

CURRENT STATUS OF TAIWAN LONGLINE FISHERIES IN THE ATLANTIC OCEAN

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1. Status of Fisheries

1.1 General overview

Taiwanese annual tuna catches in the Atlantic (TASK I) were estimated based on traders' sales records with the support of certified weight reports of the New Japan Surveyors and Sworn Measures Association (NJSSMA, Shin Nihon Kentei Kaisha) from 1994 onwards. Due to low coverage of logbook data in 1991 and 1992, great efforts have been exerted to recover logbooks as well as sales records of the previous two years (SCRS/96/79 (rev.)). Annual catches were updated accordingly (Table 1).

The preliminary total catch estimate in 1995 was 46,955 mt (Table 1), a decrease of 11,402 mt (19.5%) from 1994. The decrease was mainly resulted from the implementation of fishery management policies and the overall reduction of landing per unit vessel.

1.2 Fishing vessels

There were 186 longliners (12 small longliners, 95 regular longliners and 79 longliners with super-freezer) operated in the Atlantic in December of 1995, an increase of 14 vessels than those of 1994. However, the number of vessels varied from month to month, between 153 (March) and 186 (November and December) in 1995.

Vessel number in the Mediterranean Sea targeting on bluefin was strictly controlled. Only 14 vessels were allowed to operate in the Mediterranean in 1996, same as in 1994 and 1995, to fit the catch limit.

Two fishing patterns, the regular longline and the deep longline, have been used simultaneously in the Atlantic Ocean by Taiwanese longliners targeting on different tuna species. And, since 1990s both the two patterns have been found used by either type of longliner, depending on the commercial consideration and the tuna species that was abundant in the area of operation.

1.3 Albacore

Total landings of albacore by Taiwan in 1995 was preliminary estimated as 22,328 mt. Among which, 3,977 mt was caught in the north Atlantic Ocean, a decrease of about 2,400 mt from 1994. Landings for the south Atlantic Ocean was 18,351 mt; that is about 4,150 mt lower than 1994 level and 90.7% of the Taiwan's average annual catch in 1989-1993.

1.4 Bluefin tuna

Taiwan catches bluefin tuna as a target species by longline fishery, only in the Mediterranean Sea. Total catch in 1995 was 475 mt, reduced by 34% (249 mt) from 1994.

1.5 Tropical tunas

Taiwan landings of tropical tunas have been underestimated when compared with the records of Taiwan tuna exports to Japan. The TASK I figures for the tropical tunas of 1991 and 1992 have therefore been revised according to the recovered traders' sales records (Table 1). The revised TASK I of 1991 and 1992 were somewhat similar to those of 1993 for both bigeye and yellowfin tunas.

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Preliminary bigeye catch in 1995 was 15,950 mt, decreased from 1994 by 1,466 mt; and yellowfin catch was 4,158 mt in 1995, decreased by 2,556 mt. According to the sales reports on Taiwanese tuna catch exported to Japan, there showed about 5-10% reduction of landing per vessel. This could constitute one of the reasons for the decrease in catches from 1994 to 1995. In 1994, there was about 13% of tropical tuna catches unloaded by regular longliners. This phenomenon has changed in 1995, only 5% of the catches was unloaded by regular longliners.

1.6 *Swordfish*

Swordfish was mainly by-catch of Taiwan longliners. Preliminary catch estimate for swordfish of the entire Atlantic Ocean was 2,588 mt in 1995, similar as that of 1994, among which only 376 mt was caught in the north Atlantic, a small decrease from 1994 (430 mt).

The catch of south Atlantic swordfish was preliminarily estimated as 2,212 mt in 1995, with about 60 mt of increase from 1994 (2,151 mt).

The number of vessels jointly operated with Brazil reduced from 26, 32 and 20 in 1992, 1993 and the beginning of 1994, respectively, to 10 after March of 1994 and in 1995. The earlier query of possible double counting on Taiwanese swordfish TASK I data against those under the Brazil-Taiwan joint operation has been carefully examined and it was concluded that no double counting occurred.

2. Statistics Collecting Systems and Researches

Taiwan has undergone a reorganization of her catch statistic compilation group as well as the research group in 1996. Data collection (except the logbooks and traders' sales reports) and compilation are conducted by the Overseas Fisheries Development Council of the Republic of China (OFDC), a nonprofit organization with funds endowed by both the Government and the fishery sector. The collection of logbooks and traders' sales reports of distant water tuna fisheries are carried out by the Fishery Department of Constructive Bureau, Kaohsiung Municipal Government (FDKMG), under the direction of the Fishery Department of the Council of Agriculture (COA). Research on the tuna stocks is independently dispensed to scientists in universities or organizations under project basis.

Procedure adopted for correction and raising of logbooks records for 1994 data was based on the comparison and further adjustment with commercial landing records by boat-trip basis; basically it is the same as that described in Chap. 4 of ICCAT Field Manual for Statistics and Sampling Atlantic Tunas and Tuna-Like Fishes (3rd ed.). All the logbooks were compared and adjusted by boat-trip basis

according to the following four information: (1) the verification on fishing vessels' sales settlement, (2) the certified weight reports of NJSSMA, (3) the traders' sales records, and (4) the radio reports from Kaohsiung Fishery Radio Station (SCRS/96/78 (Rev.)). Then the logbooks data was raised to finalized TASK I data.

Logbook coverage for 1995 has been improved with the efforts of FDKMG and COA. According to the records up to June 1996, the number of logbooks of 1995 recovered was 87% of the logbook total recovery for the entire 1994; representing an increase of about 54% for the same period of time in 1995. But, comparing with the entire fishing activities in the Atlantic Ocean, the coverage is still low. Continuous efforts will be exerted for further improvement.

As above mentioned, two fishing patterns have been used in the Atlantic Ocean with different target species. A new item of hooks per basket has thus been added in the new logbooks. These logbooks have been used by fishermen since 1995's operation and will be analyzed in the near future to seek a way for adjusting the mixed logbooks data.

3. Implementation of ICCAT Conservation and Management Measures

Taiwan is not a contracting party of ICCAT. However, as one of the countries utilizing the tuna resources of the Atlantic Ocean, Taiwan has always been and will continue to be very cooperative and exerting great efforts to implement the resolutions or recommendations adopted by ICCAT.

3.1 *Albacore*

To implement the 1994 ICCAT recommendation of limiting the south Atlantic albacore catch during 1995 to not more than 90% of the average annual catches over the period 1989-1993, an official announcement has been made in 1995 that with the exception of those longliners already operating in the Atlantic Ocean, no longliner targeting on the concerned species were allowed to enter into the area from other Oceans until such a time as approved thereof. The total catch of south Atlantic albacore in 1995 was therefore maintained at 18,351 mt, that is 90.7% of Taiwan's average annual catch of 1989-1993.

3.2 *Bluefin tuna*

Starting from 1994, appropriate measures have been adopted to fulfill the ICCAT Bluefin Tuna Statistical Document Program. According to the information as documented, bluefin catch in the east Atlantic and the Mediterranean in 1994 and 1995 was 724 and 475 mt, respectively. We have also adopted a voluntary measure

of reducing our catch of bluefin tuna in the eastern Atlantic Ocean and in the Mediterranean Sea by 25% to 543 mt in 1996 by using the generally applicable reference level set up at ICCAT's 9th special meeting. Catch in 1996 was estimated as 472 mt, a 35% decrease from 1994's catch.

A fixed number of 14 vessels were permitted to fish bluefin tuna in the Mediterranean during the period 1994-1996. They have all followed instructions not to violate resolutions and recommendations adopted by ICCAT, such as prohibiting to fish in the Mediterranean Sea in June and July, and to fish and keep east Atlantic bluefin of size smaller than 6.4 kg. No violation was found in 1996.

3.3 Swordfish

It has been instructed in an official announcement that North Atlantic swordfish to be by-catch of Taiwan longliners not to exceed 8% of the total weight of catches as adopted at the ICCAT 9th special meeting. As to south Atlantic swordfish, an announcement has also been made to maintain the total catch at the 1994's level to implement the 1994 ICCAT recommendation on south Atlantic swordfish: not to increase the catch during 1995 and 1996 beyond the 1993 and 1994 level (whichever is higher).

Table 1. Annual catches of Taiwan's longline fishery in metric tons during 1991-1995.

	1991*	1992*	1993	1994**	1995**
Total	44,157	43,028	44,739	58,357	46,955
Bluefin	.*	.*	334	724	475
Southern Bluefin	13*	.*	407	148	145
Yellowfin tuna	3,692	4,007	3,713	6,714	4,158
Albacore	24,201	25,272	25,700	28,888	22,328
Bigeye tuna	12,083	10,218	11,881	17,416	15,950
Skipjack tuna	37	29	11	17	5
Swordfish	1,562	1,636	749	2,581	2,588
Striped marlin	***	***	616****	936	581
Blue marlin	***	***	685****	656	564
Black marlin	***	***	-	73	84
Other billfishes	***	***	643****	204	77
Sum of billfishes	2,569	1,866	1,944	1,869	1,306

* 1991-1992 data have been updated due to the return of additional sales records. The data of the bluefin and southern bluefin tunas have not been finalized and were carried over from the Statistical Bulletin, Vol. 25.

** Catches of 1994 have been finalized; catches of 1995 were still preliminary.

*** The additional sales records of 1991 and 1992 contained only the lump-summed landings of billfishes. Billfishes landings by species were still not available.

**** Adopted from SCRS/96/100 (Rev.)