

WALLIS and FUTUNA

INTRODUCTION

Area: Published figures range from 210 to 274 sq.km.

Population: 13,600 (1990).

The Territory of the Wallis and Futuna Islands is a French Overseas Territory comprising two groups of islands, the Wallis Islands (159 sq.km) and the Hoorn Islands (115 sq.km). The two island groups lie 230 km apart, and are about 600 km north of Fiji and 300 km west of Samoa. Wallis has a central island, Uvea (96 sq.km), surrounded by a barrier reef 3-4 km offshore with 19 low coral or small volcanic islets. Uvea is a low island where basaltic volcanism, active until quite recent times, has given rise to an inconspicuous relief (maximum elevation 149 m at Mt Lulu). The Hoorn Islands, comprising Futuna (80 sq.km) and Alofi (35 sq.km), are by contrast mountainous with maximum elevations of 524 m at Mt Puke on Futuna and 416 m on Alofi. They have no barrier reef and are the result of a Tertiary, much more ancient volcanic activity. The steep slopes of Futuna are interrupted by a series of uplifted coral tiers also evident on Alofi. Futuna is surrounded by a narrow fringing (apron) reef, up to 100 m wide, and there is a small patch of fringing reef on the northwest coast of Alofi. Neither Uvea nor Alofi have any permanent streams, unlike Futuna which has many small creeks flowing down the hills in deep gorges (SPREP, 1986).

The climate is tropical, with an average annual rainfall of over 2,500 mm on Futuna and over 3,000 mm on Uvea. Very heavy rains sometimes occur in association with cyclonic depressions during the hurricane season from November to March. During the dry season, the islands are cooled by the Southeast Trades.

The islands became a French Protectorate in 1842, and an Overseas Territory of France in 1961. The resident population of about 14,000 is confined to Uvea (8,000) and Futuna (6,000). However, another 12,000 people from the two islands live and work in New Caledonia, Vanuatu and France. Alofi was inhabited until around 1840, but was abandoned because of a shortage of water. Crops are, however, still grown there by the inhabitants of the eastern part of Futuna, only two km away. The inhabitants of Wallis and Futuna are almost entirely Polynesian, the Wallisians being descended from Tongans and the Futunans from Samoans. Subsistence agriculture, especially slash-and-burn fanning, and fishing are the main activities. Copra and *Trochus* shells are the only significant exports, and the economy depends to a large extent on subsidies from France.

The marine ecosystems have recently been described by UNEP/IUCN (1988). Terrestrial ecosystems include pockets of lowland rain forest, montane rain forest (above 400 m on Futuna), secondary forest and scrub, grasslands, fernlands, and *Casuarina* and *Pandanus* (Dahl, 1986). Forest cover in 1986 was estimated at 15% on Uvea, 30% on Futuna and 70% on Alofi (SPREP, 1986). Over 400 vascular plants have been recorded, of which 250 are indigenous and five are endemic (Dahl, 1986). Futuna Island supports endemic subspecies of the Collared Kingfisher (*Halcyon chloris regina*), Polynesian Triller (*Lalage maculosa futunae*) and Fiji Shrikebill (*Clytorhynchus vitiensis futunae*) (Hay, 1985).

There is great pressure on land and resources from the rapidly growing human population (growth rate estimated at 4.0% per annum in 1983). Much of the forest on Uvea and the lower slopes of Futuna has been cleared for subsistence agriculture, while Alofi, until recently one of the least disturbed high islands in Western Polynesia, is now subject to increasing clearing and burning by returned migrants (Dahl, 1986). The reduction in forest cover and replacement by gardens, secondary bush and "toafa", a poor scrubby formation with only ferns, *Pandanus* and a few shrubs, has been documented by SPREP (1986).

Dahl (1980) recommended that reserves be established to protect appropriate forest, lake and coral reef areas, while Hay (1985) has suggested that the uninhabited island of Alofi be protected as a reserve for the rare Blue-crowned Lorikeet *Vini australis* and other forest birds.

Summary of Wetland Situation

There are few freshwater wetlands in Wallis and Futuna, and no mangroves. Uvea has several small lakes of volcanic origin as well as a few springs along the coast, but there are no permanent rivers, streams or swamps. Futuna has no lakes or swamps, but possesses many springs and permanent and intermittent streams. Alofi apparently has no wetlands at all. There are some small taro fields on Uvea as well as on Futuna, where the taro is grown in terraced flooded gardens at the mouths of streams.

There are at least seven freshwater crater lakes on Uvea, the largest being Kikila (17.9 ha), Lalolalo (15.2 ha), Lanutavake (4.6 ha) and Lanutuli (2.2 ha). Uvea was an important American military base from 1942 to 1944, and when the Americans left, they dumped their war equipment into these lakes. Lac Lalolalo, on the west side of Uvea, is a spectacular crater lake with vertical walls some 30 m high. Approximately 30 ha of forest surrounding the lake are afforded some protection as "Vao-Tapu" (Sacred or Forbidden Forest). Special measures are taken to protect the forest from bush fires, and the hunting of pigeons and flying foxes (*Pteropus tonganus*) is restricted. Part of the forest was cleared "illegally" in 1980, and since then, tighter controls have been exercised (SPREP, 1985). The groundwater table from which the inhabitants of Uvea derive their drinking water supply is also regarded as a protected area. Some measures are apparently being taken to prevent waste materials, pesticides, fertilizers and other chemical products from entering the groundwater through run-off and infiltration (SPREP, 1985).

Wetland Research

A variety of geological, botanical and archaeological studies have been undertaken by scientists from ORSTOM, and detailed soil maps have been produced (Fromaget & Beaudou, 1986), but no studies appear to have been carried out on the wetlands.

Wetland Area Legislation

Wallis and Futuna have no specific conservation legislation, and there are no formally designated protected areas. Several areas are protected by customary taboos, but it seems that these traditional restraints on the exploitation of natural resources are no longer sufficient to prevent over-exploitation (IUCN, 1991). The Long-term Economic and Social Development Plan, passed by the Territorial Assembly in 1979, includes a chapter on the protection of the natural heritage of the islands. Two of the priorities listed are protection of the coastal zone and protection of natural sites. Supplementary legislation is, however, desirable in respect of the protection of wooded areas, the water table, water catchments and the coastal zone (IUCN, 1991).

At the international level, France is party to the World Heritage Convention, Ramsar Convention, Convention on the Conservation of Nature in the South Pacific (Apia Convention) and Convention for the Protection of the Natural Resources and Environment of the South Pacific (SPREP Convention). It has also signed but not yet ratified the Convention on Biological Diversity.

Wetland Area Administration

Not applicable.

Organizations involved with Wetlands

No department has specific responsibility for activities relating to the natural environment.

WETLANDS

The Territory of Wallis and Futuna Islands has very few wetlands, and only the crater lakes on Uvea (here treated as a single site) would appear to be of international importance on the basis of the Ramsar Criteria. The following site account has been compiled from the literature.

Wetland Name: Uvea Crater Lakes

Country: Wallis & Futuna

Coordinates: 13°16'-13°19'S, 176°08'-176°12'W

Location: on the island of Uvea in the Wallis Islands.

Area: 43.1 ha.

Altitude: 3-97 m.

Overview: Seven small, freshwater lakes of volcanic origin on the island of Uvea in the Wallis Islands.

Physical features: There are at least seven freshwater lakes in dormant volcanic craters on Uvea: Kikila (17.9 ha), Lalolalo (15.2 ha), Lanutavake (4.6 ha), Lanutuli (2.2 ha), Alofival (1.3 ha), Lano (1.1 ha) and Lanumaha (0.8 ha). Lac Lalolalo, on the west side of Uvea, is a spectacular crater lake with vertical walls some 30 m high.

The climate is tropical, with an average annual rainfall of over 3,000 mm.

Ecological features: No information is available on the aquatic vegetation. The vegetation in surrounding areas was originally dominated by lowland rain forest, but most of this has been cleared for shifting agriculture and has been replaced by gardens, secondary scrub, grassland and "toafa", a scrubby formation with only ferns, *Pandanus* and a few shrubs. By 1986, the forest cover on Uvea had been reduced to only about 15% (SPREP, 1986).

Land tenure: Customary ownership.

Conservation measures taken: Approximately 30 ha of forest surrounding Lac Lalolalo are afforded some protection as "Vao-Tapu" (Sacred or Forbidden Forest). Special measures are taken to protect the forest from bush fires, and the hunting of pigeons and flying foxes (*Pteropus tonganus*) is restricted (SPREP, 1985).

Conservation measures proposed: Dahl (1980) recommended that reserves be established to protect appropriate lake areas.

Land use: No information. Subsistence agriculture, especially slash-and-burn farming, in surrounding areas.

Disturbances and threats: Uvea was an important American military base from 1942 to 1944, and when the Americans left, they dumped their war equipment into the lakes. Part of the "Tapu" forest around Lac Lalolalo was cleared "illegally" in 1980 (SPREP, 1985).

Hydrological and biophysical values: No information.

Social and cultural values: No information.

Noteworthy fauna: There are reported to be "blind snakes" in Lac Lalolalo, and the flying fox *Pteropus tonganus* occurs in the surrounding forest.

Noteworthy flora: No information.

Recreation and tourism: Lake Lalolalo and Lac Lanutavake are occasionally visited by tourists, the former for its scenery and the latter for swimming.

Management authority and jurisdiction: No information.

References: Dahl (1980); Fromaget & Beaudou (1986); SPREP (1985 & 1986).

Reasons for inclusion: 1a, 2b. A group of very isolated freshwater lakes; the only significant wetlands in Wallis and Futuna.

Source: See references.

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