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COUNTRY STATEMENT

TUVALU

Like most Pacific Island nations, the marine resources of Tuvalu are the only major natural resources available for exploitation for income generation both on a local scale and through licensing arrangements with foreign fishing nations. The foreign fishing arrangements form a valuable contribution to the economy of Tuvalu.

The Fisheries Department and the National Fishing Corporation of Tuvalu (NAFICOT) are the two organizations responsible for the development of the marine resources. A recent review of Fisheries and the National Fishing Corporation of Tuvalu (NAFICOT) has clarified the roles of the two organizations. NAFICOT is now responsible for commercial fishing operations and development. The Fisheries Department is responsible for research and development, training and extension programmes plus the management, surveillance and licensing of the fish resources of Tuvalu.

The five Japanese boats (7 m) are due to be transferred from Fisheries to NAFICOT. This will give NAFICOT the ability to conduct independent fishing operations around Funafuti for the first time. It is hoped that this will be a step forward in the development of the commercial fishing operations in Tuvalu.

The Te Tautai is currently operating under the SPC Tuna Tagging Programme. The success of the Te Tautai's performance and the programme is well-known.

Present status of the industry

The marine resource exploitation on the local scale is still primarily a subsistence activity. There is a slow transition from subsistence fishing as a means of meeting sporadic cash needs to a more regular semi-commercial operation.

Local commercial fishing activity is limited to a small artisanal fleet of 14—16 ft trolling skiffs. The majority of the catch is skipjack and flying fish, other troll caught pelagic are basically a by-catch of skipjack fishing. Flying fish are targeted at night, though fishing is usually restricted to the period around the new moon.

There is very little commercial fishing for reef fish, the local preference being for trolling only, with little inclination to try other techniques. In contrast, subsistence fishing uses a large range of traditional and introduced techniques and gear. It is slowly becoming more common to see some reef and lagoon fish, the excess from "subsistence" fishing, for sale in the local market. The majority of deep and outer reef fishing was conducted by the Fisheries (now NAFICOT) fleet.

The bulk of the artisanal fleet is based on Funafuti, with limited activity on Vaitupu and Nukufetau. The other outer islands rely on subsistence fishing to meet their fish requirements.

The fledgling Professional Fisherman's Association in Funafuti is experiencing some organizational and developmental difficulties. Fisheries will now be providing support and training and the outlook is promising.

A recently completed fish consumption survey will give more information on the subsistence/artisanal activity on Funafuti.

Foreign fishing arrangements

The only current licensed foreign fishing nation fishing in Tuvalu's EEZ is the USA. The US Multilateral treaty has been successful in gaining valuable economic returns for the countries'

tuna resources. Tuvalu has no licensing agreement with Japan, Taiwan or Korea. Difficulties have been experienced in getting the countries to the negotiating table or as is the case with Korea the full payment of the licensing fee for previous agreements is still outstanding.

The limited surveillance capacity for monitoring foreign vessels in Tuvalu's EEZ is a continuing problem.

With the assistance of the FFA Tuvalu received US\$75,000 from an unlicensed Taiwanese vessel photographed fishing inside the EEZ.

Infrastructure development

The AIDAB-funded Community Fishing centres on Nanumea and Nukufetau will produce split dried flying fish. Marketing studies are completed and construction of the centres is due to start soon.

The Japanese-funded CFC on Vaitupu is nearing completion and it is hoped to be operational in early 1993 helping to meet the growing demand for fish on Vaitupu.

An ice machine is expected in the near future which will enable export trials of deep water snapper to commence and provide valuable support to the local artisanal fleet by helping to improve the quality of marketed fish.

Development constraints

Limited infrastructure, an unregulated local market, high fuel prices, irregular limited and expensive transport links with communication difficulties have been identified as key constraints to the development of the local industry.

Progress is being made. The availability of ice from the new machine will greatly assist improving the quality of the catch and the sealing of the runway may improve transport links.

The department continues to face financial and manpower constraints. Coordination and appropriate training of fisheries staff are vital to enable the department to successfully meet future challenges in developing the fisheries resources of Tuvalu.

Resource research and development

Trochus introduction — Adults are alive and growing but no juveniles have been found yet. The protective legislation appears to be effective in preventing premature harvesting.

Giant clams — The growth trial of *Tridacnia derisa* is continuing. The high mortality earlier in the trial has reduced the numbers by 90%. The population is now stable and growing well.

Giant clam sanctuaries are being formed in an attempt to boost the numbers of the endemic species. Giant clam circles are progressing well for *T. squamosa* in Funafuti lagoon. The prospect for *T. gigas* is uncertain with difficulties being experienced in collecting specimens.

Seaweed — Euchema trials have been conducted on Funafuti and Nui. Both have been unsuccessful mainly due to storm damage and predation by fish and turtles. Trials will be conducted on other islands if a donor is identified to fund the trials.

SPC work programmes

FAD's have been deployed at all islands with varying success. Some were lost to storms after a few months but those remaining are still in place and functioning as excellent fish attracters. The deployment is an ongoing project.

Vertical longlining training and trials were conducted in 1991 but to date no local fishermen have adopted the technique. It is felt that once fuel prices rise and a commercial sector develops with more financial awareness that the technique will be more readily accepted. Another trial with training is planned in conjunction with the deep water snapper stock assessment.

Stock assessments

The PIMAR—Tuvalu Bottom Fish Project, a deep water snapper stock assessment, commenced in May this year. Early results are encouraging in catch rates and species composition. The project includes a training component to help develop the skills needed for a locally based export industry. There are considerable difficulties to be overcome before export trials can begin, though solutions are being found and the prospects are promising. The recent SPC Fish Processing training conducted in Fiji has greatly assisted NAFICOT and helps support the project.

A stock assessment of reef fish (focusing on groupers and wrasse) is planned with the assistance of the FFA and SPC. This will enable management measures to be introduced for the proposed live reef fish export operation. The proposal is from a Singapore company based in Malaysia intending to sell the fish live to Hong Kong.

Environmental impact assessment

The SOPAC lagoon dredging/borrow pit filling trial commenced in April. Progress is slow. The environmental impact assessment is continuing, early results indicate that the area chosen for dredging has very low species diversity and the impact is likely to be low. This is now reason for complacency. The continuation of the high quality work is vital to assess the true environmental impact of the trial dredging project.

Future projects

A ciguatera monitoring project is likely to commence in late 1992 or early 1993 depending on funds arriving. The aim is to monitor *G. toxicus* levels in an attempt to predict ciguatera outbreaks to enable preventative measures to be taken.

The documentation of traditional management practices is expected to being in the near future.

The prospect for a marine park in Funafuti lagoon is being investigated. Discussions with local community leaders and elders will give an indication of local acceptance. The result of these discussions will determine if the proposal progresses further. Local support for the project is vital for its success.

The department will continue to work with the local fishermen and Fishermen's Association to develop local skills and techniques to assist in the development of the local fishing industry and sustainable commercial exploitation of local marine resources.