
China Tuna Fisheries in the Western and Central Pacific Ocean in
2006

Paper prepared by

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CHINA

1. Brief introduction

China began to develop its oceanic tuna fisheries in 1988 in the Pacific Ocean and this region is one of the earliest fishing grounds by China tuna fishery. There are currently two types of tuna fisheries in the WCPFC Convention area: tuna longline(LL) fishery, purse seine(PS) fishery. The catch of four main tuna species(skipjack, yellowfin tuna, bigeye tuna and albacore) by China in 2003 was about 42207 MT, accounting for 2.2% of the four main tuna species total catch in the WCPO. And the catch of four main tuna species in 2004 reduced to 40165 MT. But the four species catch hit the historical record 73723MT in 2006.

2. Fleet structure

2.1 LL

All the Chinese LL vessels operated in the high seas and EEZ Pacific Islands Countries(PIC). The number of LL fishing vessels has shown increase trend since the year 2000. By the year 2004, the number of LL vessels go up to 212 and remained previous level in 2005. But in the 2006, the number of vessels reduced to 157.

The size of the LL vessels ranged from 67 GRT to 742 GRT. There are two types of tuna longline vessels, ice fresh tuna longline(IFLL) and deep frozen tuna longline(DFLL). The number of IFLL vessels is 107 and the number of DFLL vessels is 50. Most of the DFLL vessels targeting bigeye tuna in the high seas and the EEZ of PIC, accounting for the 32% of the total vessels. The IFLL vessels mainly operate in the EEZ of PIC, targeting bigeye tuna and albacore. The major fishing grounds distributed among the EEZ of Federated States of Micronesia, Marshall Islands, Fiji etc.

2.2 PS

Purse seine fishery began in 2001 in WCPFC Convention area and has become very important tuna fishery in China. The number of PS vessels in 2004 was 6 and increased at 8 in 2005 and 9 in 2006.

3. Catch by species for each type of Chinese tuna fisheries

3.1 LL

When China began to develop its oceanic tuna fisheries in 1988, only seven longliners were operating in the WCPFC Convention area, with total catch of 42 MT in round weight. Since then, the number of fishing vessels increased rapidly and reached 457 in 1994, with 14,062 MT of the nominal catch, the highest record level in the 1990's. The main species of the catch are bigeye tuna and yellowfin tuna, which accounted for 54% and 32% of the total catch respectively in 1994. After 1994, however, the number of boats and total catch went down. In 1998, there was a dramatic reduction in the number of Chinese tuna longliners in the WCPFC Convention area. Only 66 longliners were operating in 1998, decreasing by 391 vessels compared with those of 1994. Total nominal catch in 1998 was 1,116 MT. Before 1998, catch of albacore accounted for a small part of the annual total catch, less than 15 MT for each year. However, the number of fishing vessels and the total catch rose again in 1999, with 117 fishing boats and 8,333 MT of catch in round weight. The main targeted species have become albacore tuna, bigeye tuna, yellowfin tuna and swordfish, accounting for 41.7%, 13.0%, 26.8%, and 4.8% of the total catch respectively. Longline fishery operated in 2000, with fishing effort 24,707 thousand hooks and total catch of 7,291 MT. Targeted species included albacore tuna, bigeye tuna and yellowfin tuna.

After the year 2000, the catch of tuna and tuna-like species has shown increase trend. The catch in 2002 reached at 7941 MT. And the catch in 2004 amounted to 22121 MT. The catch reduced to 15005 MT in 2005. But the catch by LL increased in 2006, amounting to 26133 MT, the highest historic level (Table 2).

The catch are mainly composed of BET, YFT and ALB. The percentage of BET, YFT and ALB in 2005 by LL are 43%, 16% and 27% respectively (Figure 1).

The catch by Ice Fresh Longline (IFLL) and Deep Frozen Longline (DFLL) are 13157 MT and 12976 MT respectively in 2006. The composition of catch by IFLL are mainly ALB(44%), BET(16%) and YFT(16%) and OTH(18%) (Figure 2). It should be noted that

the catch composition of OTH group (unidentified species) by IFLL is slightly higher than that of DFLL. But all the IFLL vessels operated in the EEZ of Pacific islands and fishery data submission should comply with the FFA requirement. Chinese government are requiring the fishery companies to submit specific species data and also hope obtain assistance from FFA to reduce OTH percentage.

Figure 3 shown the catch composition by DFLL in 2006. The composition of catch by IFLL are mainly ALB(11%), BET(59%) and YFT(14%).

3.2 PS

The total catch by Chinese PS in the WCPFC Convention area are shown Table 2. The catch by PS has increased since the year 2001. The catch was only 3090 MT in 2001 and amounted to 48660 MT in 2005. But in 2006, the catch by Chinese PS has went up to 52774 MT .The main catch species by PS fishery are SKJ and YFT. The catch composition of tuna and tuna like species in 2005 and in 2006 by PS are shown Figure 4 and Figure 5 respectively. The percentage of SKJ in the total catch was 80.00% in 2005 and 90.58% in 2006.

4. Disposal of Catch

Bigeye tuna and yellowfin tuna caught by longline vessels operated in the Exclusive Economic Zone (EEZ) of Pacific Island Countries and high seas were exported to Japan sashimi market. Other species caught as by-catch are sold to local market of operating ports. Albacore catch were landed at Fiji for canning. Catch by PS fishery were mostly transhipped to Thailand for canning.

5. Research and Statistics

Bureau of Fisheries, Ministry of Agriculture of China has been very much concerning the quality of tuna data collection. National-wide meeting on tuna data collection had been organized at least once a year during past years. Participants are managers of tuna fishing companies and tuna- related fishery enterprises. In addition, all the companies engaged in tuna fishing and tuna fisheries have been required to submit their catch data (such as catch and fishing effort by species, month, gear, area etc.) to China Fisheries Association, a nongovernmental organization, before the set dead line every year.

**Table 1 Number of Chinese tuna fishing vessels operating in the WCPFC
Convention area in 1988-2006.**

Year	LL	PS	Total
1988	7	0	7
1989	9	0	9
1990	23	0	23
1991	39	0	39
1992	72	0	72
1993	310	0	310
1994	457	0	457
1995	416	0	416
1996	314	0	314
1997	148	0	148
1998	66	0	66
1999	115	0	115
2000	106	0	106
2001	116	1	117
2002	123	2	125
2003	179	4	183
2004	212	6	218
2005	212	8	220
2006	157	9	166

**Table 2 Nominal Catch of tuna and tuna-like species by the Chinese tuna fishery in the
WCPFC Convention area in 1988-2006 Unit of Catch: MT in Round Weight**

Year	Gear	ABL	BET	YFT	SWO	SKJ	BIL	OTH	Total
1988	LL	0	23	19	0	0	0	0	42
1989	LL	0	95	43	0	0	0	6	144
1990	LL	4	266	161	0	0	0	129	560
1991	LL	0	507	450	0	0	0	176	1133
1992	LL	0	1349	1230	0	0	0	113	2,693
1993	LL	1	3,537	2,581	0	0	0	1,515	7,634
1994	LL	9	7,606	4,531	0	0	0	1,916	14,062
1995	LL	14	4,047	4,840	0	0	0	1,154	10,055
1996	LL	12	2,581	2,156	0	0	0	504	5,253
1997	LL	13	1,848	1,177	0	0	0	164	3,202
1998	LL	7	807	242	0	0	0	62	1,118
1999	LL	3,473	1,085	2,237	396	0	114	308	8,333
2000	LL	2056	1981	2207	143	0	528	376	7,291
2001	LL	2711	2227	1919	286	0	241	298	7682
	PS	0	0	340	0	2750	0	0	3090
	Total	2711	2227	2259	286	2750	241	298	10772

2002	LL	2920	2312	1844	220	0	183	462	7941
	PS	0	0	547	0	6813	0	0	7360
	Total	2920	2312	2391	220	6813	183	462	15301
2003	LL	6223	8965	3358	1168	0	1043	1142	21899
	PS	0	0	3377	0	20284	0	0	23661
	Total	6223	8965	6735	1168	20284	1043	1142	45560
2004	LL	6104	9314	4048	1003	0	570	1082	22121
	PS	0	0	595	0	20104	0	0	20699
	Total	6104	9314	4643	1003	20104	570	1082	42820
2005	LL	4103	6399	2367	608	0	479	1049	15005
	PS	0	0	9732	0	38928	0	0	48660
	Total	4103	6399	12099	608	38928	479	1049	63665
2006	IFLL	5826	2076	2135	260	0	475	2385	13157
	DFLL	1365	7714	1862	1024	0	339	672	12976
	PS	0	0	4968	0	47776	0	0	52774
	Total	7191	9790	8965	1284	47776	814	3057	78877

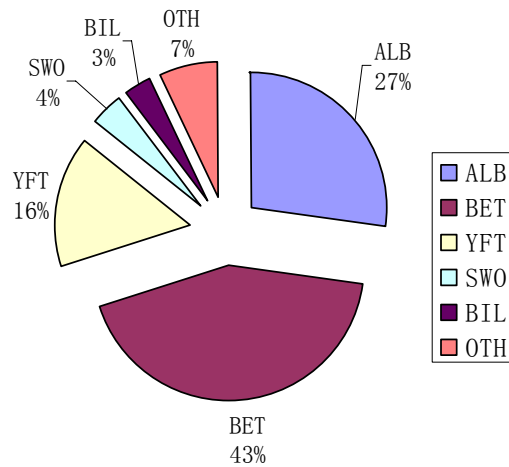


Figure 1 Main catch composition of tuna and tuna-like species by Chinese LL in 2005 in the WCPFC Convention area

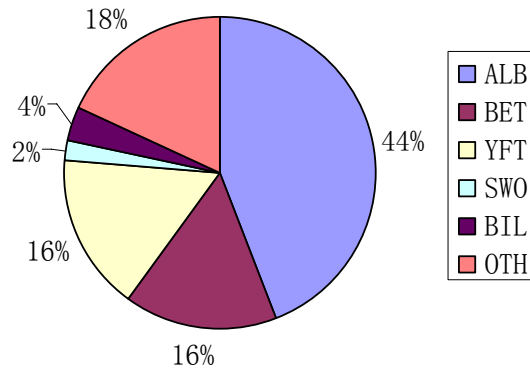


Figure 2 Main catch composition of tuna and tuna-like species by Chinese IFLL in 2006 in the WCPFC Convention area

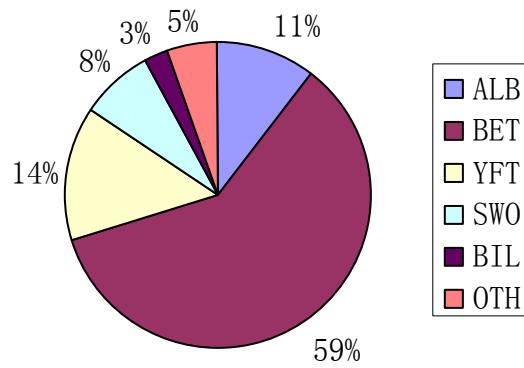


Figure 3 Main catch composition of tuna and tuna-like species by Chinese DFLL in 2006 in the WCPFC Convention area

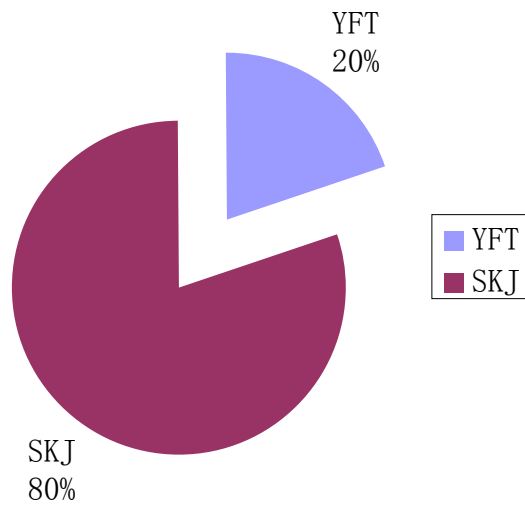


Figure 4 Main catch composition of tuna and tuna-like species by Chinese PS in 2005 in the WCPFC Convention area

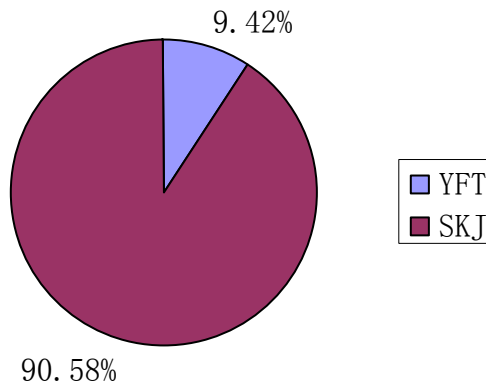


Figure 5 Main catch composition of tuna and tuna-like species by Chinese PS in 2006 in the WCPFC Convention area