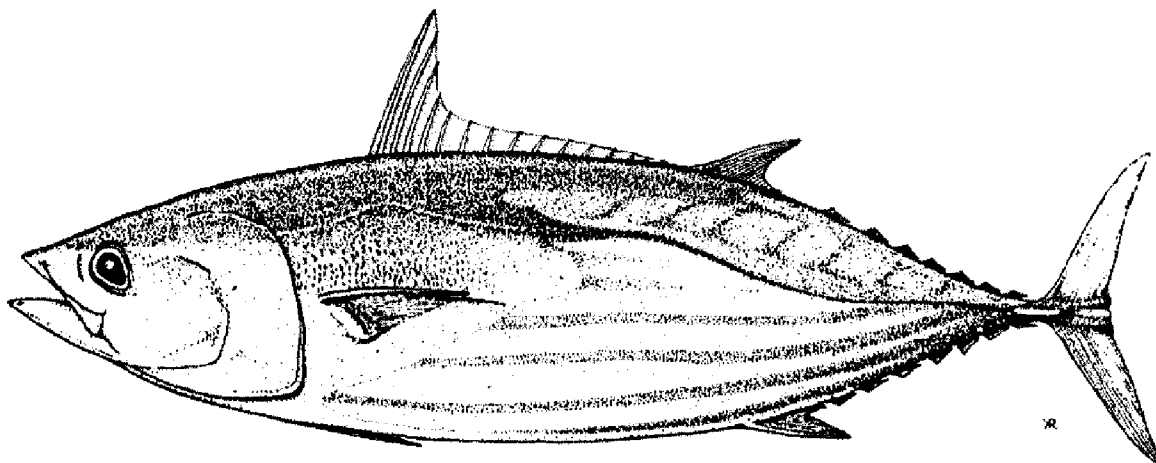


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Samoa National Tuna Fishery Report



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1. Introduction

Fisheries play an extremely important role within Samoa and a wide variety of subsistence and commercial fishing is practised. The offshore commercial fisheries, in particular the tuna longline fishery, have become increasingly important. The tuna longline fishery is now the major export earner in the country, with exports of 4505 t in 2000, worth an estimated SAT\$39 million. This was a considerable increase from exports of 2,092 t in 1996, worth an estimated SAT\$13.8 million.

The Economic Exclusive Zone of Samoa is the smallest in the Pacific and covers an area of only 120,000 sq. km. The current number of fishing vessels, 155 all sizes included, fishing within the limited sea area is of great concern to the local authority. Although there is already a Fishery Management Plan in place for the longline fleet, there seems to be a continuous push by the industry to increase the current fishing effort. The good catches, positive market behaviour as well as the readily available financial facilities makes the desire to increase fishing effort within the zone more attractive. However, the available infrastructure is far too small to cater for the current fleet rendering the onshore activities very dangerous. There is also a pressing need to address the issue of quality control at all levels of the industry. Previous rejects from the markets are negative signs and the local authority and the industry both need to find immediate solutions to remedy this situation.

The catch data are collected through port sampling and log books. It is a condition of the fishing license that the fishing log is submitted to the Fisheries Division five days after the completion of each fishing trip.

2. Total catch for all species

The estimated tuna catches and species composition of the catch are shown in the table below. The estimates for the 1994 and 1995 were obtained from the Fisheries Division and reported by Boyle (1999), while estimates for 1996 and 1997 are based on estimates of exports (Watt and Moala 1999). The total estimates for 1997-1999 are based on exports and catch composition was determined from port sampling data. An estimate of 12% by-catch for 1998-1999 was determined from interviews with fishermen and port sampling data. Estimates of fish rejected by exporters of 5.0% for 1996, 4.4% for 1997, 6.0% for 1998, and 4.0% for 1999 were included to determine the total catch. The total catch and species composition of the catch for 2000 were based on information from the Fisheries Division data base.

Table 1. Estimated longline catch (mt) for major species from 1994-2000

Year	Vessels Active	Albacore (mt)	%	Bigeye (mt)	%	Yellowfin (mt)	%	By-catch (mt)	%	Total (mt)
1994	25	641	76	14	2	73	9	116	13	844
1995	45	1883	76	40	2	216	9	340	13	2470
1996	90	1775	65	27	1	573	21	355	13	2730
1997	170	4108	65	63	1	1327	21	822	13	6321
1998	200	4742	71	334	5	801	12	801	12	6679
1999	175	4027	71	283	5	681	12	681	12	5672
2000	154	4067	69	177	3	1120	19	530	9	5895

3. Tuna Longline Fleet Structure and Fishing Effort

Table 2. Fleet 1996 –2000

Year	Vessels Active
1996	90
1997	170
1998	200
1999	175
2000	154

Estimates of fleet structure based on interviews with Fisheries Division staff as boat counts began in September 1999

Table 3. Tuna Longline Fleet Structure / Fishing Effort in 2000

Alias	No. of boats	Average no. of sets	Average no. of hooks set	Total no. of hooks (x 100)	Percent of total	Estimated catch (kg)
Apia	75					
Siumu	6					
Poutasi	4					
Lufilufi	2					
Lefaga	1					
Apolima	6					
Faleasiu	5					
Savaii	20					
Total	119	143	345	58708.65	57.2	2982399.4
10 - 12.5 m	20	149	663	19757.40	19.2	1189356.0
12.5 - 15 m	9	94	1080	9136.80	8.9	
> 15 m	6	166	1510	15039.60	14.7	1722810.3
TOTALS						
Fleet	154				100	
Hooks x 100				102642		
Catch (kg)						5894565.6
kg/100 hks				57.43		

CPUE for alias

50.8 kg/100 hooks -calculated from port sampling data

CPUE for 10 - 12.5 m boats

60.19 kg/100 hooks -calculated from port sampling data

CPUE for > 12.5 m boats

71.2 kg/100 hooks -calculated from logbook data

4. Tuna Longline Species Composition for the Year 2000

Table 4. Tuna Longline Species Composition for the Year 2000

Name	Catch(kg) < 12.5 m boats	% of total small boat catch	Catch(kg) > 12.5 m boats	% of total large boat catch	Total	%
Albacore	2785463	65.6	1265667	76.6	4051129.6	68.73
Yellowfin	874040	20.6	231019	14.0	1105059.6	18.75
Big eye	123441	2.9	56643	3.4	180084.6	3.06
Marlin	76603	1.8	23238	1.4	99841.4	1.69
Billfish	17149	0.4	7890	0.5	25039.2	0.42
Dolphinfish	89730	2.1	19143	1.2	108873.1	1.85
Wahoo	67088	1.6	21478	1.3	88566.6	1.50
Skipjack	151685	3.6	10176	0.6	161860.8	2.75
Moonfish	15097	0.4	10274	0.6	25371.2	0.43
Shark	20441	0.5	2181	0.1	22621.2	0.38
Barracuda	19461	0.5	1482	0.1	20943.1	0.36
Others	3725	0.1	1451	0.2	5176.3	0.09
Total	424925	100	1650642	100	5894567	100

- Data for the species composition of the tuna longline catch from 1996-1999 are listed in Table 1. Note the most accurate data for species composition was in the year 2000 due to the information provided by the data base.

5. Market Destination of Catches/Disposal of Catch/ Value of Exports

Sources of information for tuna exports consisted of a compilation of data collected from the two canneries in Pago Pago, American Samoa, the two major airlines exporting fresh chilled longline catches, Air New Zealand and Polynesian Airline.

Table 5. Tuna exports from Samoa 1996-2000

Tuna (all species)	1996	1997	1998	1999	2000
Tonnes exported to VCS Sampac	1150	2800	3400	2270	2926
Tonnes exported to Star Kist	370	1500	1100	1100	398
Tonnes exported air cargo	572	572	572	1037	1181
Total tonnes exported	2092	4872	5072	4407	4505
Foreign revenue from exports SAT	13,844,400	27,476,400	29,581,400	27,531,400	38,971,000

- 95% of tuna longline catch air cargo exports were to Hawaii and the mainland of the United States
- 5% of tuna longline catch air cargo exports were to New Zealand and Australia
- 25% of the total longline catch is either sold on the domestic market or distributed to the longline crew

Value of the longline catch was based on the average price of frozen tuna at the two canneries in American Samoa of SAT 4900 per tonne from 1996 to 1997, SAT 5150 in 1998, SAT 5400 in 1999 and 6700 in 2000. The average price in 1998 and 1999 for frozen albacore at the canneries was calculated according to the drop in price to

USD 1400 per tonne in the latter part of 1998 and the first 3 months of 1999. Interviews with the exporters indicated that the average price for fresh chilled tuna and other species exported air cargo was SAT 11.20 from 1996-1998, SAT 9.00 in 1999 and SAT 14.00 in 2000.

6. Onshore Developments

Currently, four fish processing companies export the tuna longline catch either frozen to the two canneries in American Samoa or fresh chilled to Hawaii or the mainland of the United States. The fish export companies are equipped with blast freezers, cold stores and ice making machines. As the rejection of tuna from the canneries has been a major concern, the need to increase the ice production capacity to ensure the catches are chilled properly is a priority for the industry. The increase of ice production capacity from 1996-2000 is listed below in Table 6.

Table 6. Ice production capacity from 1996-2000

Ice production (kg per 24 hours)	1996	1997	1998	1999	2000
Total ice production	6000	16000	26000	34000	42000

It is estimated that the present ice production capacity still is not sufficient to supply the entire fishing fleet with ice to chill the catches. The Fisheries Division has recently secured funds to purchase two 3 ton ice making machines that will be based in Savaii. Two fish exporting companies based in Apia will increase the ice production capacity by 16 tons per 24 hours before the end of the year.

Due to the success of the tuna longline fishery over the last five years the commercial fishing fleet has expanded from 25 active alias (catamarans) in 1994 to over 150 vessels in 2000. An estimated 70% of the entire fishing fleet is based in the Apia area. The increased number of fishing vessels has resulted in the fishermen's wharf adjacent to the Fisheries Division being congested. Congestion at the port facility has reached the point where the safety of the fishing fleet will be endangered if Samoa experiences a tropical storm similar to those in 1990 or 1991. Also, serious injuries to the crew of the fishing vessels are likely to occur when loading and unloading in such crowded conditions.

Some fishermen are forced to moor their vessels along the sea wall in front of the bus terminal and the small cove near the commercial wharf in Matautu. The Samoa Port Authority has warned that in the near future it will prohibit boat owners from mooring their fishing vessels at the commercial wharf or in the cove in Matautu.

The Fisheries Division in cooperation with a Japanese engineering company drafted a proposal to JICA for funding to construct a marina for the commercial fishing fleet. A survey of the terrestrial and marine area at Mulinu'u Point was conducted to determine the boundaries of the site. An infrastructure plan which included 4 floating mooring pontoons, a breakwater, boat lift, cold store rooms, fuel depot, and a boat repair yard was designed by the engineering company. The estimated cost for the construction of the marina was USD\$12 million. A proposal requesting external

funding was submitted the Ministry of Foreign Affairs for approval. The proposal was subsequently forwarded to JICA for consideration.

In September 2000, the government of China agreed to contribute USD1.3 million towards the construction of the marina at Mulinu'u Point. The proposal submitted to JICA is still under consideration.

7. Future Developments

a. The current FMP for the longline fishery is due for review in March 2001. The current Management Plan allows for the licensing of the local fishing vessels in the following categories:

Class A: Alia fishing boats(unlimited number)

Class B: 9 – 12 meters (25 licenses)

Class C: 12 – 14 meters (15 licenses)

Class D: 15 meters and over (15 licenses)

This FMP is under extreme pressure to increase the number of fishing vessels in both categories C and D.

b. Improve infrastructure: A feasibility study is already underway to evaluate the current and future needs of the industry as it continues to grow at its current rate. The big island of Savaii is favourable for the developments of onshore facilities capable of catering for large number of vessels and its central location allows for easy access by the fishing fleets from the nearby fishing zones.

c. Seafood Monitoring Authority: The current level of fish export rejects from the canneries in American Samoa causes grave concerns amongst the local authority. This prompts a number of quality control workshops carried out to teach all those involved in fish handling the best methods of maintaining good fish quality. Furthermore, a project to establish a Seafood Monitoring Authority was initiated early this year, 2001. This project is now in Phase 2, and it is mandated to establish a competent, local verification authority that is consistent with the requirements and recognized by our current trading partners(i.e.U.S) and potential partners such as EU countries.

d. Reciprocal Fishing Agreements: Neighbouring EEZs such as Tonga, Tokelau, Niue and American Samoa will be approached regarding the issue of bilateral access fishing agreements with Samoa. Informal discussions with the Kingdom of Tonga regarding the likelihood of establishing a reciprocal fishing agreement between the two neighbouring EEZs were already carried out.