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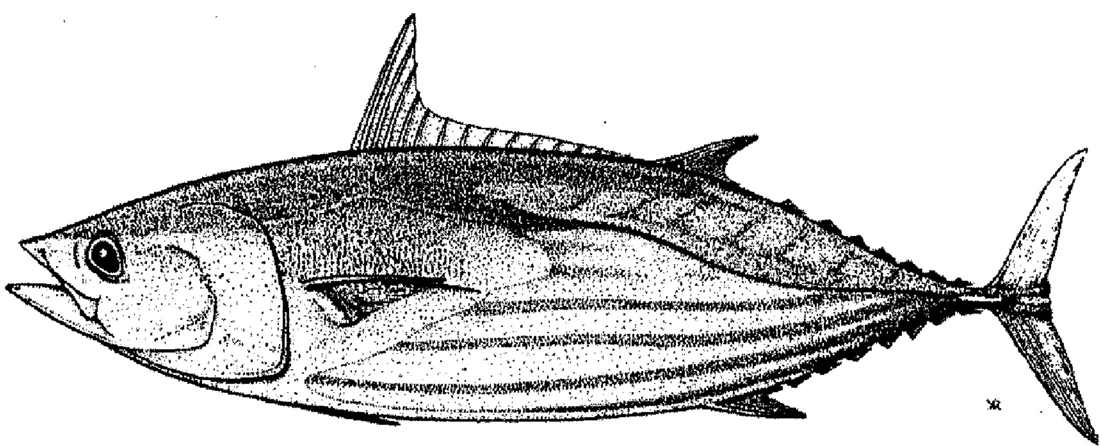
National Tuna Fishery Report – Papua New Guinea



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National Tuna Fisheries Report – Papua New Guinea

(A working paper prepared for the Fifteenth Meeting of the Standing Committee for Tuna and Billfish, Honolulu, Hawaii 18th – 27th July 2002)

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Background

The tuna fishery is Papua New Guinea's largest and single most commercially important fishery. Commercial fishing for tuna in Papua New Guinea (PNG) waters commenced in the 1950s when the Japanese fished the area initially using long-liners followed by the Taiwanese and Korean longliners in the 1960s and 1970s.

In the 1970s a locally based jointed – venture, 'Pole and Line' Skipjack fishery commenced operation and catches peaked at 49,000 metric tones (mt) in 1978. At about the same time, a similar operation was in place involving long -range Pole and line fishery by Japanese vessels. The total catch by these two operations peaked at 102,000 mt in 1974 and 90% of the catch was Skipjack. Both operations ceased in the late 1970s due to poor Skipjack prices.

The 1980s saw the era of purse-seiners, first again were the Japanese group seiners in 1976, followed by the US, the Koreans, Taiwanese and the Philippines as of 1981. The purse-seine catch rose from 12,000 mt in 1980 to 200,000 mt in 1989. The catch over the last five years has fluctuated between 100,000 - 200,000 mt averaging about 140,000 mt per year.

In 1995, the PNG government passed a domestication policy to have PNG Citizens participate in the fishing industry. The result of this was that, only PNG citizens were allowed to be involved in the longline fishery in PNG waters. It also opened up the Archipelagic waters only to PNG based purse-seine operators with conditions of local transshipment and development of onshore processing facilities. It also meant that the quota for foreign vessels is reduced with the increase in domestic vessels. Before this, tuna from PNG's fishing zone has been caught mainly by foreign operators and processed offshore.

Total catch for all species and gears combined –1997-2001

Total tuna catch by all vessels fishing in PNG waters in the last five years (1997-2001) picked up from a low of 99,364 mt in 1999 to over 200,000 mt in year 2000 (Table1a). This is a yearly average catch for the 5 year period of about 141,000 metric tonnes.

Catch by all PNG registered vessels is on the rise. Catch rose from about 10,000 metric tonnes in 1997 to 50,000 metric tonnes in 2001 (Table1b), an average of about 33,000 mt per year. This catch represents about 23% of the total catch from the PNG waters.

Table 1a. Total catch by all vessels fishing in PNG waters (source SPC logsheets)

Year	1997	1998	1999	2000	2001
Amount (mt)	153,870	125,734	99,364	216,250	109,151

Table 1b. Total catch by all PNG registered vessels in PNG waters.

Year	1997	1998	1999	2000	2001
Amount (mt)	9,613	30,408	30,872	41,837	50,042

Fleet structure

Domestic Long line

The Longline fishery is a citizen only activity in PNG. Licenses have been given only to PNG owned and operated companies since the 'Domestication policy' came into effect in 1995.

There are currently 39 longline vessels licensed to fish for tuna in PNG waters, of which three are foreign chartered. Nine vessels out of these are primarily targeting sharks.

Most long-line vessels fish on average about 10-12 days, but some vessels now fish continuously as they have support vessels or mother ships collecting their catch and refurbishing them with supplies.

Vessel sizes range from the smallest of about 25 gross tonnages (GRT) to 170 GRT. Seventy percent (70%) of the vessels fall in the size category 50-100 GRT. The sizes by length range from 15-35 metres. Most (76%) are of length 20-30 metres.

Domestic Purse-Seine

The current number of domestic Purse-Seine vessels is twenty-five (25). This includes vessels that are categorized as 'locally based foreign'. Most of the domestic vessels are small with fish carrying capacities of 400 metric tonnes (mt) to 650 mt.

Foreign Fleet

Foreign vessels are licensed to fish in PNG waters under access agreements or other agreements such as the FSM arrangement. The total number of foreign vessels is 121 (Table 2b). This makes up 70% of the vessels fishing in PNG waters.

Table 2a. Number of Vessels Fishing in PNG waters.

Year	Longline (Domestic)		Purse–seine (Domestic)		Total Active	Foreign fleet	Total Active
	Licensed	Active	licensed	Active			
1997		8	10	10	18	74	92
1998		8	13	13	21	117	138
1999	26	11	12	12	22	24	46
2000	38	25	12	12	37	89	126
2001	47	38	18	18	56	127	183
2002	39	25	25	25	50	121	171

Table 2b. Foreign Fishing Vessels Fleet Structure (source NFA)

Agreement type	Vessel nationality	Number of vessels
Access	Korea Taiwan Philippines	27 41 10
Multilateral (US)	USA	29
FSM arrangement	Micronesia Solomon Islands Marshalls Kiribati	5 4 5 1
Total		122

Catch by species for each gear type

Purse-seine

Catch by the purse-seine fishery is steadily increasing for all tuna species. From 1997 to 2001 the skipjack catch increased from 6,000 mt to 32,000 mt, yellowfin from 3,000mt to 17,000mt and the total catch from 9,000 mt to 50,000 mt (Table 3a and fig 1). CPUE is also on the rise except for year 2001(Table 3a & fig1). Effort increased from 1021 days fished or searched in 1997 to 2821 days in 2001. Vessel numbers also increased from 7 in 1997 to 22 in 2001 and currently is at 25 vessels. Species composition over the last 5 years has generally been 69% Skipjack, 29% Yellowfin and 2% others.

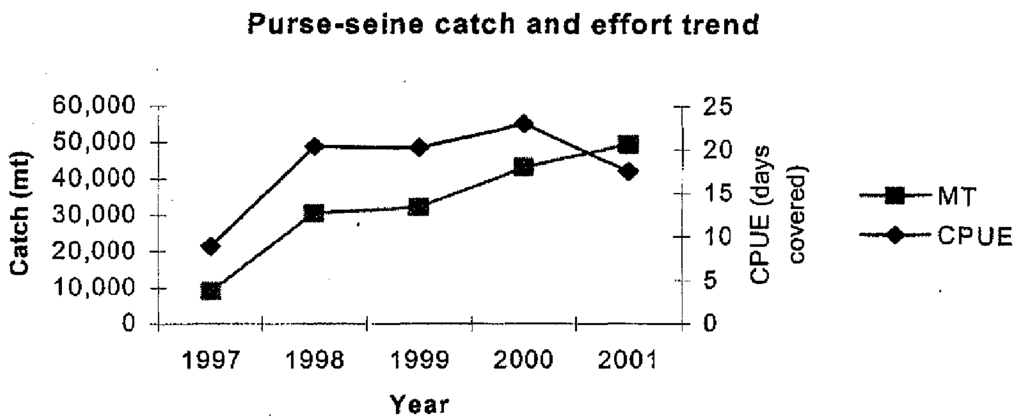
Longline

Long-line catch has doubled in the last 5 years according to logsheet data. In 1997 the catch reached 500 metric tonnes and this increased to about 1,000 metric tonnes in 2001. However, the export figure for fresh chilled tuna in year 2001 was more than 2,000 mt, which means that the actual catch was more than the reported catch. If as the long-line operators say, one third is discarded or does not qualify for exports, then the current total catch should be at least about 3,000 mt. Catch rates for all long-line dropped from 57 kg per 100 hooks in 1997 to 38 kg per 100 hooks in 2001. The lowest catch rate was in 1999 but there is some sign of improvement in the last two years.

Table 3a. Domestic Purse-seine catch 1997- 2001 (source: SPC from submitted logsheets)

Year	No. vessels	No. days	Skipjack			Yellowfin tuna			Others		Total	
			MT	CPUE	%	MT	CPUE	%	MT	%	MT	CPUE
1997	7	1021	5,585	5.47	61.41	3,491	3.42	38.38	19	0.2	9,095	8.91
1998	9	1500	22,234	14.82	72.89	7,833	5.22	25.68	434	1.4	30,502	20.34
1999	13	1592	22,779	14.31	70.9	7,757	4.87	24.14	1,592	4.9	32,129	20.18
2000	17	1878	32,474	17.29	75.36	8,920	7.75	20.7	1,700	3.9	43,094	22.95
2001	22	2821	31,670	11.23	63.94	17,404	6.17	35.14	460	0.9	49,534	17.56

Figure 1. Catch and effort trend



*CPUE (days fished or searched).

Table 3b. Domestic Longline catch 1997-2001 (Source: SPC from submitted logsheet)

	Effort	Albacore		Bigeye tuna		Yellowfin tuna		Others		Total	
Year	X100 hks	Catch (mt)	Cpue (kg/100hks)	Catch (mt)	Cpue (kg/100hks)	Catch (mt)	Cpue (kg/100hks)	Catch (mt)	Cpue (kg/100hks)	Catch (mt)	Cpue (kg/100hks)
1997	9,675	98	10.2	55	5.7	384	39.7	13	1.3	550	56.8
1998	7,534	41	5.4	16	2.1	284	37.7	16	2.1	357	47.4
1999	10,577	84	7.9	29	2.7	222	21.0	31	2.9	366	34.6
2000	14,555	53	3.6	74	5.1	316	21.7	156	10.7	599	41.2
*2001	28,325	44	1.6	139	4.9	784	27.7	106	3.7	1073	37.9

*Data incomplete

Figure 2. PNG long-line catch and effort trend for all species- 1997-2001

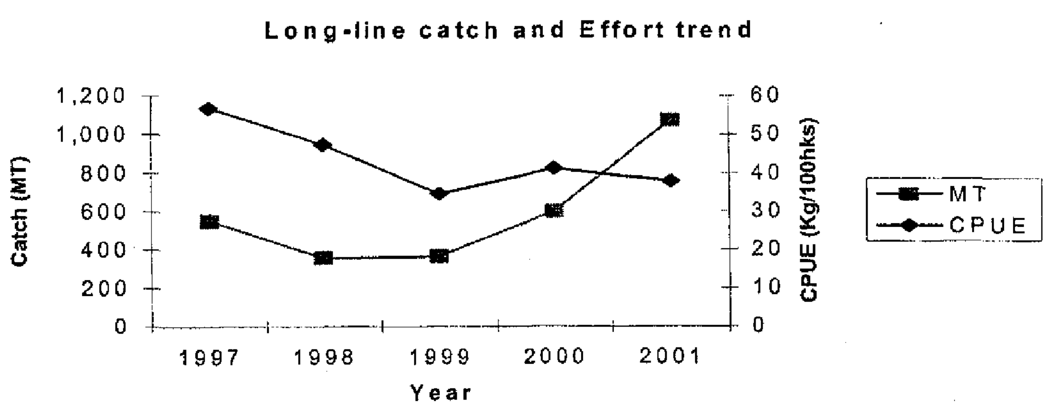
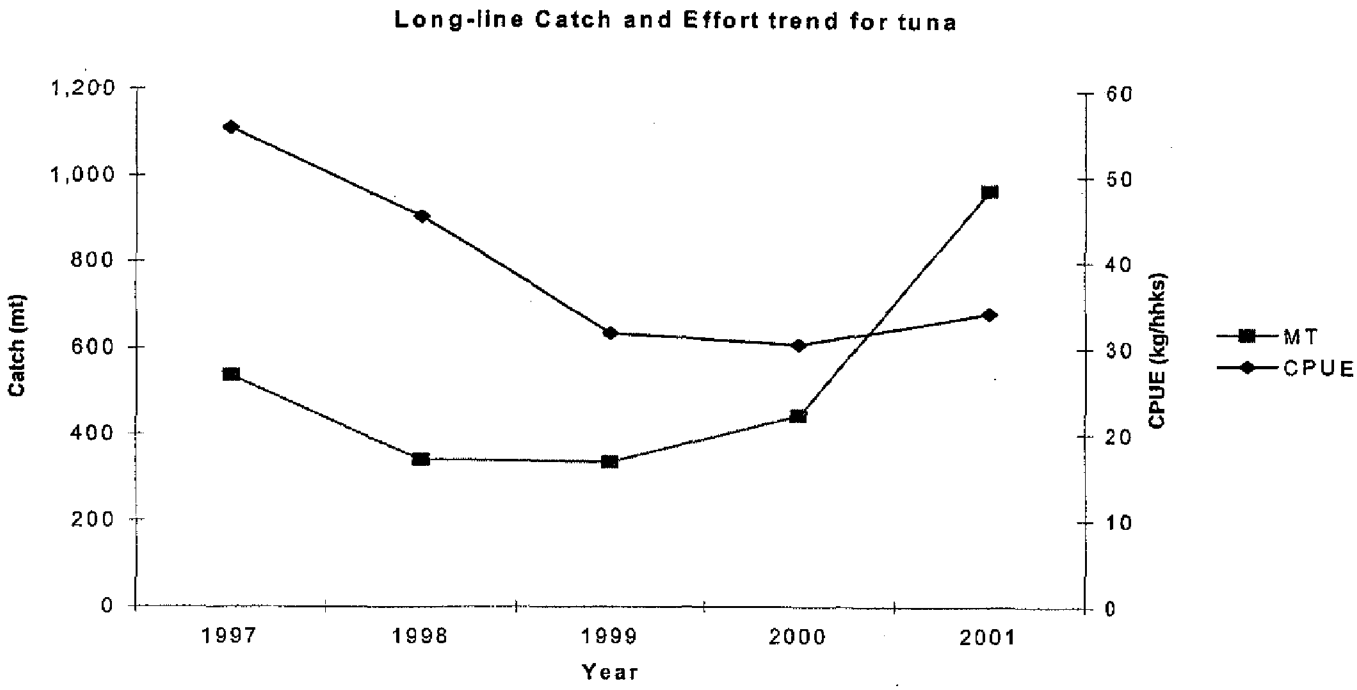


Figure3. Catch trend for tuna by longline in PNG waters 1997-2001



Final market destination of catches

Tuna products from PNG are in four (4) forms, which are;

1. Canned tuna
2. Fish meal or Dried
3. Chilled
4. Frozen

Canned tuna is exported mainly to Germany and USA, Fish meal to Australia and the Philippines. Chilled tuna to Japan and Australia, the high grade to the sashimi auction in Japan. Frozen tuna mainly ends up in Philippines, and Singapore (Appendix 1). Some canned tuna is consumed within country.

Table 4. *Tuna export from Domestic vessels (MT)*

Year	Canned	Fish meal (Dried)	Fresh Chilled	Frozen
1997	1,210.1	302.25	453.4	4,285.8
1998	5,183.55	1,010.5	590.	29,558.8
1999	6,710.9	260.00	679.47	29,122.3
2000	10,106.00	1,690.00	1,193.26	32,561.00
2001	9,407.469	1,299.60	1,745.253	29,856.65

About 900 metric tonnes is canned for domestic consumption each year.

Onshore developments (transhipment, processing etc)

Processing

Tuna cannery
There is currently one cannery operating in PNG. The production tripled from 30 mt/day in 1997 to 100 mt/day in 2001. The cannery is under-going re-arrangement to further increase production to 130 mt/day. The company also has a cold storage and wharf facilities and employs around 2,500 people. Two processing facilities (Loining plants) are under construction and a third one is in a planning phase.

Transshipments
Six ports are designated for transshipment. About 10 to 15 transshipments are done monthly in each port except for Madang where transhipment is almost daily.

Future prospects and development

Fishery wharves &other projects.
The future of fisheries in PNG is very promising and at the moment fishing is one of the most dynamic industries in the country. The National Fisheries Authority (NFA) as the institution in-charge of fisheries in PNG has embarked on a couple of major projects including the building of two fisheries wharves. One of the wharves is currently under construction and construction of the other will start later this year. In addition the National Fisheries Authority will be building fisheries jetties at selected locations in the country. NFA has also build a seafood processing facility at its college. These facilities when completed be tendered to private entrepreneurs who will run them as a private entity, but pay rentals to NFA.

Institutional strengthening & Capacity building
NFA staff numbers have been reduced to only about 50 from 150 resulting in the organization being more efficient, effective and more responsive to industry needs. This objective of servicing customer needs is being addressed through customer service training for all staff, management training for Managers and other specialist training for relevant officers. The National Fisheries college as part of the NFA restructure is now running new modular courses, aimed at building up qualification and experience of trainees who will be directly employed by the industry's capture and processing sectors.

Domestic longline fleet build-up
The current operators of the long-line vessels are also arranging to expand their fleets and some are in the process of having new vessels build. It is anticipated that there will be an additional ten (10) long-line vessels added to the domestic Longline fleet within the next 3 years.

Appendix 1. DESTINATIONS OF PNG TUNA PRODUCTS

	PRODUCT TYPE			
Year	CANNED	FISH MEAL (DRIED)	FRESH CHILLED	FROZEN
2000	USA	Singapore	Japan	Phillippines
	Germany	Australia	USA (Guam)	Taiwan
	Austria	Philippines	Australia	Belize
	New Zealand			Japan
	Solomon Islands			A.Samoa
	Australia			Australia
	Denmark			
	Trinidad & Tobago			
1999	USA	Australia	Japan	Philippines
	Germany	Phillippines	Australia	Taiwan
	Denmark		USA	Belize
	Austria			Panama
	Philippines			
	Trinidad & Tobago			
	New Zealand			
1998	USA	Philippines	Japan	Philippines
	Germany	Australia	Australia	USA
	Australia			Taiwan
	Vanuatu			Germany
				Singapore
1997	Germany	Singapore	Japan	Philippines
	USA	Philippines	Australia	Taiwan
	United Kingdom		Hong Kong	Australia
	Denmark			Singapore
1996			Japan	Philippines
			Australia	Taiwan