



**SCIENTIFIC COMMITTEE
FOURTH REGULAR SESSION**

11-22 August 2008
Port Moresby, Papua New Guinea

**ANNUAL REPORT – PART 1
INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS**

WCPFC-SC4-AR PART 1/WP-18

NEW CALEDONIA

WESTERN AND CENTRAL PACIFIC FISHERIES COMMISSION

**4th Scientific Committee Meeting
11th – 22nd August 2008
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NEW CALEDONIA - ANNUAL REPORT 2007 Part 1

Summary:

In 2007, 23 domestic long liners were fishing in the New Caledonian ZEE. No licence to fish has been issued to foreign vessel since early 2001.

Despite a slight increase of the fishing effort in 2007 the total catch, 2 122 t, is similar to that of 2006. Albacore represents almost 2/3 of the total catch (1 324 t) and Yellow Fin 19 % (393 t). The catches of sharks are decreasing since 2006, probably due to the increase of the use of monofilament mainline.

Port sampling and observer activities will continue in 2008, under a new EC-funded project and will add scientific data to the logsheets currently collected on a regular basis.

Over the last years several initiatives, both on the scientific and technical aspects of the tuna fishery, have been implemented on a local scale so as to contribute to the regional efforts to improve and spread knowledge about the spatial distribution of target tuna species and the links to environmental signals.

A. Fleet structure and fishing activity

In 2007, 27 domestic tuna longliners were licensed to fish compared to 24 in 2006. However, only 23 of them were active. There is still no foreign vessel licensed to fish in the New Caledonian EEZ.

Table 1: Number of vessels active in 2006 by GRT class

	0-50	51-100	100+
Longliners	8	11	4

Table 1 above shows 8 active vessels in 2007 are less than 50 tons. These vessels have limited cruising range. The larger longliners are capable of staying at sea for two weeks or more. The average trip length is only 10 days of which 6 to 7 are fished.

Compared to 2006 the total number of days at sea (4100) increased by 24 % to its 2005 level. Correlatively, the number of hooks (4.2 millions) also increased, however, to a lesser extent (+10%).

Globally, the fishing effort in number of hooks has dropped down by 33% since 2003.

B. Catch statistics

Table 2: breakdown of catch by species from New Caledonian longliners in the WCPFC statistical area

Metric tonnes of	2003	2004	2005	2006	2007 (*)
Albacore	1111	1468	1590	1358	1324
Yellowfin	754	631	448	414	393
Bigeye	142	90	76	35	53
Marlins	122	121	124	91	110
Swordfish	22	17	12	10	19
Mako shark	38	34	26	14	13
Others	277	255	197	187	210
TOTAL	2466	2616	2473	2108	2122

*: preliminary figures

Despite a slight increase of the fishing effort in 2007 the total catch has remain similar to that of 2006. This shows lower CPUE (- 10%) which have reported for both albacore and yellowfin.

These two species account for 80% of the global catch which albacore representing almost 2/3 of the total. No vessel targets bigeye: it is now regarded as a bycatch, such as shark, marlins and swordfish.

Many of the species show seasonal patterns in their abundance around New Caledonia which induce similar fluctuations in the catch rates (see table3).

Table 3: Number of fish caught per month in 2007

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Yellowfin	375	660	564	1160	1968	1707	1896	1048	1500	1277	1541	1735
Bigeye	102	110	163	149	214	243	156	221	76	102	63	102
Albacore	6904	4377	4095	4854	5858	6778	7087	8582	7051	4083	7148	6664
Others	2942	2395	1415	1040	1220	1182	1063	966	1039	1364	1126	1111
TOTAL	10323	7542	6237	7203	9260	9910	10202	10817	9666	6826	9878	9612

An important decrease of capture of sharks is observed since 2006, probably due to the increase of the use of monofilament mainline (Figure 1). In 2007 all the boats are using this new sort of line, which can be cut, directly by the shark or by the fishermen when necessary.

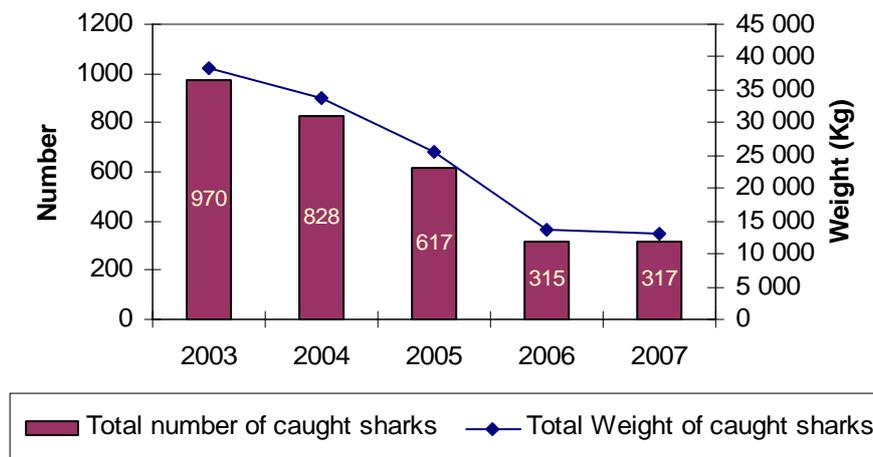


Figure 1: Number and weight of Shortfin Mako captured by Caledonian fleets

C. Monitoring activities

Port sampling and observer activities have been carried in New Caledonia for more than 20 years. However, they have only been stabilized for a few years under the EU-funded ProcFish program then under the EU-funded SciFish program.

1. Observer activity:

In 2007, 7 trips were observed corresponding to 110 days at sea, 61 longline sets and 22 280 hooks. The observer activity covered about 3% of the total longline sets (*Cuewapuru, 2007*). The proportion of species from the logsheets and the observer data respectively is shown in figure 2 below, and the comprehensive list of species observed is given in annex 1.

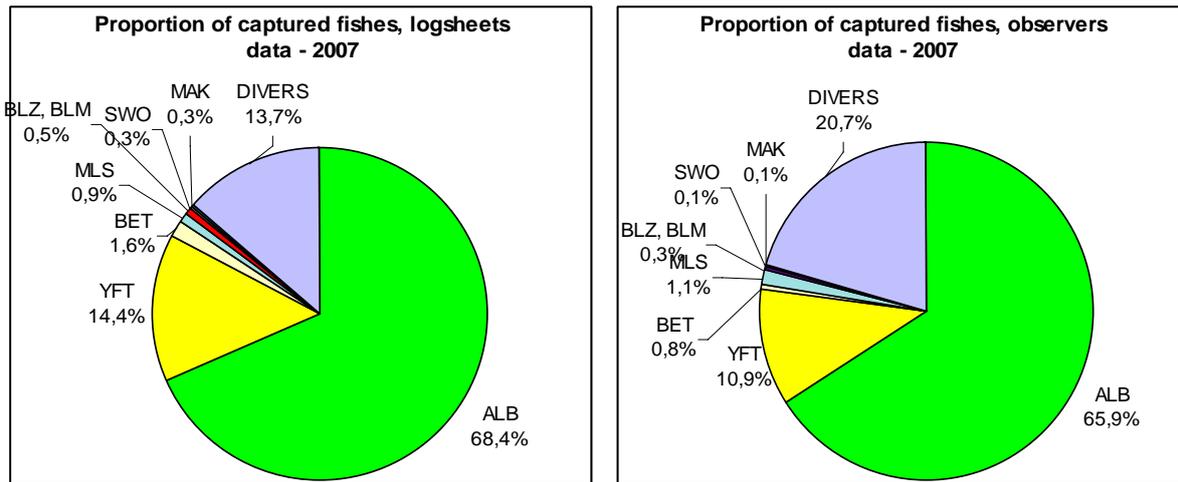


Figure 2: comparison of proportion of major species caught derived from logsheet and from observer data

(ALB = albacore; BET = bigeye; YFT = yellowfin; BLM = black marlin; BLZ = blue marlin; MLS = striped marlin; SWO = swordfish; MAK = mako; DIVERS = others)

Catches reported by observers are dominated by commercial species of tuna (albacore, yellowfin and bigeye). However, non-retained species and other retained species (mahi mahi, wahoo...), sharks and billfishes are also frequently reported by observers.

Among the captured sharks, only the Shortfin Mako is still a commercial species. The other species as Blue Shark or Oceanic Whitetip Shark (Figure 3) are usually released at sea if they are captured alive. If the sharks are dead when they are captured, their fins are removed and dead sharks are released at sea. Rays are grouped with sharks in Figure 3. They correspond to 67% of the captures.

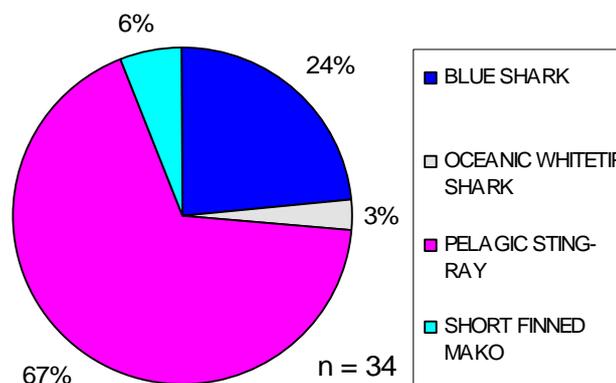


Figure 3: Proportion of shark species recorded by observers in 2007

Source: Charles Cuewapuru SPC 2007

During trips observed in 2007, one bird and one Hawksbill Turtle (*Chelonia Mydas*) were incidentally captured. The turtle was released at sea by the observer. It's the second occurrence since the start of the observer at sea program in early 2002. It appears that such interactions are rare within the domestic fleet due to the low level and characteristics of the fishing effort (no low-depth setting for swordfish in particular).

2. Port sampling activity:

From 2002 to 2007, 264 664 fish were sampled (1185 sets). In 2007, 22 883 fish were sampled (241 sets) (Table 2, Figure 3), (Cuewapuru 2007).

2007	TUNA			BILLFISHES					OTHER COMMERCIAL SPECIES					Total	
	ALB	BET	YFT	BLM	MLS	SFA	SSP	SWO	BRZ	DOL	LAG	MAK	SHF		WAH
Measured	14 835	490	3 885	89	102	22	221	36	11	1 786	543	67	5	756	22 848
Not Measured	0	0	0	24	1	5	0	5	0	0	0	0	0	0	35
Total	14 835	490	3 885	113	103	27	221	41	11	1 786	543	67	5	756	22 883

Table 2: Number of fishes sampled in 2007

Note : Shark's fins (SHF) are stocked in bags and are recorded in Kg

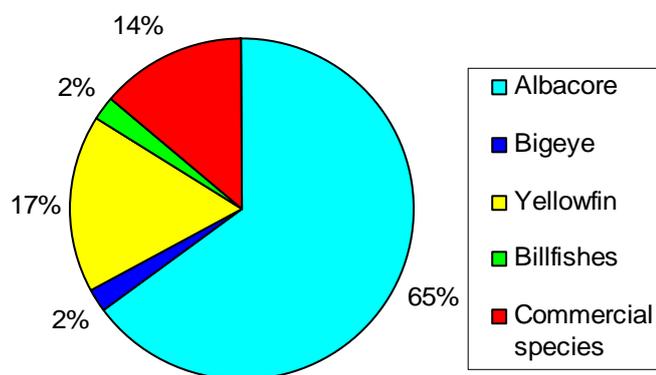


Figure 3: Composition of captures port sampled in 2007

3. Vessel Monitoring System:

The New Caledonian Vessel Monitoring System provides a near 100% coverage of the fishing activity. All licensed vessels must have a satellite positioning system on board (Inmarsat C). A daily monitoring is done, which is useful:

- To control the number of trips and days spent at sea by each vessel, and thus to know if all the related logsheets have been collected.
- To help to identify the IUU vessels
- To ensure the security of the boats.

D. Scientific and technical research

1. Local diffusion of document on the New Caledonian tuna fishery

After being briefly presented during WCPFC-SC 3, the "Atlas of tuna fisheries in New-Caledonia" has been widely distributed to local stakeholders. This document, that gather relevant information on all aspects of the local tuna fishery (oceanography, tuna ecology and ecosystem approach, economy and fishing techniques improvement) is now used as a comprehensive baseline by fishermen and managers for advising on data collection improvements and developing effective management policies.

2. Relationships between climatic signals and tuna stocks dynamics un the EEZ of New Caledonia

The 2 years multi-disciplinary study on relationships between climatic signals and the dynamics of tuna stocks in the EEZ of New-Caledonia is presently at mid-term of achievement.

A space-time analysis of fine structure of the physical and biological variables has been achieved. The affined vertical structure of the primary production around New Caledonia's EEZ have been determined using a biogeochemical model coupled (PISCES) to a hydrodynamics model (ROMS). A communication dedicated to this first component of the project was presented at the 2008 Western Pacific Geophysics Meetings (2008 Western Pacific Geophysics Meeting Cairns, Australia, 29 July - 1 August 2008*).

Further work will consist in connecting this coupled model with a tuna dynamics model in order to produce an integrated model from the physics to the tunas. Complete results should be available by December 2009.

* Faure V. et al., Variability of physical and biogeochemical variables in the South-West Pacific: a high resolution regional modelling study

ANNEX 1

Code	Species	Nb	% Alive at capture	% Retained
		143		
ALB	ALBACORE	5	44,74	98,89
ALO	SHORTSNOUTED LANCETFISH	3	100	0
ALX	LONGSNOUTED LANCETFISH	94	70,21	0
BAB	BLACKFIN BARRACUDA	3	100	0
BET	BIGEYE	17	88,24	100
BLM	BLACK MARLIN	3	33,33	100
BRZ	POMFRETS AND OCEAN BREAMS	4	25	100
BSH	BLUE SHARK	8	0	0
BUM	BLUE MARLIN	4	75	100
DOL	MAHI MAHI / DOLPHINFISH / DORADO	113	82,30	98,23
EBS	BRILLIANT POMFRET	1	100	0
GBA	GREAT BARRACUDA	17	82,35	5,88
GEM	GEMFISH (SOUTHERN OR SILVER KINGFISH)	1	100	100
GES	SNAKE MACKEREL	6	83,33	0
LAG	OPAH (MOONFISH)	17	88,24	100
LEC	ESCOLAR	12	100	0
LOP	CRESTFISH/UNICORNFISH	1	100	0
MLS	STRIPED MARLIN	25	84	100
NAU	PILOT FISH	1	100	100
OCS	OCEANIC WHITETIP SHARK	1	100	0
PLS	PELAGIC STING-RAY	23	91,30	0
RZV	SLENDER SUNFISH	1	0	100
SFA	SAILFISH (INDO-PACIFIC)	2	50	100
SKJ	SKIPJACK	91	3,30	97,80
SMA	SHORT FINNED MAKO	2	50	100
SSP	SHORT-BILLED SPEARFISH	22	54,55	100
SWO	SWORDFISH	3	100	100
SXH	BLACK MACKEREL	1	100	100
TST	SICKLE POMFRET	1	100	100
TTH	HAWKSBILL TURTLE	1	100	0
UNS	UNSPECIFIED	1	0	100
WAH	WAHOO	46	10,87	95,65
YFT	YELLOWFIN	238	70,59	97,06
	Total	2198		

Number of species recorded by observers in 2007