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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 2012, 286 longliners and 13 purse seiners operated in the WCPFC Convention Areas. The total catch of tuna and tuna-like species by longline fishery and purse seine fishery were estimated to be 49,476 MT and 49,148 MT, respectively. The catch of bigeye tuna, yellowfin tuna, albacore by longline fishery amounted to 11,324MT, 6,004MT and 24,826MT respectively. The catch of skipjack, yellowfin tuna and bigeye tuna by purse seine fishery were estimated to 44,303MT, 4,623MT and 222MT respectively. Catch by Chinese deep-freezon 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 July, 2012 to April 2013, eight (8) observers were trained and dispatched to Chinese longline vessels in the Western and Central Pacific Ocean. Fishery data and biological data were collected during observer trips. Data coverage for catch and effort was 100%. The logbook coverage for longline fishery is being improved and this will promote the quality of China data collection.

ANNUAL REPORT TO THE COMMISION

PART1 : INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

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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 2013	**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 for China tuna fishery. There are currently two types of tuna fisheries in the WCPFC Convention area: longline (LL) fishery and 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 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 (S04- S40, W130-W150). Catch of the four species increased to 105,284 MT in 2011, which includes the catch from overlapping areas. But the catch of the four species decreased to 91,302 MT in 2012 in WCPFC Convention Areas.

2. Fleet structure

2.1 LL

All the Chinese LL vessels operated on the high seas and EEZs of 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 2009-2012. The number of LL vessels in 2009 was 219, 244 in 2010, and 275 in 2011. In 2012, the number of LL vessels accounted to 286.

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 and DFLL vessel was 120 and 99 respectively in 2009, 155 and 89 respectively in 2010, 182 and 93 respectively in 2011, 202 and 84 respectively in 2012.

Most of the DFLL vessels targeting bigeye tuna on the high seas and the EEZs of PIC. The IFLL vessels mainly operate in the EEZ of PIC, targeting bigeye tuna and albacore. The major fishing grounds distributed among the EEZ of Solomon Islands, Marshall Islands etc.

2.2 PS

Chinese purse seine fishery began in 2001 in the WCPFC Convention area, and it has thereafter become very important for China tuna fishery. The number of PS vessels maintained at 12 during 2009-2011. But the number of vessels increased to 13 in 2012. Table 1 shows the number of Chinese PS vessels operating in the WCPFC Convention area in 2009-2012.

3. Catch by species and fishery

3.1 LL

The total catch by Chinese LL in the WCPFC Convention area from 2009 to 2012 are shown in Table 2. The total catch of tuna and tuna-like species by longline fishery amounted to 49,476 MT in 2012. The catch mainly consists of ALB, BET and YFT. In 2012, the percentage of ALB, BET and YFT by LL were 50.2%, 22.9% and 12.1%, respectively.

Table 3 shows the catch of non-target species caught by Chinese LL in the WCPFC Convention Area from 2010 to 2012, including mainly three billfishes species (striped marlin, blue marlin, and black marlin) and three shark species (blue shark, shortfin mako, and oceanic whitetip shark).

3.2 PS

The total catch by Chinese PS in the WCPFC Convention area from 2009 to 2012 was shown in Table 2. The catch was 76,649 MT in 2009 and decreased to 53,716 MT in 2010, increased to 77,551 MT in 2011, then decreased to 49,148 MT in 2012. In 2012, the main catch species by PS fishery were SKJ, YFT, and BET. The catch of bigeye tuna (mainly juveniles) was 222 MT. The catch of yellowfin tuna was 4,623MT. The catch of skipjack was 44,303 MT, 65.0% decrease as compared with the catch in 2011 (68,194 MT).

4. Disposal of Catch

Bigeye tuna and yellowfin tuna caught by longline vessels operating in the Exclusive Economic Zone (EEZ) of Pacific Island Countries and on the 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 as well.

5. Research and Statistics

5.1 Observer programme

In order to carry out observer program, scientific observers are strictly trained for collecting fishery data of tunas and other pelagic fishes stocks, including size-frequency data of all pelagic fishes as well as sea turtle information. Three (3) observers were sent to Chinese longline vessels on the high seas in 2009, and then four (4) observers in 2010 and six(6) observers in 2011. During 2012, eight(8) scientific observers were dispatched for the Pacific Ocean (Figure 1). Table 4 presents observer trip information on areas, periods, total hooks and hooks per basket etc. Table 5 shows the catch information during observer periods. Table 6 presents nominal CPUE of several shark species.

5.2 Data collection system

Bureau of Fisheries, Ministry of Agriculture of China, is leading and supervising the data collection of Chinese tuna fisheries. National-wide meeting on tuna data quality have 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 every company 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 is 100%. COFA and Shanghai Ocean University (SHOU) host and maintain the fishery and observer database for tuna fishery of China

Since 2008, each LL vessel is obliged by the Bureau of Fisheries to use uniformed logbook and return it back to SHOU before the end of March next year. The data contained in the logbook is evaluated to further promote data collection quality of China.

Table 1 Number of Chinese tuna fishing vessels operating in the WCPFC Convention area in 2009-2012

Year	LL	PS	Total
2009	219	12	231
2010	244	12	256
2011	275	12	287
2012	286	13	299

Note: LL vessels included chartered vessels

Table 2 Nominal catch of tuna and tuna-like species by the Chinese tuna fishery in the WCPFC Convention area in 2009-2012（Unit of catch: MT in round weight）

Year	Gear	ALB	BET	YFT	SKJ	SWO	BIL	OTH	Total
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
2012	LL	24826	11324	6004	0	2201	2574	2547	49476
	PS	0	222	4623	44303	0	0	0	49148
	Total	24826	11546	10627	44303	2201	2574	2547	98624

Note: BIL includes striped marlin, blue marlin and black marlin;
OTH includes 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 2012(Unit of catch: MT)

Species	Billfish			Sharks		
	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
2012	524	1795	255	1126	516	0

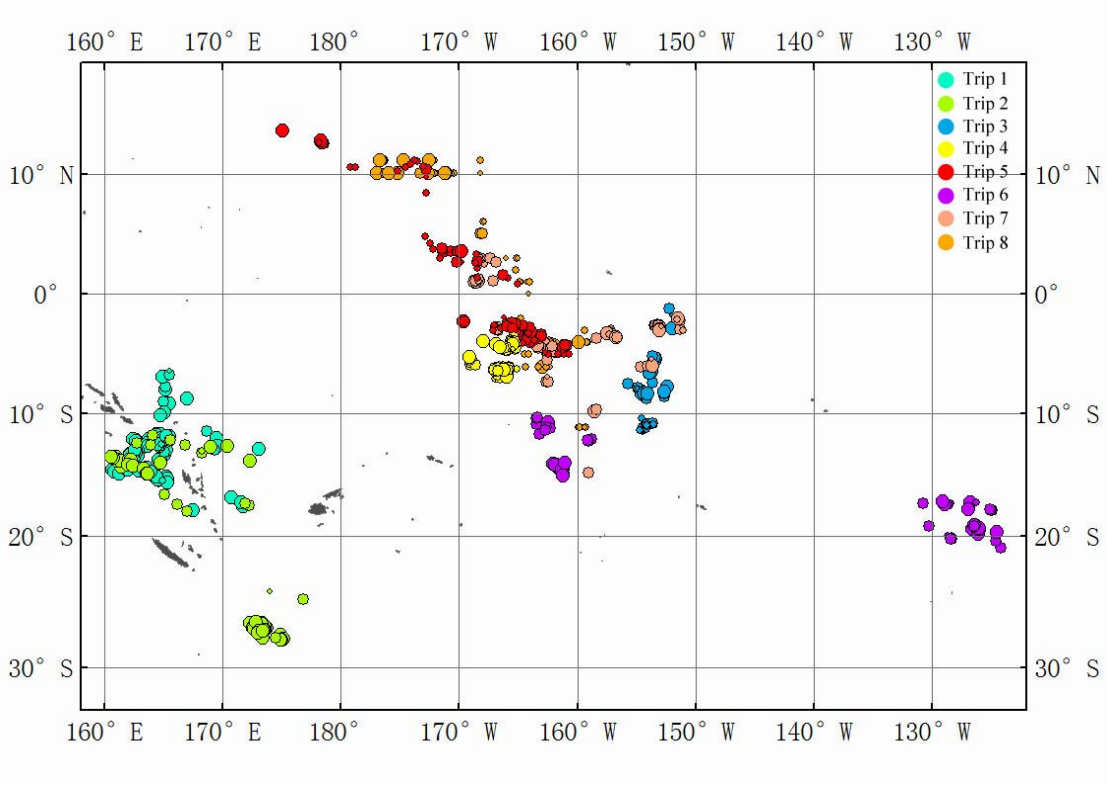

Figure 1 Position of Chinese scientific observer trip during 2012 in Pacific Ocean

Table 4 Trip information of Chinese scientific observer deployed in the Pacific Ocean during 2012

Trip	**Fishing Areas**	**Period**	Set	Total Hook	HPB	LL Type
T-1	S06°50′- S18°00′ , E160°48′-E173°08′	Jul. 17-Nov. 27,2012	98	337404	26	I
T-2	S11°49′-S18°00′, E160°34′-E172°18′ S24°19-S27°47′, E172°20′-E176°45′	Jul. 30-Oct. 21,2012	61	209600	24	I
T-3	S03°19′-S07°08′, W165°03′-W169°09	Sep. 9 - Dec. 25, 2012	98	234224	17	D
T-4	S11°32′-S1°12′, W155°20′-W151°40′	Aug. 22, 2012-Jan. 1,2013	91	223400	16	D
T-5	S5°7′-N13°40′, W160°44′-E178°30′	Oct. 22, 2012-Feb. 1,2013	92	263853	19	D
T-6	S10°11′-S15°06′, W158°32′-W163°47 ; S16°56′-S20°59′, W123°56′-W131°09′	Oct. 22, 2012- Jan. 26, 2013	63	221459	27	I
T-7	N 3°30′- S 14°54′, W 150°42-W168°52′	Nov. 22,2012-Jan. 5,2013	70	169932	16	D
T-8	S11°45′-N11°41′, W159°08′-W177°45′	Nov. 9,2012- Apr. 1,2013	118	319736	17	D

Note: T-6, T-7 and T-8 are dispatched in the Cook Islands waters. HPB-Hook Per Basket

I - ice fresh tuna longline; D- deep frozen tuna longline

Table 5 Catch information of Chinese scientific observer collected by LL in the Pacific Ocean during 2012-2013

Species	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8
Bigeye tuna(BET)	272	39	1093	136	666	1009	326	876
Yellowfin tuna(YFT)	844	198	668	100	728	286	382	243
Albacore(ALB)	5442	3878	343	2910	85	130	48	149
Skipjack(SKJ)	293	88	442	450	710	119	229	142
Blue marlin(BUM)	79	14	91	65	143	60	32	110
Striped marlin(MLS)	7	1	6	7	12	19	5	20
Black marlin(BLM)	0	0	1	0	0	2	0	9
Swordfish(SWO)	19	7	169	28	129	133	73	177
Indo-Pacific sailfish(SFA)	23	3	5	0	32	3	7	2
Shortbill spearfish(SSP)	18	10	27	30	48	21	17	21
Oceanic whitetip shark(OCS)	8	0	9	1	26	72	54	5
Silky shark(FAL)	28	1	10	3	70	32	24	39
Blue shark(BSH)	9	20	148	6	146	58	17	164
Shortfin mako(SMA)	14	6	4	0	1	2	0	5
Longfin mako(LMA)	3	1	14	1	15	7	3	7
Bigeye thresher(BTH)	8	5	16	0	32	37	13	44
Pelagic thresher(PTH)	0	0	0	0	143	0	0	0
Crocodile shark(PSK)	0	0	1	0	6	29	9	40
Whale shark(RHN)	0	0	0	0	0	0	1	0
Tiger shark(TIG)	1	0	0	0	0	1	0	0
Velvet dogfish(SSQ)	0	0	6	0	11	16	5	1
Scalloped hammerhead(SPL)	0	0	0	0	1	2	0	1
Smooth hammerhead（SPZ）	0	0	1	0	0	0	0	0
Longnose lancetfish(ALX)	451	4	13	28	24	29	11	410
shortnose lancetfish(ALO)	0	0	0	0	0	0	0	389
Sickle pomfret(TST)	11	0	64	5	184	285		619
Bigscale pomfret(TAL)	12	0	0	0	0	0	21	0
Dagger pomfret(TCR)	2	0	0	2	28	34	2	30
Atlantic pomfret(POA)	1	5	0	2	0	0	0	0
Lustrous pomfret(EBS)	2	0	0	0	0	0	0	0
Common dolphinfish(DOL)	140	24	2	1	73	1	16	82
Wahoo(WAH)	636	35	47	143	81	55	15	113
Escolar(LEC)	978	50	113	54	224	413	30	410
Snake mackerel(GES)	35	0	823		88	284	46	0
Oilfish(OIL)	17	0	1	11	0	34	0	4
Roudi escolar(PRP)	42	0	0	2	0	11	0	0
Longfin escolar(SXH)	28	0	0	0	0	0	0	0
Black gemfish(NEN)	3	0	0	0	0	0	0	0
Opah(LAG)	47	54	13	5	10	6	0	12
Spinetail mobula(RMJ)	0	0	5	0	0	7	1	6
Giant manta(RMB)	3	1	0	0	0	0	1	0
Pelagic stingray(PLS)	174	9	133	18	48	28	60	98
Sharptail sunfish(MRW)	1	0	0	0	0	3	0	4
Ocean sunfish(MOX)	0	0	3	0	3	3	1	5
Slender sunfish(RZV)	75	6	1	5	0	9	1	3
Dealfish(TRX)	1	0	0	2	1	12	0	4
Great barracuda(GBA)	119	8	1	1	0	1	0	2
Sixline soapfish(GSE)	24	0	0	0	0	0	0	0
Rainbow runner(RRU)	3	1	0	0	1	0	0	0
Blackfin barracuda(BAB)	12	0	0	0	0	0	0	0
Driftfish(CGB)	1	0	0	0	0	0	0	0
Razorbach scabbardfish(ASZ)	1	0	0	0	0	0	0	0
Crestfish(LOP)	0	1	0	1	0	0	0	0
Slender tuna(SLT)	0	0	0	0	0	0	0	1
Green turtle(TUG)	1	0	0	0	0	0	0	0
Leatherback turtle(DKK)	0	0	1	0	2	0	1	0

Table 6 Nominal CPUE of Several Shark Species by Chinese Observer Programme (Individual/ 1000 hooks)

Species Code	T-1	T-2	T-3	T-4	T-5	T-6	T-7	T-8
OCS	0.0237	0.0000	0.0427	0.0059	0.1077	0.3808	0.0211	0.3501
FAL	0.0830	0.0060	0.0474	0.0177	0.2900	0.1693	0.1649	0.1556
BSH	0.0267	0.1200	0.7017	0.0353	0.6049	0.1199	0.6933	0.2820
SMA	0.0415	0.0360	0.0190	0.0000	0.0041	0.0000	0.0211	0.0097
LMA	0.0089	0.0060	0.0664	0.0059	0.0621	0.0212	0.0296	0.0340
BTH	0.0237	0.0300	0.0759	0.0000	0.1326	0.0917	0.1860	0.1799
PTH	0.0000	0.0000	0.0000	0.0000	0.5924	0.0000	0.0000	0.0000
PSK	0.0000	0.0000	0.0047	0.0000	0.0249	0.0635	0.1691	0.1410
RHN	0.0000	0.0000	0.0000	0.0000	0.0000	0.0071	0.0000	0.0000
TIG	0.0030	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0049
SSQ	0.0000	0.0000	0.0284	0.0000	0.0456	0.0353	0.0042	0.0778
SPL	0.0000	0.0000	0.0000	0.0000	0.0041	0.0000	0.0042	0.0097
SPZ	0.0000	0.0000	0.0047	0.0000	0.0000	0.0000	0.0000	0.0000