

NOMINATION TO THE WORLD HERITAGE LIST

Convention concerning the Protection of the World Cultural and Natural Heritage

Name: FIORDLAND NATIONAL PARK

Identification No: 376

Date received by WH Secretariat: 31.12.85

Contracting State Party having submitted the nomination of the property in accordance with the Convention: NEW ZEALAND

Summary prepared by IUCN (April 1986) based on the original nomination submitted by New Zealand. This original and all documents presented in support of this nomination will be available for consultation at the meetings of the Bureau and the Committee.

1. LOCATION:

Lies in the southwestern corner of South Island of New Zealand and includes the Solander Islands in Foveaux Strait. Along the coast, the boundary extends to the mean high-water mark. 44°19'-46°35'S, 166°26'-168°14'E.

2. JURIDICAL DATA:

Parts of Fiordland were first reserved for recreational purposes in 1889. Set aside, under the name of Sounds National Park, for national park purposes in 1904. Formally constituted a national park with the enactment of the National Parks Act in 1952 and, in 1955, renamed Fiordland National Park. Current size: 1,252,378 ha.

3. IDENTIFICATION:

Lying on the Alpine Fault, which marks the boundary between the Pacific and Indo-Australian tectonic plates, Fiordland is one of the most seismically active regions in New Zealand. The Solanders are volcanic islands, generated about one million years ago by the consumption of oceanic crust along the plate boundary. Mountains rise abruptly from the ocean on the west coast, with summits ranging from 1,100m in the south to 2,746m (Mt Tutoko) in the north where uplift has been greatest. Marine terraces in the south coast record the succession of high sea levels during interglacial episodes superimposed on a tectonically rising land mass. Pleistocene glaciations have had obvious effects on the landscape. Glacial valleys in the west are now flooded by the sea to form fiords of which there are 14 up to 44km long and 500m deep. Mitre Peak in the north rises 1700m above Milford Sound and perhaps is the world's highest sea cliff. The southern fiords are longer and characteristically broader in their outer reaches, where there are numerous hummocky islands. Small glaciers up to 3km long still exist in the higher mountains (above 1900m) of northern Fiordland and in the east the lower valleys have been filled by a string of large lakes up to 458m deep. Numerous waterfalls, including Sutherland Falls, among the world's highest at 580m, plunge over the lips of hanging valleys or cascade down mountain faces. Glacial landforms are very well preserved, the strong crystalline rocks having resisted erosion. Rocks are predominantly metamorphic with igneous intrusions. Soils are generally low in fertility, having a sandy to stony loam composition. Strong westerly winds, which travel unobstructed across the Southern Ocean and Tasman Sea until reaching the mountain barrier, are responsible for the vigorous wet climate. Mean annual precipitation at sea level in Milford Sound is 6200mm, with rain falling on about 200 days distributed throughout the year except for a significant winter minimum.

About two thirds of the park is forested. The tree-line, at 850-1000m, is low for the latitude owing to low summer temperatures. Forests have the complex multi-tiered structures characteristic of rain forests. The southern beeches, silver beech or mountain beech are generally dominant throughout the altitudinal range but slow-growing podocarps up to 800 years old are important below 300m. There is a great variety of coastal environments, including forested sand dunes and estuarine flats, and also lacustrine habitats. Johnson (1979) lists 25 species of rare and endangered plants, 22 species endemic to the park and 21 species having very restricted distributions centred on Fiordland.

The fauna of Fiordland include only one native mammal (a bat) and a number of marine mammals including about 50,000 fur seals. Introduced mammals include stoat, brush-tailed possum, red deer, wapiti (the only wild herd in the southern hemisphere), chamois, pig, goat and rats. The avifauna includes many of New Zealand's less common endemics, such as rock wren, blue duck, brown teal, southern crested grebe, yellowhead, yellow-crowned parakeet, brown kiwi and Fiordland crested penguin. Threatened species include the kakapo, the world's largest parrot, and takahe, a large rail. Invertebrates are poorly known but include numerous locally endemic species. The combined phenomena of gigantism and melanism, which appear to be associated with the wet climate, is a feature among insects, notably moths, stone-flies and some beetles. New species of insects are still being discovered, especially on Secretary and other islands. Dell (1955) lists 33 species of land snail and there are others, which are endemic but undescribed.

Cultural values include a number of ancient Maori occupational sites and evidence of Captain Cook's visit in 1773.

4. STATE OF PRESERVATION/CONSERVATION:

Management is in accordance with the General Policy for National Parks formulated by the National Parks and Reserves Authority, Fiordland National Park By-laws 1981 and Fiordland National Park Management Plan, which was prepared in 1981 and is currently under review. As far as possible, native plants and animals are to be preserved and introduced species exterminated. The public have freedom of entry and access, except in the case of four specially protected areas to which entry is by permit only if circumstances warrant. There is no human permanent population within the park, which is serviced by the towns of Te Anau and Manapouri just outside its boundary.

Some 450,000 people annually visit Fiordland. The main season is from mid-November until the end of March, with most tourism concentrated around Te Anau and Milford Sound. There are hotels at Manapouri, Milford Sound and at Te Anau.

The greatest management problem has been the deliberate and accidental introduction of browsing and predatory mammals to an environment where previously there were none. Among browsers, red deer and wapiti have had the most impact but the vegetation has been recovering well since commercial hunting from helicopters was begun in about 1975. Of the predators, rats have been most responsible for the severe decline in bird populations and the extinction of several species. Water draining from the eastern side of the park in Te Anau and Manapouri lakes is diverted through a 700MW underground power station and discharged via a 10km long tailrace tunnel into the sea at Deep Cove, Doubtful Sound. Lake levels are carefully managed within their natural range to minimise ecological disturbance. A proposal to export fresh water from the tailrace in Deep Cove, using floating moorings and large

tankers, was withdrawn following an environmental impact audit undertaken by the Commission for the Environment in 1984. However, there remains the possibility of approval being given to such a scheme with environmental safeguards.

Staff include one Chief Ranger, one Assistant Chief Ranger, three Senior Rangers, five Rangers, three office staff and 33 Park Assistants (1985).

5. JUSTIFICATION FOR INCLUSION ON THE WORLD HERITAGE LIST:

The Fiordland National Park nomination, as presented by the Government of New Zealand provides the following justification for designation as a World Heritage property:

a) Natural property

- (i) Earth's evolutionary history. Fiordland National Park provides a dramatic example of the effects of Pleistocene glaciation in a southern hemisphere coastal setting. The ancient beech-podocarp forests also contribute to the story of Gondwanaland prior to its breakup in the Mesozoic era.
- (ii) Ongoing geological processes. Fiordland National Park lies on the Alpine fault tectonic plate boundary where the Pacific Plate meets the Indo-Australian plate. Fiordland's endemic wildlife and forests provide a classic case study of the effects of physical isolation. Man's effects on such an isolated environment through introduction of browsing and predatory animals illustrates the ecological effects of such disruptions.
- (iii) Exceptional natural beauty. Fiordland's fiords, glacial lakes, waterfalls and rocky coast are superlative examples of these natural features.
- (iv) Habitats for rare and endangered species. Many rare and endangered species survive in the park, most notably the takahe.

376 FIORDLAND NATIONAL PARK (NEW ZEALAND)1. DOCUMENTATION:

- (i) IUCN Data Sheets
- (ii) Consultations: New Zealand Government Authorities, J. Marsh, C. Burns, R. Cahn, W. Neilson.
- (iii) Literature consulted: Draft Interpretation Plan, Fiordland National Park Management Plan, Deep Cove Water Export Environment Impact Study.
- (iv) Site visit: January 1986.

2. COMPARISON WITH OTHER AREAS

Fiordland is the largest National Park in New Zealand and is distinct from all others in that country in terms of its size, landscape type and species composition. There is nothing comparable in Australia. In other parts of the world (Chile, North America and Norway) fiord landscapes are found. Comparable sites which have protected area status are the Alaska Peninsula National Wildlife Range, Glacier Bay National Park, the Kenai Fjords National Park, and the Kodiak National Wildlife Refuge, and the Gros Morne National Park, Auyuittuq National Park in Canada and North-East Greenland National Park. All of the above are in the Northern Hemisphere but have equally spectacular physical settings with vertical sea cliffs, waterfalls and remnant glaciers in the headwater regions. The fiords of Fiordland National Park, however, are much more covered with natural vegetation of a totally different species assemblage. In terms of its Gondwana flora and endemic fauna the only comparable site is found in Chile's Bernardo O'Higgins and Laguna San Rafael National Parks.

3. INTEGRITY

Management programmes in Fiordland are carried out by a highly competent staff and are generally at a high level. An annual budget of US\$600,000, a park staff of 45, and an active parks and reserves advisory board ensure that New Zealand's strict national park policies are effectively implemented. The management plan of 1981 is now being revised. The management of backcountry recreational activities (e.g. Milford and Routeburn Track walks) is particularly advanced and is a model for many other countries.

There are some localized tourism impacts at Milford Sound but these are to be rectified in a new development plan for the site.

The major management problem in the park is control over introduced species which have had a negative impact on the native flora and fauna. Intensive efforts are underway to control ungulate numbers and predators, particularly those that affect the takahe. The New Zealand Wildlife Service efforts have achieved notable success with the latter and further reductions of the competing non-native species are being considered. Expiry of domestic stock grazing leases in 1993 will provide an opportunity for these to be phased out.

The integrity of the park was compromised in the 1960s with the installation of a power station on Lake Manapouri within the park. Although large fluctuations in lake levels are not allowed, roads and power line construction as well as the power station have resulted in negative environmental and visual impacts. These disturbances are unfortunate and detract somewhat from the quality of the undisturbed natural values from this portion of the park.

A further proposal to export fresh water from the head of Deep Cove has been subject to an environmental impact study. The project has currently been withdrawn. There is no question that if this project were to proceed a major compromise of natural values in this fiord would occur.

Related to fresh water export issue is exclusion from the nomination of the waters of the fiords themselves which penetrate up to 44 km into the park. These waters are not under control of the park but are an integral part of the Fiordland ecosystem. There are also some indications from recent studies on the marine biology of the fiords that their natural values from an international perspective are at least equal to the terrestrial values. Control over the harvesting of the unique black coral resource in the fiords underlines the need to ensure that the fiord waters themselves be eventually considered for reserve status compatible with that of the surrounding land area.

4. ADDITIONAL COMMENTS

Inclusion of the Waitutu State Forest within the boundaries of Fiordland National Park is now being considered by the New Zealand authorities. This would add two glacial lakes, a marine terrace system and some important dense podocarp forest to the park and thus would be a welcome addition to the site.

5. EVALUATION

Fiordland National Park is one of the world's most outstanding national parks and merits inscription on the World Heritage List on the basis of all four criteria as presented in the nomination. The rationale for criteria (iv) can be further strengthened by the additional knowledge that 68 plant species occur in Fiordland that are either endemic, threatened or have very limited distributions centred on the park.

While there has been a loss of biological diversity since exotic species were introduced by Europeans, efforts are underway to maintain and re-establish the remainder. Some impacts exist from hydroelectric development and tourism, but given the total size of the park it still retains its predominant natural character.

6. RECOMMENDATIONS

Fiordland National Park should be inscribed on the World Heritage List. The Committee may wish to follow up on the following suggestions:

- Express concern over potential impacts of the water export proposal and request to be kept informed if this project is to be re-considered.
- Note the importance of the waters of the fiords as an integral part of the area and welcome initiatives to bring them under the control of the park authorities.
- Endorse the activities of the New Zealand Wildlife Service in its efforts to rehabilitate takahe habitat and restore population numbers.
- Register the possibility that if the Waitutu forest is added to the park it would also become an accepted part of the World Heritage Site.
- Encourage the New Zealand authorities to implement the land development plan for the Milford area.

