

N I U E

INTRODUCTION

Area: 259 sq.km.

Population: 2,270 (1989).

Niue is an isolated island at 19°05'S, 169°50'W, approximately 480 km northeast of Tonga and 560 km southeast of Western Samoa. It is a raised atoll of coralline limestone about 62 m high, with prominent coastal terraces about 20-28 m above sea level. The karst topography is rich in deep fissures and limestone caves. The interior of the island is slightly depressed, representing the "lagoon" of the original atoll. The soils are generally poor, highly leached coral residues with an admixture of volcanic ash or debris, some better soils occurring in pockets of organic accumulation. The island has an unusually high natural radioactivity (UNEP/IUCN, 1988).

The climate is subtropical with a mean annual temperature of 24.7°C (mean maximum 27.0°C, mean minimum 24.3°C.). The annual rainfall averages about 2,000 mm and is evenly distributed throughout the year; the mean humidity is 79.7%. The island lies on the edge of the hurricane belt, and is occasionally subjected to severe hurricanes.

Niue is a self-governing state in free association with New Zealand, which still maintains responsibility for defence and foreign affairs. The population consists almost entirely of Niueans, with a small Tongan minority and some New Zealanders. The population is declining at about 2.6% per annum as a result of emigration to New Zealand, and there are now about twice as many Niueans living in New Zealand as in Niue. The economy is based on copra, fruit and vegetable exports, tourism and budgetary support from Wellington.

Marine systems have recently been described by UNEP/IUCN (1988). The principal terrestrial ecosystems are lowland rain forest on raised coral substrate (limestone forest), coastal forest on terraces, secondary forest and fern-scrub barrens. Of the 629 plant taxa recorded on the island, 175 are indigenous (Dahl, 1986). Endemic animals include a species of charopid snail and a subspecies of the Polynesian Triller *Lalage maculosa hitmeei* (Pearsall, 1991). Coastal areas are of considerable scenic, cultural, geological and ecological value (TCSP, 1990).

Much of the terrestrial vegetation has been heavily disturbed and degraded by past and present shifting agriculture and logging. The abandoned land develops into a fern-scrub community with very poor recovery potential (Pearsall, 1991). This now covers approximately 12.4% of the island, while secondary growth and regenerating forest account for a further 46.2% (IUCN, 1991). Overgrazing is also reported to be a severe problem. However, a patch of 150 ha of limestone forest in the Huvalu Tapu area has been protected under customary law since pre-European times. The forest remains in pristine condition, and contains many of the island's indigenous species. Further forest reserves would, however, be desirable for the conservation of the triller (Hay, 1985).

Summary of Wetland Situation

There are no significant freshwater wetlands in the interior of the island and no mangroves in the coastal zone. No wet soils are identified in a recent soil map of Niue (Leslie, 1986). However, six of the 27 scenic and historic features identified by Dahl (1980) and the Tourism Council of the South Pacific (TCSP, 1990) as being worthy of special protection contain small springs, streams or pools. These are as follows:

- Anapala: a chasm with freshwater pool;
- Avaiki: a cave with pools (a fish breeding area);
- Matapa Chasm: a scenic deep cleft in rock with a freshwater stream;
- Togo: beach caves and a freshwater pool;

- Vaikona: a chasm and cave with series of deep brackish pools;
- Vaitafe: a broad reef with pool and freshwater spring.

Wetland Research

Various studies have been carried out on the hydrology, hydrogeology and groundwater resources of the island (Jacobson and Hill, 1980; Schofield, 1959 and 1969; Waterhouse, 1981), and a detailed soil survey has been undertaken (Leslie, 1986).

Wetland Area Legislation

There is an almost total lack of environmental legislation in the fields of protected areas and species, pollution control or environmental impact assessment (TCSP, 1990). An Environmental Protection Ordinance with conservation provisions was proposed in 1975, but no progress seems to have been made with this since then (Dahl, 1980; UNEP/IUCN, 1988). The Wildlife Ordinance (1972) protects listed birds and the fruit bat *Pteropus tonganus*, and there is a Fish Protection Ordinance (1965). No protected areas have been formally designated, but one area (Huvalu Forest) is well protected under customary law, and customary restrictions are applied from time to time in temporary marine "reserves" to allow the recovery of exploited resources (IUCN, 1991).

Niue is a member of the South Pacific Regional Environment Programme (SPREP). However, it has not as yet signed or ratified either the Convention for the Protection of the Natural Resources and Environment of the South Pacific (SPREP Convention), the Convention on the Conservation of Nature in the South Pacific (Apia Convention) or the Convention on Biological Diversity, nor is it a party to the World Heritage Convention, Man and the Biosphere Programme or Ramsar Convention (IUCN, 1991).

Wetland Area Administration

Not applicable.

Organizations involved with Wetlands

The Department of Agriculture, Forestry and Fisheries is the Government body with responsibility for the natural environment.

WETLANDS

None of Niue's tiny wetlands would appear to be of international importance on the basis of the Ramsar Criteria.

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