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## WORLD HERITAGE NOMINATION - IUCN TECHNICAL EVALUATION

### NEW ZEALAND SUB-ANTARCTIC ISLANDS (NEW ZEALAND)

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#### 1. DOCUMENTATION

- (i) IUCN/WCMC Data Sheet
- (ii) Additional Literature Consulted: Sanson, L.V. and P.R. Dingwall. 1995. Conservation Status of New Zealand's Subantarctic Islands. In Dingwall, P.R. ed. 1995. **Progress in Conservation of the Subantarctic Islands**. SCAR/IUCN. Department of Conservation. 1998. **Restoring the Dawn Chorus**. Strategic Business Plan. Davis, S.D. et. al. **Centres of Plant Diversity, Vol II**. IUCN/WWF. p. 5 16-518. Bibby, C.J. et. al. 1992. Putting Biodiversity on the Map: Priority Areas for Global Conservation. ICBP. Moos, P.J. ed. 1985. **Conservation of Island Birds** ICBP Technical Publication 3. Patenaude, N.J. and C.S. Baker nd. Population Status and Habitat use of Southern right whales in the subantarctic Auckland islands of New Zealand. In press.
- (iii) Consultations: 8 external reviewers, Dept of Conservation Officials.
- (iv) Field Visit: J. Thorsell, March, 1998 (to two of five island groups).

#### 2. SUMMARY OF NATURAL VALUES

The nominated site (NZSAI) consists of five island groups located in the Pacific Sector of the Southern Ocean off the south-eastern coast of New Zealand. Along with the Macquarie Island World Heritage site in Australia, the five islands form the only subantarctic island group in the region. The islands lie between latitudes of 47° and 52° south and include the Snares, Bounty Islands, Antipodes Islands, Auckland Islands, and Campbell Islands. Total land area is 76,458ha. The nomination includes a marine component extending 12nm from each island group. Highest altitude of 705m is found on the Auckland Islands. All islands are protected as National Nature Reserves and are State owned. The marine areas, except for Auckland Islands (which is a Marine Mammal Sanctuary) are managed under fisheries legislation. As the islands lie between the Antarctic and Sub-tropical Convergences, the seas have a high level of productivity.

The islands lie on the shallow continental shelf and three of the groups are eroded remnants of Pliocene volcanoes. Rivers are short with precipitous streams. The lakes are few and generally shallow and small. Quaternary glaciers have left shallow cirques, moraines and fjords on some islands. Cool equable temperatures, strong westerly winds, few hours of sunshine and high humidity prevail.

With the exception of the Bounty Islands which have no higher plants, the remaining islands together with neighbouring Macquarie Island, constitute a Centre of Plant Diversity and have the richest flora of all the Subantarctic islands. The Snares and two of the Auckland Islands are especially important in that their vegetation has not been modified by human or alien species. The terrestrial flora of the NZSAI comprises 233 vascular plants of which 196 are

indigenous, six endemic, and 30 are rare. Auckland Islands have the southernmost forests in the region, dominated by a species of myrtle. A particular floral feature of the islands are the “megaherbs” which contribute to rich and colourful flower gardens.

The NZSAI are particularly notable for the huge abundance and diversity of pelagic seabirds and penguins that nest there. There are 120 bird species in total including 40 seabirds of which five breed nowhere else. The islands support major populations of 10 of the world’s 24 species of albatrosses. Almost six million sooty shearwaters nest on Snares Island alone. There are also a large number of threatened endemic land birds including one of the world’s rarest ducks. 95% of the world’s population of New Zealand sealion (formerly known as Hooker’s sealion) breed here and there is a critical breeding site for the Southern Right whale. A number of endemic invertebrates also occur.

### 3. COMPARISON WITH OTHER AREAS

Currently, 21 islands or portions of islands are inscribed on the World Heritage list including three in the subantarctic: Gough, Heard and McDonald and Macquarie. The nomination documentation uses two previous IUCN comparative studies and provides a summary of how well the SAI of New Zealand rate within these regional overviews of the biogeographical province of Insulantarctica. In summary:

- the five NZSAI groups share the Southern Ocean with 15 other major oceanic island groups which are administered by five different countries;
- Insulantarctica is further divided into three sub-divisions of which the cool-temperate zone is the relevant one for the NZSAI (see map);
- the NZSAI are distinct from all the other groups in having the highest diversity of indigenous biota (plants and birds). In terms of numbers of birds, the NZSAI, when taken together, have the highest totals. Auckland Island is the only island in Insulantarctica listed by ICBP as one of the world’s 22 1 endemic bird areas;
- in terms of human disturbance, the NZSAI (except for portions of Campbell and Auckland) are much more pristine than other island groups in Insulantarctica;
- Moreover, if the IUCN Delphi panel analysis takes NZSAI as a group rather than individually, they would stand above the rest of the cool-temperate group for their biological values. Geologically, however, Macquarie is the most distinctive, and both the Gough and Heard Islands World Heritage sites would get higher rankings in terms of scenic values.

In summary, the NZSAI, taken together, are the most diverse and extensive of all subantarctic archipelagos. The five island groups of the NZSAI vary markedly in size, geology, landforms and climate but their main distinction is that they are the most significant site for seabirds in all of Insulantarctica. They also stand out for their diversity and numbers of endemic landbirds. flora and for their low level of human disturbance.

### 4. INTEGRITY

One of the strengths of the nomination is the application of legal, administrative and management systems in place to safeguard the habitats and species of the NZSAI. Each of

the five groups has been accorded the highest form of protection under New Zealand law - National Nature Reserves. Only one of the islands, however, has full protection of the surrounding marine area. Each of the islands has a management plan and a Conservation Management Strategy for all five is soon to be released.

Several of the NZSAI (Adams, Disappointment, Dent) remain in virtually pristine condition being rat and cat free and rarely visited by humans. The Antipodes group have undergone minimal transformation although sealers were once active there. Pigs, cats, mice and rats, however, do occur on the larger islands. Campbell's flora in particular was modified by an attempt at agriculture which failed in 1856. Sheep and cattle were subsequently introduced but the last few were eradicated in 1992. Rabbits and mice have been totally removed from Enderby and the degraded vegetation is steadily recovering. None of the NZSAI have been as adversely affected by human activity, however, as the Macquarie Island World Heritage site.

It is the intention of the New Zealand authorities as spelled out in the Strategic Business Plan and the Conservation Management Strategy for the NZSAI to eventually remove **all** alien species from the islands. This is a commendable goal which will take some years but will provide a model for oceanic islands elsewhere.

The measures in effect to protect the integrity of the marine component of the nomination are more problematical. Domestic commercial fishing in boats less than 43m length is allowed within 12nm of all the islands except Auckland. Longline fishing for Ling and Southern Bluefin Tuna is known to cause seabird mortality especially as the fishery around the Snares and Bounty islands occurs during the austral summer breeding season of the albatrosses. IUCN would suggest that a ban on long-line fishing within 12nm of all islands be considered. However, given the extensive foraging ranges of seabirds (particularly albatrosses and petrels) mortality will occur outside this range so all available mitigation measures (e.g. "tori" lines and night-setting) should be encouraged. Controls of fisheries by-catch are a major issue within the Convention on the Conservation of Antarctic Marine Living Resources (CCAMLR). (As the work of this Convention will also have implications on other World Heritage sites in the Southern Ocean, their Secretariat should be contacted and encouraged to take a special interest in this area.)

An additional problem in management of the marine area is the recent unexplained die-off of sealions around the Auckland Islands. Sealion mortality has also been associated with the squid fishery in the area and some conservation groups have suggested closure under the Fisheries Act.

Regarding this and other marine resource management issues, it should be recognised that New Zealand's Department of Conservation has very limited legal powers to control commercial harvesting in waters surrounding the islands. If World Heritage status for the NZSAI is given, the New Zealand Ministry of Fisheries should also be encouraged to address the issues relating fisheries by-catch and squid fishery impacts.

In conclusion, the condition of the terrestrial component of the NZSAI is good, and with actions underway to reduce the impact of alien species, it is improving. In the marine area, however, legal protection for four of the islands could be strengthened and a number of conflicts between commercial fisheries and wildlife need attention.

## 5. ADDITIONAL COMMENTS

### 5.1. Whales

Since the nomination was prepared, research on the status of the southern right whale population has been conducted. The findings show that both Auckland and Campbell islands are more important for recovery of this population than was previously thought. DNA analysis has also indicated that the NZSAI population is demographically isolated from those whales wintering along the south-west coast of Australia. These findings add further weight to the consideration of the area under natural criteria iv.

### 5.2. Relationships with Macquarie Island

As all reviewers have pointed out and as the IUCN Technical Evaluation of Macquarie also drew attention to, there are strong bioregional affinities between the NZSAI nomination and the Macquarie site inscribed in 1997. Indeed the Committee “encouraged the Australian authorities to consider for the future a renomination [of Macquarie] with the Subantarctic islands of New Zealand. . .” The nomination from New Zealand also states: “Given their overlaps in natural and cultural heritage values, it has been suggested previously that there could be merit in combining Macquarie and the New Zealand islands in establishing a single international World Heritage site.”

Although Macquarie is inferior in biological and in scenic terms and has suffered badly as a result of past human activity, its natural values do complement those of the NZSAI and it extends the gradient of climate severity and biotic impoverishment. IUCN suggests that if the NZSAI are inscribed that the Australian and New Zealand authorities be urged to agree to consider the six island groups as one transfrontier cluster World Heritage site.

### 5.3. Insulantarctic Islands

The islands of Insulantarctica form a ring around the Southern Ocean. With the proposed addition of the NZSAI to the World Heritage list (which already includes Gough, Heard and McDonald and Macquarie), it has led to the suggestion by IUCN’s Antarctic Advisory Committee that all the other natural islands in the subantarctic be accorded World Heritage status. Certainly South Georgia, Inaccessible, and Prince Edward and several of the Falklands (Malvinas) Islands would be worthy of consideration. Such a “constellation” of selected Southern Ocean islands as one World Heritage site may be a premature suggestion now but should not be discounted in the future.

## 6. APPLICATION OF WORLD HERITAGE NATURAL CRITERIA

The nomination of the NZSAI is made under all four criteria in a very thorough and clear document. Criterion iv is presented as the core justification with supporting reasons given under ii and iii.

Certainly the NZSAI are remarkable for their high level of biodiversity (for the biogeographic province), population densities, and for endemism in birds, plants and invertebrates. The justification for each island is strong and even more convincing for all five groups as a single unit. Although not specifically addressed in the nomination text, the

World Heritage status of Macquarie strengthens this conclusion. Although some species are at risk and have decreasing populations (especially some penguins, albatrosses and sealions) others are increasing (southern right whale) or are stable. The bird and plant life, especially the endemic albatrosses, cormorants, landbirds and “megaherbs” are unique to the NZSAI and are clearly of outstanding universal value under criterion iv.

The case for criterion ii is also strong for the pattern the islands display of immigration of species, diversifications and emergent endemism. Several evolutionary processes such as the development of loss of flight in both birds and invertebrates offers particularly good opportunities for research into the dynamics of island ecology. Human impacts are confined to the effects of introduced species at Auckland and Campbell islands but their ongoing eradication is leading to a recovery of the vegetation allowing evolutionary processes to continue. In the marine component of the nomination, however, there are some concerns regarding the negative impact that commercial fisheries are having on wildlife and concern should be expressed by the Bureau.

Like all southern islands the NZSAI possess some wild natural landscapes but they are not considered superlative compared to elsewhere. Similarly, the geological features are interesting but not sufficient to qualify under criterion i.

## 7. RECOMMENDATION

That the- Committee recommend the New Zealand Subantarctic Islands nomination be inscribed under criteria iv and ii.

IUCN suggests that the Committee compliment the New Zealand authorities for submitting a model nomination but at the same time express concern over several issues relating to marine resources as discussed above. The Committee may also wish to consider inviting the New Zealand and Australian governments to continue to liaise over incorporating Macquarie and the NZSAI as one single World Heritage site in this section of the Southern Ocean.

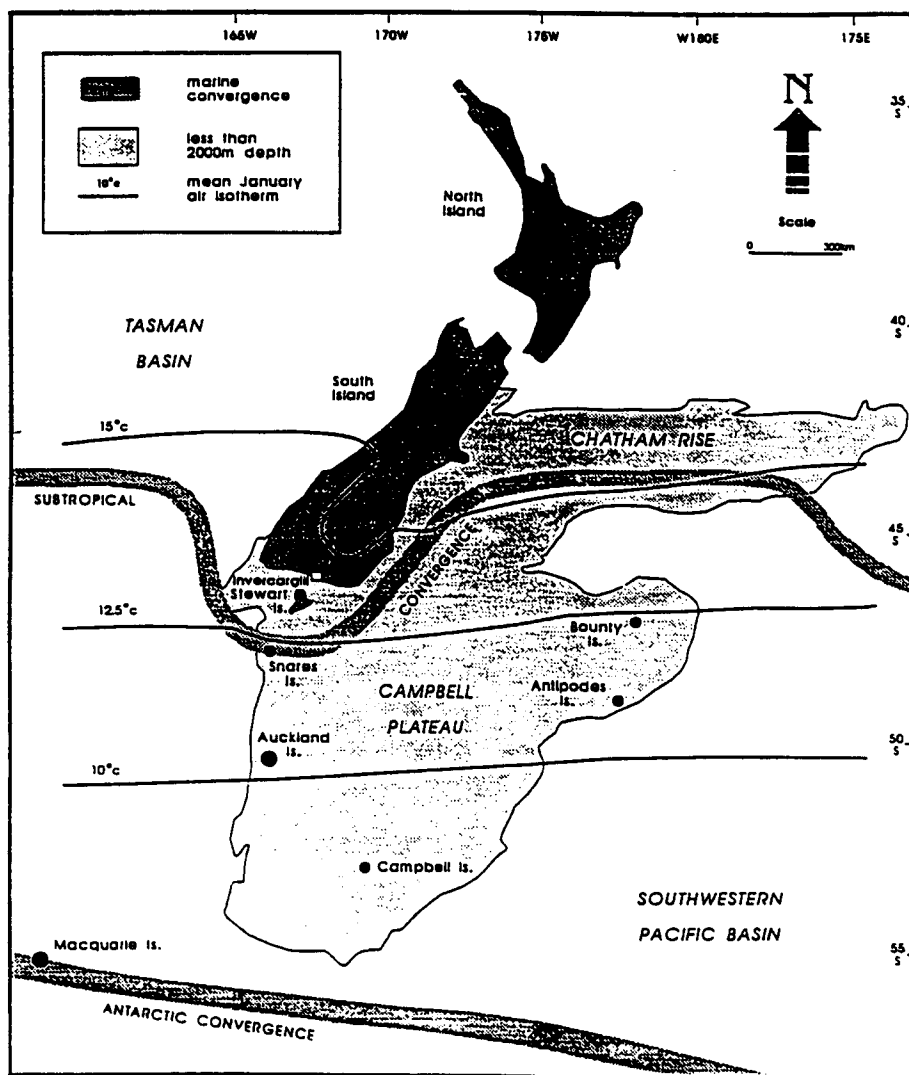


FIGURE 2. Oceanic and climatic setting of New Zealand's Subantarctic islands

Figure 2: Location of the World Heritage nominated area (subantarctic islands and surrounding territorial seas) in relation to the New Zealand mainland and major oceanographic features.

