

# A PROPOSED POLICY FOR INDIGENOUS STATE FOREST

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## INTRODUCTION

At the November 1974 Forestry Development Conference, a major theme was indigenous forest management. This article is part of a paper presented under the title "Indigenous Forest Policy: Past and Future". For publication in this journal the historical portion has been omitted and only the part concerned with future proposals included.

The proposals put forward apply only to indigenous forest under the control of the Forest Service and represent a draft policy for examination by various working parties as part of the Conference, which concludes in May 1975. In this draft policy several changes are proposed, the most significant relating to the management of the remaining merchantable State forest. It will be for the Conference to indicate how acceptable and practicable these principles and measures are, and how far they should be applied to forest under private ownership.

The indigenous forest policy of early New Zealand was dictated by the immediate needs of the community, rather than by the requirements of the distant future. In the last half century we have seen achieved the major objective of clearing forest for settlement and for the development of farmland as the mainstay of our economy. We have also seen the creation of an exotic forest estate large enough to meet the bulk of our domestic demand for timber and providing a surplus for export, mainly in manufactured form. This does not mean that further primary production is not called for. Never was this more so than at present. Farm and forest produce will be required in greater quantity than ever before to satisfy the needs of a growing population and to lift overseas earnings to pay for imported goods and services.

But the growing population, slowly but surely becoming more urbanized, has come to attach to our indigenous forests values which hitherto have taken second place. This fact among others has made evident the need for a re-statement of forest policy.

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Formulation of a forest policy, as with any policy, must always be an evolving process, taking into account past experience, accumulated knowledge, changed circumstances and changing desires. The proposals presented here represent the first step of such a process.

### GENERAL POLICY FOR INDIGENOUS FOREST MANAGEMENT

It is recognized that a policy for State indigenous forests is simply a set of principles guiding the use and management of publicly-owned forests and that these principles must be based on sound forestry systems and practices, having regard to the objectives and desires of the public and to economic and social welfare, regionally and nationally.

It is also recognized that an indigenous forest policy should be drawn up within the framework of a general land-use policy. The role of the indigenous forests in timber supply, recreation, soil and water conservation, maintenance of scenic and other less tangible values, and as a source of land for settlement or plantation forestry is meaningful only in relation to the extent and nature of the remaining land resource.

Indigenous forests are able to fulfil a wide range of desirable public uses. There is little conflict between alternative uses if demand for all of them is low. As demand increases, conflicts will become increasingly evident because in any given area of forest the attempt to increase one use or value will generally decrease others. Multiple use in the sense of maximizing all of the uses or values in any one area of forest is thus an unattainable objective, but management to achieve a best combination of uses is not precluded.

This optimum combination of uses can only be determined by defining the dominant use or value which is to be recognized in any given area together with acceptable secondary uses. This requires the delineation of a number of zones and the definition of intended use or uses within each.

Zonation for soil and water conservation, recreation, and preservation of scenery, flora and fauna obviously requires the retention of the indigenous forest.

On land zoned for production the objective may be achieved by indigenous forest management, or by clearing for creating farmland or exotic forests.

In view of possible loss of the exotic forest estate by fire or disease, indigenous State forest capable of production should not lightly be made legally inaccessible.

### PRODUCTION FOREST POLICY

Because it is virtually impossible (except by extremely costly artificial means) to restore indigenous forest once it is cleared

for other productive purposes (primarily farming and exotic afforestation) the decision to clearfell should not be made before the need is clearly evident. The need to clearfell should be considered as evident only when other land in the region already devoid of indigenous forest is either unavailable or unsuitable for further development to meet Government's social and economic goals regionally and nationally. Indigenous forests should be cleared only after a study of the social, environmental, and economic factors has demonstrated that national welfare would be enhanced by doing so. The decision on whether timber production is of greater importance than other values conflicting with such production would thus be deferred until the commitment one way or the other is necessary.

"Clearfell", in the sense used above, refers to the total removal of the forest and not to the management system where clearfelling is used to regenerate the forest. This system must be accepted as an appropriate tool of management in certain circumstances.

Logging of indigenous forests is thus not precluded but as a corollary, where there is no immediate need to use the land for other productive purposes, logging should be conducted in a way that leaves open the options of maintaining an indigenous forest structure with a wide range of values, or of clearing for other uses at some unspecified future time. A constraint on production in such circumstances would therefore be that wood cannot be harvested unless a forest structure is retained or restored after logging.

The following classification defines the indigenous production forest categories recognized for the purposes of this policy:

First, forests dominated largely by high quality timber species:

- (a) those with good regeneration potential,
  - (i) sustained yield areas
  - (ii) periodic yield areas
- (b) those with poor regeneration potential
  - (i) partial logging areas
  - (ii) conversion areas.

Secondly, forests dominated largely by poorer quality timber species:

- (i) regeneration areas
- (ii) conversion areas.

#### *Sustained Yield Areas*

All indigenous forests zoned for production which — are dominated by species which yield high quality finishing and decorative woods;

- are of sufficient extent to yield a continuous supply of such woods; and
- have a structure which facilitates regeneration by recognized silvicultural systems,

should be managed as indigenous forests for sustained yield wood production — *i.e.*, annually in perpetuity.

In many situations those indigenous forests which are zoned for sustained yield production will occupy land that would be capable of higher financial yields if used for exotic agricultural or forest crops. Sustained yield production is, however, compatible with maintaining in large measure the aesthetic, recreational and wildlife values of indigenous forests and thus accords with a strong public desire for conservation of the resource for these purposes. In addition, it guarantees some continuity of supply of high quality and special-purpose timbers to the domestic market and provides some diversification of the production forest estate against pathological hazards, although such diversification is relatively minor in relation to national wood demand.

The cut from sustained yield indigenous forest areas would be set at the level which allows continuous and relatively even production of wood. Well-stocked cutover forests would be included in sustained yield units. Examples of existing or proposed sustained yield units are South Westland terrace podocarp forest, West Coast red beech and Western Southland silver beech forests, and kauri at a low level of production.

### *Periodic Yield Areas*

Where indigenous forests of high quality timber species with good regeneration potential are of insufficient extent for management as a sustained yield unit, the forest should be regenerated and managed to produce wood on a periodic basis in perpetuity as opposed to annually. The level of cut should continue to be governed by the aim of eking out dwindling supplies of finishing and special-purpose timber. Examples are beech forest in Kaimanawa, Rangataua and Big Bush State Forests and some podocarp forests west of Lake Taupo.

### *Partial Logging Areas*

In indigenous forests zoned for production (whether previously partly logged or unlogged) but showing less promise of regenerating the dominant good quality log and veneer producing species by recognized silvicultural systems, and not occupying land that is needed for other productive purposes, a partial logging of merchantable trees should be practised with these objectives:

- to retain a forest structure similar in species diversity to the original forest and suitable for further logging if required;
- to achieve a certain degree of timber production; and
- to leave land use options open for subsequent resolution, *e.g.*, indigenous forest management, exotic afforestation, or farm development.

Partial logging of the merchantable trees would require a sufficient number being left to maintain a forest structure and character, modified but capable of meeting other needs, and ultimately of being restored by regeneration if conditions prove favourable.

The level of cut for such forests should also be set by the aim of eking out supplies.

Only limited areas of this category exist, mainly in dense North Island podocarp forests and South Westland hill country podocarp forests, and may fall within the category of periodic yield areas.

#### *Regeneration Areas*

In indigenous forests (whether previously logged or unlogged) which do not contain species yielding high quality and decorative woods, but which can be regenerated, and where the land is not required for any other productive purposes, logging should be conducted so as to ensure regeneration of a diverse indigenous forest.

The decision to cut such forests should be made and the level of cut determined, after the costs and benefits have been evaluated. Examples are West Coast hard beech forests and Southland mountain beech forests.

#### *Conversion Areas*

State indigenous forests should be clearfelled and converted to farm land or exotic forests only when other land in the region is either unavailable or unsuited for further development to meet Government's social and economic goals, regionally or nationally.

Examples are logged podocarp/hardwood hill country forests on the West Coast and in Western Southland.

#### *Restocking of Indigenous Forest*

Where recruitment of young age classes is found to be inadequate in the sustained or periodic yield categories, enrichment should be carried out with nursery raised stock or wildings of the dominant species. This would apply particularly in the case of kauri and beech forests.

Where natural regeneration is inadequate in the partial logging and regeneration categories and full productivity of the land is unlikely to be achieved within a reasonable time, consideration should be given to supplementary planting either with indigenous species or with compatible and acceptable exotic species, broad-leaved or conifer.

### *Kauri Policy*

Kauri shall be managed in terms of the 1973 kauri policy, approved by Government, and which is in accord with this production forest policy.

## MARKETING AND UTILIZATION POLICY

The proposed policy for the management of indigenous forests is unlikely to be practicable without revising the procedures for marketing indigenous timbers and without a change in consumer preference and demand. The policy would also have to be carefully introduced and implemented in order to avoid a sudden reduction or cessation of supplies to existing sawmills, with undesirable social consequences.

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 minimizing the use of such woods for purposes which can be adequately met by locally grown exotic wood, and maximizing the recovery of finishing and decorative grades or specialized products. (Best use should also be sought within these categories — *e.g.*, peelers would generally be preferred to sawlogs.)

Marketing policy and procedures should be framed to encourage milling which is efficient in maximizing the recovery of finishing and decorative grades or specialized products, and in using residues. They should also encourage logging practices and techniques which are economic, environmentally acceptable, and are compatible with management aims. Such practices require properly sited and well constructed roads and methods of extraction that minimize disturbance to soil and water values. The ability to extract economically only part of the crop under carefully controlled conditions will be essential.

These logging practices will entail increased log costs which can be met in one of two ways; by increasing the cost of logs to the processor and simultaneously raising the average price of indigenous sawn timber and veneers; or by lowering the return to the State by a reduction in stumpages or log prices. The first alternative would be more effective in achieving the goal of maximizing the recovery of finishing and decorative grades and of influencing consumer demand. The second would

in effect subsidize the price of indigenous wood and disguise its real worth in relation to exotic wood or other substitutes.

As the indigenous forest resource diminishes, an increase in the price of indigenous finishing timbers could be expected. This in turn would be reflected in higher stumpages if wood sales were competitive. However, valuation of State forest indigenous resources has long been on the residual value principle, an approach re-affirmed by the Indigenous Forest Timber Advisory Committee and the Stumpage Working Party of the Forestry Development Council whose recommendations were accepted by Government. Nearly 60% of the current annual cut of indigenous wood is committed in long-term sales and thus outside the scope of any competitive tendering. Therefore any practical changes in marketing procedures must be within the framework of the residual value principle.

Rules for grading indigenous timbers would need to be revised to encourage maximum recovery of clean and special-purpose timbers.

Prices for finishing and decorative grades should be progressively increased to reflect their intrinsic or special-purpose value as compared with locally grown exotic woods and should be realistically aligned with the price of imported timbers used for similar purposes.

The export of kauri is prohibited. Export of other indigenous sawn timber and logs should be permitted as at present only if not required for the domestic market; and in addition (for softwood only) if coming from accumulated stock and produced in the course of a normal 40-hour working week.

Existing contracts will be honoured, but terms may require renegotiation to effect the changes discussed above.

## RECREATION POLICY

New Zealand is fortunate in having large areas of indigenous forest set aside in State forests and other lands of the Crown, with a vast potential for public recreation and enjoyment. The largest areas are in National Parks and State forests.

The former have been established to preserve in perpetuity, as far as possible in their natural state, areas which contain scenery of such distinctive quality or natural features so beautiful or unique that their preservation is in the national interest. In the case of conflict or possible conflict between preservation and use for recreation, the preservation of the natural resource must be the first and paramount consideration. However, pressures may develop for the use of National Parks to the level where their values would be adversely affected or threatened. A further factor to be taken into account is that, because of the high standards laid down for

National Parks, their distribution bears little relation to population distribution.

On the other hand, there are substantial areas of State forest land, more evenly distributed throughout the country, in which recreation is a proper use, in conjunction with the other purposes for which the forests as a whole are managed.

It is therefore proposed:

- That the development of National Parks and State forest parks should be complementary, with pressures on National Parks being relieved by strategically located State forest parks and recreation areas within easier reach of growing urban populations.
- That further complementary development for recreational purposes should embrace State forests generally (indigenous and exotic) as well as scenic reserves, other Crown-owned indigenous forests and those under the control of local authorities.
- That development of State forest parks and other areas of State forest should be guided by regional recreational plans reflecting the needs and desires of all sections of the public, but especially those of the current active users.
- That rights of entry to State indigenous forests should be as liberal as is consistent with public safety, the safety of the forest itself, and the protection of other forest values.

The policy for the development and administration of State forest parks has evolved over the last 20 years. In broad terms current policy is:

- To maintain large areas predominantly in their natural condition but with provision of tracks, bridges and huts for public access and safety.
- To recognize some areas as wildernesses, with no such provisions.
- To safeguard sites and features of special scenic or historical value and to preserve plant associations of scientific interest.
- To permit limited development of facilities for intensive public use close to forest boundaries.
- To carry out such measures as are desirable and practicable to control noxious animals and restore a vegetative cover on eroded land, using exotic species where necessary.
- To utilize scrub land within their boundaries for the production of exotic timber.
- To allow limited utilization of merchantable indigenous forest.



No major changes to this policy are envisaged except that any utilization of indigenous forest should conform to the production forest policy outlined earlier, and that there should be greater consultation than hitherto with organizations involved in recreational use of State forests, regionally and nationally, in order to identify areas suitable for Forest Park status and to co-ordinate their management.

### PROTECTION FOREST POLICY

Protection of the forest and soil mantle to prevent the movement of debris into stream systems with consequent stream aggradation, flooding and loss of water quality should be the first aim in all indigenous State forest areas.

In situations where production forestry is incompatible with the prevention of mass wasting, and the dominant use or value of the indigenous forest is thus soil and water conservation, the forest should be zoned as "protection forest". This term would embrace associated sub-alpine scrub, herb fields, alpine meadows and open mountain land.

The general aim would be achieved by protection of forests from uncontrolled fires, protection from trespass by domestic animals, and control of noxious animals.

Noxious animals should be controlled at levels dictated by correct land use and should be eradicated locally where necessary and practicable following an order of priority dictated by the values at stake and at a rate governed by available finance. High priority should be accorded first, where the prime object of management is preservation of existing native flora and fauna — *i.e.*, National Parks, scenic reserves, Forest Sanctuaries and State forest biological zones — and, secondly, to catchments with significant downstream values at risk.

In these high priority categories, continuous and unremitting effort is needed to reduce noxious animals to levels the vegetation can safely stand and just as importantly to hold these animals indefinitely at low numbers. In certain situations local extermination will be called for. Such rigorous control is attainable only by Government measures, with the harnessing of commercial and recreation contributions where appropriate.

In lower priority areas, control should be exercised by commercial operations and recreational hunting, with departmental operations being supplementary.

In certain State forests of no special biological value and where scientific evidence demonstrates that the pressure of existing animals is not detrimental to the well-being of the land or vegetation, the control of these animals should be placed in the hands of recreational hunters. However, the right should be reserved to reimpose commercial or depart-

mental hunting if it is demonstrated that recreational hunting is not maintaining the necessary degree of control.

Adequacy of control should be gauged not by the number or condition of animals killed in any given period but by the condition of the land and the vegetation. All protection forests should be regularly monitored by trained staff to assess change due to the presence of noxious animals.

Where animal and fire control measures alone cannot induce the natural recovery of stabilizing vegetation, rehabilitation through planting or seeding of indigenous or exotic plants and silvicultural measures designed to improve forest health should be undertaken.

### POLICY FOR PRESERVATION OF FOREST FOR SCIENTIFIC PURPOSES

Scientific interest in our indigenous forest stems from the need or desire

- to understand and explain natural processes;
- to maintain bench-marks for measuring change on initially comparable developed land;
- to maintain genetic diversity of plants and animals; and
- to preserve rare plants, native fauna, archaeological or other historic sites, geological and other topographical features.

The indigenous forests are remarkable for the diversity which they exhibit in a relatively small geographic area. The many ecosystems which they include are of considerable scientific interest and representative examples of each should be preserved in Crown-owned forests, as well as for the specific purposes mentioned above.

Mountainland forests will generally be maintained as far as possible in their natural condition for soil and water conservation and recreation but substantial areas should be set aside for scientific purposes where they form the upper part of reserved altitudinal sequences, and also to define and recognize a particular scientific value.

It is extremely doubtful if any mainland forest is in a strictly primitive condition but relatively unmodified lowland forest should similarly be reserved as part of altitudinal or other sequences, or for particular values.

State forest should continue to be reserved for scientific purposes under the Forests Act 1949, in the form of Forest Sanctuaries where preservation as near to its natural state as possible is a requirement. Areas to be used for scientific purposes or protection of flora and fauna, but which are not of such character or importance to justify recognition as Forest Sanctuaries, or are ineligible for that status should be

zoned and dedicated for those purposes under the Forests Amendment Act 1973.

In all areas set aside for scientific purposes, entry and activities therein should be permitted only at a level which is not detrimental to scientific values.

In selecting areas to be reserved for scientific purposes, State forest should not be considered in isolation; the scientific values of indigenous forest in National Parks, Scenic Reserves or on unoccupied Crown land should be taken into account. In this way the true extent and pattern of what is available for study will be determined.

Because the forest type frequently reflects geological, pedological, and other non-vegetational features, a range of scientific disciplines may be substantially catered for by reservation of examples of all forest types and sequences. However, to make certain that these other scientific values are provided for, the reservation of indigenous forest should be considered by a multi-disciplinary panel of scientists established for that purpose.

Such a panel should set criteria to be applied in considering reservation, should identify areas meeting those criteria, and make recommendations accordingly. To encourage an integrated approach to research in reserved areas, the same panel could advise on the research to be undertaken in areas set aside for scientific purposes.

### SUMMARY

The policy presented here has endeavoured to give more weight to the changing attitudes to indigenous forests of a population which is both growing and becoming increasingly urbanized. This is so particularly in respect of clear-felling of indigenous forest and of the need to leave open to later generations the decision on the ultimate use of productive forest land. This shift in emphasis will bring problems in its wake to the timber industry and to some rural communities. These must be taken into account by the urban dominated population, who must in turn alter their preferences in wood usage and be prepared to pay the price, in more ways than one, for any decrease in output.

No major changes have been proposed in the management of State forest land for soil and water conservation. It could hardly be otherwise. The only move of any consequence is towards a greater degree of control of noxious animals by recreational hunters in specific circumstances and subject to safeguards.

Recreational policy is likewise basically the same as at present, but more stress has been laid on the complementary role that State forests can play within regional and national plans embracing recreational land of all tenures, without pre-

cluding other uses in specified parts. The policy for reservation of indigenous State forest for scientific purposes similarly highlights the contribution that can be made within a co-ordinated national framework of reservation.

Finally forest policy must be guided by public opinion, which in turn must take note of professional forestry expertise and argument. It must not be unduly influenced by pressure groups, whether they be powerful commercial interests or unrelenting preservationists. There must be appreciation of other people's points of view, a weighing up of these viewpoints, and reconciliation to arrive at a policy of effective and harmonious use of our indigenous forests.