

## SUBMISSION ON THE WHIRINAKI STATE FOREST MANAGEMENT PLAN PROPOSALS BY THE N.Z. INSTITUTE OF FORESTERS (INC.)

*The following was prepared by the Council of the Institute and submitted to the Conservator of Forests, Rotorua, on 6 September 1979.*

### 1. PREAMBLE

The N.Z. Institute of Foresters (Inc.) was founded over 50 years ago. Its object is to further the development of forestry and the interests of the profession of forestry in New Zealand. In this context, forestry includes all those activities involved in the management of forest land, the objective of which is the production of wood or other forest benefits, and the maintenance of the environment in its most beneficial form. The Institute has a membership of some 750 persons who collectively encompass a wide range of knowledge of forestry and land management and land use generally.

### 2. MANAGEMENT POLICY FOR NEW ZEALAND'S INDI- GENOUS STATE FORESTS

The Institute took part in the 1974-5 Forestry Development Conference in which a major paper on indigenous forest policy and submissions on that paper were considered by a working party representing very widespread interests and by the plenary session of the conference itself. The policy statement was endorsed by the Forestry Development Council. The Institute actively encouraged Government to adopt the policy with a full recognition of the benefits and responsibilities that this would entail. It was a matter of substantial gratification that the policy was subsequently approved by the Labour Government of the day in October 1975, and later by the present National Government in 1976.

In these days, when some extreme pressure groups are clamouring for the acceptance of their own particular point of view, to the exclusion of all others, it is a matter of special significance that the policy produced in 1974-5 was produced soberly and calmly by a gathering that was indeed fully representative of all points of view. It is pertinent to quote from the preamble to that policy: "The object of management of State indigenous forests shall in

general be to perpetuate indigenous forests both as natural forests and as managed stands" (1977).\*

In the statement which followed (and which was endorsed by Labour and National governments) it was made abundantly clear that in general indigenous State forests would be managed to ensure their perpetuation for the many uses which New Zealanders might want of them in the future. Provision was made for the conversion of indigenous forest land to other uses (such as farming or exotic forestry) only in exceptional circumstances and where "other land in the region is either unavailable or unsuited for further development to meet the Government's social and economic goals, regionally or nationally" (1977, p. 10).

The N.Z. Institute of Foresters applauded the expressions of intention given in the policy statement but did not merely rest content with these expressions. Through its members and through its contacts with other organisations it has deliberately maintained a watching brief to enable it to be satisfied that the policy was being introduced and followed in fact. In effect, the Institute has been concerned to ensure that the policy did not become a pious expression of hope, and neglected in practice.

The Institute is pleased to note that the N.Z. Forest Service has in general followed the policy. It is clear that the department's foresters and forest managers are in favour of the policy and eager to introduce it as quickly as possible.

### 3. PRICE CONTROL OF INDIGENOUS TIMBER

If there has been one aspect of the policy about which the Institute has been less than satisfied it has been the tardiness of Government to remove price control from all forms of indigenous wood. In a submission to the Commerce Commission on this subject, the Institute noted its prime object to ensure a greater degree of conservation of the remaining indigenous forest resource which, because of very slow growth rates, is incapable of sustaining indigenous timber supplies at the current rate in perpetuity. It was argued that, notwithstanding the traditional demand for low-cost housing, it was now necessary to reduce demand for indigenous timber and that this could be facilitated by removal of price control.

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\* NZFS (1977). *Management Policy for New Zealand's Indigenous State Forests*, p. 7.

Government has now, at length, taken the decision to remove indigenous timber from the list of controlled goods and services. We deplore the delay in taking this step, without which the full implementation of the objectives of the 1975 policy for management of State indigenous forests has not been possible. The delay must be seen as one important factor militating against the introduction of an important part of the policy: "Indigenous sawn timbers and veneers should be milled, processed, and marketed in a way that ensures their intrinsic qualities are put to best use. In general this means minimising the use of such wood for purposes which can be adequately met by locally grown exotic wood and maximising the recovery of finishing and decorative grades or special products" (1977, p. 11).

To appreciate the significance and importance of this delay, it is only necessary to recognise that the public, expecting to find indigenous timber being used for its best purposes as part of the new policy, has instead found that much is still being used for purposes which would be quite adequately filled by radiata pine or other exotic timber species. It is small wonder that many people, disappointed in this one respect, are inclined to doubt or even reject the whole thrust of the new policy and to believe that Government and the Forest Service are continuing the outmoded practices of the past.

#### 4. LAND AS A RESOURCE TO USE

One aspect of the philosophy of the Institute, which has developed more strongly with time, is the recognition that New Zealand's land is not a boundless resource. Rather it is a limited resource which can be used again and again if it is husbanded wisely. Badly used, or exploited unwisely, productivity will be lessened, at best. At worst, there will be no productivity from a land rendered sterile and barren for many years. This idea is not difficult for most people to grasp. What is more difficult for them to understand is that land to which is ascribed one particular type of use — that is, "preservation" in the sense of "museum preservation" — is effectively rendered sterile for the production of all but a very limited range of benefits to man.

This philosophy does not reject "preservation" as the best use of some land. Indeed, the Institute has actively campaigned for increased action not only by Government but by others also (including private landowners, Federated Farmers, etc.) to ensure that a full and properly representative range of all types of forest and indigenous vegetation are preserved for posterity.

But for New Zealand, which is, and for many years to come must be, so heavily dependent on land as the basic resource from which must be supplied almost all the nation's needs for life and comfort, there is a great danger. It is that the large-scale preservation of all types of flora and fauna in their natural state, together with their habitats, will impose increasing hardship or deprivation on the human population of this country. There must be a limit.

#### 5. GOVERNMENT'S WEST COAST FOREST POLICY

It is with such knowledge of the importance of land as a resource for man that the Institute has supported the Forest Service and Government's proposals for the management of the State indigenous forests of the West Coast and of the central North Island. The seven major objectives of the West Coast policy, announced by the Minister of Forests in August 1978, bear repeating for they all have relevance to the policies which should apply in the North Island generally, and in Whirinaki State Forest in particular. They are:

- “1. To perpetuate State indigenous forests both as natural forests and as managed stands.
2. To manage selected podocarp and beech production forests for sustained yield of wood and other compatible forest values.
3. To maintain sawmilling throughout the West Coast in the short term at a level which allows a steady supply of sawlogs either from podocarp, beech and/or exotic forests.
4. To manage existing forests and add new areas in such a way as to maintain a steady sawlog supply to forest industries in the long term.
5. To have as the first aim in all State forests the protection of the forest and soil mantle to prevent the movement of debris into stream systems. To achieve such protection by suppression of uncontrolled fires, prevention of trespass and control of wild animals.
6. To encourage the use of State forests for recreation.
7. To reserve representative areas of forest and associated native animals and land forms for scientific, educational and cultural purposes.” (1978a, p. 1).\*

\* NZFS (1978a). *West Coast Forest Policy*.

To go one step beyond the forest management policies for the West Coast, the Institute believes that the maintenance of the West Coast community is essential for the long-term wellbeing of the whole country.

Minginui is a very much smaller community but, as evidence accumulates pointing to the need to sustain rural communities and to reduce the drift to the cities, so too the argument for sustaining Minginui's community is strengthened. The maintenance of this community is dependent on just such a set of management policies as those which have been adopted for the West Coast. Indeed, failure to adopt such policies, or deliberate rejection of them, would raise doubts as to the credibility of Government policy for maintaining the West Coast or the Minginui communities.

## 6. FOREST SERVICE MANAGEMENT PROPOSALS FOR CENTRAL NORTH ISLAND

It was in the wake of the very considerable public consultation and debate on West Coast forestry issues that the management of the indigenous State forests of the central North Island was brought very forcibly before the public in 1977. The kokako, and Pureora Forest, became household discussion points. It is to the credit of Government that representatives from a wide range of interests were given the opportunity to discuss the management and objectives of the central North Island forests at the seminar organised by the Forest Service in Taupo in March 1978.

Here the issues had developed further from those associated with the West Coast. Preservation of large forest areas, as a possible safeguard against depletion of kokako habitat, was debated. Also at issue was the recognition of the fast dwindling areas of virgin lowland podocarp forest. Less well recognised was the interdependence of the forests of west Taupo and those of Whirinaki and the Urewera country.

Again the Institute was able to support generally the broad proposals of the Forest Service "as a sound interpretation of the management aspects of the new policy for New Zealand's (State) indigenous forests." (1978b, p. 23).\*

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\* Submission to the Minister of Forests on management proposals for State forests of the Rangitoto and Hauhangaroa ranges. *NZIF Newsletter*, 10 (1), 1978b.

With much expertise available to it, and with the opportunity to study both the forests themselves and the proposals put forward by the Forest Service, the Institute was able to support the grouping of the ten west Taupo State forests into a State Forest Park, and the broad zoning of forests within the region. It was able to "see selection logging within much of the production forest area (if carried out with flexibility and sensitivity) as being generally compatible with other forest uses and values" (1978b, p. 23).

Since that time the Institute has been given no cause to doubt this statement and still believes "that careful selection logging is practicable in many parts of the west Taupo forests without destroying the forest structure and without unduly lowering recreation values or many wildlife values" (1978b, p. 25). However, in its submissions on the west Taupo forests, the Institute did warn that the current system of price control and grading of indigenous timber was not conducive to their most efficient use, and stated that the Government should apply measures to ensure minimum logging and maximum high grade recovery for finishing purposes, to a level reflecting its long-term availability (1978b, p. 24).

In support of its arguments relating to management for a sustained yield, it was emphasised that the annual cut must be reduced to the sustainable level as rapidly as possible. The lack of sufficient suitable natural podocarp regeneration in many of the forest types, and particularly in those carrying dense stands, was seen as good argument to "support the proposals to replant indigenous podocarp species in selectively logged areas, rather than rely on natural regeneration" (1978b, p. 27).

In giving its support to the proposals to manage production-zoned areas of indigenous forests for timber, the need to reserve areas for their scientific value was not neglected. The Institute strongly recommended "that the Forest Service accept in full the recommendations of the Scientific Co-ordinating Committee, including the reservation of the Waitaia catchment, for scientific purposes" (1978b, p. 27), and this was in the full knowledge that such reservations would probably reduce the available timber substantially.

## 7. GOVERNMENT'S CENTRAL NORTH ISLAND FOREST POLICY

It was in the context of the wide-ranging discussion, debate, and even conflict concerning, first, the forests of the West Coast,

and then those of west Taupo, that the Institute has applied itself to the study of management proposals for Whirinaki State Forest. Whirinaki cannot be studied as a single entity, and with disregard for policies which have developed in the other forest areas. In particular, the policies and management of the west Taupo forests cannot be ignored for, with Whirinaki, they form the major remaining resource of podocarp forest in the North Island. These forests of the central North Island do indeed form a coherent management resource. Changes to the policies or management plans for one must inevitably require changes in the others. It is clear that these relationships were recognised by the Government when, in August 1978, the Minister of Forests produced the Government policy for central North Island forests (1978c).<sup>\*</sup> In this statement, Government clearly set out a number of general principles which should apply to all central North Island State forests, and then dealt with the particular requirements of the west Taupo State forests and for Whirinaki State Forest. It is this coherent policy which needs to be kept in mind when discussing any of the individual forests.

#### 8. PUBLIC CONSULTATION IN RELATION TO WHIRINAKI STATE FOREST

The Institute has felt an increasing concern in regard to the way in which management proposals have been displayed to the public so that the process of public consultation and participation has invariably turned into a series of confrontations, with the protagonists advancing arguments, or defending positions, with increasing regard to their relative advantage, and lessening regard to the validity of the arguments or the need to strive for a common goal in the interests of all New Zealanders. It was with these concerns in mind that in June 1978 the Institute invited the Forest Service and the Environment and Conservation Organisation (as representing the Native Forests Action Council, the Royal Forest and Bird Protection Society, and other organisations with similar interests) to take part in an Institute-sponsored meeting at which the public would have the opportunity to obtain balanced information on alternative proposals for Whirinaki. It was the intention that other interested organizations, such as the Wildlife Division of Internal Affairs Department and the Urewera National Park Board, and interested individuals, would contribute to the better understanding of all the implications of proposals advanced.

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<sup>\*</sup> NZFS (1978c). *Central North Island Indigenous Forest Policy.*

It is a matter of regret then that, although the Forest Service was prepared to take part, the Ecological and Conservation Organisation was unable to draw up proposals agreeable to its member bodies, with the result that the meeting did not eventuate. Almost inevitably the atmosphere of confrontation has again developed between conservation organisations and the Minister and his department.

## 9. WHIRINAKI STATE FOREST: MANAGEMENT PLAN PROPOSALS

### (a) *Proposals in Line with Government Policy*

The management plan proposals as published in May 1979 have been prepared in accordance with Government policy as announced by the Minister of Forests in August 1978. In his statement then, the Minister specifically noted that the maximum level of cut of native logs from Whirinaki State Forest "will be progressively reduced from the present maximum of 30 000 cubic metres a year to 5 000 cubic metres a year over the next 12 years" (1978c). The Forest Service has also specifically noted this direction in section 6.4.2 of the proposals. It is unfortunate, however, that the proposals do not show explicitly the relationship which Whirinaki Forest has to other forest areas of the central North Island in respect of the benefits available from the resource in addition to timber. This omission should be remedied in the management plan finally approved by the Minister.

### (b) *Brevity*

If anything, the omission highlights another fault of the proposals — the brevity of the whole document. It can be argued that a document that is to be made public should be kept simple and brief so as not to confuse the public. But the public is now the ultimate arbiter and is not without the ability to deal with any details needed to explain and justify policies and management which will have long-term impacts.

### (c) *Following through the Process of Consultation*

To take the point further, Government wisely provided for increased public consultation in the management of some State forests in its 1976 amendment to the Forests Act. Provision was made for the publication of management plan drafts and for seeking public comment before the plans could be approved. These requirements do not apply to all State forests, but, as a matter within his discretion, the Minister can be commended for extending this policy to Whirinaki Forest.



But, if consultation with the public is invited, then it would seem necessary to follow the matter through. In this case the Forest Service has invited comment and then maintained a virtual silence. Instead of providing the opportunity for the public, and notwithstanding the certainty that the subject is contentious and of considerable public interest, it has done almost nothing. It has left a vacuum to be filled substantially by a pressure group which, in the view of the Institute, provides a highly biased viewpoint. The public has therefore not had the opportunity to obtain full and truthful knowledge of Whirinaki Forest, or of its best uses for the people of New Zealand in both the short and the long term.

(d) *Selection Logging — A Loaded Term*

The basic concern of most people about Whirinaki, as of Pureora Forest before it, is whether it is possible to selectively log lowland podocarp forest (especially the dense stands) so that the major forest value is maintained and, if it is, whether the forest should be logged. The questions are complex and not capable of simple answers, for even their meaning is very different to different people. The questions themselves are "loaded" to suggest an answer which is biased toward the negative. More properly, the concern should be whether it is possible to manage the forest to provide some timber in addition to the other values considered to be important.

Principally under the tutelage of the Native Forests Action Council, which has consistently depicted scenes of total forest destruction such as used to accompany complete conversion of indigenous forest to exotic plantations, many people now think this is what is meant by selection logging or selection management. It is not so. Pressed, the more radical conservation groups do recognise the principles underlying selection management, but then claim to provide factual information to show that the damage done to the residual forest is unacceptably high. For Whirinaki, the information to support their thesis is taken principally from Pureora and Tihoi forests, with examples of logging in 1975 or earlier, with some additional examples of pre-1975 logging in Whirinaki.

Frequently quoted is a report by John Herbert, a scientist at the Forest Research Institute, in the conclusion of which it is stated: "the post-logging surveys of both the Tihoi (in press)\* and

\* See p. 42.

Mangawiri Basin selective logging in dense podocarp forest serve to emphasise the practical difficulties of logging in this forest type and at the same time of leaving a stable residual high forest structure with its ecological, recreation and amenity values more or less intact. Even the most discreet and carefully implemented operation (the Tihoi 30% block) has resulted in continued loss of trees, and wood volume losses to date exceed stand increment. Furthermore the obvious general unsoundness of many of the residual podocarps makes them highly susceptible to high intensity storms, and catastrophic windfall in these opened-up stands is a possibility. Quite apart from this, the generally poor condition of some of the residual stands cannot for long continue to resemble the original structure and stand conditions" (1979a).\*

In so far as these trials relate to the earliest selection logging trials in Whirinaki, carried out in June/July 1975, and comparable trials in Tihoi Forest, the Institute in no way disputes the conclusions. Indeed, it will be recalled that, in its submissions on the central North Island west Taupo forests, the Institute qualified its approval of continued wood production thus: "We believe, however, the logging in the high volume, dense podocarp forest will need much more careful planning than has been suggested in the Forest Service proposals" (1978b, p. 26).

Members of the Institute have seen the 1975 Whirinaki trials and agree that the results are not acceptable and have degraded the forest structure too greatly. However, these trials were carried out within two months of the Forestry Development Conference, which proposed a change from clearfelling of indigenous forest with subsequent conversion to exotic plantation, to a requirement to maintain indigenous forests both as natural and managed stands. These early trials were therefore carried out even before Government had finally approved the changed policy. It is hardly surprising that these first trials show substantial defects. They also show, however, that the local forest management staff were keen to conserve the indigenous stands.

A number of Institute members, including scientists and at least one forest ecologist of high repute, have now had the opportunity of examining more recent selection logging trials at

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\* Herbert, J., 1979a. Results of selective logging of dense podocarp forest in the Mangawiri Basin, Whirinaki State Forest, and a comparison with trials in Tihoi State Forest. *FRI Production Forestry Division Report IFM 10*, p. 6 (unpublished).

Whirinaki. In three 1979 trials in dense podocarps, selection of trees for removal has been based on:

- an individual tree basis, taking less than 20% of podocarps,
- a group basis of up to 15 trees, but still amounting to less than 25% of the total volume, and
- a “silvicultural” basis in which only defective or unstable trees are removed — less than 15% of the total.

There has been a great advance in knowledge and management practice since 1975. The treefellers are actively endeavouring to save forest vegetation. The tractors have their bulldozer blades removed to reduce the hazard of bark or root scraping. The logging arches have been removed for similar reasons. Logging tracks are kept narrow. The canopy gaps are very much smaller than formerly and damage to the forest floor and understorey vegetation is very much less than previously.

Until these trials had been seen, the Institute would not have supported continued logging in the high volume podocarp stands until the results of research became clearer. But obviously the loss of further trees from windthrow, or as a consequence of logging damage, will be very much less in the latest trial areas than in the 1975 trial areas. It is now the considered view of the Institute that selection management of Whirinaki podocarp forest is feasible, not only in low and medium volume stands, but also in the high volume stands. Further “silvicultural” logging in the high volume stands is supported. It should be carefully prescribed: that is, only trees which appear to have a short life, or are likely to be unstable, should be removed, and no more than 15% of the standing volume should be removed at any one time. There is no reason to suppose that forest damage cannot be kept within the limits required to ensure the continuance of podocarp forest.

#### (e) *Senescence of Podocarp Forest*

There is controversy as to whether the character of the Whirinaki podocarp stands will change substantially if they are left untouched. The Director-General of Forests has been quoted as saying: “There are signs of mortality in the dense podocarp stands, and although it may take a long time, they are starting to go . . . In these stands there is very little regeneration or no regeneration at all. As the canopy trees die out they are replaced by mixed hardwoods. This is not new. Eminent botanist Dr

Leonard Cockayne (1855-1934) said, 'Nor is the lowland forest, climax formation though it be, in any great state of stability. As the dominant tall trees die, they are frequently replaced by another species, and forests may be seen in actual process of change'". (1979b)\*

On the other hand, Dr A. S. Edmonds, a spokesman for the Native Forests Action Council, has said: "True, there is a very poor survival rate of podocarp seedlings in the dense stands where light is restricted and competition for moisture is severe. However, the podocarp forest will regenerate freely once these dense stands thin out by natural attrition to medium density stands" (1979c).† There are some podocarp seedlings in the dense stands, but they survive and grow only exceptionally, so there are virtually no saplings or poles. Nor is regeneration at all common in medium or low density stands, apart from tawa, for in all stands, where gaps occur in the canopy, hardwoods spring up and suppress podocarp seedlings. The areas of significant developing podocarp regeneration are those where there has been a substantial degree of forest destruction, such as by old Maori fires. Other areas of podocarp regeneration are substantial openings, which may not have carried forest since the last pumice ash shower, but which show successional phases from tussock to manuka and thence to podocarp forest.

Examination of the dense stands shows that they contain a large percentage of trees which are senescent, damaged by previous windfalls (and now decaying in the trunk), and dying, irrespective of whether logging has taken place or not. In some areas, part of the damage might be due to removal of scattered totara forty to fifty years ago. Mortality figures taken over the last 14 years in both unlogged and modestly logged areas have given an identical figure of 1.5% attrition from mortality and windthrow. With an average stand of some 90 trees per hectare, the life of the dense stands seems to be clearly limited — perhaps to as short a period as 100 to 150 years. In our view there is good evidence to support the hypothesis that the podocarp element of Whirinaki Forest is being replaced by hardwoods, and that this process will continue unless there is a catastrophic reversal (which could be caused by volcanic eruption) or deliberate management to favour podocarp regrowth is introduced.

\* NZFS, 1979b — Press statement, 1 August.

† Edmonds, A. S., 1979c. The Forests at Whirinaki. Paper delivered at NFAC seminar, Auckland, 4 August 1979.

There is good evidence to show that well-grown podocarp nursery stock (sturdy and large seedlings) can survive and grow in canopy gaps which are large enough. It is noted, however, that the plan does not state the minimum size of gap which can be successfully re-established by planting, and this needs to be determined. However, the Institute is satisfied that the podocarp stands can be economically re-established and that it will be possible to develop new vigorous stands, with a range of age classes, by positive silvicultural management. Indeed, this is probably the only way to ensure that generations to come will be able to see and enjoy dense podocarp stands.

The long-held view that native forests cannot be regenerated or successfully managed is no longer tenable. Successful management of beech forests has been conducted by the Forest Service in western Southland for thirty years now. In the far north, kauri forest has shown itself to be readily amenable to management for wood production; selection logging is changing old decadent forest into healthy stands with a developing range of trees of all sizes.

New Zealand is thus adopting practices which are commonplace in all developed countries, and in many developing countries also. That is, management of the indigenous forests in those countries is taken as a matter of course. It is disappointing, and indeed surprising, that so many people in New Zealand do not realise this, and do not appreciate that the same skills can be applied in this country. It is perhaps one of the penalties of overmuch pre-occupation with radiata pine forestry. However, the public is beginning to demand some diversification of production forestry, and there is no doubt that our indigenous forests should become an important part of this diversification. Nevertheless, it is recognised that management of podocarp stands is not as simple as management of even-aged stands of pines, and treatment of the dense stands is likely to require more skill, and delicacy, than treatment of medium and low density stands. For this reason, the Forest Service should give high priority to providing access to the lower-density stands and levying as much of the cut from these as possible.

#### (f) *Tawa Management*

Tawa is a useful and well-behaved timber, keenly sought for some purposes. At present supplies appear to be ample, in part because farmers are being encouraged by financial incentives to break in forest land for grazing. Supplies from the west Taupo/

King Country region are likely to dwindle, and many small businesses (especially turnery and such-like) will be put in serious jeopardy when this occurs. In its submissions on the west Taupo forests the Institute endorsed: "the concept of maintaining a continuing tawa supply from logged forests at Pureora and Hurakia and regard(ed) as realistic the Forest Service proposed annual cut of 4 000 m<sup>3</sup> as representing the sustained yield from a total available area of 12 000 ha" (1978b, p. 26).

Although Map 2 (Vegetation) of the Whirinaki plan proposals indicates large areas of forest types PHa and PHb, containing substantial tawa elements, the text of the plan virtually ignores tawa. This omission is unfortunate because the forest types involved are low volume podocarp stands. The use of tawa might well be developed in conjunction with shifting the emphasis from the high volume podocarp stands. Logging of tawa may also give the opportunity of increasing the podocarp element in the low volume stands. Accordingly the Institute recommends that the Forest Service investigate the management of tawa in Whirinaki Forest with the view of utilising this resource under sustained yield. In time this could enable cottage industries such as turnery and furniture components to be established at Minginui.

(g) *Conversion of Minginui Sawmills Ltd to Exotic Cutting*

Government, in its central North Island policy, announced by the Minister of Forests in August 1978, stated that the indigenous cut from Whirinaki would be reduced to 5000 m<sup>3</sup> per annum by 1991 and maintained at that level. The proposals adopt that policy, and in the preface the Conservator suggests a phasing down of the indigenous supply to this level by 1989. Controversy over this proposal has arisen on two counts: first, as to whether the sawmill should receive 5000 m<sup>3</sup> per annum, or any indigenous timber at all ultimately; and secondly, how quickly the sawmill should be converted to use mostly, or all, exotic timber. On the first count, the Institute is satisfied that there should be a continuing production of podocarp timber. This is in accordance with the real need that New Zealand has to use its own resources, and it has been argued above that the podocarp forest at Whirinaki is a resource of the most useful kind, for it can be used without diminishment. Continuous production is also in keeping with Government policy which recognised both in the major policy statement of 1974-5, and in its following statements culminating in August 1978, that there is good cause for continuing a supply of high-quality indigenous timbers for specialist purposes.

However, whether the continuing supply (or sustained yield) can be 5000 m<sup>3</sup> or another figure is a matter of conjecture. A serious lack in the proposals is that nowhere is the rationale behind this figure given. In answer to a question at the Native Forests Action Council seminar in Auckland on 4 August 1979, the Conservator reported that the basis for that figure was, in brief, that it equated (conservatively) with natural mortality of 6.5% per annum. The levels of cut proposed in the preface to the proposals, taken in conjunction with the table of volumes (section 6.1.2) allow for a cutting period for the existing podocarps in the area zoned for indigenous utilisation in excess of 200 years, although this period is loosely spoken of as the minimum period of the proposed rotation (section 6.6). The total production zone volume is given as 1 368 000 m<sup>3</sup>. The proposed cut is:

1979-80	60 000 m <sup>3</sup>
1981-84	80 000
1985-89	50 000
a total of	190 000 m <sup>3</sup>

The residual volume in 1989 is thus shown to be estimated as 1 178 000 m<sup>3</sup>. At a cutting rate of 5000 m<sup>3</sup> per annum, this might last up to 289 years. No allowance has been made here for mortality, which might be expected in a managed forest, or for any increment. The figure of 289 years is merely a rough estimate of the period during which the standing crop will be extracted. The figure of "at least 200 years" (section 6.6) is very much an indicative figure only for rotation length. No supporting evidence is given to show that a 200-year rotation would be the correct one. If it is necessary to have that length of time to produce stems of acceptable size and heartwood formation, it might be feasible to produce a considerably larger volume than has been allowed. Rough calculations could be:

<i>Stands</i>	<i>Yield/ha/yr (m<sup>3</sup>)</i>	<i>Area (ha)</i>	<i>Total yield/yr (m<sup>3</sup>)</i>
High volume	2	1 210	2 420
Medium volume	1.5	2 860	4 290
Low volume	1	3 520	3 520
Very low volume	0.5	5 120	2 560
Total			12 790

These predicted yields could well be conservative.

On the score of timber availability, and sustained yield, it would seem that there is no need to decrease the supply to Minginui Sawmill more quickly than is proposed. Nevertheless, justification of the proposed cut and elaboration of the development of a sustained yield are needed, and therefore the Institute recommends that the Forest Service provide a detailed analysis of the derivation of both the expected sustained yield and the annual cut. Meanwhile, the Forest Service should take all practicable steps to increase the proportion of exotic timber taken by the Minginui Sawmill.

(h) *Maintenance of a Viable Community*

From the controversy which has erupted, it is clear that one of the principal, though unstated, objectives of the proposals is to maintain the village of Minginui as a viable community. This objective is seen as laudable by all parties. The concern is whether the village can survive if the sawmill is converted very rapidly to a completely, or almost completely, exotic timber supply. This question is also bound up with another: can indigenous logging be transferred from the high volume podocarp stands in the so-called Block 10 to north-western outliers of high volume podocarp areas?

The Institute has examined some of the northern outliers which have already been selectively logged, and has seen the road development in the forest, and has thereby gained an appreciation of the difficulties of shifting logging quickly to new areas which have not been pre-roaded. The Institute is aware that re-logging accessible areas of the northern outliers would effectively constitute clearfelling and this is not supported. In the Institute view, there is good reason to continue with selective "silvicultural" logging at the sustained yield level and consequently there is no good reason to support a rapid conversion to a completely or almost completely exotic timber supply. If Government cannot support this view, then it should, as a matter of urgency, investigate the likely effect of such a conversion, with the object of ensuring that the Minginui village community will remain viable for the foreseeable future.

(i) *Concern for People*

In such an investigation, Government should bear in mind that the proposals have been prepared in the context of larger Government policies which must take great store of their effect



on people. The present proposals are very much concerned with people, including:

- (1) Local residents; their employment, recreation and continuance as a long-standing community, and the preservation of their historical sites.
- (2) Small wood-using industries, of which there are several hundred in the North Island dependent on special use timbers (including the more exacting components of houses). Provision of totara timber for making Maori artifacts, as provided for in the plan, is highly commended.
- (3) The general public in many respects:
  - as taxpayers, since the forest will remain productive and not become a burden on the taxpayer;
  - as householders, who will continue to be able to use beautiful woods in their homes for finish, furniture and ornaments;
  - as New Zealanders, who will be able to use the fine resources of this country and so save overseas funds. It is noteworthy that world resources of fine timbers are diminishing and prices are rising rapidly;
  - as recreationists, in that ample areas of a whole range of forest types are to be preserved and protected for their edification, enjoyment and recreation.

(j) *Reservation of Forest*

The proposals recognise the need to protect substantial areas to maintain soil and water values and to provide for the scientific and ecological requirements of the region and of New Zealand as a whole. It has been argued that all logging in Whirinaki should cease because it is the last remnant of the once common lowland podocarp forest. This is very much an over-simplification, for there are several quite distinct forest types, some of which are also represented in the adjoining Urewera National Park. Again, it has been argued that the whole forest should be reserved because there is so little podocarp forest left. The residual area is compared to the area of Lake Taupo which, in fact, is a very large lake. To lock up the whole forest from that inference would, in the long run, be foolhardy.

The proposals have clearly stated (section 4), but it bears repeating, that of the total forest area of 60 000 ha, indigenous high forest occupies 53 700 ha. Of this, only 13 590 ha (25.3%)

is set down for possible indigenous management, and only 6 790 ha (12.6%) is set down as the maximum area within which any indigenous logging may be carried out within the 10-year period of the plan. Provision has been made for a full review of the situation before the beginning of the next plan period.

The areas proposed as ecological reserves, and which will be strictly inviolate, already amount to 7 670 ha (14.2% of the high forest area). Institute members have had the opportunity to examine the proposed ecological reserves and are reasonably satisfied that they provide for the scientific requirement to retain properly representative areas of forest types and sequences from lowland to steep upland, and are whole catchments large enough in area to ensure their continued viability. However, the Institute does have some concern that, although the Forest Service has accepted advice from the Scientific Co-ordinating Committee in providing for ecological reserves, it has not accepted the Committee's advice in its entirety. The Institute recognises the competence of the Scientific Co-ordinating Committee, with its wide range of disciplines, as the body to appreciate the full requirements of ecological reserves, and accordingly recommends that the Forest Service review its proposals for ecological reserves in the light of the recommendations of the Committee.

(k) *Transfer of Whirinaki Forest to the Urewera National Park*

The Institute is strongly opposed to suggestions that the whole, or a substantial part, of Whirinaki Forest be absorbed into the Urewera National Park. It believes that the real reason for these suggestions, as opposed to the given reasons, is the belief that such an absorption would prevent, now and for all time, any forest management, whereas any type of reservation under the Forests Act would be ineffective and meaningless. This fear is groundless, but, because of its widespread nature, Government should take steps to convince the public that all legislation and all Acts are instruments of Government and have the same force and standing irrespective of the administering agency.

The Institute fears that, as one consequence of the general public appreciation of the usefulness of National Parks (and the Institute subscribes to this appreciation), there is an unjustified belief that National Park status is the "best" land use, and hence should be immutable. This is an unwarranted conclusion. As will have been obvious from earlier comments, the Institute fully supports the concept of "wise land use" and the aim of "best land use", but these do not necessarily fit in well with

the concept of "fixed land use". On the contrary, as time passes, the needs of people change, and a healthy vigorous country will allow for this in making it possible to review and change the uses of its land. To the Institute, National Park status seems far from the best way to keep options for the future open. There is considerable concern that the National Parks Act is designed principally to preserve natural areas in the museum or restrictive sense, and not to manage them to enhance their use. In this respect the National Parks Act displays a misunderstanding of ecological processes, which are dynamic, not static. The preservation (so-called "conservation") organisations have the same outlook. Without this understanding, they do not recognise that the fine forests of today can be derelict tomorrow. Nature's way is to rejuvenate forests by catastrophe in New Zealand and other temperate parts of the world. Forest management on a sustained yield basis is essentially a means of rejuvenating and perpetuating forests. Moreover, it creates diversity, which increases rather than decreases ecological dynamism.

The Institute is also concerned that National Park boards and their protagonists are becoming overly obsessed with the concept of wilderness. Undeniably, the wilderness experience can provide great satisfaction for a fortunate minority of people. But the concept, and its accompanying criteria of large size, absence of human interference (such as tracks and huts) and difficulty of penetration, ensure that use of forest wildernesses is severely restrictive toward the general public in the interests of a very small portion of the population. It could already be claimed that the substantial areas already set aside as wilderness in New Zealand are lavish in relation to the number of people wishing and able to enjoy them.

The restrictive attitude towards the management of National Parks is carried still further. In his paper presented to the Native Forests Action Council seminar in August (1979d),\* the Chairman of the Urewera National Park Board said: "The [National Park Board] Management Plan for the Park lays stress on the right of freedom of entry for the general public, subject to the need to protect the resource and to ensure that natural values are not endangered by excessive visitor use. Happily the threat from overuse has not eventuated to date within the Urewera National Park and there has been no occasion to restrict levels of public

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\* Velvin, R. M., 1979d. Whirinaki State Forest: relationships with Urewera National Park.

access in any way. It is also recognised that the remote qualities and scenic grandeur are the principal attractions which must be maintained if they are to be freely experienced by the Park user. The Board has therefore concluded that notwithstanding that aircraft are used extensively for access and tourism in some New Zealand National Parks, their use cannot be justified in Urewera."

There are two points to be made here. First, the Urewera National Park is used by people at a low level. From the point of view of need, therefore, there is no justification for adding Whirinaki Forest to the National Park. The second point is that the restrictive attitude towards aircraft of any sort inhibits the efficient control of wild animals which are degrading the very natural vegetation the Board is seeking to protect. It is understood that the Forest Service maintains a considerable number of deer and goat shooters in the Park, at taxpayers' expense, in order to control deer numbers while, because of the great size and remoteness of the Park, little effective goat control is carried out. At the same time, private hunters are effectively discouraged. It may well be that the concept of wilderness has been over-indulged to the detriment of the forest cover.

If substantial areas of Whirinaki Forest were to be transferred to Urewera National Park, it is likely that the same restrictive attitudes would apply. A comment by a local forester who is a member of the Royal Forest and Bird Protection Society is relevant. Writing of wildlife in Whirinaki Forest, he says:

"A combined three year Wildlife Service-Forest Service study is currently being carried out to monitor the bird population of Whirinaki. Both high volume and low volume podocarp stands are being studied, comparing virgin and selectively logged areas in each. Selection logging may temporarily modify the mix of bird species in an area, as related to their food supply. Low level of logging removal, and smaller areas to be covered annually in future, will reduce this impact. Species such as miro and tawa are deliberately left where possible. Kahikatea with its annual prolific seeding is important and perhaps should be added to this list, but rimu with its very infrequent seed years is relatively unimportant to berry-eating birds. The continued toll of native birds by opossums, stoats, weasels and other such pests is likely to have a much more detrimental effect on bird population than controlled selection logging and replanting" (1979e).\*

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\* Orchard, M. J., 1979e. Pers. comm.

## 10. CONCLUSION

The New Zealand Institute of Foresters supports the thrust of the Management Plan proposals for Whirinaki State Forest. It believes that they are in accord with Government policy established over a five-year period during which every facet of the policy has been exhaustively probed and shown to be sound.

There are some matters which require elaboration but, notwithstanding these, the proposals, if confirmed, will lead towards a better use of land and resources. The Institute wishes to take part in the consultative process leading towards the better use of publicly owned forests of New Zealand, and commends the approach to other public agencies charged with administration of the country's permanent and renewable resources.

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