

# SOUTH WESTLAND

### RECREATIONAL RESOURCES OF SOUTH WESTLAND

"Let us keep a few spots in Westland, uncontaminated by the ordinary tourist, the picnicker and the photographic fiend, some almost impassable place where what is inside can be left to the imagination ... keep them for those who care to risk there necks and enjoy scenery in a state of nature."

Charlie Douglas, 1900 (quoted in "Mr Explorer Douglas")

#### 1.1. CHARACTER OF SOUTH WESTLAND

South Westland, for the purpose of this publication, is defined as that part of the West Coast of the South Island between the Hokitika watershed in the north and Martins Bay in the south.

This region is unique among the districts of New Zealand. It contains some of our most diverse land forms, unmodified forest (especially lowland), spectacular scenery and remaining wilderness. Until recent times much of it was inaccessible through the lack of any through roading system. Excepting Fiordland, it is the least populated region in New Zealand and, as a corollary, is one of the least modified through the activities of man. A combination of isolation and natural obstacles to development have ensured that future generations have many of their options still open for management of the natural resources of the region.

Another outstanding characteristic of the region is its remarkable pioneer history. It is a history of courage and privation, of settlers fighting to establish small communities in a land which, in the main, was highly unsuitable for human settlement. Immigrants have come and gone in their tens of thousands since the days of the

gold rushes and poorly planned settlements (1) in the 1860's. Apart from the agriculture established on the flood plains and low terraces of some major rivers, the local economies have been anything but stable. Gold, forestry, whitebaiting, meat-hunting, and even tourism have all failed, or are likely to fail, to achieve a sustained-yield economy. Nevertheless, the cultural heritage from these settlement attempts is a history rich in human endeavour. As such, this history has an important recreational characteristic. It has a valuable educational function for present younger generations and land use decision-makers who need to be reminded of the price of such ecological folly we may have to pay.

A third characteristic of the South Westland region is that, excluding the small areas of farmed flood plains, almost the entire area is vested in Crown control - either State forest or land administered by Lands and Survey Department (National Park, Reserve or unoccupied Crown Land). As such the opportunities for co-ordinated resource conservation are probably unparallelled in any other part of New Zealand.

#### 1.2. GENERAL RECREATIONAL VALUES OF REGION

Of paramount importance to the Federated Mountain Clubs of N.Z. (FMC) is the fact that these mountains, forests, rivers, lakes, swamps and coastlines are a natural asset and do not exist solely for the economic well-being of the West Coast. Because they are relatively unspoiled and very remote from any centres of population their value is primarily <u>national</u> not <u>local</u>. Basically it is much easier for people to travel to enjoy them in their natural state, than to process them for the consumption of the population at large.

Their management (except for the Westland National Park and the western part of Mt Aspiring National Park), overall has been one of benign neglect except for periodic intensive "noxious animal" control and recent efforts at sustained-yield logging of the terrace forests. Perhaps this low profile approach to management has been appropriate for the past decades but it is not coping with the rapidly increasing recreational and commercial (especially mining and tourist) pressures. An inventory of the recreational and wilderness resources of South Westland is long overdue, as it is for the rest of New Zealand. FMC have recognised this need and this conservation plan is based on FMC's "broad brush" assessment of the recreational value of the mountains and coastal lands of New Zealand(2). Recreation and biota conservation are a necessary part of any comprehensive land use plan for lands of the Crown - a plan which FMC hope will be developed with all due concern by the New Zealand government.

## 1.3. FMC's OBJECTIVES IN THE MANAGEMENT OF THE FORESTS AND MOUNTAINS OF SOUTH WESTLAND

- 1. To preserve the outstanding wilderness character and recreational value of South Westland.
- Where warranted, to develop the recreational resources of some regions to a degree which does not significantly detract from the overall natural character of the forests, mountains and coastline.

The tenor of these two objectives is clearly that of preservation of the forests of South Westland, which are still largely unmodified by man. However, it will require sound management to achieve these objectives and FMC fully support the following aspects of the Indigenous Forestry Policy(3) which deal with zoning for multiple use.

"Indigenous forests are able to fulfil a wide range of desirable public uses. There is little conflict between alternative uses if public 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 of value will generally decrease others. Multiple uses in the sense of maximising all of the uses or values in any one area of forests 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 recognised 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".

Because of the previously discussed isolation and rugged terrain of South Westland, it is preferable that indigenous production forestry (by selection logging) should be limited to State forests north of the Okarito River. The overwhelming use of the forests south of the Okarito should be for water and soil conservation, recreation, preservation of scenery and wilderness, and the preservation of indigenous flora and fauna. Many of these uses are compatible 'multiple-uses" although recreational hunting will be influenced by introduced animal control at a level dictated by sound soil and water conservation.

#### 1.4. Some Zoning Definitions

There are four recreational zonings used in the following discussions of the recreational resources of the West Coast:

- wilderness
- natural area
- recreation area
- multiple use

These zones are fully outlined and defined in the FMC document outlining the methodology of the "FMC Recreational Plan" study(2); they form a continuum within the total outdoor recreation resource and their attributes are summarised in Figure 1.

In practical terms, however, it is necessary for the users of these recreational resources to translate these zonings (which are value based) into appropriate tenures and resource management strategies. While this may not be necessary for much of New Zealand, it is very important to outline fairly specific conservation strategies for the West Coast, in view of acute conflict between the local and national interests in the preservation of these natural areas.

Consequently in the following sections covering different regions of the West Coast these four zonings are generally translated into 3 specific resource conservation strategies - national parks, State forest parks and wilderness areas. Where more information is required, or a specific management strategy is not immediately obvious or necessary, the status quo is generally recommended in the interim. For example, some of the maps only show a natural area zoning without a committment to a national park, State forest park, or reserve, etc. at this stage. This zoning highlights the important recreational values of such a natural area and generally implies further refinement of a number of strategies to achieve the protection of the many values of the area concerned.

The following sections, 1.5 to 1.7, discuss the concepts of <u>national parks</u>, <u>State forest parks</u> and <u>wilderness</u> areas, their definition and function on conserving recreational resources through either preservation or multiple use.

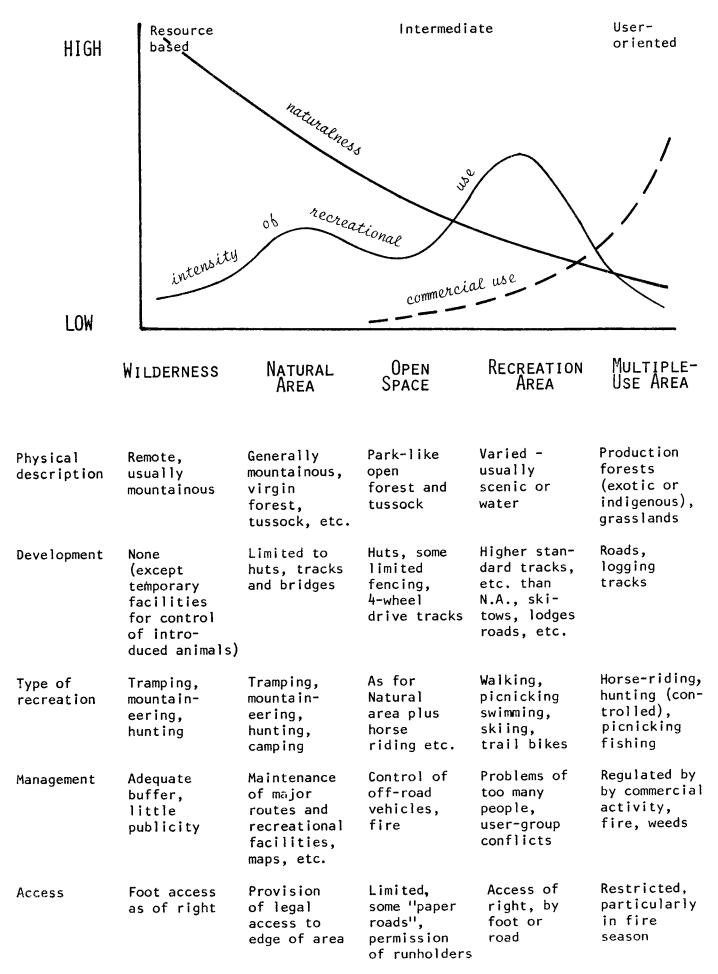
Sections 1.8 and 1.9 outline the efforts of government, during the past three years, to achieve a pattern of land use in South Westland which satisfies the demands of New Zealanders for both protective and productive

uses of the regions resources. Studies discussed in these two sections are all steps in achieving the desired compromise between conflicting uses - and users. This present document, a conservation plan for the outdoor recreation resources, is also a step in this planning process offering detailed recreational prescriptions and recommendations on the sub-regions of North and South Westland in the following chapters.



Five Mile township about 1867.

FIGURE 1. RECREATION RESOURCE CONTINUUM (15)



#### 1.5. NATIONAL PARKS

"for the purpose of preserving in perpetuity as national parks for the benefit and enjoyment of the public, areas of New Zealand that contain scenery so beautiful or unique that their preservation is in the national interest".

The tenor of the Act is clearly one of preservation in the national interest; the 10 New Zealand Parks conform, in general, to the strict "New Delhi" definition of a National Park used by the International Union for the Conservation of Nature and Natural Resources (IUCN). The selection criteria for these 10 parks have been essentially physical in character and have been strongly influenced by historical patterns of land use(4). This has resulted in a network of primarily mountainous National Parks, since most of lowland New Zealand (except for parts of the West Coast) has been so modified by settlement that it no longer meets the stringent criteria for national park status.

Yet "Parks are for people" and the preservation/use conflict has recently become more acute. FMC certainly support the preservation ethic even though this may mean some restrictions on the recreational activities of mountain club members. In the long term, FMC member clubs interests and those of all New Zealanders are best served by subordinating the wishes of individual users to the over-riding need for management to preserve the Park in its natural state. The dilemma has been well stated by Mr P.H.C. Lucas, previous Director of National Parks and Reserves (5):



Beach Near Murphys Creek

"In New Zealand the quidelines for management of parks and people are clearly stated in the legislation which endeavours to resolve the parks. people and preservation paradox by placing preservation first. The National Parks Act says that "the public shall have freedom of entry and access to the Parks .... such conditions as may be necessary for the preservation of the native flora and fauna or for the welfare in general of the Parks". The purpose of the Act is the preservation of national parks in perpetuity "for the benefit and enjoyment of the public". Public benefit and enjoyment is qualified by saying that freedom of entry and access is "so that they may receive in full measure the inspiration, enjoyment, recreation and other benefits that may be derived from mountains, forests, sounds. lakes and rivers". This is taken to reinforce the concept that national parks are places to which Man may come on Nature's terms; they are not locked away from people but they are not all things to all men. They are not recreation resorts but places where people may resort for recreation."

Because our National Parks are of such a high standard, any further areas considered for the system should be of the same standard. Fairly rigid criteria exist for evaluating additional areas for inclusion(6) but it was accepted by the National Parks Authority in 1975 after the "Kaimai National Park" controversy that there were many further areas of New Zealand worthy of evaluation as potential National Park. Currently, the Lands and Survey Department are surveying 15 such areas with national park potential, 3 of them in South Westland.

FMC believe that there are areas in South Westland which fit into this "potential National Park" category, since they conform to the present strict criteria for National Parks. Major extensions to both Mt Aspiring and Westland National Parks are recommended in later Chapters.

#### 1.6. STATE FOREST PARKS

State Forest Parks were first legislated by an amending Act in 1965, although many State Forests (such as Tararua) were de facto Parks long before that time(7). Under Section 63A of the Forests Act 1949 they are areas of State Forest set apart as Parks ".....for the purpose of facilitating public recreation and the enjoyment by the public....". Like all State Forests they are intended to be managed according to multiple-use principles. In the main, however, timber production has been only a minor feature of forest use in most indigenous Forest Parks to date. Since the "Park" designation recognises recreation as one of the most important uses of the forest, FMC have come to place great value upon the State Forest Park network (now numbering at least 15 gazetted or "approved in principle"). Preservation, unlike in the National Parks, is not the prime management criterion although it is still very important and FMC believe that Forest Parks should be maintained ".... as near as possible in a natural state ... for the quiet enjoyment of the forest by the public". (8) One important distinction for the recreational hunter is that introduced animals must be controlled to a level dictated by the needs of the forest rather than exterminated as required in a National Park. In fact, recreational hunting is likely to be sufficient to control introduced animal levels in many parts of our Forest Parks in future.

Another feature distinguishing our present Forest Parks from National Parks is that, in general, they do not contain such distinctive scenery as in National Parks. While they include considerable areas of sub-alpine tops (often badly eroded) they contain little of a high alpine nature. This qualitative difference is counter-balanced, however, by their strategic importance for recreational opportunities close to urban areas. Furthermore, the value of the complementary management of Forest Parks with adjacent National Parks has often been pointed out (9,10) and recently adopted as a principle of indigenous forest management by the N.Z. Forest Service and government (3).

many regions a Forest Park will form a valuable buffer to a National Park.

There is one region recommended for State Forest Park status in South Westland:

- Martins Bay / Cascade State forest (in part),

#### 1.7. WILDERNESS

New Zealand does not have a Wilderness System like that developed in the U.S.A. Our Parks have not evolved in response to clearly articulated public recreational needs (4). Rather, public preference for recreation is a matter of considerable debate, with little but empirical information. However, the New Zealand public probably want a spectrum of recreational experiences, ranging from passive to active enjoyment of the outdoors (10) - urban parks and picnic areas, public beaches and lakes, Walkways, Forest and National Parks, wild rivers - and wilderness. New Zealand is well endowed with wilderness but it is decreasing rapidly through the combined impact of agriculture, forestry, tourism, mining, hydro-electricity development, roading and recreational development(11). Once lost, it is very difficult to restore (11,12).

The wilderness experience is difficult to put into words. It will appeal to only a limited, adventurous section of the population but this appeal is increasing rapidly in New Zealand as a higher proportion of the population becomes urbanised and seeks periodic escape to solace and spiritual satisfaction in primitive areas. The demand for the wilderness experience is growing rapidly in North America and it will become more popular here also(12).

The place of wilderness areas in New Zealand's National Park and State Forest system is far from clear at this time. "Wilderness areas" can be designated under the National Parks Act 1952, the Forests Act 1949 or the Reserves Act 1977, but there is no such thing as a co-ordinated wilderness preservation strategy or a Wilderness Preservation System as in the U.S.A.(13).

First, the preservation ethic of National Parks is quite appropriate for the protection of wilderness - if such an area were in the park. But this is not always so, since many important wilderness areas in New Zealand have not fitted the "scenic grandeur" category necessary for a National Park. It must be emphasised that outstanding scenery is not necessary synonymous with wilderness. Some areas such as parts of Westland N.P. are excellent wildernesses but most of those zoned in other National Parks (except Fiordland and Aspiring) are either too small or fragile.

Second, wilderness is a very specific and restrictive land use; as such, it is doubtful whether it is philosophically compatible with the multiple-use concept used in the management of State Forest Parks. For instance, in the U.S.A. the Wilderness Preservation System is generally administered by the U.S. Forest Service, but has been withdrawn from the National Forest System - partly because "multiple-use" management is not very compatible with wilderness.

The recent Ministerial deferral of the proposal of the NZFS for an 83,000 ha wilderness area in N.W. Nelson State Forest Park is a salutory lesson in the difficulty of achieving preservation in the "multiple-use" State Forest System in New Zealand(13). (see section 10.5.1.) Sadly, the N.W. Nelson initiative of the NZFS makes a very sorry comparison with the remarkable wilderness evaluation efforts of the U.S. Forest Service who have recently published an inventory of 2686 "roadless areas" with a cumulative land area of over 25 million hectares!(13)

Third, the plain fact of the matter is that many of our remaining areas of wilderness just do not lie within either National or Forest Parks. In the main they are crown-owned, usually State Forest or Unoccupied Crown Land. This is certainly the case on the West Coast. However, it is possible - and extremely important - to now delineate those areas of wilderness. The criteria would be similar to the four used in the U.S. Wilderness Act 1960:

"A wilderness, in contrast with those areas where man and his own works dominate the landscape, is ... where man himself is a visitor who does not remain... an area of undeveloped Federal land retaining its primeval character and influence, without permanent improvements or human habitations, which is protected and managed so as to preserve its natural conditions and which (1) generally appears to have been affected primarily by the forces of nature, with the imprint of man's work substantially unnoticeable; (2) has outstanding opportunities for solitude or a primitive and unconfined type of recreation; (3) has at least five thousand acres of land or is of sufficient size as to make practicable its preservation and use in an unimpaired condition; and (4) may also contain ecological, geological, or other features of scientific, education, scenic, or historic value."

The most common definition of a wilderness area in New Zealand is that devised by the National Parks Authority:

"An area whose predominant character is the result of the interplay of purely natural processes, large enough and so situated as to be unaffected, except in minor ways, by what takes place in the non-wilderness around it. In order that the enjoyment of a completely natural unspoilt environment may be experienced, access to and within a wilderness area will be by foot only ..."

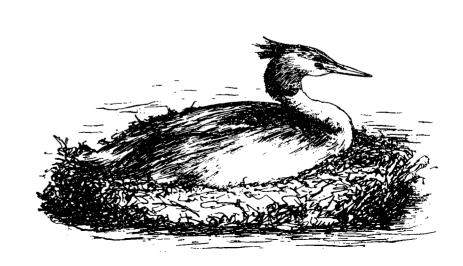
The N.P.A. definition of a wilderness area adequately expresses, in general terms, the three main criteria of wilderness:

- (a) primeval nature of the landscape (i.e. little impact from man),
- (b) opportunity for solitude and primitive recreation,
- (c) sufficiently large and distinct geographical unit.

In addition "so situated" implies "remoteness" or some form of buffering by surrounding tracts of land which can serve to filter out other forms of outdoor recreation which are not compatible with wilderness.

To assist in achieving this more rigorous definition of "wilderness areas", I believe that it is important to make a distinction between "undeveloped areas" and "wilderness areas".

An undeveloped area is simply a part of the resource which is not developed for recreation by way of hutting, bridging and tracking. There need be no minimum size and most would generally be small catchments. In practice the bulk of the "natural area" zone (or the "natural environment" zone of both the N.Z. Forest Service and the N.P.A.) would be undeveloped but would have corridors of development (tracks) running through them. The NZFS have now recognised this need for undeveloped areas by instituting the "remote experience" zone in their new zoning policy (14).



CRESTED GREBE - Nesting

In contrast, a wilderness area, while undeveloped, will also have to meet minimum criteria, especially of size and remoteness. I have discussed these two criteria in more detail (13,15) and proposed that most areas should be of at least 20,000 hectares as well as surrounded by an even larger buffer of predominantly natural landscape. The exact size necessary will obviously depend upon the terrain since an area of as small as 2000 hectares of West Coast mountain and gorge country could constitute a very viable wilderness area if adequately buffered. From a mountaineer's point of view linear distance or size could be misleading; time is a much more accurate measurement appropriate to travel in a wilderness area. Consequently, I would propose a minimum of two full days travel to cross a wilderness area - without the aid of huts, tracks, bridges, airstrips, etc. Ideally, at least one days travel through the buffer zone ("natural area" or "open space") would also be necessary to achieve the minimum criteria for wilderness.

In summary then, wilderness is difficult to define. It has two main components:

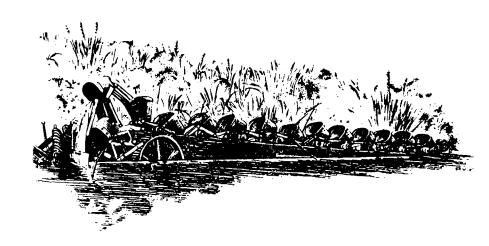
- (i) a subjective "wilderness experience" which depends upon the individual's "state of mind" and can be obtained in a wide range of undeveloped zones but is unlikely to be found in Hagley Park, and
- (ii) a "wilderness resource" which should be capable of more rigorous definition as either an "undeveloped area" or a fully-fledged "wilderness area".

As far as South Westland is concerned there are four important areas of wilderness:

- (a) "Adams Wilderness" (Waitaha, Poerua and part Waitangi S.F's plus U.C.L.)
- (b) "Hooker Wilderness" (U.C.L. with small portions of Paringa and Mataketake S.F's);
- (c) "Olivine Wilderness" (the existing Olivine Wilderness of Mt. Aspiring National Park plus

parts of the proposed westward extension of the Park;

(d) "Waiototo Wilderness" (Mt. Aspiring National Park).



Abandoned dredge at Five Mile Beach.



Seal, Awarua Point, South Westland.

Les Molloy

#### 1.8. South Westland Land Use Study

The conflicting public attitudes towards the future of the forests of South Westland - preservation or utilisation - came to a head during 1976. The initial focus was the campaign of the Native Forests Action Council and other conservation organisations to have the Okarito Lagoon and Southern Okarito State Forest and Waikukupa State Forest incorporated within an extended Westland National Park. This view was strongly resisted by the N.Z. Forest Service and the indigenous timber industry of South Westland.

In June 1976, the Minister of Lands and Forests set up a joint NZFS/Lands & Survey Department study team to report on the best future use of the Crown Lands of the region. Their report, the South Westland Land Use Study(16), was subsequently released at the June/July 1977 Hokitika forestry seminar. It is a most important document which, unfortunately, has been largely ignored in the fast moving series of forestry-related events over the past two years.

The study made some very pertinent observations and recommendations concerning outdoor recreation in the region but it also suffered from a minor deficiency - which was acknowledged with regret in the report by the authors:

"The major emphasis of this study is on the area west of the alpine fault as it is these lowland forest areas which are the subject of most conflict and it has proved impossible to study the alpine areas in the depth necessary for final decisions in this area, although some comments and recommendations are made" (16).

In the lowlands the Study team recognised three broad recreational zones:

- coastal
- lowland forest
- highway corridor (S.H.6).

By using a multi-point scoring system for assessing the different recreational attractions, the three zones (coastline, forest and highway) were given three rankings which were illustrated on a map of South Westland. However, the landscape tracts ranked were very large and the Study's recreational findings were noticeably non-specific. In fact, the Study team could not bring itself to make any detailed prescriptions for recreation or

"... identify specific areas for it (recreation) on the recommended land use map" (16).

Instead, the Study considered that the proper blend of protective and productive land uses proposed would give ample scope for a "balanced range of recreational opportunity". Just how this balance is to be achieved is not spelt out but presumably the State Forest portion of it will be via the NZFS South Westland Forest Management Plan which is in preparation.

Although the Study seems to have been overly influenced by the NZFS recreation philosophy prevailing at that time (i.e. in considering recreation of secondary importance in zoning because of its "overlying nature"), it does, nevertheless, make a number of general conclusions well worth endorsing. For instance:

"A fundamental characteristic of the study area is that virtually all the land within it has value or significance for recreation, the exception being the private farmland on the valley floors, although even this adds to the scenic variety of the area and is thus relevant to recreational driving "(16).

"An essential overall consideration in recreational management of all land in South Westland is that no recreational facilities should be developed unless their need is proven and shown to be environmentally sound, and that all recreational development must be compatible with the intrinsic qualities and other uses of the land "[16].

#### 1.9. WEST COAST FOREST POLICY 1978

Subsequent to the June/July 1977 Hokitika Forestry Seminar and the consideration of 269 submissions from the public, the Minister of Forests released government's West Coast Forest Policy(17) in August 1978. The policy proposed five specific management objectives for South Westland, viz:

- management of podocarp forests for sustainedyield in perpetuity;
- (ii) selective-logging of terrace-forests;
- (iii) logged hill country to be restocked by replanting native trees if necessary;
- (iv) preferably podocarp sawlogs of South Westland would not be available for North Westland mills;

(v) sufficient exotics will be established to supplement the indigenous cut.

For that part of South Westland between the Hokitika catchment and the Cook River, the Policy placed four proposed ecological reserves under logging moratorium while an Officials Committee investigated the socioeconomic impact of such preservation (see Chapter 6.3. for fuller details). The four areas are:

- Saltwater (1971 ha surrounding Hikimutu Lagoon);
- Oroko Swamp (192 ha flax swamp north of Lake Wahapo);
- South Okarito (8892 ha between Okarito Forks road and Waiho River);
- Waikukupa (13,207 ha between Waiho and Gillespies Road).

Curiously enough, the N.Z. Forest Service have proposed no amenity reserves in this region and it must be assumed that the important scenic and recreational features in these State forests require further study along with those south of the Cook River:

"The forests in that part of South Westland south of the Cook River will not be milled during this period. This region will be investigated more intensively with a view to delineating reserves and production forests, and assessing their social, economic and environmental impact in relation to the total land use pattern, by 31 March 1980."

(West Coast Forest Policy 1978, item 3)

Consequently, decisions can be expected on the important Okarito/Waikukupa and Saltwater national park/reserve proposals sometime after 31 March 1979 but for the rest of the State forests of South Westland a decision awaits more investigation of their productive potential and their scenic, scientific, recreational and historic

values. In the following chapters (2 - 5) on South Westland the recreational value of the forests, mountains, lakes and coastlines is outlined and a case for the conservation of these recreational resources is presented.

#### REFERENCES

- (1) See books by May, Nolan, MacKenzie, and Roxburgh in list of "Recommended further reading".
- (2) MOLLOY, L.F. 1976: An outline for an assessment of the Recreational Value of the New Zealand Outdoors. Federated Mountain Clubs of N.Z. Inc., P. O. Box 1604, Wellington. 16 pp.
- (3) N.Z. FOREST SERVICE, 1977: Management Policy for New Zealand's Indigenous State Forests. 15 pp.
- (4) MOLLOY, L.F. 1972: Conservation in the Wilderness. N.Z. Alpine J. 25: 89-93.
- (5) LUCAS, P.H.C. 1974: "Planning and the Recreational Challenge". J. T. Stewart Planning Lecture No. 8, Manawatu Branch, N.Z. Geographical Society, Massey University, Palmerston North.
- (6) NATIONAL PARKS AUTHORITY, 1978: New Zealand's National Parks: National Parks Authority General Policy. National Park Series No. 9.
- (7) HEINE, A.J.; MOLLOY, L.F. 1978: Forest Parks in New Zealand an evolving concept. Environment 77 Conference Proceedings (Ed. P.H. Gresham) 8: 23-32.
- (8) FEDERATED MOUNTAIN CLUBS OF N.Z. 1978: Policy Statement on Forest Parks. 12 pp.

- (9) McKELVEY, P.J. 1973: Forest Recreation and National Parks. Paper delivered to the National Park Policy symposium, Lincoln College. 27 pp.
- (10) MOLLOY, L.F. 1974: Public Use and Enjoyment of Indigenous Forests. Forestry Development Conference Wellington. 41 pp.
- (12) MASON, B. J. 1975: Back Country Boom. National Park Series 1975/2. National Parks Authority. 34 pp.
- (11) MOLLOY, L.F. 1979: Wilderness diminishing. <u>N.Z.</u> Alpine J. 29: 65 75.
- (13) MOLLOY, L.F. 1979: Recent government decisions on Indigenous State Forests. N.Z.J. Forestry 24(1): (in press). Also: The role of State Forests in a New Zealand Wilderness System. N.Z.J. Forestry 24 (1): (in press).
- (14) N.Z. FOREST SERVICE. 1978: Revised zoning and classification of State forest land. 11p.
- (15) MOLLOY, L.F. 1978: Wilderness preservation in New Zealand. Environment 77 Conference Proceedings (Ed. P.H. Gresham) 8: 6 16.
- (16) WILKINSON, G.B.; GARRATT, K.J. 1977: South Westland Land Use Study . N.Z.F.S. / L & S. 173 pp. (+ maps and appendices.)
- (17) N.Z. FOREST SERVICE, 1978: West Coast Forest Policy. 8 pp. (+ maps).

#### RECOMMENDED FURTHER READING

#### SOUTH WESTLAND IN GENERAL

#### VEGETATION:

Chavasse, C.G.R. 1962: Forests, soils and landforms of Westland, N.Z.F.S. F.R.I. Info. Series 43, 14 pp.

Holloway, J.T. 1954: Forests and climates in the South Island of N.Z. Trans. Royal Society N.Z. 82: 329 - 410.

Wardle, P. 1974: The Kahikitea (<u>Dacrycarpus</u> dacrydioides) forest of South Wesland. <u>Proc. N.Z.</u> Ecological Soc. 21: 62 - 71.

#### INTRODUCED WILDLIFE:

Challies, C.N. 1974: Trends in Red Deer population in Westland forests. Proc. N.Z. Ecological Soc. 21: 45 - 50.

Sutherland, L. 1965: A guide to Westland. N.Z. Wildlife 13: 14 - 29.

Wardle, J.; Hayward, J.; Herbert, J. 1973: Influence of ungulates on the forests and shrublands of South Westland. N.Z.J. Forestry Science 3: 3 - 35.

#### EXPLORATION HISTORY:

May, P.R. 1962: West Coast Gold Rushes. Pegasus, Chch. 559 pp.

Nolan, A. 1975: West Coast Gold Trails. Reeds. 88 pp.

Pascoe, J.D. Ed., 1957: Mr Explorer Douglas. Reeds, Wn. 131 pp.

Pascoe, J.D. 1971: Exploration New Zealand: Reeds, Wn.: 75 - 139.

#### RECREATION:

#### (a) Mountaineering:

A vast amount of information on mountaineering in South Westland is contained in the volumes of the N.Z.A.J., Canterbury Mountaineer, Tararua Tramper, and other club journals. Most of these are too detailed to list here but can be obtained from an index of each of these journals.

Kennedy, L.D. 1977: Moir's Guide Book: Northern Section. N.Z. Alpine Club. 103 pp.

Molloy, L.F. 1976: Wilderness Diminishing. N.Z.A.J. 29: 65 - 75.

Wilkinson, G.B.; Garratt, K.J. 1977: Chapter 7 on Recreation, South Westland Land Use Study . N.Z.F.S./L. & S.: 110 - 143.

#### (b) Hunting:

Harrison, A.R. 1965 - 1968: The Wanaka - South Westland Red Deer Herd. N.Z. Wildlife 13 - 22: (various articles).

Sutherland, L. 1970: Hunting in Westland. Reeds, Wgton . 96 pp.

#### (c) Canoeing:

Egarr, G.D.; Egarr, J.H. 1978: Westland Canoeist's Guide. N.Z. Canoeing Association, Inc. 100 pp.

#### CONSERVATION: (including recreation):

Federated Mountain Clubs of N.Z., 1977: Submission to Minister of Forests on "The Future of West Coast Forests and Forest Industries". 12 pp.

McSweeney, G. 1978: New directions for New Zealand's National Parks. Habitat 6 (6): 12 - 17.

Native Forest Action Council, 1977: The Future of the West Coast Forests . 57 pp.

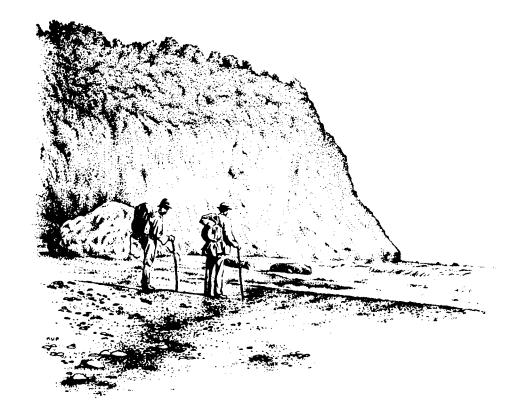
#### RESOURCE PLANNING: (especially Forestry):

Mutch, A.R. 1965: A prospector's guide to South Westland N.Z. D.S.I.R. Info. Series 44, 12 pp. (+ map).

N.Z. Forest Service, 1959: Westlands Wealth. N.Z.F.S. Info. Series No. 29. 70 pp.

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