the Cedar Cutters" (Jervis, 1970) documents the progressive exploitation of red cedar in New South Wales. The extent of exploitation of red cedar was such that few people in Australia have actually seen a tree growing in some forests, not even a stump remains as evidence of this exploitation though cedar is supposedly a long living tree with relatively durable wood.

Many millions of super feet were cut and sold but probably as much again or more was wasted and destroyed, and only rare specimens exist in the most inaccessible locations, and these are nowhere near the size of the large specimens documented in the vast literature on red cedar.

(Jervis, (1970) describes the earliest export and trade of red cedar as a shipment to India in 1795, "in the hope that, if it should prove valuable in India, it might be of advantage to His Majesty's interest in any future intercourse with that country." Regular export to both England and India probably began soon after this. About the same time, an order by the Governor was issued regulating traffic in red cedar by settlers on the Hawkesbu River. Permission was required to cut down cedar trees. It is doubtful if such orders were ever enforced.

The exploitation of the vast amounts of cedar along the coast was fairly systematic, closely following (and sometimes even ahead of) exploration. This in turn was closely followed by other forms of land utilisation and settlement. As red cedar is confined mainly to river basins and plains favoured by moist and humid conditions its exploitation progressively encouraged other forms of land development from Ulladulla on the South Coast of New South Wales to the present Queensland border. With water transport being the most efficient means of moving large quantities of cedar out, food and materials in, the use of the coastal waterways was natural. For example, exploitation began on the Hawkesbury River in the 1790's, the Hunter River in the early 1800's, and by the 1860's the pattern of cutting and subsequent devastation had reached the Tweed River Valley. One attitude to the industry after the 1860's, that is when red cedar had virtually ceased to be an important forest tree, is given in a newspaper report of a visit to the Tweed in 1869 (Jervis, 1970):

"All around the spot where we had encamped tall cedar trees were to be seen rearing their leafless boughs above the matted vines and many groups of cedar logs cut into convenient lengths, squared and made ready for transit to Sydney were in evidence that the prodigality of nature had been turned to profitable account by the timber getters of the Tweed. There was an immense quantity of cedar in the brush. Some of the blocks which had been cut and squared were of great size and value. The stuff taken out of a single tree was said to be worth from £50 to £100 in the Sydney market, and there were some monarchs of the forest containing many thousands of feet of the very best cedar. Within a radius of three hundred acres there was said to be about £8,000 to £10,000 worth of this beautiful wood. There are few places in the colony where it is now to be found in such profusion. The devastating axe of the timber getter has made dire havoc amongst the cedar brushes and where a few years ago immense quantities of the wood were to be found there is not now a single tree worth cutting. The sawyers are a wasteful set of men. They destroy more

timber than they use. They cut and square only the best parts of a tree, leaving great masses of cedar, which would fetch a great price in the market to rot unheeded in the brushes. They destroy young trees too, with most culpable carelessness, and wishing only to seize the present advantages, care not a button how many young trees they destroy in cutting down an old one. In about twenty years such a thing as a cedar tree will not be found in the country, and yet with a little care, hundreds of trees which are yet unfit to be cut might be preserved for future use. The timber getters are no doubt the pioneers of civilisation. They are the first to brave the dangers of these wilds, to penetrate the recesses of the forest, and to find out the excellence of the land. But they are an incommunicative set of men, and having lighted upon a "fall" of cedar, they take care to keep it to themselves."

Control of the cedar industry was attempted in the very early days of the colony, with licensing and regulation of transportation and sale. Controls were imposed over the entire period of cedar exploitation, but apparently this was unsuccessful. Reasons for this lack of success have been variously explained by the remoteness of operation of the cedar getters, by their disregard for the laws and in many cases their dubious background, and by a lack of government employed personnel to enforce the proclaimed restrictions. One of the most significant single factors was that cedar cutting preceded any other form of exploitation and hence was always a step ahead of any attempt to provide community services to "pioneers".

From the very beginning of settlement timber has been an essential commodity (Rule 1967), and from the beginning there was an "open go" attitude adopted by government. Although licensing for cedar trafficking was supposedly necessary from the 1790's, it was not

until 1839 that a license was officially required for the removal of any timber from vacant crown lands. In 1850 more stringent measures were applied, but these were ineffectively handled because they were too cumbersome and the government lacked the manpower to enforce them.

Proclamations of forest reserves began in New South Wales in the 1870's (Rule 1970), and the first Inspector of Forests (Henry Kendall) was appointed in 1881. By 1890, five and one half million acres (2.226 million hectares) had been proclaimed as forest and timber reserves. The infant forest service had its first Director-General appointed in 1889. Some ringbarking of old and useless trees began soon after, as a means of encouraging, hopefully, a new crop of vigorous young trees. In the earlier stages, the forest reserves were the nominal responsibility of a succession of different government departments mostly alternating between Lands and Mines. As a branch of both these departments, the Forestry section was generally the "poor relation". Lack of status and emphasis on development meant that in the parcelling out of land for various uses, the best land, which often supported the best forest was alienated for settlement. That which remained - often being the more remote and poorer sites - had to be vigorously fought for by the Forestry section, to ensure dedications as forest reserve.

Ringbarking has been a distinctively Australian method of land clearing (Webb, 1966). Some control of ringbarking on leasehold-titled land was attempted under Crown Lands Acts in the late 19th century, but it was difficult for a government agency committed to land

alienation and settlement to reconcile itself to this. Destruction of publicly-owned timber on some leaseholds continued where the conditions of tenure actually required the lessee to ringbark all trees. The economic depression of the 1890's lasted well into the first decade of the twentieth century, and markedly reduced the rate of forestry development. Perhaps as a result of its inactivity, the forestry sector was overlooked in the excitement of federation, and remained under state control. An opportunity to ensure increased support at the time at either the state or federal level was missed.

2-3 Phase 2: The Formation of the Forest Service

The Forestry Acts of 1909 and 1916 confirmed greater powers of control over ringbarking on leaseholds (Webb, 1966). A Royal Commission about forestry in New South Wales in 1908-1909 (N.S.W. Government 1909), eventually led to the 1916 Act, and the setting up of the Forestry Commission as it now is. The investigations by the Royal Commission were thorough and will not be reported on here. Numerous points concerning the inadequacies of forest control were made; for example, limitations of staff to enforce laws and regulations, the government attitude to forestry as a purely revenue producing venture, and the failure to develop and pursue definitive policies of forest management (The Australian Encyclopedia, 1927).

With the setting up of the Forestry Commission under the 1916 Act, the first effective steps towards management were possible. The Act provided for the dedication

and reservation of State Forests, Timber Reserves and other Crown Lands, and the control of operations on these. A specific target of land to be dedicated as forest was set up, and after 3 years, at least 5 million acres (2.024 million hectares) had been reserved as State Forest (Henry, 1955). Most of the old reserves proclaimed before 1916 were now dedicated as State Forest. Such dedication meant a secure land tenure, for subsequent revocation requires parliamentary consent whereas dedication is made only by proclamation by the Governor.

By 1920 the new Commission had gained control over timber operations on State Forests. Licensing of timber getting, and collection of royalty was more efficient because of increased staff. A limited number of other functions were performed by the Commission in the period between 1916 and the onset of the depression of the 1930's. For example, where time was not spent on marketing and other general maintenance of the forest and capital stock, employees were engaged on routine forest treatments aimed at improving forest growing stock and carrying capacity. This had two components. One was the "conversion" of forest, meaning the converting of standing trees into utilisable products, usually sawlogs but sometimes sleeper and other salvage-type logs. There were two aspects to direct conversion. Previously unlogged areas were logged to increase the supply of logs per unit area available to sawmillers. Also, conversion aimed at producing sawlogs from forest supposedly completely

logged by sawmillers, which meant improved utilisation. The second component in forest treatment was the ring-barking of useless trees in logged over areas, to encourage regrowth. It was mostly an integrated operation, that is, integrated with the conversion treatment. Because of the costs involved, this treatment was later modified, when the removal by ringbarking of only the larger useless trees was required. Some thinning of resultant regeneration was also tried, but abandoned after a few years because of costs.

During the period 1916 to the 1930's the Commission pursued the course of action of offering Crown timber for sale, although large volumes of high quality logs were becoming available from private lands alienated in the name of land settlement. Many logs from both Crown and private holdings were thus wasted. The large volume of private timber available at virtually no cost caused sawmillers to be highly selective when they were forced to accept higher priced Crown timber. Only the best Crown logs were taken, many were left on the ground for they were of inadequate quality, in the "glut" situation, so even good logs were paid for and left to rot. Despite this some useful policies were implemented in this same period. A large proportion of forest reserves in New South Wales were assessed for timber volume from 1916 - 1920. At first these assessments were just subjective estimates of the average commercial volume per acre on a compartment basis. Compartment volumes and the forest volume were obtained from this figure by simply multiplying by compartment area and summing the compartment volumes. The method used was as stated, subjective, and was carried out at the same

time as strip surveys which were used to provide base mapping of all State Forests (Forestry Commission records). A similar technique was used during the period 1920 - 1923 for North Coast State Forests (Henry, 1955). Temporary strip surveys 20 chains (400 metres) apart were traversed, subjective estimates of volume per acre per compartment were made and total forest volume calculated. Preliminary "working plans" were prepared giving an order of working and a maximum permissible cut on a compartment basis, although there was no annual permissible cut determined. The permissible cut in no way attempted to sustain a constant yield in perpetuity. Cutting of small groups of trees was recommended, but when left to the individual supervisor, this frequently degenerated into a selective cutting, removing only the better quality trees. The working plans also recommended various types of non-commercial treatment to improve forest productivity including ringbarking of dominant useless trees, and the creation of gaps or small groups by felling other useless trees to waste to encourage regeneration. Although working plans outlined a simple working order, after 1933 the order of working was left to the discretion of the local forester.

There were a number of other later developments in bringing the forest estate under management or control. These included allowing sawmills to cut at the rate of mill capacity, irrespective of source of supply of logs from Crown or private lands. The result was less waste of Crown timber resources. At this stage, royalty prices for forest products were at fixed rates for all mills irrespective of their location, so that mills more distant from a market had higher transport costs and were thus

unable to compete other than locally. Sawmills thus remained small and lacked competitive incentives for greater efficiency.

The 1930's depression saw moneys made available by the Commonwealth Government to forestry for unemployment relief. This was an important period in development of forest management. Large numbers of unemployed were absorbed and through sheer physical labour with hand tools, the exotic plantation programme was begun, roads and fire trails were constructed for essential purposes such as fire protection and access for management, and marketing and silvicultural programmes were begun.

In 1937, a stumpage appraisal system for royalty was introduced in New South Wales, putting sawmills on equal competitive basis regardless of location. It took into consideration actual market prices, and the varying costs of production in relation to the distance of each sawmill from the market and the forest. This system in theory has changed very little to the present, except that in 1951, the State Government indirectly fixed the market price used in appraisal by requiring the Forestry Commission to guarantee the payment of a pre-determined revenue to the State Treasury. This false market price was varied from time to time in relation to trends in the actual market price, and by so fixing revenue, the Government has effectively subsidised the whole timber-using industry, from sawmiller to home-owners (N.S.W. Government, 1968).

The first really intensive management investigations were carried out in 1939 in the Bago Alpine Ash forests near Batlow. A cut was prescribed for Ash but not other

tree species. The aim was to maintain a sustained yield of Ash. A deficiency in some growing stock size classes meant that a minimum diameter limit was placed on the Ash logs taken. Intensive management investigations followed in the Red Gum forests of the inland rivers in 1944. These two management investigations preceded the next phase in forest management history - the beginnings of extensive and technologically-based and directed forest management programmes.

2-4 Phase 3: The Start of Forest Management

Before this next phase of improved management, management techniques were based virtually on "rules of thumb". There had been little collection of data on which to base sound management decisions. Forest management therefore began with meaningful assessment of the forest resource. For management to be possible and successful on a state wide basis, the State required a co-ordinated effort, particularly the backing of technically and professionally trained personnel. The ending of the Second World War saw an expansion of technical and professional training, and many new foresters were recruited to the Forest Services. Because of the possibilities of unemployment at this time among returned servicemen, much money was made available by Governments for both employment and land settlement, despite disastrous results from many previous land settlement projects (Webb, 1966). The Forestry Commission was thus able to greatly increase the recruitment of professional and other employees, increasing its effectiveness in many ways, especially in expanding the scientific

and technical basis of forest management.

The scientific and systematic assessment of forest resources began, as opposed to the previous subjective estimates. Wartime aerial photography provided a basis for mapping forest species types and improving topographic maps. Inventory provided information on standing volume from which planned sustained harvests could be calculated. Sustained volume intake by timber industries helped to stabilise them. Where inventories were not done, volume quotas were fixed according to recent cutting history. Only a few state forest areas producing timber still exist, where utilisation is not based on an assessment of the forest.

In this post-war phase, research, particularly silvicultural research, expanded, and new or refined silvicultural techniques were applied in normal operations. For example, group selection was based on observations of the growth habits of native trees (Jacobs, 1955). Investigations into regeneration of Cypress Pine in the dry west increased interest in this forest type. Successful regeneration of wet sclerophyll sites with species such as Flooded Gum, Sydney Blue Gum and Hoop Pine became possible where previously problems had been encountered. Silvicultural advances showed it was possible to regenerate most native hardwoods by a technique of snig-track extension, which exposed mineral soil - a desirable if not essential condition for the regeneration of most of the more valuable and faster-growing native tree species. Many silvicultural techniques were examined in finding ways to obtain seedling establishment on disturbed sites, including seedfall from residual trees, direct seeding of

preferred species, and planting of nursery-raised seedlings.

Within the phase, clearcutting of forest was largely restricted to immediate gully type situations in New South Wales where Flooded Gum was seeded or planted after.

2-5 Phase 4: Intensification of Silvicultural Management

This phase can be seen as the resulting reaction to the previous phase, although there is no sharp boundary between them. Continuing inventory and research indicated that the forests had not responded, as predicted or hoped, to the management of the previous phase. Regeneration and retained trees were frequently not as good or vigorous as expected. Volume growth frequently showed little response to standard management practices. Inventories showed large quantities of useless growing stock had been retained on the managed forests. My own management investigations in northern tablelands forests showed that even in near-natural forests, the commercial forests carried large numbers and large volumes of useless trees, frequently outnumbering the number of useful trees. This was more pronounced amongst the larger size classes than the smaller classes.

As in the United States, the reaction to the forest condition was a change in silvicultural direction, from selection logging to clear-cutting (Florence, 1972). "Clear-cutting" usually means complete cutting of all standing trees - an essential silvicultural technique for regeneration of some forest types or for plantation establishment. The term "clear-cutting" sometimes has a different connotation

in New South Wales than in the United States. For example, complete utilisation cutting more adequately describes the operations in the woodchip project at Eden where a varying stocking of trees is retained. In the evolution of clear-cutting in New South Wales, clear cut patches were initially an extension of group selection, with the groups just made larger. Gradually the groups cut tended to cover many hectares. The same technique applied in the Eden area for supplying woodchip material created clear cuts of several thousand hectares in early operations, although the trend now is for smaller clear cut coupes of about eighty hectares.

During this period, pressures also developed from the wood-using industries to maintain log supplies in the face of decreasing forest volume capital; these pressures were frequently acceded to for social and political reasons (N.S.W. Government, 1968). The natural political decision was to maintain timber supply, which in turn made the decision for an increased rate of establishment of plantation forests, particularly exotic species, easier.

Industry is not the only sector exerting pressure on New South Wales forestry management. Although some management practices may have been long criticised, it has not been until recent years, and the general upsurge of public interest in anything that affects the individual well-being, that the conservation movement has criticised forest management.

2-6 Phase 5: The Present Public Reaction Phase

Almost concurrent with Phase 4 is the present phase, where foresters and forest service have become aware of the need for changes in forest management policy associated with general changes in social outlook. A booming national economy, high rates of inflation, ever improving standards of living, higher pay, shorter working hours, more leisure time, and differences in the age structure of the population have all contributed to a changing social climate. There are probably many more contributing factors than those just stated.

The conservation movement likes to take credit for awakening society, in general, and the forestry profession in particular to the so-called environmental crisis. On the other hand, the forestry profession probably rightly thinks that it was socially aware long before any of the current controversial issues arose (for example its reaction during the second phase). However, it may be justifiable to criticise forestry for reacting too slowly to the changes which have taken place in the past decade, and for failing to inform the public of its past and present conservation achievements.

It was, and still is a difficult task for the Forestry Commission of New South Wales to adapt to new social demands, and adjust management practices accordingly. Under the Forestry Act 1916 - 1969, it was charged only with the responsibility of timber supply to meet the needs of the state (Forestry Act, 1969). It was not until the Act of 1972 that a requirement for multiple use management

was incorporated into the Commission's objectives. It is still difficult to adapt to new social demands for at least two reasons. One is that though the newer Forestry Act of 1972 adopts a policy of multiple use management, the amount of capital allocated to the Commission has not been increased to provide for true multiple-use programmes. The other reason for failure to adapt to new demands is the political atmosphere. The popular image of politicians - particularly Ministers - is one of "empire-builders" who attract attention and gain political prestige from the number and size of departments and projects they administer. Such attitudes have most likely led to the proliferation, as seen in recent years, of government departments specifically charged with controlling different aspects of conservation. Of the 32 New South Wales Government agencies listed with interests in conservation (A.C.F., 1970), 7 of them, or about twenty-two percent (22%) were established in the period 1966 - 1970, the period of a marked increase of environmental or conservation awareness.

In this present phase concern is felt by the conservation movement for the other values, mainly aesthetic, that forests supply. Both the level of money available, and the number of other government agencies involved in providing similar and overlapping services, inhibit the New South Wales forest service from reacting the way conservationists would desire.

There is a further phase that is dependent on this present phase, and it is the future. The future phase is one resulting from reaction to the present, and so

cannot be described. However, some direction can be given to it by actions taken now by examining alternative management options available to a forest service within an atmosphere of constraint imposed by an active conservation movement.

CHAPTER 3

The Conservation Concept

3-1 Introduction

In this chapter the conservation movement will be examined with a view to placing in categories various concepts of the meaning and significance of the term "conservation". In Australia there have been few, if any critical examinations of conservation as a popular movement. Individual conservationists have contributed to both scientific and popular publications, explaining the rationale for their own interpretations of the subject. By examining a number of these conservation concepts and relating them to sociological concepts, it is possible to present a breakdown of the conservation movement into a number of categories, each with its distinctive concept of or attitude to conservation.

3-2 The Ideological Basis for Conservation

The co-existence of a conservation movement interested in all aspects of use of natural resources, and government agencies (such as the forest services) charged with the management of the publicly-owned natural resources, indicates a widespread recognition by society that an environmental problem exists. The size of the conservation movement in New South Wales, evidenced by the large number of conservation organisations, both non-government and

government, has inevitably resulted in conflict within the movement itself. Different concepts of and approaches to conservation have developed within the broader movement, with subsequent controversy and alienation among groups. As a result there can now be recognised two main polarised groups. One is popularly known as the conservation or environmental movement. The second group includes the resource users and managers, that is government agencies and industries which are usually on the defensive against attacks from the first group. Conflict arises when ideals of any two individual organisations are incompatible. As a phenomenon in itself, conflict is discussed in Section 3-3-1, page 47.

3-2-1 Causes of the Environmental Crisis

Environmental crisis is a general term used to describe public concern for increasing pollution and degradation of the total, world ecosystem. To some conservationists, the environmental crisis threatens man's quality of life. To others it threatens the life and survival of plant and animals species, their environments, and man's appreciation of natural systems. While there may be general recognition that the world's population and the rate of growth of that population are the root causes, most people blame man's greedy appetite for using natural resources and the associated emphasis on economic growth, and see these as the problems to be attacked. Some are unwilling to nominate economic growth as a primary problem.

For example, the national government's advisers separate economic growth from the manifestation of the environmental crisis (Australian Government, 1973).

The noted environmentalist, Dasmann (1972), sees the combination of population, technology and land-use, as the cause of the environmental crisis. The United States Council of Environmental Quality (1970) lists a large number of environmental problems and their causes. These causes include the following:

- a) misplaced economic incentives
- b) misplaced appreciative values
- c) population
- d) technology
- e) mobility of people
- f) limitations on outlook in government
- g) the news media
- h) an information gap among the levels of society.

Although both sources include population as one cause among others, it has not been pointed out that the others arise only as a consequence of the size and rate of growth of population.

3-2-2 Attitudes to Conservation

Whatever the conservation philosophy is based upon, whether it be population, economic growth, the use of natural resources, or any combination of factors, there are three readily discernable attitudes:

- i) the holistic approach, where a total, a world view is taken of the environmental crisis, with the

ultimate and major cause recognised as being the size of the human population.

ii) the symptomatic approach

iii) the narrow approach, where, again, the results of population are each seen as causes, but on an individual basis rather than in combination.

The Holistic Attitude:

It cannot be claimed that the holistic view is recent in origin. In his essays on population in the very late 18th century, Malthus (1798) first saw finite limits to resources through increasing population pressures. He failed to recognise (in pre-industrialisation days) that technology and science could extend the limits of world resources (Barnett & Morse, 1963). A potential population crisis has been a world concern since the days of Malthus, though emphasis has waned in major period of technological and scientific development. During the technological and social revolutions of the past few decades affluent societies have developed, with vast increases in the use of natural resources, and improvements in quality of life - a Malthusian inversion, as Sinden (1972), Barnett and Morse (1963) and others would call it. Consequently, the "doomsday prophets" have been in vogue again with some convincing arguments as to the plight of the world ecosystem. Unless man radically adjusts his social system and population and his approach to resource use, the doomsday prophets may be right this time. All the frontiers on earth have been explored and pushed aside. There is only one more frontier left for man to explore: space, which at the moment appears

to offer no help or solution.

In recent years many world-renowned conservationists have stressed population as the basic cause of the environmental crisis. Notable amongst these are Carson (1962), Arvill (1967), Ehrlich (1968, 1970), Hardin (1972), Udall (1963), and Commoner (1972), all who have produced books and major papers stressing the holistic attitude. Many of these writings have been popularised through wide circulation, and it can be claimed these are responsible for the awakening of a large number of the general public to the world-wide problems.

The holistic attitude is exemplified by Joffe (1970), who says that conservation should be described very simply, by putting man in perspective, by planning to manage the human resource (population) in the same way as we plan to manage (i.e. conserve) other factors of the environment. A further example of overseas conservationists who take an holistic view about conservation is Pecora (1972) who says man, through the sheer force of numbers, science and technology, has a great impact on the environment around him. The overall effects of man on a world and time scale have not as yet been great when compared with the natural baseline. However, local alterations to environment (that is, at the personal level) have been great for aesthetic, nuisance, and damage reasons.

Prominent amongst conservationists in Australia who take the holistic view of population being the primary cause of environmental problems, is Sir Macfarlane Burnet (1970), who sees solution if "men and women of vision, purpose and intelligence can devise ways of controlling,

modifying and redirecting those patterns of behaviour... which have brought us to the brink of chaos". Coombs (1970), in a series of broadcast lectures made the point several times that population held the key to today's problems of both the human and total world ecosystems. Notable amongst conservationists in Australia expressing a total view are the scientifically or academically trained. But most are involved in issues that affect themselves, and so could be classified in the attitude system as adopting all three attitudes. The same is probably true of all conservationists who take a total view. Recher (1972, 1973) recognises the population pressures, and because of them advocates that no salvage of rare or endangered species of plants and animals be attempted unless of scientific or economic importance (Canberra Times, 1973). He bases his stand on this issue on the fact that these species are likely to be poorly adapted to environmental change. Man through inevitable environmental change is just hastening their natural demise. Brereton (1967), a noted zoologist also expresses a similar view on the fate of endangered animals. Other Australians who also see population as a constraint on conservation ideals include May (1971), Branagan (1970), Burton (1971), and Ellis (1970).

Symptomatic and Narrow Attitudes

Since symptomatic and narrow attitudes grade into one another, it is proposed to deal with both at the one time. The difference is that the narrow attitude is generally taken at the personal level, where a number of individuals combine and collectively follow a cause.

Meanwhile, each individual may have a different reason (the symptom) for supporting the cause.

Some conservationists, for example, emphasise the many aspects of nature that are important. These aspects are the quality of natural environments, the maintenance of the balance of nature, the protection and preservation of fauna and flora. In emphasising these aspects, the symptoms of environmental problems are likely to be treated. The single factor that threatens any aspect of nature is man, and being part of nature, he therefore threatens his own existence. The solution to the problem is to treat the cause itself rather than the symptoms, and this involves the treatment, or conservation, of man. The narrow approach is taken when only one or a limited number of factors (other than man) are used in arguments for conservation.

In following these two attitudes, conservationists seek to preserve what they believe is a natural status quo, by preventing further encroachment by man. Conservationists emphasise, for example, pollution, both of air and water. Some emphasise human problems created by urbanisation and by improved standards of living, including proper landscaping of cities, provision of urban recreational facilities and visual pollution of the city environment. Others are concerned with resources, both renewable and non-renewable. Still others are concerned with use and economics of use of specific resources such as land and soil, water, forests, and minerals. From this far-from-complete review of ideals it is apparent that there is scope for some co-ordination of ideals and activities in these many overlapping environmental concerns. There is

as yet little evidence of this happening.

For the purpose of this essay, attitudes of some 48 Australian conservationists were subjectively analysed. Most if not all are listed in the Bibliography. Only 8 (about 15%) included in their attitude the philosophy that population was the primary basis for the need for conservation. Not one out of 127 non-government and government organisations listed in the A.C.F. Directory (1970) stated any concern for population amongst its aims and ideals. However, a high proportion of organisations, 37 percent, were listed without details of their objectives and philosophies. Because this survey was also subjective, the analysis of results given are not meant to imply a total lack of concern for a holistic approach. Entries in the Directory do not give a total picture of each organisation's environmental concerns. The lack of collected information about the Australian conservation movement is evident when a study such as this is undertaken.

While only about 15 percent of individual conservationists express a positive orientation to the population problem, the remaining 85 percent could well appreciate that this is in fact the basis for their concern. However, they probably ignore it specifically to concentrate on its more immediate manifestations - hence a symptomatic or narrow attitude to conservation. Alternatively, they may place their faith in man's own ability to solve in time his resource and environmental problems. Ellis (1970) quotes McMichael (1967) expressing this common belief.

"I am optimistic enough to believe man will learn to control his numbers and that there will not only be room

for areas of natural beauty and living things, but that the community of tomorrow will want and will use such places to fulfill their spiritual needs, to enjoy their leisure hours in contact with the world of nature ' ". It is probably necessary to have such optimism if one is to devote time to treating the symptoms, by solving the problems of pollution in all its forms, and of uncontrolled development, and of the use of resources.

Where the population question is ignored, emphasis is normally directed to particular and narrow segments of the total environmental crisis. Single issues such as the survival of the kangaroo, (A.C.F. 1967), oil drilling on the Great Barrier Reef (A.C.F. 1969), sandmining at Myall Lakes (Butler, 1970), and woodchipping of forests at Eden (Routley, 1972; 1973), command the leisure time of a large number of conservationists. All these undoubtedly are commendable causes in some peoples opinions, but frequently, attitudes do not reflect any qualifications of or indeed reference to the total problem. Action for particular causes can bring about a modification, a decrease, or an elimination of an ecological problem, but further delay the time until the primary problem (population) is attacked. Technology, industry's pursuit of profit, and the political sacred cow of economic growth all come in for a fair share of criticism (Wright, 1970) while the conservationists and the whole community enjoy the benefits flowing from them. A "return to nature", which implies rejection of all these benefits is just not possible or feasible in today's complex society; besides, nature would get trampled to death in the process!

The vicious circle is obvious. The civilisation of man is now manifesting a backlash which if ignored will probably undo the civilisation process. The domestication of animals and plants led to man establishing communal living. Here, development of agricultural techniques enabled him to expand and support larger populations, until resource and technological limitations again placed limits on population growth. At this stage the industrial revolution greatly increased the earth's population potential. More recently, the resource base has been further broadened by medical and scientific advances, but man has not taken stock of all the interrelating factors that will eventually limit his population growth. In this context it is impossible to envisage a return to nature without drastic reductions in population, for the modern amenities of life will not easily be given up. There is still a choice though. On the one hand, it is possible to control the factors that influence deterioration of quality of life in such a way that environmental impacts of resource use will be minimised, but not necessarily eliminated; on the other hand, man can continue on the present path and suffer the consequences.

3-3 Sociological Basis for Conservation

Sociological aspects of the conservation movement in Australia have not been examined in any detail, and indeed there has been little emphasis on these elsewhere in a conservation context. The most relevant surveys

that gather sociological information on conservation are probably those done in national parks and the other recreational areas as visitor-use surveys, but sociological information collection is most likely only a secondary consideration. Here then it is only the socio-economic factors that are normally analysed rather than just sociological factors. Economists are changing their attitude to conservation, too, and becoming involved in fringe sociological topics by including welfare economics in their fields of study (Gregory 1972, Neutze, 1972). Through the economic technique of cost-benefit analysis, so-called "intangible" costs and benefits, which are really social costs and benefits, are priced in money terms, by using in turn such technique as opportunity costing, and shadow pricing (Ferguson, 1973). Cost-benefit analysis does not give a pure, mathematical answer. Interpretation and judgment of the relative merits of tangible and intangible costs and benefits is necessarily subjective. A factor often forgotten or insufficiently acknowledged in social-economic analysis is the time factor, for it is difficult to compare, say, the costs and benefits of a national park that persists over a long term with a relatively short-term industrial development. It is these types of differences and arguments that lead to conflict, a topic itself that has undergone some intense sociological review.

3-3-1 Conflict and its Role in Conservation

Classical sociological theory recognises many motives for conflict, and inevitably these will be present in environmental controversies. Recognising the reasons for conflict may provide a basis for resolving it. For example, in conflicts between foresters and other conservationists, arguments and actions have too often been based on symptoms rather than causes, a fact recognised by American foresters who have been strongly criticised by the conservation movement of their country in recent years (Wambauch, 1972). Recognising reasons for conflict therefore may lead to ways of rationalising and resolving such conflict.

The main reasons for joining the conservation movement are frequently the need to satisfy personal wants and to safeguard personal values. These wants and values vary from person to person, and may not often be expressed by the public in general. When wants differ, even slightly, conflict results. Conflicts hamper the conservation cause. Boster (1971) sees conflict occurring on many levels, and in many ways, including:

- a) among the various levels of government (national, state, local).
- b) between short and long term aims
- c) among priorities accorded use of resources in short supply.

Boster also sees the overriding reasons for conservation conflicts as being those concerned with the role of social institutions, interpersonal relationships,

individual wants, desires and values, and human nature. These can lead to both between-organisation, and within-movement conflicts, of which the latter are not very fruitful for the joint cause.

Among factors causing conflicts, Simmel (1955) lists not only needs and desires but hate and envy as well. Only in extreme cases of conservation conflict would these last two be operative. Simmel further argues that conflict is designed to ultimately resolve divergent views. Indifference, as an opposite to conflict, is not seen as a sociologically stimulating process, but is an attitude often adopted to avoid conflict. The inevitability of conflict maintains social systems, which are in unity when the sum total of all conflicts are in balance, and discord when not in balance.

The different types of conflict as described by Simmel include:

- a) integrative, which tends to unite society
- b) antagonism
- c) legal
- d) conflict over causes. Non-personalised, objective rather than subjective conflict
- e) intimate conflict. Personalised relationships
- f) as a threat to group affiliations.

A decrease in interest, the deflection to a higher order interest, the exhaustion of strength and will, and the transition to a state of peace are the motives for ending conflicts. The methods of ending are:

- a) victory
- b) compromise

- c) conciliation
- d) irreconciliability.

Boulding (1962) reclassified the conflict resolution scheme as follows:

- a) avoidance of likely conflict. An extreme form of avoidance is:
 - b) conquest
 - c) procedural resolution.

Procedural resolution is not really a resolution for it is not permanent. The original conflict is merely replaced by new ones. There are three types of procedures commonly employed:

- i) reconciliation
- ii) compromise
- iii) award - that is, an outsider settles the conflict.

These three types can be further subdivided by recognising two more forms of procedural resolution:

- i) law
- ii) violence

In a conservation conflict, violence is hardly a likely outcome or means to a solution. On the other hand in the United States, law has been used to win conflicts rather than resolve them by other means. Many cases, for example, have been fought between the Forest Service and the very powerful conservation group, the Sierra Club (Journal of Forestry).

In his detailed examination of conflict, Boulding proposes two basic models to describe every conflict situation. One is static, the other dynamic. The

dynamic is probably the most applicable, for conflicts change with time. However, because they are dynamic, they are quite often unstable and the outcome is unpredictable. Society would be dull if conflict were absent, or even continuing on single, set themes over considerable periods of time.

Furthermore, Boulding recognises that conflict occurs at three levels:

- i) at the individual level where conflicts are generally simple issues
- ii) at the other extreme where organisational conflict involves depersonalised organisations and institutions
- iii) at the middle area where group conflicts tend to be disorganised as a result of different social factors. Whatever the level, conflict is inevitable, for again, too little is supposedly not good for society, while the optimum amount to keep society in harmony is difficult to determine.

On the Australian scene, little if any sociological review of conflict has been done. However, the conservationist, Downes, simply considers that there are two forms of conflict (1972). One form is that resulting where the final objectives of two groups are in complete opposition, with neither group understanding the others objectives or reasons for holding such objectives. The other form is the situation where opposing groups hold to the same objective but have different ways and means of achieving it. In the first form, the conflict is not

resolved. The final result if there ever is one, is that one group wins, the other loses. The second type of conflict is resolvable through rational argument and the use of only the relevant facts.

3-3-2 Human Ecology and Conservation

Apart from conflict, the sociological sciences have also studied human ecology, examining the way people react to the environments, mainly man created, in which they live (Lee, 1966; 1970). There is no reason why human ecology should be divorced from total ecology of the world ecosystem. Some work has however been done in this field of human ecology, and it is important that the conservation movement be looked at in this context. A Canadian study (Sewell, 1972) assessed the attitudes of two professional groups (engineers and public health officials, two groups whose practices directly involve human ecology) in relation to management for environmental quality. It was concluded that at least three changes be made to present approaches. Firstly, it was necessary for these (and other) officials to adopt a holistic rather than fragmented view of the environmental problem. The overall effects of the adoption of any policy or solution on the environment and on man, need to be taken into account when making decisions. Secondly, it was necessary to involve the public much more directly in planning, by presenting a few discrete alternatives in the management plan. Thirdly there was a need for change in the administrative structure, the law, and in policies.

In the same source (Driver, 1970), and also in the Journal of Forestry (1972), another study looked at the attitudes of a professional conservation body (United States foresters) to the natural environment (supposedly including man). The conclusions tended to be very similar.

3-3-3 Class Structure and Conservation

The conservation movement has often been accused of being the playground for upper middle class society. The fact has not been substantiated in Australia but can readily be inferred by examining class structure in this country and by assessing where individual conservationists fit in the scheme.

The traditional class structure has an historical basis. Class separation was originally based on the division of labour and land. The upper class remained "superior" through inheritance of accumulated wealth and land. Middle class people tended to be the professionals, the skilled artisans and those new-rich who accumulated wealth through other than inheritance. The lower class were the remainder, those engaged in serving the other classes and those engaged in physical, generally monotonous labour "doomed to a life of perpetual monotony". The basic divisions are retained to some extent today in most societies, except that different names are applied, and there are many factors modifying an individual's standing. The ranks of the so-called middle class have been swelled by the industrial, technological and scientific revolutions so that now we may refer to an "upper middle class", "middle middle class", and "lower middle class".

Some of the important modifiers of individual status are education, income, inheritance of money, land, title and position; religion, social background of relatives, intelligence and the power to command the destiny of others in society.

Later in this chapter, concepts of what conservation is all about will be examined. Three basic concepts will be described and it could be said that each concept is the pre-occupation of one of each of the three main social classes. Although the assumption that each of the social classes adopts a distinctive "class attitude" to conservation would be untenable, it would certainly be true that the members of lower classes generally support utilisation of resources wherever possible. Such action would improve their chances of moving upwards in the social hierarchy, for industries involved in direct utilisation of resources both employ a significant number of people that the upper classes consider to be the lower class, and provide the material goods the "upper" classes aspire to accumulate. Emphasis on preservation of resources could deny the lower classes of the resources necessary to achieve a basic and reasonable standard of living, whereas at the same time upper classes could be enjoying more than a reasonable share of the same material and spiritual goods and services.

The traditional class breakdown is probably not strongly evident in Australia. The relatively brief time since first white settlement has been inadequate for such a class structure to emerge, particularly as settlement roughly coincided with the industrial revolution

(Hunt, 1970). Most "class" breakdowns in Australia are done on an occupation basis. Table 3 (page 55) is a typical example.

The "class" breakdown used by the Commonwealth Statistician is more complex, and it also gives the proportion of the total workforce in each category (Australian Government Labour Report, 1971). See Table 4 (page 55).

It must be stressed again that any such breakdowns are not absolute over time, because they can be modified, particularly where large amounts of public money are spent on welfare such as education and health. A particular failing of occupational "class" structures is that they take no account of the socially underprivileged, for example the unemployed, incapacitated, aborigines and dropouts.

If the conservation movement were to truly represent social views, it would have to be able to demonstrate that its membership was drawn from the various social classes, in proportion to the numbers within each class, and from the various states and regions in proportion to the population in those states and regions; and that opinions are expressed by due democratic (majority) process. This personal perfect model may however, be unrealistic and unattainable.

Socio-economic surveys of non-government conservation organisations may be justified where any weighting in decision-making affecting the public sphere, is to be given to conservationist pressures. Very little has been done in the sociological sector in studying the conservation movement in Australia as a whole let alone at the

TABLE 3. Social Class Classified on Occupational Status

Class	Designation
1. Professional (non-manual)	White Collar
2. Intermediate (office)	White Collar
3. Skilled	Blue Collar
4. Partly skilled	Blue Collar
5. Unskilled	Blue Collar

TABLE 4. Occupational Status

Occupation	Proportion %
1. Professional, technical and related workers	9.28
2. Administrative, executive and managerial	6.27
3. Clerical	14.69
4. Sales	7.73
5. Farmer, primary production, fishermen, hunters etc.	9.66
6. Miners, quarrymen and related groups	0.66
7. Workers in transport and communications	6.06
8. Craftsmen, production-process and labourers	35.49
9. Service, sport and recreation	7.43
10. Armed services	1.18
11. Occupation inadequately described	1.56

Source: Labour Report No. 56, 1971. Commonwealth Bureau of Census and Statistics, Canberra 1972. Based on national Census 30th June 1966.

state or local level. The nearest approximation to recording social background information is that gathered in visitor-information surveys at various recreational activities and facilities. Only limited social-economic information is then collected, usually of limited value in subsequent analysis. Recreational use of national parks has become the favourite area for such surveys. It could be suggested that to a large number of people national parks symbolise "conservation" in its true sense, or that national parks uphold the conservation concept of preservation of all that is good. It might be inferred that the preservation concept is more attractive to the social classes that make up visitors to national parks. An example is seen in a study by Vowles (1967). Vowles made a visitor-use survey of Lamington National Park, Queensland in the month of August, 1966 and his analysis is given in Table 5. This is based on occupation which was regarded as being at least partly indicative of social status.

These data strongly supports the theory that conservation (and in this sense, preservation) is the pastime of the "upper" classes, if it is accepted that professionals make up the greater part of this social class in Australia. Many similar studies have probably been carried out in Australia, and it would be surprising to see in them a significantly different trend in visitor-use in relation to social or occupational status.

TABLE 5. Visitor-use Survey of Lamington National Park, Queensland

Occupation	% of Visitors	% of Occupation of the total population
Professional	55%	8%
Clerical	20%	13%
Skilled manual	7%	36%
Business and sales	6%	15%
Others	13%	28%

3-4 Conservation Concepts

An individual's exposure to conservation issues, and the modifying influence of his social background, probably determines his concept of conservation. Individual attitudes then mix to shape a group concept of conservation. An attempt has been made to categorise conservation groups and individuals according to their concepts of natural resource utilisation and environmental conservation. But first it is necessary to consider the common or popular meanings of some frequently used terms.

"Conservation" has been very broadly defined in Chapter 1. Different conservation concepts arise where individuals or groups more or less emphasise on each of the many ideas expressed in that definition, or where there is a difference of opinion as to which ideal among the many expressed is the most important.

"Natural resources" are often thought of as the primary resources of land and sea which, with labour, are converted to material goods that society finds necessary for "quality of life". The 'free' goods including soil, water, air, and the many things that are aesthetically or spiritually appreciated should also be considered as natural resources. Man himself may be considered one of the world's natural resources, but quite often is not.

"Environment" is some quality that is difficult to define. Rapoport adequately defines environment (1972), but as his description is rather lengthy, it will not be repeated here. Simply, environment is essentially all

that which surrounds and interacts, so that man's environment is all that which surrounds man, and which interacts with man. Quite often though, man is excluded from loose or general interpretations of the meaning of environment, although in conservation, we are concerned just as much if not more with man's environment than with anything else's environment.

"Ecosystem" broadly means living system. It is a term used in many contexts to describe particular situations such as a "desert ecosystem", a "forest ecosystem", or a "pond ecosystem". It^{is} also applied in a total sense in the form the "world ecosystem". More precisely, ecosystem means the interaction of living things and their physical surrounds, on whatever scale as described by the attached adjective. It can be readily interchanged with "environment".

"Ecology" therefore implies that it is the study of ecosystems, the study of interrelationships among living organisms and environment.

With these broad rather than restrictive meanings of terms in mind conservation concepts can now be described. Three main concepts can be readily recognised, but an infinite number are possible, depending on individual conception and emphasis on values. Two of the three concepts that can be readily described constitute extremes in concept. Between them are a multitude of possible concepts which are difficult to describe because they vary slightly from one to another. The three concepts are:

- i) an extreme concept of conservation that can be

most suitably described by the words: resource preservation.

- ii) the extreme concept of conservation at the other end of the scale, that is where resource utilisation takes place or is planned with little regard for other environmental values.
- iii) the middle conservation concept, that is naturally, a blend, a balance of the two extreme concepts, a compromise.

Conflict is inevitable both between and within groups holding to these respective concepts (Downes, 1972, Section 3). Examination of past and present conflicts amongst conservationists would probably show that most conflicts arise between groups which operate at different ends of the concept spectrum. The logical solution seems to be to orientate conservationists towards the middle or compromise view, where resolution of conflict is possible.

3-4-1 Extreme Conservation Concept: Emphasis on Utilisation

Downes (1972) prefers to use the term "exploitation" rather than resource utilisation, and gives it two meanings. His primary meaning is "the action of turning to account", which could be interpreted as a middle or balanced concept - to be discussed in a following section (Section 3-4-3 page 67). His secondary meaning expresses the extreme concept under review as "the action of utilising for selfish purposes".

Where most definitions of conservation refer to wise "use" of resources, utilisation of natural resources is implied but without prejudicing all aesthetic or spiritual values. In the case of renewable resources, "use" and "conservation" can be compatible, even where use is apparently though temporarily destructive of the present resource. In the case of non-renewable resources, "use" and "conservation" may be compatible only where the rate of use is adequately planned, where limits to the use can be established, and where alternatives to the resultant product will in time be available. The mining industry, based on non-renewable resources is an obvious example of extreme conservation, for it has received and still is receiving much criticism from "conservationists".

An extreme conservation concept is reflected where the major endeavour of an organisation is directed to commercial production from a renewable resource such as wood, or from a non-renewable resource such as minerals, and other values of the resource and its location are inadequately considered if at all. Despite widespread attacks by conservationists implying that this is the concept usually adopted by resource utilisers, only a minority of developers would be oriented to this more extreme view.

Until the awakening of society to environmental problems during the last ten years, the utilisation attitude to resource conservation was accepted virtually without challenge. Development of resources was actively encouraged by governments, both state and federal, to get the country on a sound economic footing, and to

become a significant industrial nation. Technological advances and a relatively healthy employment situation since the 1950's have provided a large proportion of the Australian population with new-found affluence and the desire for both material well-being and spiritual fulfillment. An increase in economic wealth has created better working conditions and shorter working hours, largely because of greater unit productivity. Thus there has been more time for leisure and pursuit of pleasure, and this in turn has awakened society to some of the less desirable consequences of affluence. For example, an increasing awareness of the consequences of strong economic activity now makes the doctrine of maximum production untenable where environmental considerations are held to be secondary. It is now generally accepted that a better balance is needed between resource utilisation, whether renewable or non-renewable, and environmental factors.

In the literature surveyed not one author was found who advocated and followed an extreme doctrine of utilisation of resources. However, many conservationists accuse other conservationists and so-called non-conservationist resource users of the extreme concept of utilisation for selfish purposes. The more polarised in the opposite direction is the view, the more vigorous is the attack. The reaction of the resource users who are trying to provide necessary goods and services to the whole community rather than sections of it, is typified by comments of resource users: Australian geologists Branagan (1968) and Ellis (1970) and an American geologist (Pecora, 1972).

Branagan states that cities and city people have and enjoy all the material advantages of modern life, many of them produced by the mining-based industries, yet condemn the means of providing these material goods. Ellis merely comments on peoples' time preferences. Conservationists (meaning extreme conservationists: preservationists) are concerned with the short term, while their concern should really be for the long term.

Phillis (1971) in describing the position of the New South Wales Forestry Commission in relation to physical use of natural resources explains the main reason for polarisation of conservation concepts, and resultant conflict. Until recent emphasis on environmental problems, the principal endeavours of forest services (in Australia) had been directed to timber production, and other values of forests tended to be incidental. The same statement could be applied to most industries using other resources. If extreme conservationists (preservationists) do not acknowledge that at least some consideration is given by resource managers to other environmental values, then the conservationists are likely to suffer "backlash" which will hamper their future effectiveness in more vital battles.

3-4-2 Extreme Conservation Concept: Preservation

Firstly, it is necessary to give a meaning to "preservation", to distinguish it from the term "conservation". The definition of preservation can be stated

simply; preservation is the act of preserving or maintaining an environmental or ecological status quo for all time (Martin, 1971). The meaning of "conservation" is generally far broader than this. Where the term conservation is used and preservation is meant, it is a narrow and a negative view of conservation. Despite this, a basically preservationist attitude to the environmental crisis should not necessarily be condemned, because a more extreme attitude sometimes forces resource users to plan more effectively, and to actually preserve representative examples of those resources that preservationists wish to see preserved.

The preservation concept could be considered a mixture of both Arcadian and Utopian ideals (Burch, 1971). It is Arcadian in that it seeks a return to a supposedly better past with its natural and unimpaired environment; it is Utopian in that it seeks all the good things in life, including a higher standard of living and better quality of life but still retaining all the good. This mixed position is untenable because it wants the advantages that technology has created and continually improves without the persistence of technology itself. Growth of technology is seen as the primary cause of environmental degradation because of the rate at which natural resources are being used and because of greater volumes and more diverse forms of resultant pollution.

Preservationists quite often take up a single issue at any given time, failing to account for the interdependencies in the total environment. Most who view conservation as a preservation activity demand that

areas they wish to preserve be included in a dedicated national park, nature reserve or other similar reserves. But, national parks are meant to cater for many needs other than preservation. National parks provide:

- i) an escape for people from the rigours of working and living in non-natural environments.
- ii) national recreation areas.
- iii) valuable tourist attractions.
- iv) preserving, intact, segments of natural environments and lands as they were before pioneers (Morcombe, 1970).

Thus, the declaration of a national park is not the answer to a preservationist dream, despite the popular misinterpretation of the national park concept. Non-national park areas can provide some of the multiple values demanded by conservationists but not all values at once.

An environmental status quo is unrealistic. Natural systems are not static but are dynamic (Pryor, 1970). Time is an environmental dimension often ignored by those with a preservationist concept of conservation. It must be recognised that natural changes do occur and will occur irrespective of whether man participates or not. In fact, to preserve some representative environmental systems, man has to and will continue to take a hand in their management. Preserving without management fails to recognise interdependencies over time, fails to recognise the successional sequences of ecosystems, their dynamic nature. A man's lifetime is short when compared with the natural processes in

some systems, and dynamic changes occurring may not be seen or anticipated in the short-term interests of preservationists.

The question arises as to where preservation priorities are directed; whether it is the preservation of man that is important, or whether it is the preservation of the other factors in the environment, or whether it is the total environment including man. Some writers' question the preservation concept by asking directly what is more important, man or other species. For example, what is more important, oil today or polar bears tomorrow? What is the value of a park if few people will ever be able to use it? How many houses are worth going without to ensure the continued precarious existence of a rare plant? And who is to decide and arbitrate on these imponderables? (Ladell, 1973). Recher (1973) answers one of these questions by saying that rare species may not be worth the effort of preservation except as zoo and museum curios, for they are probably poorly adapted to their natural environment anyway. Man probably has not caused species demise but merely hastened it. Some authors can even be cynical about preservation. The loss of the bald eagle in America should be no cause for lament despite its prominence in the United States' national emblem, for the British have managed to get along with their coat of arms without the unicorn. Loss of wilderness, the frontier, and natural environments are inevitable here on earth, but space beyond our world should; provide enough wilderness for anyone's imagination (Wernick, 1966).

Preservationists see themselves as anti-establishment.

Everything done (which it apparently is in the name of "progress") is worth opposing. The ultimate culprit either directly or indirectly, is in most cases "the Government", in the form of its employees or its politicians. Professions, both inside and outside government are also singled out as being anti-conservationist, despite the fact that they are and have been for some considerable time of Australian history the only active conservationists. A new school education curriculum in one Australian State states:

"Environment conservation is one of the most critical problems confronting modern society. Agriculture and forestry have caused grave dislocations of our environment. It is therefore the duty of schools to provide pupils with a basic introduction to the nature and scope of environmental problems and to endeavour to arouse in them a sense of their obligation as private individuals and future citizens to help prevent the destruction of the environment and to create a healthy environment for themselves and their successors," (Quoted by Ovington, 1973).

More specifically, in recent times the professionals, foresters and miners have persistently been subjected to these kinds of preservationist pressures, while some destructive aspects of other applied technologies, notably agriculture, have gone unnoticed.

3-4-3 Middle or Compromise Conservation Concept

The term "balanced" is used in describing a middle-of-the-road conservation concept, and it implies a balance between the two extreme concepts already described, that is, it is a balance between preservation and utilisation respectively. It implies that 'resource use' can be commensurate with utilization, for example, water

conservation and soil conservation admit the use of the resources water and soil. If we are to guarantee society a fit though modified environment in which to live and attain an acceptable standard of living for all, then the ideal conservation concept must be based on both resource use and resource conservation. Where there is conservation conflict, the resource user is generally prepared to accept some compromise, that is to adopt some "middle-of-the-road" attitude. If conservationists with a strong preservation bias were similarly prepared to accept compromise, this balanced concept of conservation would normally end major conflict. Individuals, private enterprise, public organisations, governments, nations, the world, all have so many aims that a balanced outlook is necessary, not just to maximise or minimise particular aims but to optimise the total mixture of aims of all society.

An analysis of conservation concepts has been made in two ways, (1) from literature, and (2) from the account of objectives given by organisations listed in the A.C.F. Directory. The results are reproduced in Table 6, (page 72).

From the literature survey it is seen that by far the majority of conservationists support, in their writings at least a middle-of-the-road conservation concept. Almost 48% of individuals support a "balanced conservation concept", although interpretation of what is balanced will vary markedly. It is stressed that these analyses are personal, subjective, and could be varied by others whose attitudes are different. It

is conceivable that in surveying the same literature, a strict preservationist would record a greater percentage of organisations with concepts towards the opposite end of the concept scale. The individuals surveyed would most likely not be representative of the conservation movement in Australia or New South Wales for that matter, for the literature used was mostly published in professionally-orientated journals and books, which would contain articles by individuals having the necessary ability and professional background to indicate their philosophies. On the other hand, the analysis from the "Conservation Directory 1970" would be reasonably reliable within the limits of personal interpretation because the coverage of organisations was more comprehensive, especially of government organisations.

It is therefore surprising to see the differences between individual concepts from literature and those as stated in the A.C.F. Directory. Only 25% of New South Wales government bodies with conservation interests display a "middle concept" of conservation. Perhaps there is consolation in that the proportions of organisations in the two intermediate categories were high.

Of the large number of non-government bodies listed in the Conservation Directory 1970, a large proportion (49%) could not be placed in any particular category because inadequate information was given; either no information was given at all, or the resume was incomplete. It is noted that the highest proportion of organisations

are in the preservation category.

Conservation action of the past decade or so as part of the economic and social revolution has done much to change peoples and governments traditional attitudes to the natural environment. In order to satisfy the diverse needs of society, the resource users have had to modify management policies to some degree. The most acceptable course to follow in modifying management policies is to adopt the middle or compromise concept; that is, preservation of resources in part, and the restoration, and where necessary, improvement of environmental resources after use, consistent with the maintenance of essential resource production. As it is difficult to determine the extent to which modification of resource use policy is carried out, it is difficult to classify many conservationist organisations and individuals, government or non-government, in terms of the several concept categories.

Most non-government organisations and individuals could be readily placed in the preservationist category or towards the preservation end of the concept scale, while government conservation bodies tend towards the utilisation end of the concept scale. Such a polarisation will make future compromise between the conservation movement and government conservationists difficult where conflict arises.

Table 6 also shows the high proportion of individuals from the literature survey, mostly employed in the sciences, who agree with and promote a middle-of-the-road conservation concept. While scientific conservationists frequently express this attitude, they may actually have

a strong preservation bias in relation to specific environments or resources, but there are exceptions too. Downes (1972) sees land as the basic resource of all resources, for it supports or produces in one way or another all the materials of use to society. For land to fulfil the needs of the people, several objectives are required: the different needs of a community for different purposes must be understood, accepted, and satisfied over time. Only in this way can a balanced land use policy (equivalent therefore to a balanced conservation concept) be achieved. When decisions are made, they should be on the basis of adequate information, demonstrable community need, a non-parochial attitude, the recognition that diverse needs have to be satisfied, the recognition that use-priorities change with time, the recognition of different potential uses of land, and the recognition that multiple use of resources may return maximum benefit where the multiple use is based on ecological principles so as to avoid decline in productivity and usefulness.

Physical resource management providing balanced multiple use on the basis of Downes' listed factors is not the only criterion in satisfying a middle conservation concept. The economic results of accepting a multiple use policy have to be considered. The community as a whole has a requirement for a certain minimum standard of living dependent on material needs. Not until the minimum requirements of all are satisfied can a bias towards preservation be entertained. The consequence of the continuing demand for improved quality of life

TABLE 6. Support for the various Conservation Concepts

(Expressed as percentage)

Concept	From Literature	From ACF Directory 1970	
		Non-Govt.	Govt.
Extreme: utilisation	4%	0%	0%
Intermediate	15%	2%	44%
Balanced: Use and preservation	48%	4%	25%
Intermediate	25%	13%	22%
Extreme: preservation	8%	32%	9%
Unclassified	0%	49%	0%
Total	100%	100%	100%

will include an increase in material resource use at the expense of aesthetic fulfillment. A compromise has to be made. A balanced concept of conservation, under most circumstances would be acceptable in satisfying the material and non-material wants of society. Conflict under such a policy would not be eliminated, but at least would be minimised, for there will always be extreme attitudes from which conflict will arise. However, such conflict in itself may be necessary to ensure a balanced, a middle-of-the-road approach to resource use is maintained.

3-4-4- Intermediate Concepts of Conservation

The foregoing three conservation concepts have been selected because they are the obvious ones that can be readily described. It is more difficult to pinpoint other concepts on the gradational scale, although this has actually been done in Table 6. In effect the categories fall within a continuum of concept, and are not in any way mutually exclusive. Therefore there are many concepts that would fit between those categories described.

The nature of individual bias determines how close the concept held is to either extreme or to the middle or compromise view. The position on the gradational scale is not necessarily static over time or over issues. Some individuals and organisations vary in their attitudes in different situations. A typical example is Marshall (1966), who showed an extreme bias in his criticism of conservation achievements in Australia and in his failure to recognise the progress that had in fact been made. He showed a middle or compromise view when he called for a balance

between legitimate development and conservation.

The Australian Conservation Foundation (1970) also exhibits a changing position on the concept scale, when it singles out government activities in resource development as the prime causes of most conservation issues. On the other hand, the A.C.F. adopts as its policy the following definition of conservation: "the wise, use over the longest possible time, of natural resources for the benefit and survival of Man, viewed both as a user and a custodian of Nature". It then condemns through its support of ad hoc action-type conservationist groups, what may very well be wise use of natural resources. For example, in the absence of any objective study, the A.C.F. and the Colong Committee may be opposing what could be wise use of the Colong Caves area for limestone mining, and the Boyd Plateau for pine plantation. Such committees set themselves up as sole judge of wise use, project themselves to the general public on this basis, and attack government departments and developers who believe themselves to be making wise use of available resources on behalf of the general public.

A bias towards preservation is not necessarily a bad thing, and need not be criticised as long as the rights of a majority to a share of the products of utilisation are not subjugated by undue emphasis on preservation. The same can be true of a bias towards resource use. It is interesting to see how a conceptual position may differ in respect to different resource uses.

For example, Costin (1972) emphasises the importance of water conservation in the Australian environment, for example through construction of reservoirs. However, Costin's views on vegetation conservation (Costin, 1972) do not encompass various types of usage, but have a strong bias towards preservation.

A change of public attitude over time also makes any consistent categorisation of individuals or groups difficult. Given the social, economic and environmental conditions of today it is difficult to conceive that some major projects undertaken in the past would now be possible, under current pressure from vocal and yet minority conservation groups.

The chances of a Sydney Harbour Bridge being built would most likely be minimal. Apart from cost, the Opera House decision today could be marginal, for it would probably offend both the "natural" shoreline of Sydney Harbour, and the already man-made skyline. The construction of a Snowy Mountains Scheme would probably attract as much if not more criticism than Lake Pedder in Tasmania.

Table 6 (page 72) indicates that a significant proportion of individuals and groups could not be allocated to a clearly definable category and instead were assigned to intermediate-level categories based on their bias in one direction or the other. With a continuum of concept, it is easy to see there is something in the saying that there are as many definitions or concepts of conservation as there are conservationists.

CHAPTER 4Case Study of a Forest Management - Conservation Conflict4-1 Introduction

In the last few years, management practices of the Forestry Commission of New South Wales have come under criticism in many parts of the State. Not one, but several major management policies have come under attack; these include the pine plantation programme, logging in rain-forests, and clear-cutting for woodchips. These have been the major controversies, debated at length in public and scientific circles. To be sure, the forest service in question has had to deal with many more complaints that have not had the sensation value of the major ones named above. The Forestry Commission is not the only organisation, government or private, that has been confronted about day to day activities which were accepted without question not too many years ago. In recent years, greater social freedoms and social awareness, and greater scope for activism, (although some would deny that the social system is less authoritarian) has coincided with the increase in awareness of an environmental crisis.

Of the abovementioned major forestry issues it is intended to trace the development of the conflict over rain-forest logging at Wiangerie State Forest, Kyogle Subdistrict, and Casino District of the Forestry Commission of N.S.W. The reasons for doing this analysis are:

- a) to identify how and why a conflict begins

- b) to examine the course a typical conflict follows
- c) to examine whether attitudes of either "opponent" change, enabling a compromise
- d) to identify the concepts of conservation adopted by the "opponents"
- e) to determine ways for forestry to handle conflict situations that may arise in the future.

Although all controversies have received coverage by the mass media, most have been conducted from city bases (Sydney and Canberra). The Wiangerie case is^a little different because there seems to have been a great deal of involvement at the local level. The case study has been investigated from two sources, (i) from official records of the Head Office of the Forestry Commission of New South Wales, and (ii) from newspaper reports of locally circulating newspapers ("The Northern Star", Lismore, for example). Reports of the conflict were also given on local television stations, but in the main these were based on the newspaper articles.

The case history will be developed in the following way:

- (i) a brief history of operations at Wiangerie S.F. will be given
- (ii) the conflict will be traced through several phases, and
- (iii) an analysis of the conflict will be presented.

4-2 Brief Description and History of Wiangerie S.F.

A description and history of the forest can be gleaned from Forestry Commission (1973) notes, used

later in this section as background notes to the case history. The following description is derived solely from these notes.

Wiangerie State Forest is dedicated crown lands vested in the Forestry Commission of New South Wales. Commission records evidently date back to 1926, although the forest was first dedicated in 1917. It was most likely a forest or timber reserve under previous land laws. Undoubtedly, logging operations would have been carried out prior to either date. Originally red cedar would have been logged and, following settlement and the first World War, logging would have extended to other species. Records indicate a volume removed since 1926 of over 50 million super feet (151,727 M³) of rainforest species, which excludes hardwoods (Eucalyptus, Tristania, Syncarpia) that occur in and near rainforests, and generally occupy drier more exposed sites in the landform complex. The rate of volume removal would not have been constant for many reasons including, for example, the marked effect of economic conditions on the timber industry. Logging has almost always been selective, for silvicultural reasons, and because demand has been for a restricted number of species and larger sizes. Silvicultural research (Baur, 1972) led to the adoption of a logging policy of 50% upper crown retention with the additional condition that a diversity of species be retained.

Roading is not new, but intensity may have increased in recent years. Besides increasing the value of the logged trees, reducing transport and maintenance costs, roads also permit access for the touring public. It is

not possible at the moment to assess whether new roading and logging causes more immediate damage than old systems of logging. The visual effect of new roading is more apparent but diminishes in a relatively short time.

Geographically, Wiangerie State Forest occupies a plateau which is an extension towards the South, of the junction of the Tweed Range. The Tweed Range separates the Tweed and Richmond River valleys and the MacPherson Range, which extends along the Queensland-New South Wales border. The State Forest area is 35,700 acres (14,448 ha), although the Border Ranges Preservation Society quote the precise figure of 37,744 acres (15,275 ha). Area of actual rainforest is also in dispute, but the Forestry Commission figure of approximately 16,000 acres (6,475 ha), should be more precise than approximately 20,000 acres (8,094 ha) as quoted by the Preservation Society. Of the 16,000 acres (6,475 ha) 6,000 acres (2,428 ha) have been selectively logged in the past, 4,000 acres (1,619 ha) are to be retained without logging, which leaves a further 6,000 acres to be selectively logged in the current cutting cycle. Although the past logging practices have been criticised, the areas so treated cannot be in the degenerate a condition often described, for the Preservation Society still wishes to preserve them in national park.

4-3 Wiangerie Case Study

4-3-1 Phase 1: Pre-media

The first record of dissatisfaction about forest operations in rainforest on Wiangerie State Forest was

a letter, September, 1970, from a concerned citizen who apparently had no connection with any conservationist group, for he wrote on his own behalf. He was a "local" who lived on the lower Richmond River, about 110 km by road from Wiangerie State Forest. He expressed concern that his trips to the forest were being spoilt by the visual damage to the forest, which decreased its value to him for his hobbies of picnicking and photography. Concern was expressed also that roading was effecting groves of Antarctic Beech and their associated orchids, birds and animals. However, this person was not opposed to logging of the forest for he saw advantages from commercial exploitation. The same person apparently wrote similarly to the National Parks and Wildlife Service, which then made representations to the Forestry Commission about joint management of the forest, along with other suggestions for joint management of other state forests in N.S.W. Reasons why joint management would not work were put forward by the Forestry Commission and the matter was not pursued further at this stage.

The Summerland National Parks and Wildlife Committee soon became involved, possibly by invitation from the National Parks and Wildlife Service. In a general investigation of the need for national parks in the Richmond River area, a selected area had to satisfy several aims. In short, these were preservation, protection of habitat for fauna and flora, suitability for use by people, and intelligent utilisation. The report of the Summerland National Parks and Wildlife Committee reasonably recommended that suitable areas for National Park should be sought

elsewhere than state forests. However, their final recommendation was that a major portion of Wiangerie State Forest be dedicated as national park.

The next stage in development of the controversy came in early 1972. This was an internal report from the Forestry Commission research organisation that showed regeneration, and growth of regeneration in subtropical forests was good where 50% of standing trees were retained. Under this regime post-logging damage by dieback was minimal. In July 1972, another internal report of the Forestry Commission outlined the objects of management of Wiangerie State Forest, several months before public controversy. Again in brief, these were to meet quota commitments already made based on assessment of standing volume, the retention of flora including its natural diversity, the development of the recreational potential of the forest, and the scientific preservation of a representative sample of the forest. This policy specifically stated that in any area of the forest where all the trees of a species were likely to be taken, that seed trees had to be selected for retention.

4-3-2

Phase 2: The Public Controversy

In November 1972, before the conflict received coverage in the mass media, one of the precipitators (a member of the Border Ranges Preservation Society) of the conflict wrote to the Forestry Commission, expressing deep concern over the "recent" opening up of the forest, the environmental damage caused by roadbuilding and the effect

of roading and logging on "the ecology". Some statements were emotional although not loaded. The complaint was raised that the forest would never be the same again. The Forestry Commission reply to this letter, later became the basis for a standard answer to most enquiries directed about rainforest operations at Wiangerie State Forest (Forestry Commission N.S.W., 1973).

A letter from a Federal Member of Parliament was also received in November, 1972. It was a query about roading at Wiangerie State Forest but arrived at the Forestry Commission via a number of State Parliamentary Ministers. It was duly answered obviously to the satisfaction of the Federal Parliamentarian for no further queries came from the same source in the time-period researched.

The next event, in early January 1973, was a query about forest policy on rainforest areas, from the National Parks Association of N.S.W., prompted by a citizen who was probably a member of the Association. The tone of the query indicated that the National Parks Association wholeheartedly believed and supported the views of their correspondent without any prior thought or checking of facts, for they were immediately on the offensive.

The conflict started to build up with the formation of a group whose principal aim was the dedication of Wiangerie State Forest as a National Park. The group called itself the "Border Ranges Preservation Society" and published a booklet in launching their campaign (Border Ranges Preservation Society, undated). No attempt has been made in researching this case study to document the history of the formation of this conservation group, nor

its membership content.

This original document of the Border Ranges Preservation Society seems to be the whole basis from which many individuals and groups in following months derived their background for attacks on the Forestry Commission, for the same points raised in it were blindly used by many followers who failed to check the so-called facts on which the case for preservation was launched. Later in this case study this document and the standard information sheet of the Forestry Commission will be dealt with in more detail.

(See Appendix page 137).

4-3-3

Phase 3: Media Involvement

The controversy was first reported by local newspapers and local television news in late January, 1973, particularly by the Lismore, Murwillumbah, Casino and Kyogle newspapers. Table 7 is a list of dates on which newspaper reports on the conflict were published in these local papers, not all of which are daily newspapers. It does not pretend to be a fully comprehensive list, for it came mainly from the files of the Forestry Commission. Time did not allow complete research of the appropriate newspapers. Many other newspaper clippings received by the Forestry Commission and by the author were not marked with the date of publication. Articles and letters are known to have been published in "The Sydney Morning Herald", "The Courier Mail", "The Sunday Mail" colour magazine supplement (Brisbane) other national newspapers (for example "The Bulletin") as well as many conservation orientated magazines and journals. On many occasions local news-

paper reports formed the basis for short reports given on local and regional news broadcasts over radio and television. The public controversy began at the time of a number of by-elections for State Parliament in New South Wales. A win by the Opposition in all the electorates involved would have meant defeat for the Government. Electioneering was intense in the local region, for the electorate of Byron was one being contested. Apparently, the Border Ranges Preservation Society used the by-election as a platform to launch their campaign, and the "Wiangerie State Forest for national park" campaign was adopted as policy. The local representatives of political parties had most likely been approached just prior to the opening of the election campaign, late January, 1973. In delivering his policy speech the leader of the Opposition Mr. P. Hills, on behalf of his party's candidate, proposed a halt to logging at Wiangerie pending a full enquiry by his party, and possible dedication of the forest as a national park. At the same time an urgent telegram was sent to the Minister for Conservation from Mr. Hills requesting the same halt to logging and an immediate enquiry. This Labour Party policy and text of telegram were reported on 26.1.73.

A political "faux pas" apparently had been committed. The policy relating to Wiangerie was attacked by the labour-intensive sawmilling industry and employees usually considered to be traditional supporters of Mr. Hills' Labour Party. In subsequent controversy, much was made of the number of people directly employed by sawmilling and associated activities at Wiangerie S.F., and the threat

to their jobs by cessation of logging. It is therefore conceivable that the incident with the telegram reduced the Labour Party vote and may even have cost it the good chance it had of winning the Byron by-election. Mr. Hills probably regretted this hasty action, for in a further report on 9.2.73, he said there was no reason why logging and conservation could not go hand in hand, although he denied altering his original position. It was evident from the report that not all the statements Mr. Hills made were entirely correct or were very well informed.

There are other examples of the use by the Border Ranges Preservation Society of using the election as the occasion for mounting their campaign. A few days before the political campaign began, the Forestry Commission of New South Wales received a copy of the Society's booklet, and with it a letter dated 24.1.73 asking many questions. All of these questions are answered in the Commission's information sheet on the forest, and were answered at the time by individual letter. A letter was received from the Preservation Society dated the following day 25.1.73, asking a further set of questions about Antarctic Beech trees, which in turn was duly answered. A further pointer to the political activity of the Society, was the receipt by the Commission of many queries, all the same, all taken from the Society's booklet, and forwarded through the Premier, various Ministers, and members of State Parliament from the Richmond-Tweed area. There was also a number of letters from conservation organisations, all asking questions or commenting on the points raised by the Border Ranges

TABLE 7 Local Newspaper Reports of Wiangerie Conflict

Date	Type of Article
26.1.73	Report - A.L.P. policy
5.2.73	Report - Sawmiller rejects A.L.P. Proposals
6.2.73	Report - Minister's reply to A.L.P. policy
9.2.73	Report - A.L.P. Policy modified
14.2.73	Letter to the Editor
15.2.73	Report - Minister rejects A.L.P. proposals
20.2.73	Letter to the Editor
21.2.73	Article - Border Ranges Preservation Society case
24.2.73	Report
26.2.73	Report - Minister reply to B.R.P.S.
27.2.73	Report - Support for B.R.P.S. by Byron Flora and Fauna Conservation Society
27.2.73	Article - Reply to B.R.P.S. article by Cecil
2.3.73	Letter to the Editor - Secretary, B.R.P.S.
7.3.73	Article - Glen Hall about beech trees.
20.3.73	Letter to the Editor
21.3.73	Letter to the Editor - Glen Hall
21.3.73	Report - Murwillumbah Chamber of Commerce to support national park proposal
22.3.73	Letter to the Editor
27.3.73	Letter to the Editor
29.3.73	Letter to the Editor
4.4.73	Article - Secretary, B.R.P.S.
10.4.73	Report - On national park proposal
10.4.73	Report - B.R.P.S. proposal (Sydney Morning Herald)
11.4.73	Report - B.R.P.S. proposal
14.4.73	Letter to the Editor - A.R. Maslen supporting B.R.P.S.
17.4.73	Report - Tweed Byron Regional Tourist Association attitude.
18.4.73	Report - Murwillumbah Chamber of Commerce support Forestry Commission policy
18.4.73	Report - Kyogle Chamber of Commerce against B.R.P.S. proposals.
18.4.73	Report - Kyogle Chamber of Commerce against B.R.P.S. proposals (diff. papers)
18.4.73	Editorial - supporting Forestry Commission policy
19.4.73	Article - W. Young against B.R.P.S.©
19.4.73	Report - National park would be a local disaster
21.4.73	Report - Terania Shire Council support for B.R.P.S.
21.4.73	Report - Kyogle mill workers oppose national park proposal
26.4.73	Report - Kyogle timber workers union against national park proposal

TABLE 7 (Contd.)

Date	Type of Article
26.4.73	Report - S.T.A. Summerland Tourist Assoc. support for National Park proposal
26.4.73	Letter to Editor - W. Young
27.4.73	Report - Public meeting address by forester.
28.4.73	Editorial (Northern Star)
28.4.73	Letter to the Editor - Secretary B.R.P.S.
2.5.73	Letter to the Editor
9.5.73	Report - Tweed Shire support opposing
11.5.73	Report - Minister rejects National Park proposal
11.5.73	Report - S.T.A. seeks government inquiry in rescinding previous support for B.R.P.S.
12.5.73	Report - Forestry Commission tour of Wiangerie State Forest
12.5.73	Report - Minister rejects National Park proposal
16.5.73	Report - Casino Municipal Council refuses to support case against National Park
16.5.73	Letter to the Editor - Secretary, B.R.P.S.
17.5.73	Report - Minister rejects National Park
17.5.73	Report - Minister rejects National Park proposal
17.5.73	Letter to the Editor - Glen Hall
22.5.73	Report - Minister replies to Letter to the Editor
23.5.73	Report - Forestry Commission forest tour
24.5.73	Report - Forestry Commission forest tour
25.5.73	Editorial "Tell the World". (Casino "Express")
4.6.73	Report - Lismore City Council accepts report of alderman who attended forest tour
4.6.73	Letter to the Editor - A.R. Maslen.
9.6.73	Report
12.6.73	Report - Richmond - Tweed Development Association support Forestry Commission
18.6.73	Report - Northern Rivers Regional Advisory Council support Forestry Commission
18.6.73	Far North Coast Branch of National Parks Assoc. favours national park proposal
27.6.73	Report - Opposition Leader Hills praises Forestry Commission.
Not known	Report - District Forester invites public inspection of Wiangerie forest. (March)
"	Letter to the Editor (Sun Herald, late March)
"	Letter to the Editor (Sydney Morning Herald) early April.
"	Article - Secretary, B.R.P.S. commentary on forest tour (late May-early June)
30.7.-4.8.73	Article - National Estate Enquiry (National Times).
Not known	Report - Government to probe claims for national park (May)
"	Report - on meeting of Byron Flora and Fauna Conservation Society.

TABLE 7 (Contd.)

Date:	Type of Article
Not known	Report - S.T.A. National Parks and Wildlife Committee
"	Report - on timber industry support of Forestry Commission control of Wiangerie ("Courier Mail")
"	Report - on conflict over Wiangerie ("Sunday Mail" colour magazine)
"	Report - Woodburn Shire Council receives letter from Kyogle groups.
"	Report - on forester's address to Tweed-Byron Tourist Association
"	Letter to the Editor - J.D. Thompson (early May, 1973)

Note: The number of reports whose publication dates are not known are mostly due to poor documentation at time of collection of data, and no fault of the Forestry Commission records. At time of documentation the actual newspaper source was sometimes not recorded however, most were taken from the newspapers of Kyogle, Casino, Lismore and Murwillumbah.

Preservation Society. There were some letters from individuals who wrote as private citizens, but whose names nonetheless often appeared as members of other conservation bodies.

4-3-4

Phase 4: February 1973

In the reply by the Minister for Conservation to the Opposition telegram, reported on 6.2.73, reference was made to ill-informed criticism. The Minister defended the policies and actions of the Forestry Commission and tried to explain briefly the reasons for rejecting the national park proposal. Naturally in the atmosphere of a by-election the exchanges between political parties tended to be emotional and derogatory, to gain as much advantage one way or the other from the situation.

Letters-to-the-Editor of local newspapers, and contributed articles during February 1973 tended to be emotional in tone, were often ill-informed, accepted only one viewpoint without trying to understand the opposite view, and misunderstood or misinterpreted the little real information supplied by the Border Ranges Preservation Society. In this period the two major political parties engaged in the Byron by-election tried, naturally, to get as much political "mileage" out of the conflict. This added to the emotionalism. Terms such as "a priceless heritage", and headlines such as "National Park sought in bid to end high range forest falling", and "forest ravaging by government log policy", contain emotional elements, and contribute nothing to balanced

reporting in newspapers, except perhaps where they are direct quotations.

Throughout the conflict, much attention was given to beech (Nothofagus species) and its importance, without anyone really trying to present a review of the total information available about beech. Such beliefs that logging of beech was being carried out, that beech is rare, that it does not regenerate, that it was not being preserved, and many more were played up in the media, especially by one Glen Hall, a local historian who really showed an ignorance of the subject. ("Northern Star", 7.-8.3.73). It is doubtful that Mr. Hall even visited the area he wrote about, and under such circumstances would be unable to argue rationally on the subject. It appears that several others who wrote letters-to-the-editor also had not been to the forest and seen the activities they were so vigorously condemning. Mr. Hall's articles were misinterpreted, judging by the number and content of letters received by the Forestry Commission thereafter about the fate of beech.

4-3-5

Phase 5: March 1973

After the period of rapid claim and counter claim, most arguments were concerned with more factual information. The aggressiveness of the attacks by the Secretary of the Border Range Preservation Society, J.G. Brown, continued despite the factual information provided by both sides in the conflict. In the early stages of the conflict, the attitude and position of the Forestry Commission was handled publicly by the Minister (for Conservation) and

by the Forestry Commissioner. Comments of these were recorded in major daily newspapers and at the local level. As the conflict progressed, it tended to become more local. It was not until mid and late March that local forestry officers were heard or quoted in local news, and thereafter the local foresters were more often quoted. Like all public servants, foresters are bound by rules and regulations concerning release of news items. Prior approval has to be sought, and the context generally has to be approved. It appears that the local foresters were encouraged to provide information where it was sought, and to comment whenever asked, rather than to counter directly the charges made against the Commission. For example, the forester at Murwillumbah spoke about rainforest logging to some public meetings in the Tweed River area. It need be noted at this stage that the conflict was treated seriously in the Tweed River area for two reasons. Firstly, part of the sawlog production from Wiangerie is processed at a large sawmill in Murwillumbah and is thus important to the local community. Secondly, the secretary of the Preservation Society J.G. Brown lives at Mullumbimby, a few miles from Murwillumbah, and conducted most of the Society's campaign from that centre.

Public debate was entered on behalf of the Forestry Commission by the Minister for Conservation and then mainly in reply to questions raised by local politicians. Otherwise local officers, as mentioned before, did not enter debate, but provided information. The District Forester in a statement released to the local press invited the public to visit the contentious area rather

than prejudge the situation as presented by the opposition publicity. No attempt was made to answer or comment on each and every item or letter-to-the-editor that appeared in the local newspapers, but the statement was made by the Forestry Commission that queries made in person at any forestry office would be answered as well as possible. It was felt that the Commission's information pamphlet answered all the general questions raised in the public forum. Moreover, every letter received in Sydney was answered, and it is presumed any received in the Casino District were also dealt with. (Records of all forestry offices were not researched, being out of the question in a study such as this).

One persistent questioner was, naturally, J.G. Brown, Secretary of the Border Ranges Preservation Society, with articles and letters in the newspapers, as well as letters to the Forestry Commission. Despite communication between the Society and the Commission, both privately and publicly, the Society evidently refused to understand or accept the answers given. For example, the Society made much of the emotionalism of "virgin rainforest", claiming that all logging was only recent, and persisted in this view over the period of the controversy. In fact, soon after the campaign for national park dedication was started, the Commission advised that logging operations had been carried out since the early cedar-getting days on the Richmond, that the forest was in no way "virgin", that operations were not new, or the scale of operations had not recently increased but had become more concentrated for reasons of economy. Another example of the Society

tactic is that a paper by G.N. Bauer in 1957 was continually used as a basis for rejecting rainforest logging, although this paper does not specifically refer to Wiangerie. The Society does not acknowledge, or was not sufficiently diligent in its research to find later papers by Baur (1968) which are the basis for the current practices at Wiangerie.

Support for the Border Ranges Preservation Society

The early tactic of the Society was to reach as many people as possible in a short space of time, and to get an early reporting of its case before resistance began. At first politicians and other conservationists organisations, mostly local, were saturated with the call for a national park dedication of Wiangerie State Forest. Actually this "storm" came as no surprise to the Forestry Commission, for an increasing number of enquiries were being received, instigated primarily it is presumed by people who eventually formed the Border Ranges Preservation Society. Naturally, the support of other conservationist groups and organisations were readily forthcoming. A list of the other groups contacted would include the following, but may not be complete for the obvious reason that not all groups made public statements of their support:-

1. The National Parks Association of New South Wales
2. The Queensland Survival League
3. Byron Flora and Fauna Conservation Society
4. Summerland Tourist and Development Authority
National Parks and Wildlife Committee
5. Tweed Valley Conservation Trust
6. Aquarius Foundation, Nimbin

7. Queensland Federation of Bush Walking Clubs
8. National Parks Association of Queensland
9. Total Environment Centre
10. Australian Conservation Foundation
11. N.S.W. National Parks and Wildlife Service.

Most if not all these bodies would support a national park proposal irrespective of any arguments against such a proposal, for the term "national park" means "conservation" to those imbued with the ideal of preservation. From the public reports, it appears that the concept of conservation held by these bodies cannot encompass the multiple use policies adopted by the Forestry Commission. The ultimate or basic argument is not really about what the Forestry Commission is doing at Wiangerie State Forest but rather is about having the area called "National Park" rather than "State Forest". Given the policy and the aims of the Forestry Commission, it is doubtful whether the approach of the Commission to conservation of the forest can be criticised in principle. However, these aims and policy are not complementary to the ideal of a National Park. Therefore, it is not logging and the associated affects on the particular environment that are being attacked, but the ideal of forestry as opposed to the ideal of national parks. A solution to the conflict appears to be the acceptance of a balance about concepts of conservation as outlined in the previous chapter (Chapter 3). To the author, the multiple use policy adopted by the Forestry Commission is such a compromise, a balance between complete preservation as desired by the Border Ranges Preservation Society and full utilisation which is demanded by society -

though indirectly - through the demand for timber and timber products. The aims and ideals of both groups are satisfied in some degree, although neither completely.

Support for the Forestry Commission

In this section support for the Forestry Commission is examined, but excluded are the local government commerce, and tourist groups, for these are to be discussed in a following section (section 4-3-6, page 96). The first support for Forestry Commission policies and activities came from the Minister for Conservation, whose Ministry includes the Forestry Commission, in opposition to the policies endorsed by the State Leader of the Opposition (Australian Parliamentary Labour Party), Mr. P. Hills, for the Byron by-election campaign.

Before the Border Ranges Preservation Society's case was reported in the papers, an article by a local saw-miller appeared ("Daily News", 5.2.73) rejecting the proposals for a national park as outlined by Mr. Hills, and supporting the conservation activities of the Forestry Commission. A list of subsequent supporters would include the following, notable for the number of individuals rather than organisations:-

1. Mr. Cecil Jones
2. Mr. W. Young (Kyogle)
3. Kyogle timber industry employees
4. "Kyogle Examiner" newspaper editorial
5. "Richmond River Express" newspaper editorial (Casino)
6. Mr. D. Day, State Member for Casino
7. Australian Timber Industries Journal, June 1973
8. Mr. D. Hawkins (Murwillumbah)

9. Mr. P. Hills, Leader of Opposition, State Parliament (June 1973)
10. Mr. R. B. Duncan, State Member for Lismore

4-3-6 Phase 6: April 1973. Involvement of Local Government

During April, 1973, the Border Ranges Preservation Society tried a new line of attack by evidently trying to alienate relations between the Forestry Commission and local government councils, tourist associations and Chambers of Commerce, and similar bodies throughout the region. Naturally, some of these bodies decided immediately to support the Society, without bothering to hear or see the opposing case. The attack on the Forestry Commission and its policies contained in the Society's booklet was apparently accepted by these councils or bodies without question. For example it was reported the Terania Shire Council supported the Border Ranges Preservation Society ("Northern Star", 21.4.73).

The earliest account of a move to involve commercial interests was given in the Murwillumbah "Daily News" (21.3.73) where it was reported that the Murwillumbah Chamber of Commerce had been asked to support the Tweed Valley Conservation Trust in joining the Preservation Society's proposal for a national park. The Chamber of Commerce was not ready to answer immediately, and after due consideration decided to back the Forestry Commission's approach ("Daily News", 18.4.73). This decision was made despite the publication of two articles ("Northern Star") on 4.4.73 and 11.4.73 presenting the Border Ranges Preservation case, and the direct receipt of correspondence

from the Society or the Trust.

A particular case of rash involvement in the conflict is exemplified by the Summerland Tourist Authority who at first willingly supported the Preservation Society ("Northern Star", 12.3.73), possibly in the belief that more tourists would be attracted to the region by a national park run on lines similar to Lamington National Park, than by the existing state forest. The Preservation Society have implied that a similar number of visitors that are already attracted to Lamington, could be expected at Wiangerie. It was not as widely publicised, however, that facilities provided at Lamington are mostly located on or near the perimeters, that only hardy walkers rather than tourists see much of the park, and that most of the tourists who do visit the perimeters are mainly holidaying at the Gold Coast which is within an easy driving distance on good roads. A similar major tourist resort like the Gold Coast is not located within easy access and distance from Wiangerie. The idea that a national park at Wiangerie would attract more tourists to the region than a not dissimilar state forest offering the same if not more amenities, must have initially persuaded the Tourist Authority to support the Border Range Preservation Society.

The Kyogle Community Development Association criticise the Tourist Authority and urged the rescinding of the decision for support. The Authority was further attacked throughout April by Commission supporters and by other commercially oriented groups, to such an extent that at a subsequent meeting of the Authority, it was

agreed that a "full-scale Government inquiry into the feasibility of turning the Wiangerie State Forest into a national park" should be sought, and this was necessary before the Authority could support either retention of state forest or dedication of the area as national park ("Northern Star", 11.5.73). A later report in the "Northern Star" (16.5.73) revealed that when the original decision to support the Preservation Society was made only six (6) members of the Authority were present, although it is not stated how many members there are in the Authority.

A table (Table 8, page 99) is now presented, listing local government and other public or commercial groups which made public their position in the conflict. The above list may not be exhaustive, but gives an idea of how extensive local involvement was in the conflict. Although it was stated earlier that the Border Ranges Preservation Society contacted most local councils, both the Summerland Tourist Authority and Kyogle Community Development Association also tried to enlist support for the national park cause, and for the present policies of the Forestry Commission, respectively. From the list it will be noted that some bodies preferred to remain neutral without supporting one view or the other. In some cases an aligned view was erroneously attributed to them by newspaper reports. For example, in the case of Woodburn Shire Council the article in the newspapers was titled "No objection to forest becoming National Park", which implies support for a national park proposal. The council merely "received the letter without discussing it".

TABLE 8 Support for national park proposal and retention of state forest

Group	Support
1. Summerland Tourist & Development Authority National Parks and Wildlife Committee	Initial support for national park proposal decided to be neutral until Government enquiry (if held) made recommendation.
2. Murwillumbah Chamber of Commerce	Support for retaining State Forest.
3. Tweed-Byron Regional Tourist Association	Support for retaining State Forest.
4. Kyogle Chamber of Commerce	Support for retaining State Forest.
5. Kyogle Shire Council	Support for retaining State Forest.
6. Kyogle Community Development Association	Support for retaining State Forest.
7. Australian Timber Workers Union	Support for retaining State Forest.
8. Terania Shire Council	Support for national park proposal.
9. Grafton City Council	No decision taken at time of this case study.
10. Tweed Shire Council	Support for retaining State Forest.
11. Woodburn Shire Council	Support for national park proposal was reported. Neutral
12. Casino Municipal Council	Support for national park proposal was reported. Neutral
13. Lismore City Council	Support for retaining State Forest was reported.
14. Northern Rivers Regional Advisory Council	Support for retaining State Forest.

TABLE 8 (Contd.)

Group	Support
15. Richmond-Tweed Development Association	Support for retaining State Forest.

Again, "The Municipal Council (Casino) favours Wiangerie Forest becoming a National Park", was reported, but in fact a motion to oppose the forest becoming a park was defeated on the casting vote of the Mayor. No motion to support the national park proposal was introduced or voted upon.

4-3-7

Phase 7: May-June 1973

Most of the conflict involving councils and associations carried over into May and June, but other significant moves in the campaign during May tended to decrease the tempo of the conflict, and it is considered a stalemate situation existed thereafter.

The first significant move was the campaign mainly led by Kyogle Community Development Association, directed at organisations which initially supported the Preservation Society, asking that the matter be reconsidered after hearing from opponents of the national park proposal. The role of local government and other organisations was discussed in the previous section. The build-up of activity involving these groups began in April, but was most evident in this following period.

Another significant development in May was the move by the Forestry Commission at the local (District) level of explaining policy and attitude, and demonstrating management ability. Most effort was concentrated on putting forward the Commission's case without bias and without emotionalism. Of course, the natural biases of the Forestry Commission towards its multiple objectives could not be dismissed, nor could the bias in the case of

the preservation movement, hence a public relations effort by the Commission was justified.

A "Fact-finding day for decision-makers" was organised by the Forestry Commission. Representatives were invited mainly from local government bodies, tourist bodies, regional development committees, the media, the army, and politicians, state and federal. It is presumed that conservationist groups opposing the present management system imposed on the forest area were not invited for several reasons. Such groups already had a strongly antagonistic view, and had already presented their case and arguments in both the media and their own letters. If invited, the affair could have become a confrontation rather than a presentation of the conservation objectives and achievements of the Forestry Commission. The Forestry Commission was not concerned that the groups invited might make a decision one way or the other after the fact-finding tour, as long as the Commission's facts had been presented, and the opportunity existed for balancing the opposition arguments.

The "fact-finding" tour was held on 23rd May, 1973. It was reported in detail in the local newspapers (for example, the "Northern Star", 24.5.73). Reaction of the Border Ranges Preservation Society was almost predictable, for it condemned the tour with statements demonstrating the emotional rather than factual basis on which its call for national park dedication was founded. A full article contributed by the Secretary, J.G. Brown, appeared in the "Northern Star" (date unknown, but most likely within two weeks following the forest tour). For example, Brown says "It would also appear that no effort was made to justify the economics of this industry, (presumably,

rainforest logging rather than forestry generally) when it is one of the heaviest tax and ratepayer supported private undertakings in the State". If the Society could substantiate such a claim, it would indeed have at least one good argument for its cause. Similarly, if its other many claims made over a long period could be substantiated, its case for a national park would be very strong.

With the presentation of the Commission case for continuing multiple use forest management, the peak of the campaign seemed to pass, although in following months the campaign broadened in that comment and investigations were made by other than local interests. For example, periodical magazines of most large conservation organisations (such as the Australian Conservation Foundation, Ecology Action) commented, articles and letters appeared in capital city and national newspapers, as well as in popular nature magazines, and city-based groups such as the Total Environment Centre and the Australian Conservation Foundation commissioned reports.

At the same time, a number of non-conservationist organisations and individuals, took up positions in the conflict. The Lismore City Council adopted the report of their representative who attended the tour. The report supported the Kyogle Community Development Association and the Kyogle Chamber of Commerce in the stand against the Border Ranges Preservation Society. In Mid-June the Northern Rivers Regional Advisory Council decided to commend and support the job being done by the Forestry Commission. On the 27th June 1973, a report in the local newspapers

(the "Northern Star") said that after a tour of inspection, Mr. P. Hills, the leader of the Opposition in the N.S.W. Parliament, who earlier supported the campaign to stop logging and dedicate Wiangerie State Forest as national park, praised the Forestry Commission for the job it was doing.

In Summary

This case history was mainly derived from the files of the Forestry Commission of N.S.W. It does not pretend to present the whole case, for the conflict still continues. Reports have been quoted up until the end of June 1973, when the Forestry Commission files were last seen. Since that time there has been one further activity of note, reported in "The National Times", July 30 - August 4, 1973. The Federal Government's Inquiry into the National Estate has examined the issues in relation to Wiangerie State Forest.

The conflict over Wiangerie appears to be one based on State Forest with logging, versus National Park without logging. Aims of both parties to the conflict are the retention of rainforest, one by management which involves exploitation of trees, the other which does not. Otherwise, the benefits conferred by both management systems could be approximately the same.

In its case, the Border Ranges Preservation Society has relied on the emotional appeal of national park and the ideals embodied in the popular national park concept rather than present other real arguments in support of its proposal. The negative approach of attacking the present activities on the area in dispute has been adopted,

although these activities are constrained by a multiple use forest management policy.

There has been lack of communication between the main parties to the conflict, and a lack of understanding of forestry practice on the part of the Preservation Society. However, it will always be difficult for the Forestry Commission to explain in detail in a short time and in simple terms what a history of forest management has taught. Foresters have spent much time associated with forests learning their profession, and should not expect the public to gain, in a short time, their understanding of the forest, or the issues in the logging decision. Some greater effort needs to be made in explaining points raised by opponents to forestry activities. The editorial in the Casino "Richmond River Express" of 25th May 1973, expresses this very well. Under the title "Tell the World", it urges not only the Forestry Commission but all bodies which perform public duties, and perform them well, to tell the public about their jobs, and hopefully, avoid the type of conflict which had been seen in relation to the future of Wiangerie State Forest.

A surprisingly good summary of the conflict over Wiangerie is given in "The National Parks Journal", August 1973, except that most of the "facts" given come from the Preservation Society's publicity campaign. The report covers a little over three pages in the journal, and only in the final paragraph is an opinion expressed on the reporter's position (The Far North Coast Branch of the National Parks Association) in the conflict.

Objections to rainforest logging, one of the issues in the conflict, were apparently based on one paper by

Baur (1957). In its search of literature, the Border Ranges Preservation Society either failed to find, or ignored later writings by Baur (1962a, 1962b, 1964, 1968, 1972) demonstrating that the present logging practices have been based on continuing research. The Forestry Commission may not have publicised or even made the Preservation Society aware of the basis for its rain-forest policy.

It is commendable that the conflict was public, and widely publicised. However, the tendency is nowadays for all environmental conflicts to become public. Most will never be resolved to the satisfaction of all parties for on both sides of an argument there are extreme views which can never be reconciled. Where participants are willing to accept a balance between the extremes of preservation and utilisation, compromise, which it is felt is true conservation, can be reached. No compromise was made in the Wiangerie case, for the Border Ranges Preservation Society, its followers and proponents obviously adhere to a preservationist concept. The attitude of multiple use management by the Forestry Commission appears to balance some utilisation with some pure preservation. Lack of appreciation and understanding of the policy by opponents, and lack of publicity about such a policy may be a reflection on the Forestry Commission. More time and effort needs to be put into public relations and publicity, and it is believed this is now being done.

CHAPTER 5

Options for Forest Management

5-1 Introduction

Whatever the reaction of the individual forester, the forestry profession, and forest services are to the conservation movement, it must be conceded that the movement is now well-established in New South Wales and throughout Australia and will continue to apply strong pressures to achieve its objectives. It is necessary, therefore, that foresters and forest services examine what options are open to them under this new situation, in their management of the public forest resources.

5-2 Forest Management and Conservation Movement

In New South Wales, the management options available must be examined within the legal constraints of the Forestry Acts 1916-1972. Before the 1972 amendments to the Acts, the Forestry Commission had powers to control personnel, and to control and manage state forests, timber reserves, flora reserves and catchment reserves, all subject to control and direction by the responsible Minister. It also had the powers to sell timber and other products from most of the above lands plus various other crown land titles, to purchase grow and sell horses, cattle and sheep, to purchase land, to silviculturally manage water supply catchments, to plant trees for any other government department or authority, and to resume land for public purposes. The conclusion

to be drawn is that until 1972, the management of forests in New South Wales was necessarily and strongly orientated to the commercial use of timber and land. Despite this strong orientation, other activities were indulged in which should have strong appeal to the conservation movement in general. An idea of the types of activities can be gained from examining pre-1972 Annual Reports of the Forestry Commission.

The amended Forestry Act of 1972 established the role of the Forestry Commission in managing forests both for timber and non-commercial purposes. Under this Act the objectives of the Forestry Commission are clearly determined and stated:-

- (a) to conserve and utilise the timber on Crown-timber lands to the best advantage of the State;
- (b) to provide adequate supplies of timber from Crown-timber lands for building, commercial, industrial, agricultural, mining and domestic purposes;
- (c) to preserve and improve, in accordance with good forestry practice, the soil resources and water catchment capabilities of Crown-timber lands;
- (d) to encourage the use of timber derived from trees grown in the State; and
- (e) consistent with the use of State forests for the purposes of forestry and of flora reserves for the preservation of the native flora thereon -
 - i) to promote and encourage their use as a recreation; and
 - ii) to conserve birds and animals thereon.

The Amended Act also requires the Commission, in attaining its objectives, to ensure the preservation and enhancement of the quality of the environment through all practicable steps.

Therefore, the latest Act gives the Forestry Commission a broad, diverse set of objectives, and provides the powers to meet these objectives. In doing so, it has not given priority to any single objective, nor directed that equal emphasis be given to each and every objective. Thus, in evaluating how it should respond to the conservation movement and pressure, the Commission now has many management options available to it.

In determining its forest policy a Forest Service must first resolve whether it in fact should have a primary or major goal, such as optimum timber production given constraints such as sustained yield, maximum profit, minimum environmental impact, and countless others. Such a decision should be taken with due account given the needs of society, and the activity of other organisations, both government and private, providing some at least of the same objectives. For example, where a National Park and Wildlife Service provides recreation outlets and preserves wildlife of all kinds, it may be the function of the Forest Service to make provision for the more material goods required from lands of a similar type to those occupied by the National Park and Wildlife Service. In New South Wales alone, the National Park and Wildlife Service now controls about 1.6188 million hectares (4 million acres) of land, and has the highest acquisition rate of any government department. Other forms of conservation are also taken care of by State government organisations such as the Soil Conservation Service, the Water Conservation and Irrigation Commission, and the department for Environment and Pollution Control. All these bodies have specific responsibilities

for managing and conserving natural resources. In determining its attitude to resource conservation, the problem society must face is not whether conservation per se is desirable, but how much of each kind it should have, and its priorities in achieving its objectives. Some enlightened conservationists, such as the Duke of Edinburgh who is the President of the Australian Conservation Foundation, Angus Martin (Martin, 1971) a Melbourne Zoologist, and L.J. Webb (Webb, 1973) a rainforest ecologist, have recognised that environmental changes, especially damaging environmental changes, are unavoidable, and that unavoidable change might be restricted and localised in areas planned in advance for such change.

It is sheer pressure of number of people, and the associated scale of industry and technology, food production and aesthetic satisfactions, needed to sustain the ever-increasing population, that makes damage or change unavoidable. One or two partial solutions to the problem are immediately apparent. For example, population control is desirable. If this cannot be achieved within a very short time, the natural resource availability per capita is likely to decline, while the rate at which total resources are used will accelerate. Another partial solution is short-term only, for it ignores population as a basic consideration. It is the highly planned use of resources, developed on the premise that continuing resource use and that environmental disturbances are unavoidable. It would accept for example, that pollution in its various forms will continue, but would deliberately nominate which river to pollute, the level of air pollution which can be accepted, the location of quarries and mines to make them as environmentally

acceptable as possible, and so on.

In terms of the foregoing philosophy, it is pertinent to ask whether in fact, adequate provision has not already been made for conservation of natural vegetation resources in New South Wales. As long ago as 1970, McMichael (1970) was able to state that examples of virtually all Australian environments were represented in national parks. Since 1968 there has no doubt been a considerable increase in land dedicated as national park in response to growing conservation awareness. Under these circumstances, it can be argued that there is adequate forest area already available to provide non-timber needs, and that the New South Wales Forestry Commission should not yield to conservation pressure, but strongly orient all economically located areas available to it to provide the timber products demanded by society, at the lowest possible cost. This attitude would be more acceptable if the Forestry Commission could incorporate in planning requirements for minimum damage, and the location of unavoidable damage to specific areas. Such arguments, however, are unlikely to reduce conservation pressures. Society has not determined the proportion of the total forest resource (at any level - local, state, federal, world) it wants to "conserve, or, more precisely, "preserve" from commercial timber production, especially many economically valuable forest areas which are close to major centres of population, where environmental and conservation pressures are greatest. Alternatively, it can be argued that the Commission should partially yield to conservation pressures to the extent that it continues to manage its economically valuable

forests for timber production, but with constraints imposed by realistic multiple use planning.

Multiple use management would undoubtedly be conceptually acceptable to all parties, but if the standard of planning and of management are to be high, it will involve a social cost if the price of wood to the timber consumer is not to be unrealistically increased. Since society is the consumer of both timber products and conservation products, it must somehow decide where the balance lies, and how much each usage subsidises the cost of foregoing the other. The decision should not be taken on forestry in isolation, but in conjunction with the whole range of social welfare decisions that have to be made. Social welfare decisions are not made entirely consciously, but good planning can aid in making the unconscious decisions. It is pressure rather than planning that the conservation movement seems to be forcing on governments, private businesses, and individuals at the present.

There has been no total, long term social planning at either the state or even national level. The total amount of money available to governments to enhance quality of life is limited, and priorities in using this money have not been determined. In the absence of priorities there has been no government planning in New South Wales of the way "social" funds should be allocated. For example, the National Parks and Wildlife Service in New South Wales draws on social funds to cater for specified needs of the people. The Forestry Commission partly through social funds, is required through the

objectives of its enabling Act to cater for an overlapping set of needs. The respective roles of each organisation in providing for these needs and the way available "social" funds should be disbursed to enable them to do so, has not been determined.

Not only is there no priority for the use of social funds, there is no determination of how much land should be devoted to the many aspects and concepts of conservation. This question of "how much land for each use" has been posed more than once in these writings.

The International Union for the Conservation of Nature and Natural Resources (I.U.C.N.) has quite arbitrarily decided that 5% of land in any country should be set aside for national parks (I.U.C.N., 1964). Of this 5%, only 5% should cater for the recreational needs of society, the remaining 95% being for scientific purposes. It is therefore apparent the Union (I.U.C.N.) is a professional scientific conservationist pressure group. If such a policy were adopted in New South Wales, the recreational social needs of people would have to be catered for by other than a National Parks Service, for society and non-scientifically-trained conservationists may not agree with such a small proportion of their national parks being available for recreational and aesthetic appreciation. Never-the-less, such a statement of objectives should be made in New South Wales after thorough interdisciplinary and interdepartmental inquiry and planning, to help evaluate the management options available to all government departments involved in conservation of natural resources.

5-3 Management Options

In the absence of an inter-departmental determination of social welfare aims, allocation of social welfare roles, and of land for the many conservation purposes, the present conservation pressures have to be catered for by each individual government organisation, as the pressures occur. A management option fixed over time would be unjustified, for it would not be possible to change without new pressures being applied. Under these circumstances, it is proposed to examine the main options available to the Forestry Commission of New South Wales in balancing economic timber production and resource and environmental conservation.

In resolving conflicts, three broad approaches are possible (Boulding, 1962):

- i) avoidance
- ii) conquest
- iii) procedural.

Under procedural methods there are further ways to resolution

- a) reconciliation
- b) compromise
- c) award (legal award; or an alternative form is by violence - hardly applicable in these circumstances).

More complete discussion of conflict was carried out in Chapter 3 (section 3-3-1, page 47). The proposed management options were derived with the above scheme of resolution in mind.

5-3-1 Management Option: Ignore Conservation Pressures

An elementary option available to the Forestry Commission is to ignore the pressures of the conservation movement. To some, this would be a quite reasonable attitude to adopt. For example, Richardson (1972) sees production forestry providing necessary timber for the relatively underprivileged urban dwellers, and suggests the more affluent have a wider range of substitute materials available to them. This is a logical attitude considering the numbers and the proportion of relatively low income earners in our urban areas. In this view, undue emphasis on conservation of forest resources would be an option society cannot afford, unless it is prepared to deprive large sectors of its constituents of essential products, such as building materials and paper.

There are several arguments for, and against ignoring conservation pressures. Arguments for ignoring these pressures include the following:

i) In New South Wales, the demand for timber-based products is so strong, and projected deficiencies so great, that any constraints on timber production imposed by the conservation movement, either through limiting of softwood production or logging of the various kinds of native forests, could have serious economic consequences for the state and nation. The New South Wales position can be judged in relation to the other states by simply perusing the figures given in the regularly-produced "Timber Supply Review" (Forestry & Timber Bureau).

ii) To many people and organisations directly

involved in resource use decision making, the conservation movement provides few worthwhile or feasible solutions, or alternatives to the present forms of management. This is a reason for continuing conflict, for the conservation movement more often says "don't do that" rather than "why not do this instead?". Criticisms, also, are invariably destructive rather than constructive. On the other hand, some destructive criticism may be worthwhile, for it may provoke resource managers to improve standards of planning and management.

iii) Although the number of professionals with conservation-based training employed full-time by the conservation movement is increasing, the conservationist activity of most individuals could still be described as a "hobby". Most conservationists devote their spare time, their leisure time to the movement, or more particularly to that aspect of conservation which is their own particular interest. But the question arises as to whether the forest manager should spend valuable working hours in answering their essentially after-working hours, "hobbyist" critics.

Despite the foregoing viewpoints, it is probably inappropriate for governments and government agencies to ignore the pressures of the conservation movement. The case against ignoring the movement includes the following points:

i) Undoubtedly the movement has been able to achieve a great deal despite its acknowledged minority interests. This has been due in part to the role of individuals in established professions, particularly those with affinities with resource conservation. Professionals tend to be

credible people in the eyes of society, and their views respected, despite the fact that they may be concerning themselves with issues far removed from their professional expertise. Their achievements have frequently been enhanced by the tactics of aligning public opinion to their particular view-point by highlighting only those facts favourable to their cause, and at the same time highlighting any unfavourable aspects of resource use proposals they oppose, -reasonable tactics for anyone in a conflict situation to employ. Again, since parliament is the body ultimately responsible for the directions society takes, politicians are frequently responsive to lobbying pressures. Where a few hundred votes are usually critical in a marginal electorate, the politician must often concede to minority pressures to help him retain that electorate.

ii) Where the pressures of a conservation movement are ignored, the lack of opposition to this pressure could result in progressively increased public support for the movement, and acceptance of possibly biased or radical objectives. Ultimately, the legal position of, for example, a Forest Service could be undermined, and its powers and objectives so changed that it no longer practices its original role. To ignore conservation pressure is to strengthen the case of the conservation movement, and to weaken the credibility of those engaged in resource-use decision making.

iii) There is another danger in ignoring an active conservation movement. An organisation engaged in a particular type of natural resource management such as a Forest Service may not have equal expertise in all aspects

of the natural environment. Often, outside expertise is relied upon to provide information on how management practices affect other factors, such as wildlife, in the case of Forest Services. This type of information may be provided by the conservation movement in its arguments for change. If this type of outside knowledge were to be ignored, resource managers would find that conservation conflicts would increase in size and importance, management freedom would be curtailed or even withdrawn.

5-3-2 Management Option: Concede to the Conservation Movement

Ignoring conservation pressures, and conceding to conservation pressures are at opposite ends of the management option spectrum. Richardson (1972) sees conceding as accepting "apartheid" in forestry - catering for a superior minority while excluding the majority from experiencing the potential benefits of resource use. If the conservation viewpoint on all issues is accepted there is the danger that ultimately the essential needs of society might not be met, and standards of living would decline, all to favour the immediate demands of a privileged minority. Any immediate benefits to society gained from responding to all conservation pressures might be far outweighed by the difficulties experienced and costs to succeeding generations.

A concessional or conciliatory attitude on the part of forest authorities is acceptable only if these authorities can project the consequences of such an attitude to the whole of society, with some consensus that society as a whole is willing to accept those con-

sequences. For example, an important factor in the case of Wiangerie State Forest (Chapter 4) was the employment issue which the conservation movement tended to dismiss as virtually irrelevant. The importance of employment, to politicians, at least, who supposedly have the interests of society at heart, was demonstrated by the actions of the then Leader of the Opposition in the N.S.W. Parliament (Mr. P. Hills) in the Byron by-election. Mr. Hills' initial reaction when apparently approached by the conservation movement, was to forward a telegram, made public, to the government urging the cessation of logging. However, when the effects of this action on a sizeable labouring population - potential supporters of the Opposition, were fully appreciated, Mr. Hills' attitude changed. On the other hand conservationists were adamant that unemployment created in this case was an insignificant factor in the conflict, claiming that the unemployment level was already high in the district. This argument suggests an inability of conservationists to conceive of how an economy works, how wages paid to a given number of people support other people in business and other forms of employment, and how again in turn these ^{people} support another round of people, and so on.

This demonstrates a need for the education of the public to understand how their society and its economy functions so that the effects of actions taken for the "good" of society by both sides to a conflict, can be gauged. For example, a particular resource use decision such as withdrawing Wiangerie State Forest from timber production may have little, if any, direct impact on those making the

decision, or those wishing to change a decision already made. However in fact, the ramifications of the decision through society may be very considerable indeed. In simple terms, if timber production from Wiangerie State Forest ceased then:

- i) direct and indirect employment would be affected
- ii) the use of derived products would be denied, thus lowering the standard of living for some
- iii) substitution of other products whose production processes may be even more environmentally damaging may be forced on society, and
- iv) increased spending on imported products would mean, apart from economic implications, that environmental problems may be someone else's concern.

In a concessional situation, the onus is really on both sides to evaluate the costs and benefits to the many levels of society. These include the costs and benefits that can have an actual price tag determined by the market, all intangible and indirect costs and benefits that cannot be priced by the traditional means of a market, and the costs and benefits at each of the levels: personal, local, regional, state and national. In some instances, the international level must also be considered.

If the conservation movement were to realistically evaluate the consequences of the actions it wants to impose on society and have to accept the consequences of any actions so imposed, it would probably be far more concessional and responsible in its approach.

5-3-3 Management Option: Compromise

Both the previous options were extremes which makes the selection of a middle ground option easy. The half-way option between ignoring and conceding is compromising - where parties to a conflict each yield and each gain. Just as was found in categorising concepts of "conservation" (Chapter 3), there are a number of positions on the scale among these three readily identified positions.

Some compromise approach to the conflict situation between resource use managers and the conservation movement is undoubtedly the most appropriate of the three broad options under consideration. Compromise fits into Boulding's categorisation of possible approaches as the third method of resolving conflict, that is, procedural resolution of conflict. (See Chapter 3 for more detail). (Boulding, 1962).

The "middle" conservation concept (Chapter 3) would be one in which some compromise in resolution of a resource use and resource conservation conflict would be accepted. The "middle-ground" conservationist and the "middle ground" resource user would most readily find a compromise, and in accepting the need for compromise would appreciate that society's needs will be met only where both resource use and resource conservation are given strong emphasis in management planning. However, conflict cannot be completely resolved because neither the conservationist nor the resource manager would attain their optimum objectives in resource use. Boulding (1962) and other sociologists argue that without conflict, society "exists" rather than lives, that life would be quite mundane.

Despite comments made about conservationists, it must be admitted that even extreme conservationists would consider some resource use inevitable. This being so is another indication that compromise is just as feasible an option as conceding or ignoring. Conservationists and managers of natural resources could well take notice of guidelines suggested by the well known Australian ecologist and conservationist, L.J. Webb, who readily recognises that resource use is inevitable (Webb, 1973). Webb has produced a list of principles for management of natural resources. In brief summary, these principles are as follows:

- i) Take a total view.
- ii) Maintain and cultivate diversity.
- iii) Do not destroy irreplaceables.
- iv) Accept change (in natural ecosystems).
- v) Remember time.
- vi) Aim for the steady state.
- vii) Identify vulnerable features.
- viii) Take out nothing but the income (sustain yield).

In managing renewable resources, these are obvious broad principles to follow, and have in fact been applied in the management of many forests in recent years. They certainly apply to many relatively conservatively managed sawlog production forests, such as Wiangerie State Forest despite opinions otherwise by the Border Ranges Preservation Society. Many of Webb's principles or objectives can even be recognised in management approaches where forest is converted to softwood plantations, or cleared in woodchip programmes. If further compromise in forest management is needed to reduce conservation and

resource use conflicts, these principles of Webb's could be accepted as a basic set of working principles to be taken into account and incorporated in policy and planning.

There are broadly three options open to the state forest manager under a compromise situation. Each one demands more intensive appraisal by management both before and during operation.

i) A standard multiple use policy can be routinely applied to all state owned forest areas.

ii) A standard multiple use policy can be applied, but in this case the Forest Service responds to pressures where they arise by preparing a brief statement for circulation to interested persons outlining and justifying proposals; some but limited provision can be made for local participation in the planning, where there is pressure for it.

iii) A fully documented management plan is prepared, justifying the use of the forest resource and all management practices proposed; the plan considers and resolves as far as possible all factors in the decision-making process, and public participation in this process is sought and encouraged.

Each of these options is now examined in more detail.

(a) A "standard" multiple use policy

Under this option there could be three requirements

i) Preparation and publication of a forest policy and management principles for state owned forest lands. The policy would require the manager to consider all factors bearing on multiple use of the forest (ecological, political, legal, economic, and social) in terms of the

Forestry Act of 1972. The policy might further require the manager to determine priorities and the emphasis placed on each of the various possible uses of the forest (timber production, recreation, wildlife conservation, grazing, water).

ii) In addition to the broad forest policy statements, more specific policy statements might be prepared for the main types of programme, for example, the softwood plantation programme, major wood-chip operations, rain-forest management and Eucalypt sawlog-pulpwood forests.

iii) Taking it a stage further, for individual forests, preparation of management plans would be required, in which provisions being made for timber production, preservation of habitats, recreation, maintenance of water quality, and so on, are documented but not necessarily explained or justified. The Forest Service would not be required to publicly explain and justify management proposals for specific forests. It would be assumed the Forest Service had the technical expertise and competence to do the job adequately. It would be assumed that the state-wide and major-forest-type policies and individual-forest plans do in fact balance total social requirements as assessed by the forestry profession embodying a number of professionals from disciplines other than forestry.

Forest management in New South Wales is at present not too far removed from that outlined for this option. Exceptions can be noted. There is at present no publicly available statement of broad state-wide applied forest policy other than the Forestry Act. On the other hand, a public relations section in the Forestry Commission has been established recently and this will make such publicity

material available. The issuing of statements about situations where conservation pressure is being applied, is carried out at present. However more detail may have to be given to satisfy completely, critics of specific forest policies. Forestry Commission statements (1973a, 1972b, 1972c) for public distribution on Wiangerie Rainforest logging, and the Eden woodchips scheme are pertinent examples of the more specific policy statements suggested for the major forests programmes. These do not present any detailed documentation, but simply answer questions raised over time by conservationists. They provide some rationale for and explanation of management proposals, but these frequently are not detailed enough to satisfy or convince conservationists that the Forest Service has thoroughly justified the inclusion of timber production amongst multiple use objectives.

The Routley duo have produced extensive documentation of their case against particular Forest Service policies, such as the softwood plantation project and the wood-chips project (Routley & Routley 1972a, 1972b, 1973a, 1973b). Perhaps the Forest Service might also have to spend considerable time and effort to provide a much more detailed documentation and justification of their case for the use of the particular resources. Statements such as those for Wiangerie and Eden may help to counter conservation pressure only when backed up by a substantially researched policy and plan for the State's total forest resources.

(b) Higher planning standards and public participation in the decision making process

In the second management option within the compromise category, standards of planning are higher than those under the foregoing option. Public participation is welcomed and a more concerted effort is made to periodically review the basis of forestry policies and programmes, and if necessary adjust them. For example, policies in forestry are based in part on long term estimates of supply and demand. If policies are to remain valid, these estimates must be reviewed at regular intervals. Society's appreciation of factors influencing future demand change, as does the sophistication of econometric techniques for forecasting demand. For example, the expanded pine planting programme (Softwood Agreement Acts, 1967, 1972) was based on forecasts of timber supply and demand made in the late 1950's and early 1960's. Largely because the bases of these forecasts (population estimates, trends in use) could be challenged, the softwood programme has come under strong attack particularly by Routley and Routley (1972b). Updated forecasts presented at the 1974 FORWOOD (Forestry and Wood-based Industries) conference permit a re-evaluation of the softwood programme, and contribute to the development of "compromise" between conservationists and resource managers and utilisers.

Furthermore, under this second planning option, detailed planning for the major forestry programmes is envisaged. This planning should justify the proposals in a balanced, multiple use way, particularly timber production.

Through the use of such economic aids as input-output

analyses (Neutze, 1972a, 1972b,; Miernyk, 1965), derived linkage and multiplier effects (Reilly, 1972), cost - benefit analysis (Mishan, 1971), and the use of environmental impact statements, a more soundly based though still subjective judgment of the best policy can be made. An advantage of these aids is that most if not all the effects of a management policy can be listed. The most appropriate course of action is based on direct and indirect values that can be measured by the economic techniques. Actual values can also be derived for intangibles (Ferguson, 1973), but mere listing and public discussion of the intangible costs and benefits may allow application of subjective (non-money) values, and hence permit a judgment to be made. Despite these economic and other aids to decision making, the final decision must still be largely subjective - value judgments must be made by forest managers, who have achieved society's confidence through communication with the public.

Under this option, public participation in making the subjective decisions could be directly sought. Because of its technical expertise, the responsibility would remain with the Forest Service to present a number of alternate plans on which discussion can take place and a judgment be made. Public contribution would be mainly in the "intangibles" field, assessing the environmental attributes of the alternate proposals. When a level of provision of non-timber services has been determined by public involvement, the ultimate plan would be prepared by the professional body in a way that is responsive to the expressions of public attitudes.

Florence (1973) suggests planning for natural, Eucalypt, forests to follow similar lines - that weight be given to the non-timber values through detailed analysis of the (forest) resource, through an appreciation of the biological basis of management, and through environmental impact analysis. Communication with the public, rather than participation, is suggested when planning major new schemes of forest use. It is agreed that improved standards of management planning would not resolve all issues or prevent conflicts. But at least conflicts would be minimised, and hopefully restricted to the most "conservative" of conservationists - those adopting concepts based on preservation, described earlier in Chapter 3. Value rather than objective judgments cannot be avoided by Forest Services and decisions so made will reflect the basic philosophy of the Forest Service. Such an option as this one of higher standards of planning and public involvement, will take debates on forest policy outside the forestry profession where they have tended to be carried out in the past. This type of involvement should be encouraged to reduce conflicts and lack of awareness of the public, as was demonstrated by the Wiangerie State Forest conflict (Chapter 4).

(c) Management option showing professional leadership

A third management option consistent with "compromise" and development of a balanced conservation concept would require the Forest Service to actively pursue a modern management policy and in fact to remain "one step ahead" of the conservation movement in its attitude to land use planning and resource use. Again, this could be achieved in a number of ways.

(i) The Forest Service could seek integration of other environmental sciences with forestry. Two methods could be used for integrating sciences. Forestry professionals already basically trained in forestry could specialise in such related fields as landscape architecture and planning, sociology, wildlife research, welfare economics, and many others, to broaden the Forest Service base for making environmental decisions. A second method would be the employment among forestry professionals of other environmentally, sociologically, economically, trained professionals.

(ii) With an expanded range of expertise and skills available within its organisation, the Forest Service could actively engage in public education, including broadening the appreciation of the forests' non-timber values.

(iii) The Forest Service could challenge both the politicians who ultimately control forest policy and endorse forestry decisions, and society at large, to provide the skilled employees and much increased funds that would be needed to achieve the levels of planning and multiple use management needed to satisfy both the conservationists and those more concerned with meeting timber production goals.

A greater range of skills combined with positively directed pressures on both the public and politicians should enable the forestry profession to vastly upgrade its environmental management standards based on multi-discipline planning. Such an approach to forest management would undoubtedly increase costs for providing services, if timber users or any other single purpose

users are not to be unfairly penalised.

The first target of the recently intensified concern for environmental values was pollution of man's environment, mainly air and water. To offer improvement in quality of these factors of the environment, society has already come to realise and accept increases in costs for products manufactured by polluting industries. Decrease in water or air pollution means increased expenditure during the manufacturing process. In the same way society must absorb increased costs of forest management when conservationists force change and demand less environmental damages to the forest environment. Society can have from its state-owned forests: timber, water, wildlife, recreation, in fact all its requirements for environmental quality. But it cannot have it by simply increasing the price of timber alone, to the consumer. Similarly timber production should never be regarded as a charge against maintaining other values. A balance is essential, and society will have to bear the cost of producing timber and other values in well-managed, multiple use state forest land.

5-4 The Management Decision

The decision as to which management option it should work under is not necessarily the role of a forest service, nor is it the purpose of this essay to suggest which is most appropriate. At the present time, under the operative Acts, any of the options suggested would be acceptable to the New South Wales Forestry Commission. The objectives of multiple use management can be attained within the broad

limits imposed by the Forestry Act.

The Forestry Commission could take one of three directions in searching for a type of management that would suit society's needs. Firstly, it could present to the State government, for decision, what it judges to be the most appropriate option or options. Secondly, the Commission could inform the public in general (not only conservationists) of the alternative management options available, and allow the public, through pressure on politicians and thus the State government, to decide the option or options to follow. Thirdly, both the government and public could be informed of the alternatives available.

There is actually a further alternative available. That is, the Forestry Commission could itself decide, within the confines of the legislation, which management option would be suitable within current political, social and economical environments. The conservation movement can be regarded as an integral part of this environment, and as long as the Forest Service reacts in a responsible way to each and all the pressures upon it, it may retain the right to make the detailed rather than broad management decisions. As long as the Forest Service continues to make its value judgments in accord with the general wishes of society, there should be no pressure for firmer control of forest management decisions by government and society, except perhaps from the more extreme segment of the conservation movement.

However, the political decision making role should not be pre-empted, by the Forest Service, for example, by determining the level of social-type expenditure involved

in forest management. The New South Wales Forestry Commission could closely examine its own role, prepare and present what would be a major paper, for government and public consideration, on the problems associated with multi-purpose objectives. It could outline what it judges as suitable options, and the costs and benefits associated with these options, from a single emphasis on timber production to the various levels of preservation demanded by the conservation movement. Such a case could be detailed enough to state for example, that the "higher standard management planning" option would be imposed on operations such as the softwood plantation programme and the woodchip project. Other operations such as logging the Wiangerie State Forest rainforest could be included within the "standard multiple use planning" option.

CHAPTER 6

Conclusion

Conservation has been discussed and practised in New South Wales for much of the history of development in the state. The modern conservation movement (not including the exploitive-type conservation bodies formed by government and industry) is more a phenomenon of recent times, proliferating in the last decade or so. Its objectives appear to be more "preservationist" than "conservationist" depending to a large extent on where one's own philosophy lies. In association with the social change of recent years the conservation movement has become publicly fashionable, and, at the same time more radical and politically active. However, there are now some signs, that over-reaction to issues by the movement has disenchanted some of its earlier followers, though its power to influence politicians still remains.

The state-owned forests have been managed in some ways for about one hundred years. Management expertise has been progressively improving but its potential to accommodate the conservation pressures of recent years has been rather limited. Forest management authorities have not reacted quickly enough or taken adequate note of conservation pressures and their consequences.

Individual interpretation of the term conservation varies with a number of factors - the age of the individual and his education, experience, profession, income, and social background. Conservation on the surface appears to be largely a leisure time "hobby" of the more affluent, the academic, and other higher-qualified professionals,

The most popular interpretation of the conservation concept, appears to be "preservation", where preservation means protection from commercial exploitation. This concept seems to be closely associated with the national park concept, for whenever conflicts occur over natural resource utilisation, the conservation movement pressure is for national park dedication.

In the case of conflict over the use of Wiangerie State Forest in northern New South Wales, the conservation movement largely based its case for national park dedication on negative arguments. It attacked the silviculturally-based management being carried out by the Forestry Commission of New South Wales rather than present positive, subjective and objective, arguments for its national park proposals. The conflict involved more than just a conservationist group and the Forestry Commission. Local government, tourist associations, employee groups and political parties became involved. Arguments were at times described as "hysterical", but mostly "emotional", with the conservation group using the typical tools of the aggressor, including misquotation, quotation out of context, refusal to accept evidence presented during conflict. Alternatively, the Forestry Commission relied on a standard answer to the conservation movement case, and tended to remain remote from the emotional arguments. In no way did the Commission try to discredit the conservation movement. There are many lessons to be learnt from such a conflict. For example all the questions asked by a conservation organisation should be publicly answered, and false statements made by that

organisation should be corrected by the Forest Service. Moreover the Forest Service must inform the public of its aims and management policies and seek at all times to reduce that component of conflict arising through ignorance of these aims and policies.

There are a number of management options available to a Forest Service subject to conservation movement pressures, but a compromise option appears the most suitable in most situations. Conservationists generally adhere to a preservationist attitude of conservation, while Forest Services have traditionally, by virtue of historical development, followed a utilisation line. The multiple use objectives outlined and established by appropriate legislation are commensurate with a "balanced" concept of conservation. Multiple use is therefore a worthy compromise between the extremes of utilisation and conservation.

In any resource use situation where conflict develops, the resource users, conservationists, governments and society in general, must all be prepared to compromise, as far as these narrow concepts are concerned. The situation must be examined in the context of the way it affects society at all levels, from the personal level to total world population level. If this is done, society will come to realise that conservation of resources is not the real problem; rather the level of human population is the main constraint on resource conservation. This ultimate problem of world human population - its size, its rate of increase, and its distribution in relation

to resources necessary to maintain life at reasonable standard - is the problem which must be solved before permanent solutions to natural resource problems can be found.

APPENDIX 1Review and Comment on Background Papers

Two background papers were prepared by the opponents of logging of Wiangerie State Forest, and these are now reviewed. Border Ranges Preservation Society's paper is entitled "Tweed Range and Levers Plateau for National Park". It is presented in a blue-grey cardboard cover, and consists of two map reprints and five quarto sized pages of typewritten notes. Copies may have been lodged with the Mitchell Library in N.S.W. otherwise, it would be available from the Society Secretary whose address is given:-

J.G. Brown,
3 Morrison Avenue,
MULLUMBIMBY. NSW. 2482.

The Forestry Commission's paper is entitled "Rainforest Logging on Wiangerie State Forest Background Notes". It consists of five foolscap pages of roneoed notes dated April, 1973, copies would be available from:-

The Forestry Commission of N.S.W.,
93-95 Clarence Street,
SYDNEY. NSW. 2000.

Review of Border Ranges Preservation Society
Background Paper

The first two pages of the pamphlet are location maps at different scales, the larger one being 1:150,000, the smaller one being a district tourist map. The first heading within the article is entitled "Current Project", which briefly describes the present aim of the Society as "Preservation of RAINFOREST and ALLIED FLORAS on the

the Tweed Range, New South Wales now the subject of large scale logging operations and despoilation". The ideal of preservation cannot be criticised, especially when the organisation presenting this ideal is a Preservation Society. However the object of that ideal may be in dispute, for the ultimate argument in this case is one of land use - how much land to allocate to "preservation" and how much to allocate to other ideals of "conservation", as well as to other, non-conservation, uses. What can be criticised are the inferences made in the underlining of the final part of the project. "Now" infers that the "Large scale logging operations" have just begun. "Large scale" is nowhere qualified in the rest of the article, and the "despoilation" has to be judged personally to determine whether or not it is offensive to the individual. The area may be "despoiled" in the eyes of the Preservation Society, but is it to the eyes of all conservationists? Obviously not, for even some members of the Society have admitted that the job done in logging achieves its objectives but is not commensurate with the ideal of a national park.

The next heading is "IMPENDING PROJECTS" and the three included are the "Preservation of SIMILAR REMNANT FLORAS" on the adjacent area of Lever's Plateau, investigation of other areas suitable for preservation, and the encouragement of reafforestation of areas within the region. Again, these objectives are reasonable, but probably unrealistic if a total, or holistic view is taken.

Subsequently, each of the ideals presented is elaborated on. Two pages describe the proposal for a national park encompassing the Wiangerie State Forest. Firstly, local geography is briefly described. The

The negative arguments are then introduced decrying what the Forestry Commission is doing with the area. The Society criticises and opposes, almost everything that is being done, but offers no evidence to back up its statements. Finally, some positive reasons are given for the national park proposal, and rightly, these are mainly based on aesthetic appeal. However, it is the author's opinion it is unjustified to preserve a further large area, when already one exists as Lamington National Park, containing all the features that Wiangerie has. It is suggested that preservationists are catered for already by the existence of Lamington National Park, and if other sections of the public with other ideals can enjoy Wiangerie, despite the multiple use activities of the Forestry Commission, there is no need for further reservation to cater for the minority interests of preservationists.

Review of Forestry Commission Background Notes

In answer to the case conducted by the Border Range Preservation Society, and to the public involvement in the conflict, the Forestry Commission of N.S.W. produced a roneoed set of notes to explain Commission activity and policy in relation to rainforest and its utilisation at Wiangerie State Forest. It was based on a reply given to the Border Ranges Preservation Society early in the campaign in answer to the direct submission of its case in January 1973.

The notes, state their aim as explaining "the attitude and policy of the Forestry Commission on the various issues that have been raised." Firstly, the responsibilities of the Commission are detailed. As

mentioned elsewhere in this paper, the responsibilities are determined by the Forestry Act, which gives the objectives that endorse a policy of multiple use. The notes go on to describe the basis for timber production, and how it is consistent with a concept of conservation (rather than preservation). It explains also that the Commission is and has been active in the preservation sphere despite the emphasis the Forestry Act gives to timber production and other values.

Secondly, the geography and vegetation of the forest area are described, the description being similar to that given by the Preservation Society, although the actual areas given of the State Forest differ.

Next, a brief history of about one full page is given of the State Forest. Logging operations are described, and evidence presented that they are not "recently started" as implied by the Preservation Society. It is also shown the logging is not on a larger scale than previously. The reasons for the particular approach of selective logging are given. These include existing commitment to industry, retaining the rainforest in a viable condition despite logging, and the restoration of the forest within a few years.

The preservation programme on Wiangerie State Forest is next outlined. Normal Commission activities are to be excluded from specific areas enabling their preservation in perpetuity. It appears that something more than 11% of the total forest area will be preserved, and most likely the percentage of the total rainforest is much higher - a not insignificant contribution to preservation.

General policy towards rainforest logging is next detailed, explaining the basic alternatives open to the Commission in managing rainforests wherever they occur in the State.

Finally, a few paragraphs at the end of the notes attempt to put "Wiangerie State Forest into Perspective", by stating the justification for continuing to meet the management objectives already set for the area, despite the proposal to change direction and dedicate the forest as national park. The notes answer in a broad sense the statements and criticisms of policy made by the Border Ranges Preservation Society. They have not fully justified Commission activity, for the activities in themselves were not so much in question as was the use of the forest area. But in briefly explaining attitude and policy the notes have achieved what was intended of them.

Apart from the background notes, the Commission did not at any stage enter debate on the conflict. Rather, at every opportunity public and private, it explained its position leaving judgment of its performance to others. Private letters to the Commission, however, were individually answered, explaining specific questions raised by criticism. Public debate was avoided possibly because of the tendency for such a debate to be never-ending, and because of misunderstanding and misinterpretations which inevitably result.

Many questions were raised in newspaper articles, letters and reports, and many facts presented by both the Forestry Commission and the Border Ranges Preservation Society were distorted and misunderstood. The opportunity

to comment on, answer, and correct misrepresentations at every opportunity should not have been missed by the Forestry Commission even though this is a time-consuming task. Most answers and corrections could have been done at the District level. Ability to publicly answer and to correct, it is realised, may be limited by how readily the media would accept replies to articles and letters. Generally, newspapers tend to run a news item only once for the initial story has the most impact on readers. Answers, replies and corrections to original articles therefore tend to be ineffectual.

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