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Annual Report to the Commission
Part 1: Information on Fisheries, Research and Statistics

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CHINA

Summary

There are two types of tuna fisheries in the WCPFC Convention Areas: longline and purse seine fishery. In 2011, totally 275 longliners and 12 purse seiners operated in the WCPFC Convention Areas, the tuna catch from longline fishery and purse seine fishery were estimated 33,363 MT and 77,551 MT, respectively. Catch by Chinese deep-freezing longline fishery for bigeye are exported to Japan for sashimi and catch by fresh-tuna longline for albacore are sold for cannery products. Catch by purse seine fishery for skipjack are also sold for cannery products. From 2011 to the first quarter of 2012, 6 observers were trained and dispatched to Chinese longline vessels in the Central and Eastern Pacific Ocean. Fishery data and biological data were collected during the observer trips. The first observer trip conducted from Aug 7, 2011 to Dec 20, 2011, covering the areas N 6°16′- S 7°06′, E 150°25′- E. The second trip conducted from Sep 28, 2011 to Feb 15, 2012, covering the areas N0°31′-N6°49′, E149°516′-E163°31′. The third trip conducted from Sep 28, 2011 to Feb 16, 2012, covering the areas N0°35′-N7°27′, E148°36′-E162°06′. The fourth trip conducted from Dec 1, 2011 to Feb 13, 2012, covering the areas N06°22′-S08°09′, W173°30′-W150°00′. The fifth trip conducted from Jan 20, 2012 to Mar 18, 2012, covering the areas S 5°59′-S 16°25′, W 160°04′-W 167°25′. The sixth trip conducted from Dec 27, 2011 to Feb 29, 2012, covering the areas N12°20′-S4°35′，E175°50′-W149°10′. Size data for BET, YFT and SWO shall be submitted to WCPFC. Data coverage for catch and effort was 100%. The logbook coverage for longline fishery is improving and this will promote data collection quality of China fishery.

ANNUAL REPORT TO THE COMMISION

PART1 : INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

Xiaojie DAI, Yan CHEN, Jiangfeng ZHU and Liuxiong XU

Shanghai Ocean University, Shanghai, People's Republic of China

Scientific data was provided to the Commission in accordance with the decision relating to the provision of scientific data to the Commission by 30 April 2012	**YES**

1. 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: longline (LL) fishery, purse seine (PS) fishery. The catch of four main tuna species (skipjack, yellowfin tuna, bigeye tuna and albacore) by China in 2004 was 40,165 MT. Catch of the four species hit the historical record 112,260 MT in 2009, but decreased to 81,938 MT in 2010. It should be noted that above-mentioned catch does not include the catch from overlapping areas(South of 04S, W130-W150). In 2011, catch of the four species increased to 105,284 MT, which include the catch from overlapping areas.

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 an increase trend since the year 2000. **Table 1** shows the number of Chinese LL vessels operating in the WCPFC Convention area in 2007-2011. The number of LL vessels in 2007 was 86, increased to199 in 2008, and further increased to 219 in 2009, then increased to 244 in 2010, and in 2011, the number of LL vessels was 275.

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). In 2009, the number of IFLL and DFLL vessel was 120 and 99, respectively, in 2010, the number of IFLL and DFLL vessels was 155 and 89, respectively, and in 2011, the number of IFLL and DFLL vessels was 155 and 93, respectively. Most of the DFLL vessels targeting bigeye tuna in the high seas and the EEZ of PIC, accounting for the 60% 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

Chinese purse seine fishery began in 2001 in the WCPFC Convention area, and then it has become very important tuna fishery for China. The number of PS vessels in 2004 was 6 and increased to 8 and 9 in 2005 and 2006, respectively, and then the number of PS vessels maintained at 12 from 2008 to 2011. **Table 1** shows the number of Chinese PS vessels operating in the WCPFC Convention area in 2007-2011.

3. Catch by species and fishery

3.1 LL

The total catch by Chinese LL in the WCPFC Convention area from 2007 to 2011 are shown in **Table 2**.The catch mainly consisted of ALB, BET and YFT. In 2011, the percentage of ALB, BET and YFT by LL were 36.0%, 33.4% and 13.8%, respectively. The catch of ALB in 2011 (11,996 MT) decreased 29.3% and 39.7% as compared with 2010 (16,970 MT) and 2009 (19,906 MT), respectively. The catch of BET in 2011 (11,139 MT) increased 25.2% and 13.7% as compared with 2010 (8,895 MT), and 2009 (9793 MT), respectively. The catch of YFT in 2011 (4,598 MT) increased 95.2% as compared with 2010 (2,356 MT), but decreased 27.2% as compared with 2009 (6,318 MT).

Table 3 shows the catch of non-target species caught by the Chinese LL in the WCPFC Convention Area in 2010 and 2011, mainly including three billfishes species, the striped marlin, blue marlin, and black marlin, and three shark species, the blue shark, shortfin mako, and oceanic whitetip shark.

3.2 PS

The total catch by Chinese PS in the WCPFC Convention area from 2007 to 2011 was shown in **Table 2**. The catch by PS has increased since the year 2007. The catch was only 54,941 MT in 2007 and amounted to 55,554 MT in 2008, increased to 76,649 MT in 2009, then decreased to 53,716 MT in 2010. In 2011, the main catch species by PS fishery were SKJ, YFT, and BET. The catch of bigeye tuna (mainly juveniles) was 843 MT, 45.1% decrease as compared with the 2010 catch (1,536MT). The catch of yellowfin tuna was 8,514 MT, 14.2% decrease as compared with the 2010 catch (9,925MT). The catch of skipjack was 68,194 MT, 61.4% increase as compared with the 2010 catch (42,255 MT), but close to the 2009 catch (67,635 MT).

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 cannery. Catch by PS fishery were mostly transhipped to Thailand for cannery, and some are processed in China for export.

5. Research and Statistics

5.1 Observer programme

In order to carry out the observer program, scientific observers are strictly trained for collecting fishery data of tunas and other pelagic fishes, collecting size-frequency data of all pelagic fishes as well as sea turtle information. Three observers had been sent to Chinese longline vessels in the high seas in 2009, and then four observers had been sent out in 2010. From 2011 to the first quarter of 2012, six observers were trained and

dispatched to Chinese longline vessels in the Central and Eastern Pacific Ocean. The first observer trip conducted from Aug 7, 2011 to Dec 20, 2011, covering the areas N 6°16′-S 7°06′，E 150°25′-E, with 112 sets (total hooks 278,752) and 6,091 individuals of sampled fish. The second trip conducted from Sep 28, 2011 to Feb 15, 2012, covering areas N0°31′-N6°49′, E149°516′-E163°31′, with 100 sets (total hooks 332,787) and 2941 individuals of sampled fish. The third trip conducted from Sep 28, 2011 to Feb 16, 2012, covering the areas N0°35′-N7°27′, E148°36′-E162°06′, with 129 sets (total hooks 334,394) and 3,631 individuals of sampled fish. The fourth trip conducted from Dec 1, 2011 to Feb 13, 2012, covering the areas N06°22′-S08°09′, W173°30′-W150°00′, with 63 sets (total hooks 177,973) and 1438 individuals of sampled fish. The fifth trip conducted from Jan 20, 2012 to Mar 18, 2012, covering the areas S 5°59′-S 16°25′, W 160°04′-W 167°25′, with 51 sets (total hooks 149,848) and 3123 individuals of sampled fish. The sixth trip conducted from Dec 27, 2011 to Feb 29, 2012, covering the areas N12°20′-S4°35′, E175°50′-W149°10′, with 50 sets (total hooks 121,362) and 1173 individuals of sampled fish. The observers collected catch and effort data and size data for all species observed. Biological information (sex, maturity, hard parts, etc.) were collected by randomly sampling the catch.

5.2 Data collection system

Bureau of Fisheries, Ministry of Agriculture of China, is leading and supervising the data collection of the Chinese tuna fisheries. National-wide meeting on tuna data quality had been organized at least once a year in recent years. Participants are managers of tuna fishing companies and tuna- related fishery enterprises. Each vessel of all the companies engaged in tuna fishing is required to report fishery data (such as catch and effort by species, month, gear, area etc.) to China Overseas Fisheries Association (COFA). Data coverage of catch and effort was 100%. COFA and Shanghai Ocean University are maintaining the fishery and observer database for tuna fishery of China

With an aim to improve data quality, each tuna longline fishing vessel is obliged to fill out tuna fishing logbook since 2009 and submit the logbook to Shanghai Ocean

University for data summarize and analyse before the end of March the following year. Failure to do so will lead to punishment by the Government. The data quality is also reviewed by Shanghai Ocean University to promote strict compliance of the measure.

The logbook covers 20 species, including major species such as bigeye, yellowfin, albacore, marlin and other by catches, for example, shark. We are still adding more species in the logbook based on the conservation measures adopted by RFMOs. The fishing vessel is also required to record any bycatch of sea turtle, sea bird and their release.

COFA provides logbooks each year for free for each longline tuna fishing vessel. During 2011, 100% logbook coverage collection for longline fishery has been implemented as before and it would promote data collection quality of China.

Table 1 Number of Chinese tuna fishing vessels operating in the WCPFC Convention area in 2007-2011

Year	LL	PS	Total
2007	86	10	96
2008	199	12	211
2009	219	12	231
2010	244	12	256
2011	275	12	287

Table 2 Nominal catch of tuna and tuna-like species by the Chinese tuna fishery in the WCPFC Convention area in 2007-2011（Unit of catch: MT in round weight）

Year	Gear	ALB	BET	YFT	SKJ	SWO	BIL	OTH	Total
2007	IFLL	4835	2024	183	0	1221	570	254	9087
	DFLL	618	5797	1397	0	892	185	511	9400
	PS	0	1000	6196	47745	0	0	0	54941
	Total	5453	7821	7776	48745	2113	755	765	73428
2008	LL	15092	8761	4562	0	2192	1640	1733	33980
	PS	0	1000	11148	43406	0	0	0	55554
	Total	15092	9761	15710	43406	2192	1640	1733	89534

2009	LL	19906	9793	6318	0	1569	1335	2598	41519
	PS	0	1535	7073	67635	0	0	406	76649
	Total	19906	11328	13391	67635	1569	1335	3004	118168
2010	LL	16970	8895	2356	0	929	1255	1401	31806
	PS	0	1536	9925	42255	0	0	0	53716
	Total	16970	10431	12281	42255	929	1255	896	85017
2011	LL	11996	11139	4598	0	1971	1768	1891	33363
	PS	0	843	8514	68194	0	0	0	77551
	Total	11996	11982	13112	68194	1971	1768	1891	110914

Note: BIL included striped marlin, blue marlin and black marlin;
OTH included sharks and other species.

Table 3 Catch of non-target species by the Chinese LL tuna fishery in the WCPFC Convention Area in 2010 and 2011(Unit of catch: MT)

Species	Striped marlin	Blue marlin	Black marlin	Blue shark	Shortfin mako	Oceanic Whitetip
2010	132	1094	29	506	133	532
2011	370	1226	172	726	408	0