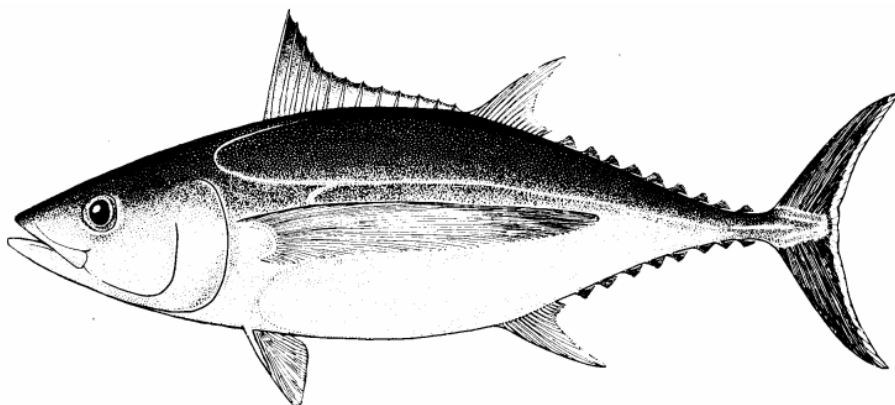


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National Tuna Fishery Report of China in WCPO

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1. Brief information to the fishery

Mainland China began to develop the distant water longline fishery in the late 1980's. In 1988, seven longliners, reconstructed from China's inshore trawlers, arrived in WCPO waters. This fleet rapidly increased to a peak of 457 vessels in 1994 that caught a nominal 12,885 metric tons. The fleet then steadily reduced, due to inefficient fishing and poor returns, until in 1999 it bottomed out at 66 vessels that caught 1024 tons. Since 1999 the fleet has been more stable at around 110-120 vessels and in the year 2001 there were 117 vessels, which caught 7682 metric tons. In 2002, 125 tuna fishing vessels including two purse seiners were in active in WCPO, with the total catch of 15300 metric tons. In 2003, 183 tuna fishing vessels including 4 purse seiners were operated in WCPO, with the total catch of 45560 metric tons.

Mainland China began to develop tuna purse seine fishery in WCPO water later in 2001. The tuna purse seiner started operation in June that year and fished for 210 days with a total catch of 3090 MT of Skipjack and yellowfin tuna. In 2002, 2 tuna purse seiners joined in Chinese fleet in WCPO. In 2003, other 2 tuna purse seiners joined in Chinese fleet in WCPO. Up to now, there are 6 tuna purse seiners active in WCPO waters, which are owned by 4 fishing companies.

Most small scale tuna longliners were mainly operating inside the EEZ waters of Palau, Tonga, Micronesia, Marshall Islands (targeting Bigeye tuna) and Fiji (targeting Albacore). As usual, small scale longliner operated 800-1000 hooks every day, with 5-7 hooks each basket, a part of small scale longliners with chill sea water reserving equipment and super spool operated 2000-2200 hooks every day, with 23-24 hooks each basket, large scale deep freezer tuna longliners operated 2500 – 3000 hooks every day, with 7 – 19 hooks per basket depending on the fishing season or the target species.

The total fishing efforts of Chinese tuna fleet in WCPO waters in 2001, 2002 and 2003 are respectively 26,103 thousand hooks, 22,850 thousand hooks and 63,591 thousand hooks for longline and 210 fishing days (the average catch was 14.7 MT/day), 212 fishing days (the average catch was 34.7 MT/day) and 621 fishing days (the average catch was 38.1 MT/day) for purse seine, respectively.

Purse seiner was operating at tropic waters between 07° N -10° S and 137° E-175° E, mainly inside the EEZ waters of Pacific Island countries.

2. Total Catch, for all species and all gears combined (1998-2003)

Total catch of tuna and tuna-like species caught by Chinese fleet in WCPO from 1998 to 2003 is shown in table 1. Big increase of the total catch in 1999 (8333 metric tons) compared with that in 1998(1024 metric tons) was mainly attributed to the increase of fishing boats. Total catch in 2000 reduced to 7291 metric tons, 12.5% lower than that in previous year.

From 2000 to 2002, total catch of longline fishing has been roughly maintained at relatively stable level, between 7290 – 7940 metric tons, with the average 7638 metric tons. In 2003, total

catch of longline fishing was 21899 metric tons; this increase (13958 metric tons more than that in 2002) of total catch of longline fishing was attributed to the catch of a part of the deep freezer large scale longliners (9031.7 metric tons, 64.7%) and the increase of the fleet (56 longliners more than that in 2002).

The increase of total catch of Chinese fleet after 2001 was attributed to the joining of tuna purse seiners. In 2002, total catch reached 15300 metric tons, 48% of which was caught by purse seine fishery. In 2003, total catch reached 45560 metric tons, 51.9% of which was caught by purse seine fishery.

**Table 1 Nominal Catch of tuna and tuna-like species
in WCPO waters from 1998-2003 Unit: MT**

Year	Purse seine	Longline	Total
1998	0	1024	1024
1999	0	8333	8333
2000	0	7291	7291
2001	3090	7682	10772
2002	7360	7941	15301
2003	23661	21899	45560

3. Fleet Structure

Before 2001, longlining was the only fishing method by Chinese fleet for tuna and tuna-like species. The size of the longliners ranged from 50 to 500GRT, with 24-30m LOA in dominance, which is equivalent to 50-149 GRT.

Before 1998, almost all the tuna longliners operating in WCPO waters belonged to small-scale type, with the dimension between 50 -149 GRT, and 24m - 30m in LOA. All those small-scale boats were reconstructed from trawlers operated in China's inshore waters and made of steel, wood or concrete cements in the hull. They reserved the fish with ice.

After 2002, Mainland China began to design and construct the small scale longliner with chill sea water reserving equipment and super spool and made of steel or glass fiber reinforce plastic in the hull. The LOA is about 30m, mainly operating in the Fiji EEZ and targeting Albacore.

Before 2001, all the large scale longliners (over 40 m in LOA) were introduced from outside Mainland China.

Mainland China developed tuna purse seine fishery in 2001. Two purse seiners were in active in 2002. Four purse seiners were in active in 2003. At present, there are six tuna purse seiners operating in WCPO.

Table 2 Number of Chinese tuna fishing boats in the WCPO waters

Year	LL	PS	total
1998	66	0	66
1999	115	0	115
2000	106	0	106
2001	116	1	117
2002	123	2	125
2003	179	4	183

4. Catch by Species for each gear type

Bigeye tuna and yellowfin tuna have been the main targeting species by Chinese tuna longline fleet since its operation, the proportion of the two species in the catch was over 40% and 30% before 1998. Since 1999, albacore catch has rapidly increased and become one of the three main species caught by the fleet (Table3) as a result of some large-scale longliners targeted albacore in WCPO and seasonal shift to North Pacific Ocean. Since 2001, skipjack catch has also rapidly increased and become one of the four main species caught by the fleet (Table3) as a result of the joining of tuna purse seiners. In 2003, proportion of bigeye tuna (8965.2MT), yellowfin tuna (3358.1MT) and albacore (6222.5MT) in the total longline catch (21899MT) accounted for 41%, 15% and 28% respectively, different from that in previous year (29%, 23% and 37% respectively). Skipjack was the dominant species caught by purse seiners and accounted for 86% in the total catch of the purse seiners in 2003, slightly different from that in previous year (93%).

**Table 3 Nominal Catch of tuna and tuna-like species
in WCPO waters from 1998-2003 Unit: MT**

Year/Specie		ABL	BET	YFT	SWD	BIL	SKJ	Others	Total
1998	LL	6	740	222	0	0	0	56	1024
1999	LL	3473	1805	2237	396	114	160	148	8333
2000	LL	2056	1981	2207	142.8	528	0	375.8	7290.8
2001	LL	2711	2227	1919	286.2	240.6	0	298.1	7682
	PS	0	0	340	0	0	2750	0	3090
	Total	2711	2227	2259	286.2	240.6	2750	298.1	10772
2002	LL	2920	2312	1844	220	183	0	462	7941
	PS	0	0	547	0	0	6813	0	7360
	Total	2920	2312	2391	220	183	6813	462	15301
2003	LL	6222.5	8965.2	3358.1	1168.3	1043.3	0	1141.7	21899
	PS	0	0	3377	0	0	20284	0	23661
	Total	6222.5	8965.2	6735.1	1168.3	1043.3	20284	1141.7	45560

5. Final Market destination of catches/disposal of catch

Bigeye and yellowfin tuna caught by small scale tuna longliners operated in the Exclusive Economic Zone (EEZ) of Pacific Island countries, including Palau, Tonga, Micronesia, Marshall Islands and Fiji, were mainly exported to Japanese sashimi market by the air if the quality was met the requirement, other species were sold at local market. Bigeye and yellowfin tuna caught by large scale deep freezer tuna longliners operating in the WCPO high sea area were also mainly sold to Japanese sashimi market by the deep freezer reefer.

Albacore caught by larger boats generally operating in the high seas of Southern Pacific Ocean were usually sold to the processing plant for canned products. Albacore caught by small scale longliners with chill sea water reserving equipment and super spool generally operating in the Fiji EEZ were usually sold to the U.S.A. market in fresh or sold to the processing plant for canned products.

Catch of purse seiner were mainly sold to Thailand and processed for canned products.

6. Onshore developments (transshipment, processing ect)

In 2002, one 3000 ton deep frozen store was constructed in Shandong Province by introducing Japanese technology. Some companies have imported equipments from Japan to process frozen tuna products for Japanese sashimi market.

One company was processing the smoked skipjack filet for Japanese market.

One processing plant for canned products was constructed and invested by one Korea company in recent years.

7. Fishery Management and Training

Observer program

Mainland China began to carry out observer program in ICCAT water in 2001. In June 2003, two observers left for Chinese large scale deep freezer tuna fleet in Pacific Ocean. In April 2004, two observers left for Chinese tuna purse seiner fleet in WCPO.

Training

In June 2004, a training course about the fisheries management regulations in WCPO was introduced to the fishermen and the concerned company's manager. This course was arranged by China Fishery Association distant water fisheries division. The importance of complying with the management regulations in WCPO was emphasized.

8. Future prospects and developments

Data collection and report

"Tuna Working Group" is constructing tuna fishery database. All the fishing companies report by month the catch data to tuna working group office for analysis. The technical tuna-working group of Shanghai Fisheries University will further arrange and analyze the data from the "Tuna working group" and submit them to regional tuna fisheries management organization as required. So far, except the data collected by observer program, there lack of size frequency data from fishing companies. Some efforts, such as observer program are needed to collect such kind of size frequency data.

Reference

1. Xu Liuxiong, 2003. National Fishery Report of China in WCPO. SCTB16 working paper. NFR-4.