

EIGHTH STANDING COMMITTEE ON TUNA AND BILLFISH

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NATIONAL FISHERY REPORT

FRENCH POLYNESIA

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REPORT ON THE TUNA AND BILLFISH FISHERY - FRENCH POLYNESIA

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INTRODUCTION

This document provides a brief appraisal, in the suggested format, of the status of the tuna and billfish fishery in French Polynesia in 1994.

Some further information is also contained in the annexes to this report.

1. TOTAL CATCHES

Table 1 is a summary of the 1994 liveweight estimates for total tuna and billfish production in French Polynesia.

Species	TUNAS					BILLFISH				TOTAL
	Skipjack	Albacore	Yellow-fin	Bigeye	Bluefin	Blue marlin	Stripped marlin	Sword-fish	Other marlins	
Tonnage (MT)	1 191	991	555	165	1	417	113	72	27	3 532
%	33.7	28.1	15.7	4.7		11.8	3.2	2.0	0.8	100
	2 903 (82.2 %)					629 (17.8 %)				

Table 1: Summary of domestic catches in French Polynesia in 1994

Tunas and billfish are thought to represent 41% of all fish caught in French Polynesia by domestic vessels (see Annex 1); if catches taken by foreign vessels in French Polynesia's EEZ (see Annex 2) where they consist almost entirely of the main tuna species and billfish are also included, their proportion rises to 53%.

2. STRUCTURE OF THE FISHING FLEET

The domestic vessels which contributed to the tuna and billfish fishing effort in 1994 may be divided into two broad groups:

- coastal vessels;
- high-seas vessels.

3.1. **The coastal vessels** are those fishing than less 50 nautical miles offshore. Their trips generally last less than 24 hours. This is a highly diverse grouping because it includes poti marara, conventional skipjack boats, skipjackers converted into longliners, small longliners plus a multitude of small boats involved in subsistence or recreational fishing.

The fishing techniques used are very varied including trolling, pole-and-lining, deep hand lining and small monofilament longlining (with a mainline less than 40 km in length).

3.2 **The high-seas vessels** are those with a range exceeding 50 nautical miles offshore and fitted with gear comprising a main longline over 40 km in length. All these ships, are, at the present time, using the monofilament longline technique. Three separate types of vessel may be distinguished:

- tuna boats landing fresh fish;
- freezer-equipped tuna boats;
- offshore tuna boats.

All these vessels are at present using the monofilament longline technique but only the offshore tuna boats are also able for a short period each year to troll for surface South Pacific albacore around the 40° S parallel.

Table 2 gives an idea of the general composition of the French Polynesian fishing fleet in 1994.

Type of fishing	Type of vessel	Number of vessel	Techniques used
Coastal fishery	Poti marara	≈ 200	Deep handlining, trolling Pole-and-lining, trolling, bottom lining
	Pole-and-line skipjack boats	70	
	Skipjack longliners	29	Monofilament longlining, pole-and- lining, trolling Monofilament longlining, trolling
	Small longliners	8	
	Others	≈ 700	Trolling, deep hand lining
Subtotal		≈ 1 000	
High-seas fishery	Fresh tuna boats	23	Monofilament longlining
	Freezer tuna boats	5	Monofilament longlining
	Offshore tuna boats	4	Monofilament longlining, trolling outside the EEZ
Subtotal		32	

Table 2: Structure of the French Polynesian fleet in 1994

3. CATCHES BY GEAR

As stated in the previous chapter, 4 fishing techniques are in use:

3.1. Trolling:

- **In the EEZ:**

It can be stated that, in French Polynesia, all fishing boats use the trolling technique at least occasionally.

Nevertheless, for the purposes of this paper, we only consider those boats whose surface trolling activity is of significance as compared to the other techniques used i.e. the poti marara and other coastal boats.

The principal species targeted are skipjack, yellowfin tuna and blue marlin, but not insignificant quantities of wahoo, trevallies, mahimahi, dogtooth tuna, etc are also caught.

- **Outside the EEZ:**

In 1994, the offshore tuna boats did not make a surface albacore fishing trip around the 40° S parallel.

The table appended as Annex 3 summarises the preliminary results of the 1995 season and shows a substantial increase in landings over 1993 of the order of 25% and 100% respectively in terms of number and weight.

3.2. Deep hand lining:

This technique is principally used around FADs and tuna holes and is basically restricted to the poti marara.

Catches are mainly South Pacific albacore and yellowfin.

3.3. Pole-and-lining:

This traditional fishing method is used by what we refer to as the "conventional" skipjack boats.

The main target species remains the skipjack, but young yellowfin are also well represented in catches figures.

3.4. Monofilament longlining:

All longliners are using nylon monofilament material. This fairly recent activity, which began in 1990 with 2 boats, has had phenomenal success because by 1994 there were 66 longliners operating. The number as at the first half of 1995 has risen to a potential total of 72 boats.

Catches are much more varied than those registered with the other techniques, but the target species are the major commercial tuna species and the billfish.

The table appended as Annex 4 summarises general longlining data for 1994.

The production of commercial species has increased by approximately 30% over 1993 while fishing effort has increased by almost 40% in terms of hooks set, which explains a drop in weight yields of approximately 8%.

Regarding the species composition, the proportion of tuna has dropped (16%) while the billfish percentage has risen by 55%, with both groups together representing around 90% of commercial landings. Albacore is still the preponderant species accounting for more than 2/3 of important tuna species.

Table 3 summarises landings recorded by gear type.

Fishing Method	TUNAS					BILL-FISH				TOTAL
	Skipjack	Albacore	Yellow-fin	Bigeye	Bluefin	Blue marlin	Striped marlin	Sword-fish	Other marlins	
Trolling	208	-	98	-	-	64	-	-	-	370
%	56,2		26,5			17,3				100%
Method	17.5		17.7			15,4				10,5
Species										
Pole and lining	892	-	126	-	-	-	-	-	-	1 018
%	87,6		12,4							100%
Method	74.8		22.7							28,8
Species										
Bottom lining	-	78	56	-	0.4	5	-	-	-	139
%		56	40		0.4	3.6				100%
Method		7.9	10.1		0.4	1.2				3.9
Species										
Long-lining	91	913	275	165	0.6	348	113	72	27	2 005
%	4.5	45.5	13.7	8.2	-	17.4	5.6	3.6	1.3	100%
Method	7.7	92.1	49.5	100	0.6	83.4	100	100	100	56.8
Species										
TOTAL	1 191	991	555	165	1	417	113	72	27	3 532
	2 903 (82.2 %)					629 (17.8 %)				

Table 3: Catch breakdown by gear type used**4. DESTINATION OF CATCHES**

The fish caught by domestic vessels has 2 possible destinations:

- the local market;
- the export market.

4.1. The local market:

In 1994, the local market consumed almost all landings (95%), the vast majority of which was sold fresh and accounted for a total value of approximately 600 million CFP francs.

Four kind of individual or grouping are involved in the local market:

- **the individual fisherman**, who catches his fish and lands it for sale through any of the available opportunities, such as:
 - wholesalers (companies, co-operatives);
 - retailers (shops, municipal markets, roadside stalls, itinerant salesmen);

- processors (restaurants, fish filleters, fish smokers);
- direct sale to private customers.

Most coastal vessels are operated by this kind of individual fishermen, but some offshore tuna boats also use this marketing system.

- **fishermen grouped into companies or co-operatives**, who operate on an individual basis but sell their fish on a preferential terms to the company or co-operative involved. The poti marara, skipjack boats and some longliners belong to this category.
- **companies** which operate fishing boats and also market their own landings and/or those of other fishermen; this group includes skipjack boats and longliners. In 1994, 3 companies were operating 13 offshore tuna boats under this kind of system.
- **pure traders** who do not fish themselves but who purchase fish from the above groups.

At the present time, there are over fifteen companies or co-operatives selling fish, 8 of which have authorisation to export.

Products purchased from fishermen generally take one of the following forms:

- tunas: whole or gutted; fresh or frozen fillets;
- marlins: with head and belly flaps removed, fresh or frozen fillets; these products are sold with or without further processing (into steaks, loins or fillets).

No information is currently available on the respective quantities following the various paths to the consumer as described above.

4.2. The export market:

At present only tuna longliners offer fish for export.

In 1994, 185 mt of fish were exported, accounting for a total value of 74 million CFP Francs.

Table 4 summarises the export data:

Type of product	Tonnage (MT)	Value (CFP F '000 000)	Species	Destination
Whole fresh fish	97.2	38.9	Tunas, marlins, mahimahi	USA, Japan, Europe
Frozen (whole/fillet)	62.6	13.3	Albacore, marlins, swordfish, mako	Europe, Western Samoa
Fresh fillet	7.7	3.7	Tunas	Europe
Processed	17.5	17.8	Tunas, marlins, swordfish, Spanish mackerel	Europe
Total	185	73.7		

Table 4: Export data for 1994

The volume exported remains low (5%) compared to total recorded landings.

Indeed, for many species, the local market prices are more attractive to fishermen, because overall domestic demand is not satisfied throughout the year.

Also, the sashimi market which is intrinsically more lucrative, is presently encountering supply problems relating to both quantity and quality because the proportions of bluefin tuna weighing over 30 kg and with a high-fat content remain low.

In order to develop exports it would be necessary to increase the size of the tuna fishing fleet.

5. DISCARDS

The landings from the coastal fishery are used thoroughly and there is little wastage.

Most discards are recorded in the longline fishery.

Some longline catches are thrown back into the sea such as sharks, rays, lancet fish, mola, trichiurides, etc... while others are partly consumed by some communities: *Ruvettus* sp. *Lepidocybium* sp. *Prometichys* sp. *Sphyræna* sp. etc...

The quantities of fish with local market value which are discarded because they do not find takers or they have been improperly stored remain negligible, because the former category are usually eaten anyway and those comprised in the latter category are few because onboard fish storage and the cold chain operated by producer or consumer have improved considerably.

6. ANCILLARY ACTIVITIES

The Territory of French Polynesia is committed to developing the fishery sector, and especially the longlining fleet, by means of direct or indirect support in terms of both funding (fiscal facilitation) and capital investment in joint infrastructural facilities.

A tuna fishing wharf (180 linear metre) constructed in 1993 doubled its capacity in 1994; a flake ice manufacturing plant with a 30 tonnes per day output capacity has been operating since late 1993; a wholesale market and cold store for bait (105 m³) has been operating since 1995. The wholesale market has 6 wholesale preparation rooms leased to wholesalers on the tuna wharf and a refrigerated fish-selling room 750 m³ in area.

Substantial financial aid for the purchase of longliners and longlining equipment were granted prior to 1994, while incentives were also given to modernise the poti marara (diesel engines for example).

The cost of diesel fuel has been reduced by half of a period of several years, and the cost of fuel for the poti marara with petrol engines was subsidised to reduce fishermen's costs.

Also, a research programme designed to improve the knowledge of the tuna resource in our EEZ and improve fishing strategies has just commenced. Linked as it is with the longlining database set up with the help of SPC expertise between 1994 and 1995, this research programme is commencing at just the right time to resolve a number of issues relevant to future fisheries development in French Polynesia.

In 1995, the number of longliners stabilised and this reflects caution on the part of investors. From 1991 and until 1995 yields fell regularly without the industry being aware of the reasons nor how long the slump would last.

7. PROSPECTS

Longline catch prospects for 1995 are at least 4 to 5 000 mt. This being so and in order to improve resource accessibility, it is becoming urgent to conduct various types of supporting actions simultaneously:

- yield improvement;
- quality improvement;
- improvement of distribution networks maintaining the best possible prices;
- improvement of the situation of general material circumstances of fishermen and women.

A number of projects are under consideration in order to achieve the above objectives:

- research and database programme as referred to above;
 - establishment of forward fishing bases in areas close to richer fishing grounds;
 - reduction or indeed banning of fishing licences for foreign vessels in the territorial EEZ;
 - suitable refrigeration equipment (blast freezing tunnel);
 - development of more profitable fishing boats (funding/management);
 - extension of wholesale market and construction of wholesale markets in the outer islands;
 - exportation;
 - training for skippers, fishermen, mechanics and fish handlers and processors;
 - better social security cover for fishermen.
-

GROUPES	Bonite	Germon	Yellowfin	Bigeye	Marlin bleu	Marlin rayé	Autres marlins	Espadon	Mahimahi	Opah	Squales	Divers	Poissons récifo-lagonaires	TOTAL
Tonnages (MT)	1191	991	555	165	417	113	27	72	256	83	430	271	4000	8571

MOIS	JP	YELLOWFIN	BIGEYE	GERMON	AUTRES	TOTAL	rendement
1	348	65599	215792	15216	41435	338042	971
2	305	70579	213528	24808	31655	340570	1117
3	162	12692	102345	1231	15221	131489	812
4	64	4680	22363	1400	4236	32679	511
5	10	3735	3534	60	2968	10297	1030
6	134	32693	65229	19793	23827	141542	1056
7	71	17988	40800	7100	8910	74798	1053
8	0	0	0	0	0	0	#DIV/0!
9	64	14415	36419	6310	1179	58323	911
10	152	50241	92645	11717	15061	169664	1116
11	625	224327	395363	41939	73248	734877	1176
12	84	34703	43040	3822	16800	98365	1171
TOTAL	2019	531652	1231058	133396	234540	2130646	1055
%		25.0%	57.8%	6.3%	11.0%	100.0%	

Nombre de navires	Période	JM	JP	Limites géographiques	Tonnages (kg)	Poids moyen (kg)	Effectifs	Rendements (Nb/JP)
4	février - avril	304	243	37°00 - 40°00S ; 151°00 - 164°00W	182634	8,6 *	21237	87

* 41% du tonnage est constitué de germons de poids moyen supérieur à 10 kg

caractéristiques	Germon	Yellowfin	Bigeye	Marlins	Espadon	Opah	Mahimahi	Thazard	Divers 1*	Squales	Divers 2**	TOTAL
Tonnages (kg)	912900	275439	164967	487842	72209	82654	90184	25154	75226	419949	46355	2652879
<i>poids moyen (kg)</i>	20.6	23.7	29.9	67.0	68.1	39.8	12.3	16.4	9.6	40.7	6.7	25.1
rendement (kg/100h)	18.16	5.48	3.28	9.71	1.44	1.64	1.79	0.50	1.50	8.35	0.92	52.78
%	34.4%	10.4%	6.2%	18.4%	2.7%	3.1%	3.4%	0.9%	2.8%	15.8%	1.7%	100.0%

* divers poissons commercialisables

** divers poissons non commercialisables

LA PECHE THONIERE EN 1994

Catégories	effectifs	potentiel LL	jours mer	sets	Hameçons	Germou		Yellowfin		Bigeye		Marlins		Espadon		Saumon		Mahimahi		Thazard		Diy con.		Pommes		Divers		TOTAL nominal		Ventilation																																
	(km)	(km)				Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids	Nb	Poids																															
Thoniers-bouilliers	27	576	2650	2212	1169322	9120	185729	2446	67748	951	32602	1255	94754	242	22562	559	22830	1837	21865	212	3881	1206	10160	2905	114748	979	7139	21712	584,009	20.5%	22.8%																															
pm	529 hameçons/set					43308 hameçons/an					20.4		27.7		34.3		75.5		93.2		40.8		11.9		18.3		8.4		39.5		7.3		26.9																													
rendements (pour 100ham)	0.8 set/jour de mer					82 sets/an					0.8		15.9		0.2		5.8		0.1		2.8		0.1		8.1		0.0		1.9		0.0		2.0		0.2		1.9		0.0		0.3		0.1		0.9		0.2		9.8		0.1		0.6		1.9		49.9		0.9		0.9	
ventilation	2030 hameçons/km LL/an					98 jours mer/an					42.0%		31.8%		11.3%		11.6%		4.4%		5.6%		5.8%		16.2%		1.1%		3.9%		2.6%		3.9%		8.5%		3.7%		1.0%		0.7%		5.6%		1.7%		13.4%		19.6%		4.5%		1.2%		100.0%		100.0%					
Thoniers de proximité	8	167	612	472	356700	3673	72939	355	10167	413	13425	462	38407	70	6610	199	8365	531	6208	73	1445	264	2702	788	31460	351	2085	7179	193,813	6.8%	7.3%																															
pm	756 hameçons/set					44588 hameçons/an					19.9		28.6		32.5		83.1		94.4		42.0		11.7		19.8		10.2		39.9		5.9		27.0		1.1																											
rendements (pour 100ham)	0.8 set/jour de mer					59 sets/an					1.0		20.4		0.1		2.9		0.1		3.8		0.1		10.8		0.0		1.9		0.1		2.3		0.1		1.7		0.0		0.4		0.1		0.8		0.2		8.8		0.1		0.6		2.0		54.3		1.0		1.0	
ventilation	2136 hameçons/km LL/an					77 jours mer/an					51.2%		37.6%		4.9%		5.2%		5.8%		6.9%		6.4%		19.8%		1.0%		3.4%		2.8%		4.3%		7.4%		3.2%		1.0%		0.7%		3.7%		1.4%		11.0%		16.2%		4.9%		1.1%		100.0%		100.0%					
Thoniers du large	22	1429	2951	1939	2682518	23623	495632	5709	137692	3065	90217	4238	289216	548	34959	936	36368	4019	50675	979	15826	5268	51707	4917	197077	4038	24702	57,340	1,424,070	54.2%	53.7%																															
pm	1383 hameçons/set					121933 hameçons/an					21.0		24.1		29.4		68.2		63.8		38.8		12.6		16.2		9.8		40.1		6.1		24.8		1.0																											
rendements (pour 100ham)	0.7 set/jour de mer					88 sets/an					0.9		18.5		0.2		5.1		0.1		3.4		0.2		10.8		0.0		1.3		0.0		1.4		0.1		1.9		0.0		0.6		0.2		1.9		0.2		7.3		0.2		0.9		2.1		53.1		1.0		1.0	
ventilation	1877 hameçons/km LL/an					134 jours mer/an					41.2%		34.8%		10.0%		9.7%		5.3%		6.3%		7.4%		20.3%		1.0%		2.5%		1.6%		2.6%		7.0%		3.6%		1.7%		1.1%		9.2%		3.6%		8.6%		13.8%		7.0%		1.7%		100.0%		100.0%					
Thoniers congélateurs	5	386	415	257	353410	3572	71028	1763	33003	372	10189	639	30146	76	3296	105	4419	546	6751	130	1959	496	4483	938	42871	722	6046	9,359	214,191	8.8%	8.1%																															
pm	1375 hameçons/set					70682 hameçons/an					19.9		18.7		27.4		47.2		43.3		42.2		12.4		15.0		9.0		45.7		8.4		22.9		0.9																											
rendements (pour 100ham)	0.6 set/jour de mer					51 sets/an					1.0		20.1		0.5		9.3		0.1		2.9		0.2		8.5		0.0		0.9		0.0		1.3		0.2		1.9		0.0		0.6		0.1		1.3		0.3		12.1		0.2		1.7		2.6		60.6		1.3		1.1	
ventilation	916 hameçons/km LL/an					83 jours mer/an					38.2%		33.2%		18.8%		15.4%		4.0%		4.8%		6.8%		14.1%		0.8%		1.5%		1.1%		2.1%		5.8%		3.2%		1.4%		0.9%		5.3%		2.1%		10.0%		20.0%		7.7%		2.8%		100.0%		100.0%					
Thoniers hauturiers	4	312	662	362	464467	4305	87572	1364	26828	719	18534	689	35319	124	4782	278	10672	412	4685	137	2043	627	6174	767	33802	832	6385	10,253	236,796	9.7%	8.9%																															
pm	1283 hameçons/set					116117 hameçons/an					20.3		19.7		25.8		51.3		38.4		38.4		11.4		14.9		9.9		44.1		7.7		23.1		0.9																											
rendements (pour 100ham)	0.5 set/jour de mer					91 sets/an					0.9		18.9		0.3		5.8		0.2		4.0		0.1		7.6		0.0		1.0		0.1		2.3		0.1		1.0		0.0		0.4		0.1		1.3		0.2		7.3		0.2		1.4		2.2		51.0		1.0		1.0	
ventilation	1489 hameçons/km LL/an					166 jours mer/an					42.0%		37.0%		13.3%		11.3%		7.0%		7.8%		6.7%		14.9%		1.2%		2.0%		2.7%		4.5%		4.0%		2.0%		1.3%		0.9%		6.1%		2.6%		7.5%		14.3%		8.1%		2.7%		100.0%		100.0%					
TOTAL	66	2870	7290	5242	5026417	44292	912900	11637	275439	5520	164967	7283	487842	1060	72209	2077	82654	7344	90184	1532	25154	7860	75226	10315	419949	6922	46355	105,843	2,452,879	100.0%	100.0%																															
pm	959 hameçons/set					76158 hameçons/an					20.6		23.7		29.9		67.0		68.1		39.8		12.3		16.4		9.6		40.7		6.7		25.1		0.9																											
rendements (pour 100ham)	0.7 set/jour de mer					79 sets/an					0.9		18.2		0.2		5.5		0.1		3.3		0.1		9.7		0.0		1.4		0.0		1.6		0.1		1.8		0.0		0.5		0.2		1.5		0.2		8.4		0.1		0.9		2.1		52.8					
ventilation	1751 hameçons/km LL/an					110 jours mer/an					41.8%		34.4%		11.0%		10.4%		5.2%		6.2%		6.9%		18.4%		1.0%		2.7%		2.0%		3.1%		6.9%		3.4%		1.4%		0.9%		7.4%		2.8%		9.7%		15.8%		6.5%		1.7%		100.0%		100.0%					

REMARQUE : les 18 nouvelles unités mises en service en cours d'année 1994 n'ont pu exercer leur activité de pêche que sur une période moyenne de 6 mois.