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**CHINA ANNUAL FISHERY REPORT**

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**WCPFC/SC2/2006**

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## **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.

## **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(Table 1).

The size of the LL vessels ranged from 67 GRT to 742 GRT. The number of small size(under 100GRT) is 15 and the number of large size is 197. Most of the large size LL vessels targeting bigeye tuna in the high seas and the EEZ of PIC, accounting for the 65%(128) of the total large size vessels.

The small size LL 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 amounted to 8 in 2005.

## **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 hit the highest historic level, amounting to 22121 MT. But catch decreased in 2005(Table 2).

The catch mainly composed of BET, YFT and ALB. The percentage of BET, YFT and ALB in 2004 by LL are 41%, 18% and 28% respectively. And the composition of targeted species in 2005 shown similar percentage, which is 43%, 16% and 27% respectively.(Figure 1 and Figure 2)

### **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. The main catch species by PS fishery are SKJ and YFT. The catch composition of tuna and tuna like species in 2004 and 2005 by PS are shown Figure 3 and Figure 4 respectively. The percentage of SKJ in the total catch was 97% in 2004 and 80% in 2005.

### **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 transshipped 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.

#### ***Observer program***

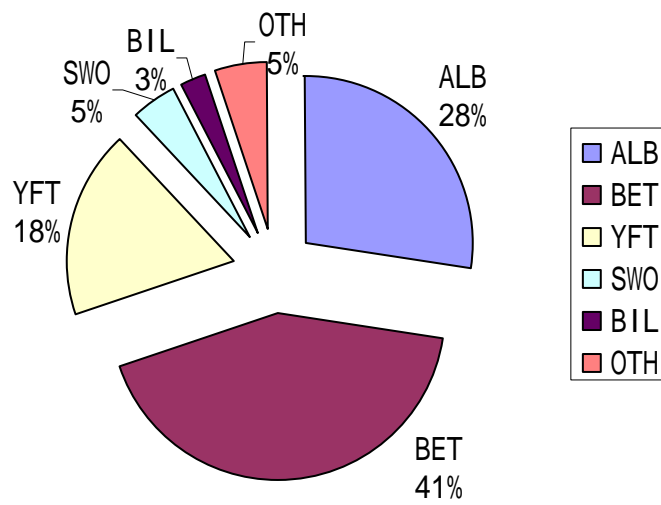
China began to carry out scientific observer program in 2001. Since then, every year four scientific observer were dispatched to Pacific Ocean, Indian Ocean and Atlantic Ocean. The observers should be trained and training session included identification of tuna and tuna-like species, catch sampling and data forum filling etc. All the returned observers should be debriefed and submitted report to Tuna Research Working Group established at Shanghai Fisheries University.

**Table 1 Number of Chinese tuna fishing vessels operating in the WCPFC Convention area in 1988-2005.**

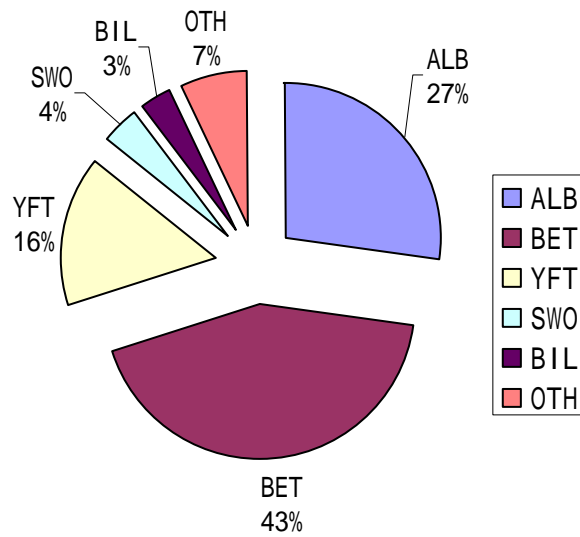
| Year | LL  | PS | Total |
|------|-----|----|-------|
| 1988 | 7   | 0  | 7     |
| 1989 | 9   | 0  | 9     |
| 1990 | 23  | 0  | 23    |
| 1991 | 39  | 0  | 39    |
| 1992 | 72  | 0  | 72    |
| 1993 | 310 | 0  | 310   |
| 1994 | 457 | 0  | 457   |
| 1995 | 416 | 0  | 416   |
| 1996 | 314 | 0  | 314   |
| 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   |

**Table 2 Nominal Catch of tuna and tuna-like species by the Chinese tuna fishery in the WCPFC Convention area in 1988-2005 Unit of Catch: MT in Round Weight**

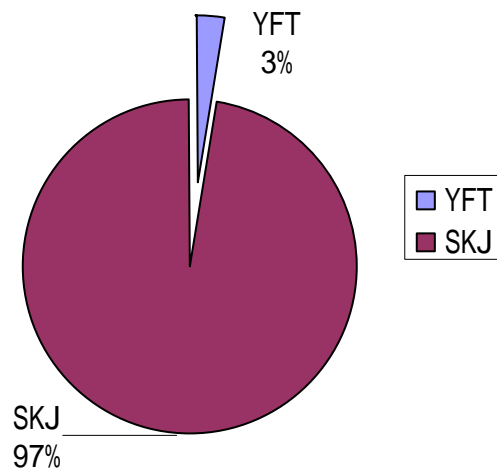
| Year | Gear  | ABL   | BET   | YFT   | SWO  | SKJ   | BIL  | OTH   | Total  |
|------|-------|-------|-------|-------|------|-------|------|-------|--------|
| 1988 | LL    | 0     | 23    | 19    | 0    | 0     | 0    | 0     | 42     |
| 1989 | LL    | 0     | 95    | 43    | 0    | 0     | 0    | 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  |



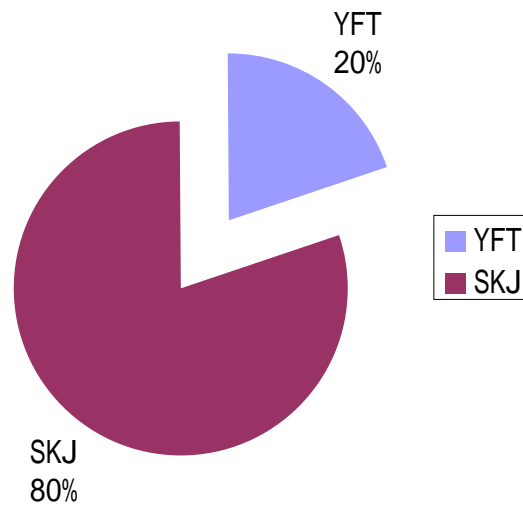
**Figure 1 Main catch composition of tuna and tuna-like species by Chinese LL in 2004 in the WCPFC Convention area**



**Figure 2 Main catch composition of tuna and tuna-like species by Chinese LL in 2005 in the WCPFC Convention area**



**Figure 3 Main catch composition of tuna and tuna-like species by Chinese PS in 2004 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**