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PART 1: INFORMATION ON FISHERIES, RESEARCH, AND STATISTICS

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CHINA

Annual Report to the Commission

Part 1: 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 2015	**YES**

Summary

There are two types of tuna fisheries in the WCPFC Convention Areas: longline and purse seine fishery. In 2014, 353longliners and 19 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 35310 MT and 59,406 MT, respectively. The catch of bigeye tuna, yellowfin tuna, albacore by longline fishery amounted to 9,370 MT, 5,949 MT and 14,643 MT respectively. The catch of skipjack, yellowfin tuna and bigeye tuna by purse seine fishery were estimated to 53,028MT, 5,551 MT and 828 MT respectively. Bigeye by Chinese deep-frozen longline fishery are exported to Japan for sashimi and albacore by fresh-tuna longlineare sold for cannery products. Skipjack by purse seine fishery are also sold for cannery products. From April, 2014 to Jan. 2015, six (6) adequately trained scientific observers were dispatched to Chinese longline vessels in the 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 100% and this will promote the quality of China data collection.

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 was 91,302 MT in 2012 (including the catch from overlapping areas), which sharply decreased comparing with 2011. In 2014, the catch of the four species rebounded to 89,368MT

in WCPFC Convention Areas.
Official document on tuna fishery regulation requirements based on conservation measures adopted by t-RFMOs was issued and distributed to each tuna fishing company in 2013 by the Ministry of Agriculture, where detailed requirements are clearly specified to the vessel owner. Such requirements include, for example, VMS, data collecting and reporting, observer, statistical document, seabird and sea turtle mitigation, and bycatch such as shark.

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 2009-2014. The number of LL vessels in 2010 was 244, 275 in 2011, 286 in 2012 and 379 in 2013. In 2014, the number of LL vessels was353.

Size of the LL vessels ranged from 67 GT to742 GT. There are two types of tuna longline vessels, ice-fresh tuna longline (IFLL), including those targeting albacore, 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 in2011, 202 and 84 respectively in 2012, 272 and 107 respectively in 2013, 245 and 108 respectively in 2014.

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

2.2 PS

Chinese fleet entered the WCPFC tropical purse seine fishery in 2001, and it has become very important for China tuna fishery. The number of PS vessels maintained in a steady level of 12-14 during 2009-2013.At present there are 19 purse seiners flagged to China fishing in the WCPFC Convention area. Table 1 shows the number of Chinese PS vessels operating in the WCPFC Convention area in 2009-2014.

3. Catch by species and fishery

3.1 LL

The total catch by Chinese LL in the WCPFC Convention Area from 2009 to 2014 are shown in Table 2. The total catch of tuna and tuna-like species by longline fishery

amounted to 35085 MT in 2014. The catch mainly consists of ALB, BET and YFT. In 2014, the percentage of ALB, BET and YFT by LL were 41.7%, 26.7% and 16.9%, respectively.

Table 3 shows the catch of non-target species caught by Chinese LL in the WCPFC Convention Area from 2010 to 2014, including mainly three billfishes species (striped marlin, blue marlin, and black marlin) and two shark species (blue shark and shortfin mako).

3.2 PS

The total catch by Chinese PS in the WCPFC Convention area from 2009 to 2014 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 sharply decreased to 49,148 MT in 2012. In 2014, the main catch species by PS fishery were SKJ, YFT, and BET. The catch of bigeye tuna (mainly juveniles) was 828 MT. The catch of yellowfin tuna was 5,551 MT. The catch of skipjack was 53,028 MT. The catch for Chinese purse seine fleet are excluded those from the chartered vessels. The total catch of Chinese PS in 2014(59,407 MT) decreased 27.4% compared with the catch in 2013 (81,830 MT).

4. Disposal of Catch

Bigeye tuna and yellowfin tuna caught by longline vessels operating in the EEZ of PICs and on the high seas were exported to Japan sashimi market. Other species caught as by-catch sold to local market of operating ports. Albacore catch were landed at Fiji for cannery. Catch by PS fishery were mostly transshipped to Thailand for cannery as well.

5. Research and Statistics

5.1 Observer program

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. Four (4) observers were sent to Chinese longline vessels on the high seas in 2010, and then six (6) observers in 2011, eight (8) observers in 2012, nine (9) observers in 2013. During 2014, six (6) scientific observers were dispatched for the Pacific Ocean (Figure 1).

Six (6) observers are sent to longline vessel operating in the Pacific in 2014. Every observer on fishing vessels observed the composition and disposition of the catch and by-catch. The data of target species and by-catch species (sharks, marlin etc), size frequency data, and disposition status were collected during the observation in detail. Fishing operation information was also available to the observers. Observers are

strictly selected from undergraduate students and graduate students in Shanghai Ocean University (SHOU). They are obliged to attend two-week training sessions for fish identification and catch form filling before they are dispatched on board for six monthsat least. Catch data and biological data (shark size, sex ration, etc.) are collected. Observer reports are prepared after each trip.

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.

5.2 Data collection system

Bureau of Fisheries (BOF), 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.
Since 2008, each LL vessel is obliged by the BOF to use unified 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.
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), a non-governmental organization as authorized by BOF. Data coverage of catch and effort is 100%. COFA and SHOU host and maintain the fishery and observer database for tuna fishery of China.

5.3Sea turtle and shark conservation measures

For the longline fishing by Chinese vessel, sea turtle is one of the by-catch species. The BOF officially issued Logbook for Tuna Fisheries in 2008, and each tuna longline vessel, no matter of its fishing ground, is required to precisely record the sea turtle bycatch. Failure to doing so will lead to sanctions by the government, as China implements performance review on each fishing company on annual basis.

Booklets/posters on some sea turtles have been printed and distributed to each longline vessel. Mitigation devices, such as dehookers, cutters, dipnet and user manual are provided to each longline vessel since September 2009 free of charge by COFA. In 2012, 2013 and 2014, 85, 72 and 24 sets of such devices were dispatched respectively each year to longline vessels, including those operating in WCPFC area. Fishing companies are trained on proper treatment, including safe release, on sea turtle.

Shark is one of the bycatch species for the longline fishing by Chinese vessel. It is required in the official document issued in 2013 by the Ministry of Agriculture that sharks have to be fully utilized, the 5% ratio on sharkfin and weight of sharks up to the first landing point must be strictly observed. In accordance with CMM 2011-04,

oceanic whitetip shark is prohibited to be kept on board as bycatch, such species must be handled strictly in line with the measure.

Each tuna longline vessel, no matter of its fishing ground, is required to precisely record the shark as bycatch in the logbook. 20 species, including 8 shark species, are required to be recorded in the logbook. Failure to record accurately will lead to sanctions by the government, as China implements performance review on each fishing company on annual basis. Pictures of major shark species are printed in the logbook to assist the fishermen easily identify the shark caught in fishing operation.

Bycatch data, including those on shark, is collected on monthly basis, though sometimes needs to be verified, by COFA. Such data, together with other data on tuna species, are forwarded to Consultant Team at SHOU to verify the accuracy of the data. Fishing companies that fail to report accurate/reasonable data are reported to BOF by the Team for punishment, including suspension fishing permit of the vessel in question.

Shark data is reported to the Commission before the deadline of data submission. In 2014, 225 tons of shark are caught as bycatch in WCPFC by Chinese fishing fleet, most of which are blue sharks which constitutes almost 91% of the total bycatch of shark.

CMMs on sea turtles and sharks adopted by WCPFC and other t-RFMOs are translated into Chinese and have been transferred into domestic regulation, and are distributed to each longline company for their compliance. National-wide annual conference on tuna fishing is held each year, where major conservation measures are explained to the meeting participants. Cases on violation punishment are another major issue during the meeting to call the attention of each company on compliance.

6. Transshipment information

6.1 Transshipment at-sea

In 2014, 203 at-sea transshipments in total were made in the Pacific by Chinese flagged LSTLVs to WCPFC-registered carrier vessels, the total amount of tuna and tuna-like species including by-catch transshipped are around 18758.312 metric ton with the presence of WCPFC observer.

In terms of the transshipment, most of them occurred in the WCPFC area (excluding the overlapping area), around 23% of them occurred in the overlapping area, and 4.4% of them occurred in the IATTC area.

In terms of the catch, most of them are from WCPFC area (excluding the overlapping area), but there are quite a few catches from overlapping area and IATTC

area.According to para 2 of CMM 2009-06, if the transshipment occurred in WCPFC area, even the catches come from IATTC area, it is also required to report to WCPFC Secretariat such transshipment; and if the transshipment occurred in overlapping area, usually two observers assigned by both WCPFC and IATTC on board the carrier vessel would issue two transshipment declaration reports.

Transshipment pre-notifications/application were submitted to COFA, by the vessel master and/or owner prior to its transshipment, and such request was communicated to the WCPFC Secretariat after being reviewed by the Association and BOF and we usually do our best to notify such request to WCPFC as far in advance as possible and at least no later than 36 hours before each transshipment according to para35 of CMM 2009-06. But in practice, although we attempt to notify such transshipment request to WCPFC far in advance, we found that sometimes, due to operation arrangement of carrier vessel, the actual transshipment time is shorter than 36 hours or the time period we notified. The transshipment was consequently made after approval by the Secretariat.

Please note that there are nineteen (19) transshipments highlighted in red in the attached excel form, because we were informed by the fishing vessel owner that these 19 transshipments would occur in the IATTC area, so we notified these transshipment application to IATTC instead of WCPFC.However, we were then informed by the fishing vessel owner that almost all of them occurred in the overlapping area, so we added them in the WCPFC transshipment record. We also added some comments on the "NOTE" column for easy reference.

6.2 Transshipment in port

We were informed that two in-port transshipments were made in SUVA and PAPEETE respectively in 2014, and the catch transshipped was around 182.311 metric tons.

Transshipment declarations were normally submitted to the Secretariat after completion of transshipment within 15 days, although there are still a small portion of declarations submitted beyond the 15-day deadline.In this regard, we will make more efforts to meet the deadline.

7. Information of cetaceans and whale sharks

According to the CMM 2011-03, CCMs shall include in their Part 1 Report any instances in which cetaceans have been encircled by the purse seine nets of their flagged vessels. In 2014, 3 events reported to our official authority and the vessels involved are Zhong Tai No.1 (twice) and Zhong Tai No.2.

According to the CMM 2012-04, CCM shall report in their Part 1 annual report of any instances in which whale sharks have been encircled by the purse seine nets. In 2014, 3 events reported to our official authority and the vessels involved are Zhong Tai No.2, Zhong Tai No.3 and Tai Long 1.

The detailed event record regarding the two issues mentioned above can be found in the attachment Table 6 and Table 7.

8. **Information of North striped marlin**

According to CMM 2010-10, Para 5c of the Measure stipulates that: 2013 and beyond: [20%] reduction of the highest catch between 2000 and 2003. Measures taken by China on the stock are as follows:

(1)The fisheries authority of China made arrangement to observe the catch limit as decided by the CMM, and accordingly, we set catch limit of 137.6 MT in 2014;
(2)The stock is included in the logbook for China longline fishery, and vessel master has to record the catch in the logbook correctly;
(3)Catch data by longline vessel is submitted to the fishery authority on monthly basis;
(4)Fishing gear modification: vessels operating in the area applicable to the Measure are encouraged to use monofilament instead of wire leader to reduce the catch of such stock; and
(5) Vessels are encouraged not to operate in fishing grounds where a large amount of such stock may be harvested.

The catch by China for North Striped Marlin in the area applicable to the CMM is 12.28MT in 2014.None of ourfishing vessel targets striped marlin.

9. Sea birds information

In accordance with CMM 2012-07, CCMs shall annually provide to the Commission,in part 1 of their annual reports, all available information on interactions with seabirdsreported or collected by observers, including mitigation used, observed and reportedspecies specific seabird bycatch rates and numbers, to enable the ScientificCommittee to estimate seabird mortality in all fisheries to which the WCPFCConvention applies.

The fisheries authority of Chinarequired fishing vessels to take appropriate measures to mitigate incidental catch of seabirds. On another hand, China fishing vessels almost operated in the north of south of 30°. Based on the trips information from the observers, there were no catch of sea birds in 2014.

On April 17, 2015, COFA organized a sea birds training meeting in SHOU. Experts

from Birdlife International and ACAP presented the seabirdsidentification and mitigation of sea birds to the captains from the industries and observers.

10. Oceanic whitetipshark information

In accordance with CMM 2011-04, each CCM shall estimate, through data collectedfrom observer programs and other means, the number of releases of oceanic whitetipshark, including the status upon release (dead or alive), and report this information tothe WCPFC in Part 1 of their Annual Reports.

In 2014, our observers recorded 21 individuals of oceanic whitetip sharkin the WCPFCConvention Area. There were 12 discards (dead) and 9 releases (alive) respectively.

11.Silky shark information

In accordance with CMM 2013-08, CCMs shall estimate, through data collected from observer programs and other means, the number of releases of silky shark caught in the Convention Area, including the status upon release (dead or alive), and report this information to the WCPFC in Part 1 of their Annual Reports.

In 2014, our observers recorded 37 discards (dead) and 43 releases (alive) of silky shark in the WCPFCConvention Area.

12. North Albacore and South Albacore information

In accordance with CMM 2005-03, all CCMs shall report annually to the WCPFCCommission all catches of albacore north of the equator and all fishing effort north ofthe equator in fisheries directed at albacore. In 2014, the total catch of north Pacificalbacore by China fishing vessels was 709 MT in the north Convention area. The hooks targeted for albacore north of the equator were 25483662.

In accordance with CMM 2010-05, CCMs shall report annually to the Commissionthe catch levels of their fishing vessels that have taken South Pacific Albacore as abycatch as well as the number and catch levels of vessels actively fishing for SouthPacific albacore in the Convention area south of 20°S. The catch of South Pacificalbacore in the Convention Area south of 20°S in 2014by China fishing fleet was 6259MT. And the number of vessels was below 70, which is the historical level.

Table 1 Number of Chinese tuna fishing vessels operating in the WCPFC Convention area in 2009-2014

Year	LL	PS	Total
2009	219	12	231
2010	244	12	256
2011	275	12	287
2012	286	13	299
2013	379	14	393
2014	353	19	372

Note: LL vessels include chartered vessels

Table 2 Nominal catch of tuna and tuna-like species by the Chinese tuna fishery in the WCPFC Convention area in 2009-2014
（Unit of catch: MT in round weight）

Year	Gear	ALB	BET	YET	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	896	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
2013	LL	24162	10671	4638	0	1840	2102	1321	44734
	PS	0	170	8051	73607	0	0	2	81830
	Total	24162	10841	12689	73607	1840	2102	1323	126564
2014	LL	14643	9370	5949	0	2200	2113	810	35085
	PS	0	828	5551	53028	0	0	0	59407
	Total	14643	10197	11500	53028	2200	2113	810	94492

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 from 2010 to 2014 (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
2013	165	1926	11	453	25	0
2014	214	1826	73	206	19	0

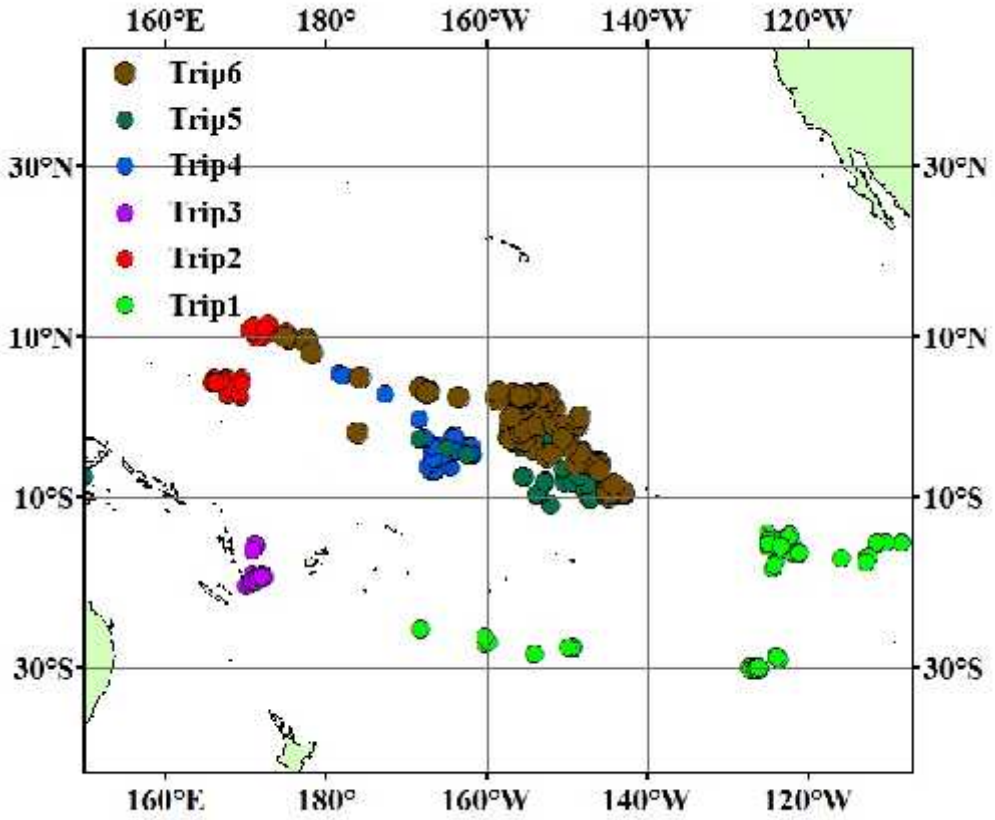

Figure 1 Position of Chinese scientific observer trip during 2014 in Pacific Ocean

Table 4 Trip information of Chinese scientific observer deployed in the Pacific Ocean during 2014

Trip	Fishing Areas	Period	SET	Total Hook	HPB	LL Type
T-1	S14°37′ -S30°12′, W108°21′-W168°15′	Apr.15,2014-Aug.19,2014	88	305722	23	I
T-2	N02°28′-N11°20′, w175°08′-W166°04′	Aug06,2014-Sep16,2014	32	73543	25	I
T-3	S15°38′-S20°45′, E169°59′-E172°19′	Aug.26,2014-Sep.20,2014	24	63600	24	I
T-4	N07°52′-S 06°52′,E178°22′-W161°55′	Aug.07,2014-Nov.11,2014	82	214686	16	D
T-5	N01°55′-S10°18′, W168°27′-W146°59′	Aug.02,2014-Jan.02,2015	133	358000	16	D
T-6	N10°06'－S09°41′, E175°23′−W144°46′	Aug.11, 2014-Jan.21,2015	118	319833	16	D

Note: 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 2014-2015

Species	Trip-1	Trip -2	Trip -3	Trip -4	Trip -5	Trip -6
Bigeye tuna(BET)	417	400	4	1401	1994	1635
Yellowfin tuna(YFT)	280	44	63	124	270	184
Albacore(ALB)	9541	26	201	40	196	89
Skipjack(SKJ)	314	3	132	13	22	21
Blue marlin(BUM)	2	30	0	68	167	56
Striped marlin(MLS)	35	0	1	15	28	24
Black marlin(BLM)	4	0	0	3	2	0
Swordfish(SWO)	78	1	0	213	321	214
Indo-Pacific sailfish(SFA)	0	1	0	2	12	7
Shortbill spearfish(SSP)	115	2	24	15	24	17
Oceanic whitetipshark(OCS)	1	0	0	3	7	10
Silky shark(FAL)	1	5	0	17	12	45
Blue shark(BSH)	149	14	0	160	79	83
Shortfinmako(SMA)	2	0	1	9	2	1
Longfin mako(LMA)	0	0	0	5	14	12
Bigeye thresher(BTH)	6	0	0	30	28	73
Crocodile shark(PSK)	0	0	0	13	70	72
Velvet dogfish(SSQ)	0	0	0	14	54	66
Scalloped hammerhead(SPL)	0	0	0	0	0	2
Smooth hammerhead（SPZ）	0	0	0	0	1	0
Longnoselancetfish(ALX)	1325	70	0	110	27	92
shortnoselancetfish(ALO)	0	0	0	0	0	0
Sickle pomfret(TST)	17	46	0	32	253	135
Bigscalepomfret(TAL)	24	0	0	0	0	0
Dagger pomfret(TCR)	11	0	0	23	42	40
Atlantic pomfret(POA)	6	0	0	0	0	0
Common dolphinfish(DOL)	69	5	87	6	15	11
Wahoo(WAH)	278	32	0	15	76	27
Escolar(LEC)	334	0	1	33	137	97
Snake mackerel(GES)	62	0	0	42	33	54
Oilfish(OIL)	3	0	0	1	4	4
Roudi escolar(PRP)	13	0	0	0	5	2
Black gemfish(NEN)	35	0	0	0	0	0
Opah(LAG)	187	0	3	7	15	0
Spinetailmobula(RMJ)	0	0	0	7	2	13
Pelagic stingray(PLS)	175	23	1	33	58	185
Ocean sunfish(MOX)	1	0	0	4	11	6
Slender sunfish(RZV)	0	0	0	2	8	0
Great barracuda(GBA)	1	0	0	0	0	2
Rainbow runner(RRU)	0	0	0	0	0	1

Driftfish(CGB)	0	0	0	0	0	2
Green turtle(TUG)	0	0	0	0	1	0
Leatherback turtle(DKK)	0	0	0	1	3	1

Table 6 Cetacean interactions in purse seine fishery for national fleet

Vessel Name	species	date	latitude	longitude	EEZ	Life Status(Dead/Alive)	Number of Individuals
ZHONG TAI NO.1	STRIPED DOLPHIN	2014/12/10	00°31.165′ N	167°27.625′ E	NAURU	3-Al,9-D	12
ZHONG TAI NO.2	MELON-HEADED WHALE	2014/12/18	01°24.168′ N	168°58.094′ E	KIRIBATI	Al	1
ZHONG TAI NO.1	FALSE KILLER WHALE	2014/12/27	05°30.883′ N	153°56.895′ E	PNG	Al	1

Table 7 Whale shark interactions in purse seine

flag	Gear	Vessel Name	species	date	latitude	longitude	EEZ	Life Status(Dead/Alive)	No. of Individuals
CN	PS	Zhong Tai No.3	WHALE SHARK	2014/01/29	05°50′ S	176°7′ W	KIRIBATI	Al	1
CN	PS	Tai Long 1	WHALE SHARK	2014/09/29	04°59′ N	164°23′ E	FSM	Al	1
CN	PS	Zhong Tai No.2	WHALE SHARK	2014/11/15	03°11.329′ S	170°42.810′ E	KIRIBATI	Al	1