

SOUTH PACIFIC COMMISSION
TWENTY-THIRD REGIONAL TECHNICAL MEETING ON FISHERIES
(Noumea, New Caledonia, 5-9 August 1991)

COUNTRY STATEMENT - WESTERN SAMOA

Background

1. Western Samoans traditionally relied on fish and shellfish from the nearshore reefs and lagoons for the large proportion of their dietary protein. The inshore waters today remain very important for subsistence in rural areas, and a small semi-commercial (artisanal) fishery supplies the urban demand for reef fish. The offshore waters are the basis of the commercial fisheries for bottom fish (snappers) and pelagic species (tunas) which provide most of the urban demand for fresh fish, and some exports. However demand for fresh fish continues to outstrip supply and landings from both inshore and offshore fisheries are declining.

Value of fisheries resources

2. The value of Western Samoa's fisheries are considerable. The annual commercial landings (approx 800-1,000 t) have a domestic market value of about T\$4 million, exports of about T\$0.35, and foreign fishing licenses of about T\$0.13. At local market rates, the value of the subsistence catch (approx 4,000 t) is around T\$15 million, but its worth is incalculable to a subsistence population without the purchasing power to buy alternative (and less nutritious) protein staples.

Inshore fisheries

3. Because of persistent reports of declining inshore landings, FAO has provided a resource adviser to assess the fishery, stocks and inshore resources. Preliminary surveys indicate that inshore fisheries were very important in the subsistence economy on Upolu. Over half of all rural households census regularly fished for subsistence, about 75% of villages were classified as fishing villages (>33% of households fishing). A preliminary estimate of annual landings of inshore fish in Upolu was about 2,500 t. Average per capita annual fish consumption was estimated to be about 35kg in rural areas and 15kg/capita in urban villages. Estimates of fish yields from inshore waters were high, about 5 to 10 tonnes/km/yr (to 40m and 6m depths, resp.).

4. The landings in the inshore fisheries were found to be in rapid decline. Over the past five years commercial sales in the Apia Fish Market had declined by five fold, and some important fisheries had collapsed (eg between 1986 -90 there were: x 10 fold decrease in landings of scads, mullet and rock cods; x 20 fold decrease in trevally; x 100 fold decrease in giant clams). In the subsistence fishery the catch per unit effort (a relative indicator of stocks) had declined by ca 35% since 1983, and fish consumption had declined by about 40%. Some species (eg clams, coconut crabs) were approaching local extinction. One clam was completely extinct. Serious ecological degradation was found to have occurred to reefs and mangroves from crown-of-thorns starfish outbreaks, terrestrial runoff, pollution and cyclone Ofa, and from land reclamations.

5. Probable reasons for the decline in inshore fisheries include increased fishing effort resulting from population growth, the advent of the cash economy in rural areas (ie commercial exploitation of reef fish), use of more efficient fishing gear (gill nets and fish fences), use of destructive fishing techniques (dynamite and poison), and loss of nursery habitats (mangroves, swamps etc) of important inshore species.

Offshore fisheries

6. While the inshore fisheries are over-exploited and require close management, the offshore fisheries offer much far greater prospects for further development. To promote the offshore commercial fisheries, about 350 alia catamarans have been constructed between 1978-present in a boat building program initiated by FAO/UNDP. Appropriate fishing techniques (trolling, deep water reefs, use of fish aggregation devices etc) were also developed for the fishery.

7. Although accurate estimates of tuna landings prior to 1989 are lacking, it is likely that landings approximated 2,000 t pa in the early 1980s when the maximum number of vessels (about 200) were in the fishery. Many alia subsequently left the fishery. In 1989 the fleet numbered around 100, and tuna landings were estimated to be about 680 t. Cyclone Ofa further reduced the fleet to 50 in February 1990, and commercial sales of tuna declined to 350 t in that year. Although fishermen report changes in the behaviour of skipjack and catch rates may have declined over the years, the tuna stocks remain underfished. Reasons for the decline in offshore fishing effort include the higher costs of vessels, high fuel consumption (because of the fishing technique, trolling), and the rising cost of fuel.

8. The Division is currently evaluating alternative fishing techniques to reduce fuel costs in the fishery. Recent exploratory fishing by the SPC masterfisherman at the Division has identified good stocks of large yellowfin in deeper waters around the tuna rafts, and developed long-line gear suitable for use on alia. The fishery is considered to have great potential it uses less fuel than skipjack trolling, and the fish are of a size and quality in high demand overseas.

Deepwater snapper fishery

9. The deepwater bottom fishery was developed in the 1970s by the SPC and catches were very high initially. Statistics on the deepwater snapper landings are lacking, but it is widely believed among fishermen that stocks have greatly declined over the past decade. In 1989 landings were estimated to be about 80 t, approaching the estimated maximum sustainable yield for the main islands' fishery.

Management of inshore fisheries

10. Because of the rapid decline in inshore landings and their subsistence importance, the preliminary recommendations of the FAO study were: (1) that management of reefs and lagoons be recognised as a national priority; (2) that an integrated coastal and reef environmental and fisheries management plan be produced, and an appropriate strategic plan for the Fisheries Division be developed to implement this.

11. Specific recommendations to reduce pressure on inshore resources and increase fisheries production were: (1) the promotion of aquaculture (eg Pacific oysters, *Eucheuma* seaweed, giant clams, *Tilapia niloticus* etc), and selected introductions of exotic species (eg trochus); and (2) the development of an artisanal fishery based on the nearshore reef slope and pelagic fisheries. It also recommended that: (3) an education program be undertaken to inform village authorities, fishermen and others on the wise use of the marine resources.