

STATUS OF TUNA FISHERIES IN MAURITIUS

STATISTICAL SYSTEM IN USE & IMPLEMENTATION OF THE RECOMMENDATIONS OF THE SCIENTIFIC COMMITTEE

by

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ABSTRACT

The tuna fishery is an important fishery in Mauritius as it forms the basis of a local canning factory. Tuna transshipment has been a valuable tuna fishery related activity since more than three decades. An artisanal fishery has also been developed around fish aggregating devices, catches consisting mainly of tuna and dolfinfish. The sport fishery also lands an important quantity of tuna and tunalike fishes. Since recently, a swordfish fishery is being developed.

1 - THE PURSE SEINE FISHERY

A first Mauritian purse seiner, "Lady Sushil I" was launched in 1979 and was joined by a second one, "Lady Sushil II" eight years later. A third Mauritian purse seiner, "Cirn " started operations in 1991. Since 1997, only one (Lady Sushil I) was operating, the other two vessels were sold off. However, since July 2000, the local purse seiner is not operating due to financial difficulties.

2 - THE TUNA LONGLINE FISHERY

The longline fishery had a brief start in 1970-1971 when a longliner was operated by the local tuna canning factory. Due to various problems, the vessel stopped operation. Two small longliners and another one of 298 GRT started fishing in 1986. But as their catches were low, they subsequently stopped operations. Since recently, a new Mauritian small longliner has started operating. Some more vessels will operate soon.

3 - CATCH OF LICENSED LONGLINERS

Since 1995, licences are issued to Asian longliners to operate in the Mauritian EEZ. Most of the longliners that have taken licences over the years are Taiwanese vessels. These account for about 85% of the total number of licences issued.

During the year 2001, 7 523.1 tons of tuna and related species were transshipped by the licensed longliners. The major part of the catch was composed of albacore tuna (*Thunnus alalunga*) which is the target species of these vessels. The species composition of the catch of these longliners of the year 2001 is shown in table II.

Table II Species composition of the catch of the licensed longliners 2001

Species	Catch (Tons)	%
Albacore	4884.3	65.0
Yellowfin	627.0	8.3
Skipjack	5.4	0.1
Bigeye	683.9	9.1
Bluefin	205.8	2.7
Marlin	362.3	4.8
Sailfish	18.3	0.2
Swordfish	363.0	4.8
Others	373.1	5.0
Total	7523.1	100

4 - ARTISANAL FISHERY

The fish aggregating device (FAD) associated fishery was introduced in 1985 to tap the migrating pelagic resources in the outer-reef waters of the island. At present there are 20 FADs in operation. The catch amounts to about 300 tonnes annually and

is composed of tuna, dolphin fish, billfishes and sharks.

5 - THE SPORT FISHERY

The sport fishery involves local recreational fishermen and tourists. It is an important attraction for the promotion of tourism and various big game fishing competitions are held every year in Mauritius. The catch from this fishery is composed mainly of billfishes and tuna and is estimated to be around 400 tonnes per year. Presently about 120 fishing boats with length varying from 12m to 18m are engaged in this fishing. Sport fishery is active in Mauritius during month from November to May.

6 - SEMI-INDUSTRIAL SWORD FISH FISHERY

The occurrence of the swordfish (*Xiphias gladius*) in Mauritius waters had been reported by some fishermen a longtime back. Commercial fishing of swordfish started in 1999. In 2001, six fishing boats were involved in swordfish fishery. About 88 tons of swordfish and tuna were unloaded by these vessels. Majority of their catch was composed of swordfish.

During the present year, five licences have been issued to local boats to operate in this fishery. Thirty EU swordfish longliners have also been licensed to operate in the Mauritian EEZ.

7 - TUNA CANNING

Export of canned tuna constitutes about 90% of the total export value of fish and fish products and helps the country to keep a positive balance of trade in the fishery sector.

Tuna canning operations started in 1972 with raw materials obtained from Madagascar and later from Maldives. Since August 2000, a modern new canning factory has been set up at Riche Terre. The factory is operated under a British-Mauritian joint venture. The present factory has a processing capacity of 200 tonnes per day and it satisfies all the norms and regulations for exports of canned tuna to the European markets.

8 - TUNA TRANSSHIPMENT

In recent years, the volume transshipped and the number of calls have increased sharply. A total of 16,327 tonnes and related species were transshipped during 2001. The majority of the catch of the longliners are composed of albacore which constitutes more than 75% of the total catch. The quantity of fish transshipped by the longliners during the past seven years is shown in the table below:-

Species composition of fish transshipped (tonnes)

Year	Albacore	Yellowfin	Bigeye	Skipjack	Bluefin	Swordfish	Marlin	Sail fish	Misc	Total
1995	1,350.0	1,143.5	565.2	15.8	0	668.4	496.4	0	533	14,772.3
1996	11,865.9	959.6	464.7	8.8	0	210.0	445.9	0.0	760.4	14,715.3
1997	9,972.5	631.6	304.5	7.5	0.5	398.7	331.6	0.0	648.4	12,295.3
1998	20,991	1,760.0	1,651.0	12.1	0.0	926.6	934.5	22.2	1,520.3	27,817.7
1999	15,070.0	1,508.0	472.0	3.0	5.0	295.0	401.0	125.0	558.0	18,437.0
2000	12,846	834.8	779.7	33.3	0.53	355.4	237.8	22.17	473.3	15,583
2001	13,595	898	880	-	-	274	319	25	336	16327

9 - FISHERY AGREEMENTS AND ISSUE OF LICENCES

A fishing agreement was signed in 1990 between European Union and Mauritius to allow E.U. vessels to operate in the EEZ of Mauritius. Four protocols were signed since 1990, each effective for three years. The fourth protocol is in force since December 1999 and ends in November 2002. Under the fourth protocol, fishing opportunities are provided to 43 purse seiners, 40 surface longliners and handliners to a maximum of 25 GRT/month on an annual average. The present protocol has been extended for one year.

Licences have also been issued to foreign longliners of mainly Taiwanese registry for fishing in Mauritian waters. During 2001, 119 licences were issued to longliners.

The licence conditions of these vessels include a deposit of US\$ 500 which are refunded after the submission of fishing logbooks.

Mauritius has also signed a fishing agreement with Seychelles in 1990 which, allows Mauritian tuna fishing vessels to fish in Seychelles waters.

Mauritius has also entered into a fishing agreement with the Federation of Japan

Tuna Fisheries Cooperatives Associations. Under this agreement, fishing possibilities are provided to 10 Japanese longliners to operate in Mauritian EEZ.

10 - COLLECTION AND PROCESSING OF STATISTICAL DATA

Fishing logbooks are regularly distributed to local and licensed foreign vessels. Daily catch statistics are recorded by skippers on these fishing logbooks.

Landing statistics or trip data are collected from the owners of vessels or fishing companies representing longliners in Mauritius.

Length frequency sampling is conducted on the catches of licensed longliners and purse seiners during their landings. Length frequency data is also collected on the catches of the local swordfish fishing vessels.

Data concerning vessel characteristics are regularly collected and compiled.

The computer system. "Chain Thon" which was installed by IRD (ORSTOM) scientists in 1987, had stopped operating as certain problems had cropped up with our mini-computer system. We had approached the IOTC Secretariat who helped us through the provision of computers equipment, the software Wintuna 2000 and training. With the help of the Computer Analyst Mr. M. Garcia, the existing data which were on Excel were transferred on the Wintuna design. We thank IOTC Secretariat, OFCF and Mr. M. Garcia for the assistance.

11 - MEASURES TAKEN TO IMPLEMENT RECOMMENDATIONS OF THE SCIENTIFIC COMMITTEE

11.1 - Submission of statistics

Mauritius has transmitted to IOTC data for the year 2001 and these include:

- a. Catch and effort of the swordfish fishing vessels
- b. Length frequency data of the catches of the swordfish fishing vessels;
- c. Length frequency data of the licensed foreign longliners transshipping at Port Louis
- d. Vessels characteristics for the vessel Registry

Catch and effort data relating to licensed foreign longliners will be submitted shortly.

11.2 - Port sampling to collect length frequency data on longline catch

Regular sampling for the collection of length frequency data is being carried out on the catches of licensed longliners which target mainly Albacore tuna. Data collected during the year 2001 have already been transmitted to IOTC.

11.3 - Predation of longline caught fish

Regarding predation of longline caught fish, survey forms have been distributed to local vessels involved in swordfish fishery. According to returns received, predation by marine mammals specially by pilot whale (*Globicephala maelana*) is quite severe. Some cases of predation by sharks have also been reported. Loss of catch due to predation may reach up to 20% of the total catch during summer months and relatively less in the winter months. Data collected on predation by marine mammals will be submitted to IOTC shortly.

11.4 - Support for tagging programme

In line with the support for the tagging programme Mauritius and Seychelles had requested the EC to fund a feasibility study of the tagging programme in Indian Ocean under the EC General Directorate for Development (DG-DEV). In this connection consultants were in Mauritius and they were provided with all information that were requested. They have also visited other member states of the Indian Ocean Commission. They will present their findings at a workshop which will be organised on the 12 - 13 December 2002 in Mauritius.

11.5 - Data on swordfish fishery

Length frequency as well as catch and effort data are being collected. Data for this fishery for the year 2001 have already been transmitted to the IOTC Secretariat.