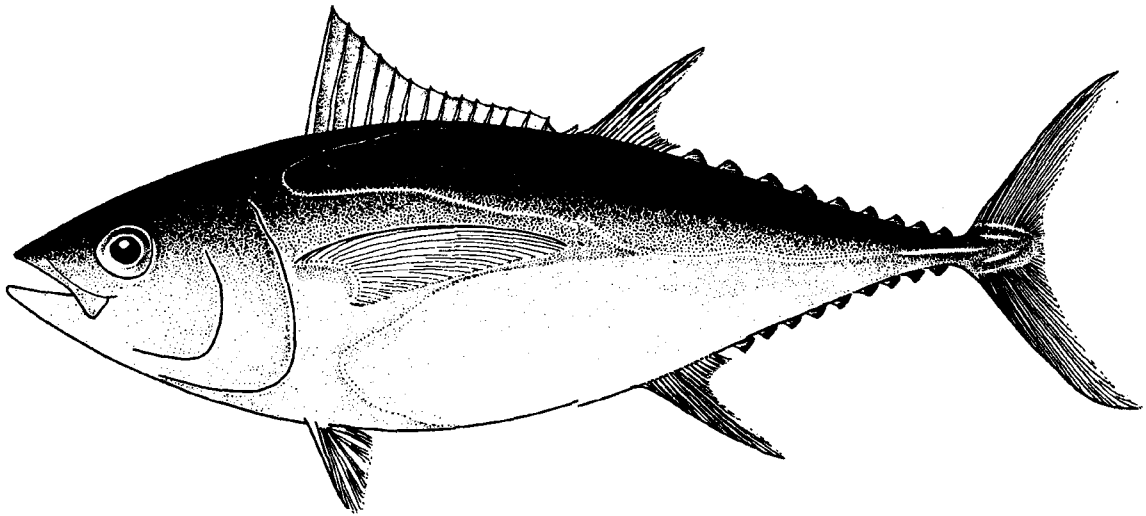




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New Caledonia Tuna Fishery



Regis Etaix-Bonnin

Service territorial de la marine marchande
Noumea, New Caledonia

NEW CALEDONIA TUNA FISHERY

In the waters around New Caledonia, aside from a few small artisanal boats, large pelagic fish like tuna, billfish and associated species, are caught by longliners of two different types:

- freezer vessels capable to stay at sea for more than one month sending their catch to the canneries in the region ;
- smaller longliners targeting for bigeye and yellowfin tuna to be exported to the fresh Japanese sashimi market, having used monofilament gears since 1994.

In 1999 only one freezer longliner was active and there is some evidence that this type of boat is to retire from the domestic fleet: the future seems to be in the hands of smaller "fresh-fishing" vessels which are more efficient in catching high-grade tuna and billfish and allow New Caledonia to benefit from weekly direct flights to Japan.

A. Catch statistics

Table 1 : Breakdown of the catch from the New Caledonian longliners since 1995

M. Tonnes (%)	1995	1996	1997	1998	1999 (*)
Yellowfin tuna	749 (53%)	495 (37%)	416 (39%)	163 (9%)	333 (19%)
Bigeye tuna	92 (6%)	208 (15%)	209 (20%)	447 (26%)	494 (28%)
Albacore	332 (23%)	414 (31%)	277 (26%)	860 (49%)	690 (40%)
Sharks	40 (3%)	34 (3%)	20 (2%)	18 (1%)	21 (1%)
Others	206 (15%)	202 (14%)	134 (13%)	260 (15%)	206 (12%)
TOTAL	1,419	1,353	1,056	1,748	1,744

(*) : estimates

Although two more boats were registered in the fleet last year, the estimated catch of tuna and associated species for 1999 is almost 1,750 tonnes, similar to 1998, mainly because the last New Caledonian freezer boat was poorly active.

Bigeye continues to be more and more abundant in the catch, in relation with the use of monofilament longline, whereas catch of yellowfin tends to decline. Albacore is still the major species, being sold on different markets (local, export fresh or frozen).

The catch statistics presented above are based on three different sources of data:

- customs statistics;
- logsheets since 1983;
- unloading data since 1994.

Customs statistics do not provide data for each species of billfish caught, all being mixed together as "others" since they are not target species of the New Caledonia tuna longline fleet.

Thus, we have to refer to logsheets to get a breakdown of billfish catch by species (see table 2 below).

Table 2 : Breakdown of billfish catch (derived from logsheets)

No. of fish (%)	1995	1996	1997	1998	1999
Striped marlin	497 (48%)	197 (47%)	258 (64%)	1975 (58%)	315 (21%)
Blue marlin	71 (7%)	40 (9%)	14 (4%)	134 (4%)	129 (8%)
Black marlin	161 (15%)	95 (22%)	40 (10%)	413 (12%)	284 (18%)
Swordfish	89 (8%)	36 (9%)	42 (10%)	377 (11%)	142 (9%)
Sailfish	227 (22%)	55 (13%)	9 (2%)	230 (7%)	392 (26%)
Spearfish	0 (0%)	0 (0%)	41 (10%)	284 (8%)	274 (18%)
TOTAL	1042	423	404	3413	1536

1999 appears to have been a uncommon year for striped marlin since this species contributed to less than 25% of the total billfish catch in weight last year, compared to at least 45% in the previous years. The increasing catch of sailfish in 1999 is noticeable, as well as that of spearfish.

Table 3 : Seasonality of billfish catch (derived from logsheets: 1983 to 1999)

No. of fish per 100 hooks	1 st quarter	2 nd quarter	3 rd quarter	4 th quarter
Striped marlin	0.027	0.031	0.048	0.180
Blue marlin	0.011	0.011	0.007	0.013
Black marlin	0.043	0.023	0.022	0.043
Swordfish	0.010	0.011	0.011	0.015
Sailfish	0.028	0.018	0.010	0.019
Spearfish	0.001	0.005	0.006	0.002
TOTAL	0.120	0.099	0.104	0.272

The highest CPUE of billfish is reported in the 4th quarter of the year, when striped marlin is abundant in the waters around New Caledonia, in particular from September to November. CPUE of black marlin in austral summer is about twice that of winter. Spearfish appears to have a better catchability in winter than in summer.

B. Tuna fleet

Table 4 : Number of tuna longliners active by gross registered tonnage (GRT)

Number of Longliners	1995	1996	1997	1998	1999
GRT less than 50 t.	1	1	1	-	-
GRT from 51 to 200 t.	5	5	6	10	12
GRT from 201 To 500 t.	2	2	2	1	1
TOTAL	8	8	9	11	13

In 1994 monofilament was first used by the New Caledonia tuna fleet on longliners ranging from 50 to 100 tonnes, the number of which has constantly increased since then. On the other hand there is less and less large freezer longliners (more than 200 tonnes) registered in the fleet and it is unlikely that this trend will reverse.

C. Assistance to fisheries

Following the results of ECOTAP presented at SCTB 12 by French Polynesia, New Caledonia carried out last year a study funded under the program ZoNéCo to validate these results in its own waters, mainly on the following issues:

- fishing depths;
- CPUE.

Due to technical problems it was not possible to undertake all the scheduled fishing campaigns. Thus, only 7 longlines were set, totalling 1,400 hooks fitted with hook timers and pressure sensors.

From the limited number of data collected it was however noted that:

- the deeper the hook, the higher the difference between predicted and observed depths: it may be due to difficulties in using the tachymeter and the line-shooter as well as bad weather conditions disabling to reach a constant ship speed;
- sea surface drift has a real impact on hooks depth: at this point, the reason why is unknown (wind or surface currents on the buoys, deep currents);
- the fish hooked do not seem to clearly interfere with the natural shape of the main line.

From these observations it is clear that more longlines should be set to study the real impact of environmental conditions on the behaviour of the gear (wind/sea surface currents direction and force).

With regard to catch, a global yield of 3.01 fish per hundred hooks was reported, quite consistent with that of the domestic longliners in 1998.

Bigeye CPUE was lower than that of ECOTAP, however better than the one reported by the New Caledonia longliners. This result needs to be confirmed by more fishing tests which are to be carried out in year 2000.

D. The markets

New Caledonia tuna longliners target species suitable for the Japanese sashimi market. However, they also have to sell large quantities of by-catch which can't be exported, even to canneries (albacore). Up to date, local processing has been very limited to a few tonnes of fish.

E. The future

Since 1st January, 2000, two more "fresh-fishing" boats entered the tuna fleet, whereas the last freezer longliner has not yet applied for an annual fishing licence. As of June there are so 14 registered tuna longliners licensed to fish in the waters of New Caledonia.

A project consisting of 10 boats and involving a fisherman from Tahiti is about to be completed in the Northern Province. The markets will be the Japanese sashimi and the European Union where loins of albacore are to be exported.

There is an opportunity too that a few French purse seiners aiming at fishing in the Pacific be based in the Northern Province of New Caledonia in the forthcoming years, so that hundreds of jobs can be created for maintenance and handling.