

SOUTH PACIFIC COMMISSIONWORKSHOP ON PACIFIC INSHORE FISHERY RESOURCES

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Country Statement**Niue**

by

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The island of Niue is an isolated, elevated atoll situated at latitude 169° 52' W longitude 19° 02' S and is surrounded by steep rocky limestone cliffs with a narrow fringing reef. The island is rhomboidal in outline, 11 miles wide by 13 miles long, with a coastline of approximately 70 km. There is neither good harbour nor safe anchorage. The limited landing facilities available for small boats are located at Alofi and Avatele.

The old lagoon is now 215 ft (approx. 64.5m) above sea level, having been elevated during the pleistocene period some 270,000-900,000 years ago. The ancient lagoon having had a depth of 100 ft (approx. 30m), shellbeds and fauna have been identified as belonging to the plio-pleistocene era and representing lagoon sediment fauna that lived well below the high tide of mark. Many marine shells, large giant clam shells, and other fossils are commonly found.

The ocean surrounding Niue is deep and at about 1km from shore soundings show no bottom at 400 fathoms (about 720m). The coastline is rugged and there are no extensive beaches. A wave cut platform encircles the island just above sea level. Seaward of this platform is a narrow fringing reef, exposed at very low water, to which much of the rubble and debris resulting from cliff erosion becomes re-cemented through the action of coralline algae.

In many places the wave cut platform shelves gently without a noticeable step. In the slightly embayed parts of the coastline waves sweep across the inclined shelf and deeply undercut the limestone cliffs. However, towards the blunt promontories of the coastline the shelf is narrower or non-existent and the colonies of binding algae grow along the foot of the cliff and often extend for some distance up the face of the cliff. This possibly has the effect of limiting the erosive power of the waves so that the rate of undercutting is reduced on these actual points. Thus on the outjutting parts of the coast waves break directly onto the algae-coated cliffs bathing the rocks continuously in sheets of spray, and coral binding organisms live up to 20 ft (6 m) above sea level. These cliffs are pink in colour and in places covered with small steps formed by coral gardens arranged in a pattern like a terraced garden or rice paddy landscape in miniature. These coral gardens have a rich, vigorous coral fauna in contrast to the surrounding area.

On the western side of the island coral growth is sparse and as a consequence reef fish are not as abundant as usually would be expected around an island with a low fishing pressure. Niuean fishermen are thus less fortunate than many other Pacific Islanders in that their supply of reef fish is by no means abundant, and difficult to obtain. The eastern coast is very difficult to work from canoes or small boats owing to the prevailing conditions of wind and waves. For most of the year the only source of seafoods are obtained at low tide and often at night. Canoe and small boat fishermen generally keep close inshore when fishing.

Fisheries research and legislation

Up until 1986 research did not form a significant part of the Niue Fisheries Division's activities. The increase in tourism and commercial fishing has attracted the governments concern and it has looked more closely at its inshore resources, particularly the effects of over exploitation and its consequences. We have requested assistance of the USAID Small Island Countries Fisheries Development Project to assess the inshore resources by the acquisition of a suitable research vessel and gear, to enable us to develop management plans to ensure the resources for future generations.

Areas of current research

At present we are planning to undertake some work on coconut crab (Birgus latro) resource development under the Japanese funded Aquaculture Project, aimed at current exploitation, and future management. Also planned is giant clam (Tridacna maxima, T. derasa) stock assessment the formulation of a management plan, and a study the feasibility of reseeded depleted reef areas.

Current legislation for the protection of marine resources

The laws of Niue provide for the protection of fish under the Fish Protection Ordinance 1965.

The ordinance comprises the following:

1. The use of explosives, firearms, poison, or underwater breathing apparatus are prohibited for taking fish.
2. Fono for fish. This provides for the Director of Agriculture and Fisheries to close any reef area to entry for as long a time as required for the conservation of marine life.
3. Traditional bait fishing. This covers the procedure and bait to be used in traditional ulihega (Decapterus macarellus) fishing.
4. Miscellaneous provisions - covers the powers of seizure and forfeiture power to destroy Lakau Niukini (Derris matacensis), the liability of officers, and the application of fines.

In addition the Government may issue a licence for the taking of fish in a closed area within the 200 miles EEZ which may contain certain provisions such as allowable catch quotas, closed areas, reporting scientific findings, etc. A licence recently issued contained the following provisions:

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| Reef and bottom fish | - Limit 5 tonnes per visit . |
| | - Limit to 2 visits for each reef. |
| | - Minimum size whole 2kg in weight. |
| | - No females with soft shell or eggs to be taken. |
| Giant clams | - No harvesting of clams under 15 cm in length |

Improvement of research capabilities

The assistance of the FAO/UNDP Regional Fisheries Support Programme was obtained in designing a vessel suitable for Niue as an inshore research vessel. Following costing, funding and construction the vessel will be fitted out and carry out resource assessment and monitoring.

Under the UNDP country programme a fisheries centre has been approved which will incorporate a laboratory area with basic facilities suitable for use by researchers involved in fisheries work.