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TWENTIETH REGIONAL TECHNICAL MEETING ON FISHERIES
(Noumea, New Caledonia, 1 – 5 August 1988)

COUNTRY STATEMENT – KINGDOM OF TONGA

South Pacific Commission
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Country Statement - Kingdom of Tonga

1. Introduction:

Tonga's Fisheries Sector is one of Tonga's major exporters and there is potential for further development. To this end the Fisheries Division of the Ministry of Agriculture, Forestry and Fisheries is actively pursuing its objectives, as stated in the kingdom of Tonga Development Plan Five (DPV) 1986 to 1990.

The Artisanal Fisheries Development is being promoted through a combination of projects including the boat-building program, establishment of ice-plants and freezer storages in five outer-islands and upgrading the advisory services in those islands, establishment of the Tonga Fishermen's Association and its work program, and the creating of the fish collection distribution and marketing network.

The Resource Assessment and Development Unit (RADU) of the Fisheries Division continue with its five (5) years stock assessment programs on the two most important resources, the seamount fishery and the Inshore Reef Resources.

In all Fisheries Sectors, there is optimism for expanded fish Production and total import substitution. Increased exports and employment remain realistic targets.

2. Artisanal Fisheries Development

2.1 General:

Specific objectives of artisanal Fisheries development are as follows: - to expand artisanal fishing by introducing new fishing craft and improving fishing techniques which together will help to improve the amount of fish supplied to the local market and for export.

- to reduce the pressure on traditional fishing grounds by diversification into unexploited species in both inshore and offshore areas beyond the current range of the artisanal fleet.

- to provide additional employment opportunities and to increase income from fishing activities particularly in the outer island groups where the marine resources are concentrated.

2.2 Boat Building Project : (UNCDF/UNDP TON / 81001)

The UNCDF Boatbuilding Project proceeded on its final phase at the beginning of 1988. Two of the last nine vessels in the Project were launched at the beginning of the year. All nine vessels were of the

TON 7 design. All forty boats build by the Project are now completed and operational.
Distribution of these boats throughout the Kingdom is as follows:

Island	Vessel Size	No. of Boats
Tongatapu	28'	10
	21'	1
'Eua	21'	3
Vava'u	32'	1
	28'	10
	21'	1
Ha'apai	28'	9
	21'	4
Niutoputapu *	21'	1
TOTAL		= 40

Niutoputapu boat sank and was lost during deployment of FAD at Niutoputapu.

2.3 Extension Services

During the year 1987/88 the Fisheries Division's Extension section concentrated on several projects despite being handicapped by lack of manpower. The Extension section ran training courses for prospective UNCDF/UNDP boat owners, provided staff for the fish marketing Infrastructure Project and the creation of the Tonga Fishermen's Association and the establishment of its branches in the outer islands.

2.4 Marketing Infrastructure Development Project

A fish marketing infrastructure has been developed in the Kingdom to facilitate the growth of the fishing industry. The Japanese government donated freezers and ice-making machines for five (5) islands - Niutoputapu, Ha'afeva, 'Uiha, Nomuka and 'Eua which were opened in March 1987. These centers now have the capability to produce ice and store fish. The fish are then shipped from these centers, to Nuku'alofa, by M.V.Ekiaki and M.V.Ngutulei.

The new fisheries harbour in Nuku'alofa an EEC funded project costing T\$2.8. million, was opened in February 1987. The harbour area contains a workshop for boat construction, cargo and passenger handling facilities, a ten (10) ton capacity boat hoist and a 100 ton slipway, berthing area for fishing, yachts and other vessels and a fish market.

The fish market contains 4 by 10 ton blast freezers, 4 by 10 ton chiller rooms, one 10 ton/day capacity Ice making machine and a fish sale area. The fish market is run by the Tonga Marketing Authority.

3. Resource Assessment Programs

3.1 General:

The Fisheries Resource Assessment and Development Unit started several Resource Assessment Projects in 1986/8. Two of the most important projects are those of the Inshore Reef Resources and the Seamounts Resources.

(Refer Appendix 1 for list of Projects)

3.2 Resource Assessment Project on the Inshore Reef.

This 5 years project was launched early in 1987, following closely the Munro/ICLARM sampling methodology as mentioned in Munro and Fakahau 1986. The methods used in this project are, sample survey, inventory of fishing methods, gears and social economic data, inventory of fishing grounds, selection of routine fishing array and routine lunar monthly fishing. The project is concentrating mainly on the shallow water and the shelf areas and use the "Z" traps as the main sampling device. This project is funded by USAID through FSP Tonga.

3.3 Resource Assessment Project on the Seamounts

The project on the Stock Assessment of Bottom fishes of the seamounts encompasses the whole of the kingdom of Tonga. It is directly aimed at the deepwater snappers and groupers (Lutjanidae and Serranidae) as they are important Fisheries resources in Tonga.

The two general aims of this project are to ascertain (1) How big is the resource . (2) How to manage the resource in order to sustain the fishery. Several standard stock assessment methods are used in this project, and as the Fisheries Division lacks a Research vessel routine sampling is done from the fishermen who engage in the fishery regardless of whether they own a UNCDF boat or not. It is anticipated that this project will run for 5 years.

3.4 Other Resource Assessment Projects

For other Resource Assessment Projects run by the RADU please refer Appendix 1

4 Deep sea Tuna Longlining Operation

4.1 General

The Tonga Government Longliner, M.V."Lofa" continues to operate commercially, managed by the Fisheries Division under the direction of the Lofa Management Committee. Since the political problem in Fiji in 1987 "LOFA" only exports fish to Pangopango to the Starkist cannery and the miscellaneous fish are landed at the local market.

4.2. 1987/88 Performance of M.V. "Lofa"

Due to a combination of favourable factors "Lofa" showed a net profit, after deduction of depreciation and expenses, in 1987. The main reasons behind this dramatic improvement for 1987 are, first the average unit price of fish landed in Pangopango and the local market increased by 20% and 13.5% respectively, and total expenses decreased by 7%. The other reason for the increase in revenue is that a greater proportion of high priced fish were caught in 1987 than in the previous years.

It is hoped that this trend will continue in 1988. A major aim now is to export the high priced fish, such as albacore, only, with the miscellaneous fish sold locally.

4.3 Future Tuna Operation

Proposed plan for the Tuna fishing operation includes acquiring a new longliner (Lofa II) from Japan, building 10 smaller (23 metres) longliners and setting up a Fishing Industries Authority to handle all commercial fishing operations. These projects are still in the planning stage but the latest indication is that two prototype small longliners will be funded by the Asian Development Bank under its multi-purpose project loan to the Government of Tonga.

All catches from these vessels are anticipated to either be canned locally or transhipped from Nuku'alofa to either PAFCO Levuka or Starkist Pangopango.

5. Aquaculture / Mariculture Program

5.1. General

A number of projects involving the propagation and/or growth of brackish and marine organisms have been identified as being probably suitable to conditions in Tonga. The reasons for promoting aquaculture are varied and well known, such as, source of income in agriculturally poor areas; to relieve pressure on overexploited traditional inshore fisheries resources; or an unused area of natural water may be converted to useful production. For these various reasons, establishment of appropriate aquaculture / mariculture programs are planned for Tonga.

5.2. Seaweed Project.

Seaweed is one of the mariculture projects to be promoted in Tonga. The intention was to generate income for those who do not have land or jobs but are using the shallow marine areas for gathering marine products for a living. Since this project started it has run into several problems.

a. Seaweed is a low priced commodity in raw form, with no incentives to the farmers. At the beginning of the project someone made the wrong comparison between seaweed and vanilla, and at the end of the seaweed season the farmers realized that they were not getting

anywhere near the price of vanilla. It caused dissatisfaction, especially with the main seaweed project in Vava'u, the centre of vanilla growing.

b. Planting materials were always imported from Fiji and there was not enough available for the farmers who wanted to farm seaweed.

c. Harvesting has always been before the rabbit fish season or there will be no seaweed to harvest. The rabbit fish is also responsible for the lack of locally available planting material.

d. Ice-ice and strong winds contributed to the devastation of the seaweed project. By late 1987 and early 1988 all seaweed experiment plots in Nuku'alofa were attacked by ice-ice and had to be destroyed before the disease spread to Vava'u. In June 1988 the Vava'u plot (400 lines only) was destroyed by strong winds. With the uncertainty in the market (Coast Biological N.Z. closing down) there is doubt whether the seaweed project will survive for long.

5.3. Grey Mullet Culture Project.

Mullet have traditionally been a high priced fish, and always on demand. The introduction of monofilament nets in the mid 1960's devastated the mullet stock. Now, the Fisheries Division is doing experimental mullet culture to determine whether culture of mullet can be done on a low cost basis, and if successful can it be done economically on a commercial basis. There are also plans to stock low salinity lakes with mullet fry.

5.4. Giant Clams

There are plans for Tonga to join the ACIAR-run Giant Clam Project. The intention is to run a small hatchery for *Tridacna derasa* or import seedlings from overseas to restock depleted reefs. There are also ideas to import *T. gigas* on an experimental basis.

APPENDIX.

4. TONGA'S PROPOSED RESEARCH PROGRAMME 1986 - 1990

The main aim of the Research Programme is to assess and monitor those species which are important for local consumption or which form the basis for export industries. This is of paramount importance to Tonga as current fisheries developments have got to a stage where information on the resources is needed for the implementation of management measures.

TIME SCALE	TARGET SPECIES	TYPE OF RESEARCH
1. 1986-1990	DEMERSAL SPECIES ON SEAMOUNTS	FULL STOCK ASSESSMENT PROGRAM (Continuing)
2. 1987-1990	INSHORE REEF FISHES	STOCK ASSESSMENT
3. 1986 - 1990	PELAGIC SPECIES	DATA COLLECTION FOR SPC.TUNA AND BILLFISH PROGRAMME AND THE NEWLY FORMED SOUTH PACIFIC ALBACORE RESEARCH S.P.A.R
4. 1986-1988	SEAWEED (Eucheuma sp.)	AQUACULTURE
5. 1986-1988	MULLETS	BIOLOGICAL STUDY OF MULLETS.
6. 1989-1990	TROCHUS	SURVEY AND INTRODUCTION
7. 1987-1988	TRIDACNIDAE	COMPARATIVE STUDY
8. 1987-1988	DEEP WATER PRAWNS	TRAP SURVEYS
9. 1989-1990	LOBSTERS	FOLLOW UP STUDY OF DISTN. AND BIOLOGY
10. 1987-1989	LOCAL OYSTERS	IDENTIFICATION AND ASSESSMENT OF LOCAL OYSTER SPECIES FOR CULTURE PURPOSES