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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

National report of China

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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 2024	**YES**

SUMMARY

There are two types of tuna fisheries in the WCPFC Convention Areas: longline and purse seine fisheries. In 2023, 327 longliners and 18 purse seiners flying the Chinese flag operated in the WCPFC Convention Areas. The total catch of tuna and tuna-like species by longline fishery and purse seine fishery was estimated to be 48,544 MT and 40,430 MT (including fishing in the EEZs of PIC), respectively. The catch of bigeye tuna, yellowfin tuna, and albacore by the longline fishery was 5,393 MT, 14,248 MT, and 26,552 MT, respectively. The catch of skipjack, yellowfin tuna, and bigeye tuna by the purse seine fishery was estimated at 38,491 MT, 1,807 MT, and 132 MT, respectively. From August 2022 to March 2024, thirty-seven (37) scientific observers were trained and dispatched to the Chinese longline vessels in the Pacific Ocean. Fisheries and biological data were collected during the observer trips. The logbook coverage for the longline fishery has been improved, which greatly improves the quality of the data China has collected.

1. Introduction

China has developed its oceanic tuna fisheries in the Pacific Ocean since 1988 and this region is one of the earliest fishing grounds for China's 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 a historical record of 112,260 MT in 2009 but decreased to 81,938 MT in 2010. It should be noted that the above-mentioned catch does not include the catch from overlapping areas (S4° - S40 °, W130° - W150 °). In 2023, the catch of the four species rebounded to 86,625 MT in the WCPFC Convention Areas.

2. **Annual fisheries information**

2.1 Fleet structure

2.1.1 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 increasing trend since 2000. Table 1A shows the number of Chinese LL vessels operating in the WCPFC Convention Area in 2019-2023. The number of LL vessels was 341 in 2021, 340 in 2022 and 327 in 2023.

There are three types of tuna longline vessels, namely frozen LL target albacore (FLL), deep-frozen LL target tropical tuna (DFLL), and ice fresh LL vessel target tropical tuna (IFLL). Table 1B shows the China LL vessel information in the convention area in 2023. The number of FLL, IFLL, and DFLL vessels was 269, 23, and 35 respectively in 2023.

2.1.2 PS

Chinese fleet entered the WCPFC tropical purse seine fishery in 2001, and it has become very important for the China tuna fishery. The number of PS vessels maintained a steady level of 12-14 during 2009-2013. Several old purse seine vessels have been replaced by newly built vessels in recent years. In 2023 there are 18 purse seiners flagged China fishing in the WCPFC Convention Area. Table 1 shows the number of Chinese PS vessels operating in the WCPFC Convention area in 2019-2023.

2.2 Annual Catch in the WCPFC Convention area

2.2.1 LL

The total catch by Chinese LL in the WCPFC Convention area from 2019 to 2023 is shown in Table 2. The total catch in the longline fishery was 51,636 MT in 2023. The catch mainly consists of ALB, BET, and YFT. In 2023, the percentages of ALB, BET, and YFT by LL were 51.4%, 10.5%, and 27.6%, respectively.

Table 3 shows the catch of non-target species caught by Chinese LL in the WCPFC Convention Area from 2019 to 2023, mainly including three billfish species (striped marlin, blue marlin, and black marlin) and three shark species (blue shark, shortfin mako, and Oceanic whitetip shark).

2.2.2 PS

The total catch by Chinese PS in the WCPFC Convention area from 2019 to 2023 was shown in Table 2. The catch was 53,716 MT in 2010, increased to 77,551 MT in 2011, then sharply decreased to 49,148 MT in 2012. In 2023, the main catch species by the PS fishery were skipjack and yellowfin tuna. The catch of bigeye tuna (mainly juveniles) was estimated to be 132 MT. The catch of yellowfin tuna was estimated to be 1807 MT. The catch of skipjack was estimated to be 38,491 MT(Table 2).

2.3 Fishing Patterns

2.3.1 LL

The Chinese longline fleet can be divided into two categories: temperate longline targeting albacore tuna and operating mainly in the subtropical and temperate area of the southern hemisphere, and tropical longline (between 23°N - 30°S) targeting bigeye and yellowfin tuna. Tropical longline, accounting for 94% of total hooks in Chinese longline fishery, operated in the Exclusive Economic Zone (EEZ) of Pacific Island Countries and high seas.

2.3.2 PS

The Chinese PS vessels mainly operate in the tropical waters close to the equator area targeting skipjack. Since most of the fishing grounds are located in the EEZs of PICs, these vessels acquire fishing permits through access agreements with PICs, including Papua New Guinea, Marshall Islands, Micronesia, Nauru, Solomon Islands, and Tuvalu.

2.4. 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's sashimi market. Other species caught as by-catch are sold to the local market of operating ports. Albacore catch was landed at Fiji for the cannery. Catch in the PS fishery was mostly transshipped to Thailand for cannery as well.

3. Research and Statistics

3.1 Observer program

To have a high standard of scientific observer program, scientific observers are rigorously trained for collecting the fishery data of tunas and other pelagic fish stocks, including size-frequency data of all pelagic fishes as well as sea turtle information. Six (6) observers has been sent to the Chinese longline vessels on the high seas since 2011, and this number has incresead year by year. In 2023, thirty-seven (37) scientific observers were dispatched to 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 observer coverage information.

3.2 Data collection system

The Ministry of Agriculture and Rural Affairs (MARA) of China, is leading and supervising the data collection of Chinese tuna fisheries. National-wide meetings on tuna data quality have been organized at least once a year in recent years. Participants included 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 the tuna fisheries of China.

Since 2008, each LL vessel is required by the Bureau of Fisheries (BOF) to use a standard logbook which is modified frequently according to the latest applicable CMMs, and return it to SHOU before the end of March following year. The data contained in the logbook are evaluated and audited to ensure good quality for the data collected.

Another important way to collect size data is port sampling. Port-sampling program conducted in domestic ports aims at collecting length data of tunas and other species. Measurement is done when unloading from fishing vessels or in the processing plants.

3.3 Research activities

The scientific papers published in the scientific journal from 2023 to 2024 were as follows:

- Wang X, Liu W J, Zhang J. Effect of Oceanic Niño index on interannual CPUE of yellowfin tuna (*Thunnus albacares*) in Western and Central Pacific Ocean based on ARIMA model. South China Fisheries Science, 2023,19(04):10-20 (in Chinese).
- Zhou C, Yang X, Yang B G, et al. Nutritional ecological niche of Pacific yellowfin tuna based on fatty acid analysis. Journal of Fishery Sciences of China, 2023,30(10):1202-1213(in Chinese).
- Wang Z H, Yang X M, Tian S Q. Spatial pattern characteristics of albacore tuna resources at different spatial scales in South Pacific. South China Fisheries Science, 2023,19(02):31-41(in Chinese).
- Zhang J, Liu W J, Wang Y X, et al. Reproductive Biology of Bigeye Tuna

(*Thunnus obesus*) in the Tropical Western and Central Pacific Ocean. Journal of Fisheries of China, 2023:1-12(in Chinese).

- Xu Z Q, WANG J T, Lei L, et al. Spatial and Temporal Distribution of the Fishing Ground Gravity of *Thunnus alalunga* in Western and Central Pacific. FISHERIES SCIENCE, 2023,42(04):604-612(in Chinese).
- Shi X F, Wu X C, Wang Y X, et al. Feeding ecology of *Thunnus obesus* in the tropical Western and Central Pacific Ocean. Marine Fisheries, 2023, 45(01): 49-59(in Chinese).
- Xu Z, Wang J, Zhou C, et al. Identification of Fishing State of Purse Seine Fishing Vessels Based on Multi-Indices. Journal of Ocean University of China, 2023, 22(6): 1605-1612.
- Xu R, Yang X, Tian S. Use of Space-Time Cube Model and Spatiotemporal Hot Spot Analyses in Fisheries—A Case Study of Tuna Purse Seine. Fishes, 2023, 8(10): 525.
- Yang S, Yu L, Wang F, et al. The environmental niche of the tuna purse seine fleet in the Western and Central Pacific Ocean based on different fisheries data. Fishes, 2023, 8(2): 78.

3.4 Research cruise

According to WCPFC Convention principles "on the need to collect and share data, including information from national research programs"(Article 5) and "The function of promoting the conduct of relevant scientific research and disseminating the results thereof is one of the functions of the Commission" (Article 10), China as a member country has conducted a five-year scientific survey program using its fishery research vessel "Song Hang" with longline as main gear in the WCPFC convention area. The survey will collect fundamental data and conduct experiments to improve the commission's scientific research to support better management advice. This cruise was conducted with the aims of 1) Collecting fishery-independent data including catch and effort and biological data for common species caught by longline; 2) Sampling for the study of the stock structure of target and bycatch species; 3)Assessing the influence of different types of longline hooks and baits on catch rate and survival rate of bycatch species; 4) Investigating the mechanisms of moving and aggregating of main species by incorporating environmental factors, and 5) Conducting tagging and releasing experiments for sharks and other bycatch species when incidentally caught. The survey covered the area in the high sea from 129°58′ E to 138°03′ E and 10°58′ N to 16°01′ N between late August 28th and September 17th in 2023. A total of 20 sets (8242 hooks) were released, and a total of 13 species were recorded in this survey. For more details, our scientists will submit the working papers to the scientific committee and share our new findings and understanding with WCPFC and other CCMs.

4 Implementation of Conservation and Management Measures

4.1 CMM 2009-03

In accordance with CMM 2009-03, the number of fishing vessels for swordfish in the

Convention Area south of 20°S was limited to the number in any year during 2000-2005, and the catch of swordfish caught in the Convention Area south of 20°S is limited to the amount caught in any year during the period 2000-2006.

China has no vessels targeting swordfish. The total catch on the swordfish in south of 20°S in 2023 in the Convention Area was 27.86 MT.

4.2 Observer coverage

In accordance with WCPFC 11 decision – para 484(b), CCMs are to compile and include in Annual Report Part 1 to be submitted from 2015 onwards, observer coverage for their longline fleet activity in the previous calendar year. A total of 37 trips were sent observers in 2023, and 10.30% of fished hooks were observed in China longline fishery (Table 4 and 5).

4.3 CMM 2009-06

In accordance with CMM 2009-06, CCMs shall report on all transshipment activities (including transshipment activities that occur in ports or EEZs) in Part 1 of its Annual Report. The summary information of transshipment activities of our fishing fleets in 2023 was shown in Table 6.

4.4 CMM 2011-03

In accordance with CMM 2011-03, CCMs shall advise in their Part 1 Annual Report of any instances in which cetaceans have been encircled by the purse seine nets of their flagged vessels. Incidents of cetaceans encircled by purse seine nets during the operation of Chinese flagged purse seine vessels in 2023 were recorded in Table 7.

4.5 CMM 2018-03

In accordance with CMM 2018-03, CCMs shall annually provide to the Commission, in part 1 of their annual reports, all available information on interactions with seabirds reported or collected by observers, including mitigation used, observed and reported species-specific seabird bycatch rates, and numbers, to enable the Scientific Committee to estimate seabird mortality in all fisheries to which the WCPFC Convention applies.

The fisheries authority of China required fishing vessels to take appropriate measures to mitigate incidental catch of seabirds, although China fishing vessels almost operate in the areas between 23°N and 30°S. In 2023, China didn’t have fishing vessel operated in

China Overseas Fisheries Association organized a training meeting on the bycatch mitigation of seabirds and sharks online. The mitigation method was emphasized by experts from SHOU for the industry people, managers, and stakeholders. Five species of seabirds was been found by our observers on board, and the information regarding interactions with seabirds reported by observers was shown in Tables 8-10.

4.6 CMM 2006-04

In accordance with CMM 2006-04, CCMs shall report annually to the Commission the catch levels of their fishing vessels that have taken striped marlin as bycatch as well as the number and catch levels of vessels fishing for striped marlin in the Convention Area south of 15°S.

The bycatch of striped marlin in the Convention area south of 15°S in 2023 is 36.14 MT. None of China's fishing vessels targets striped marlin.

4.7 CMM 2015-02

In accordance with CMM 2015-02, CCMs shall report annually to the Commission the annual catch levels taken by each of their fishing vessels that have taken South Pacific albacore, as well as the number of vessels actively fishing for South Pacific albacore, in the Convention area south of 20°S.

The catch of South Pacific albacore in the convention area south of 20°S in 2023 by the China fishery fleet was 3734.35 MT. There were 67 vessels actively fishing on the high sea in the Convention area south of 20°S.

4.8 CMM 2019-03

In accordance with CMM 2019-03, all CCMs shall report annually to the WCPFC Commission all catches of albacore north of the equator and all fishing efforts north of the equator in fisheries directed at albacore.

In 2023, the total catch of north Pacific albacore by the Chinese fishing fleet was 811.9 MT in the north Convention area, and 10 vessels (524 vessel days) targeted at albacore in the North Pacific Ocean. Fishing effort in fishing days for North Pacific albacore was shown in Table 11.

4.9 CMM 2023-03

In accordance with CMM 2023-03, all CCMs taking more than 200 metric tonss of North Pacific swordfish shall report annually to the WCPFC Commission all catches of North Pacific swordfish in the high seas and EEZs within the Convention Area north of 20° N and all fishing effort in those fisheries.

In 2023, China has none fishing vessel targeting North Pacific swordfish, and none swordfish taken by Chinese fleets in the Convention Area north of 20° N.

Table 1A Number of Chinese tuna fishing vessels operating in the WCPFC Convention area in 2019-2023

Year	LL	PS	Total
2019	364	15	379
2020	352	14	368
2021	341	16	357
2022	340	16	356
2023	327	18	345

Note: Both LL vessels and PS vessels include chartered vessels

Table 1B China LL vessels operation in Convention Area in 2023

Metric Tons	Frozen LL target Albacore	Deep Frozen LL target tropical tuna	Ice Fresh LL vessel target Tropical Tuna
0-50	0	0	0
51-200	37	0	23
200-500	229	8	0
500+	3	27	0
Total	269	35	23

Table 2 Nominal catch of tuna and tuna-like species by the Chinese tuna fishery in the WCPFC Convention area in 2019-2023
（Unit of catch: MT in round weight）

Year	Gear	ALB	BET	YFT	SKJ	SWO	BIL	OTH	Total
2019	LL	22679	8644	10010	0	1571	1576	811	45291
	PS	0	28	297	6193	0	0	0	6518
	Total	22679	8672	10307	6193	1571	1576	811	51809
2020	LL	20656	7403	10115	0	1134	1314	734	41356
	PS	0	76	387	6022	0	0	1	6485
	Total	20656	7479	10502	6022	1134	1314	735	47841
2021	LL	16076	5493	9530	0	643	1171	832	33745
	PS	0	103	6037	30016	0	0	0	36156
	Total	16076	5596	15567	30016	643	1171	832	69901
2022	LL	26437	5667	9560	0	498	1015	1651	44828
	PS	0	203	1950	42292	0	0	0	44445
	Total	26437	5870	11510	42292	498	1015	1651	89273
2023	LL	26552	5395	14248	0	547	1802	3091	51635
	PS	0	132	1807	38491	0	0	0	40430
	Total	26552	5527	16055	38491	547	1802	3091	92065

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 2019 to 2023
(Unit of catch: MT or individuals)

Species	Billfish (MT)			Sharks(individuals)		
	Striped marlin	Blue marlin	Black marlin	Blue Shark	Shortfin Mako	Oceanic Whitetip
2019	190	1375	11	/	/	/
2020	150	1139	24	/	/	/
2021	114	843	74	11173	1046	920
2022	76	894	45	10145	593	557
2023	118	1297	96	10397	1672	688

Table 4 Trip information of Chinese scientific observer deployed in the Pacific Ocean during 2023

Trip	Target	DEPARTURE	RETURN	Fishing days	Total hooks	HPB
1	ALB	2023/12/30	2024/3/16	77	251250	25
2	BET and YFT	2023/2/18	2024/3/5	381	1181947	23
3	BET and YFT	2023/9/24	2024/2/29	158	534106	23
4	ALB	2023/7/31	2024/2/17	201	633455	24
5	ALB	2024/2/3	2024/3/3	29	63585	27
6	ALB	2023/3/1	2023/8/24	176	565500	29
7	ALB	2023/6/5	2023/12/23	201	578574	25
8	ALB	2023/3/3	2023/8/16	166	513856	26
9	ALB	2023/8/3	2023/9/5	33	91471	23
10	ALB	2023/10/4	2024/3/26	174	484948	26
11	BET and YFT	2023/2/18	2023/7/12	144	446974	22
12	ALB	2023/5/20	2023/12/29	223	611911	30
13	ALB	2023/1/18	2023/6/15	148	311078	25
14	ALB	2023/6/19	2023/8/29	71	238735	25
15	ALB	2023/6/29	2024/1/30	215	689680	25
16	ALB	2023/4/5	2023/6/9	65	222326	26
17	ALB	2023/6/26	2023/7/19	23	84510	27
18	ALB	2023/9/1	2024/1/23	144	527742	27
19	ALB	2023/7/14	2024/2/1	202	581256	26
20	ALB	2023/12/4	2024/3/21	108	406069	27
21	ALB	2023/12/22	2024/1/22	31	120730	26
22	ALB	2023/8/12	2024/2/16	188	548694	27
23	ALB	2023/3/4	2023/6/1	89	254231	27
24	ALB	2023/2/12	2023/6/24	132	383200	27
25	BET and YFT	2023/4/4	2024/1/31	302	1069300	22

26	BET and YFT	2022/10/21	2024/1/31	467	1730846	26
27	BET and YFT	2023/3/30	2024/1/10	286	938600	23
28	BET and YFT	2023/4/5	2024/1/29	299	666050	22
29	ALB	2023/3/5	2023/11/28	268	608796	27
30	BET and YFT	2023/3/4	2023/11/27	268	618868	26
31	ALB	2022/8/2	2023/8/31	394	649968	24
32	ALB	2023/3/5	2023/10/8	217	722908	26
33	BET and YFT	2022/11/4	2023/7/29	267	681955	26
34	BET and YFT	2023/3/3	2023/8/31	181	538600	26
35	BET and YFT	2023/3/7	2023/6/27	112	363244	27
36	BET and YFT	2022/8/9	2023/8/23	379	863179	25
37	ALB	2022/11/4	2023/7/27	265	660894	26

Note: HPB-Hook Per Basket. D- deep frozen tuna longline; F-frozen tuna longline

Table 5 Summary of longline observer coverage (by No. Of hooks) for 2023

CCM fleet	Fishery	Days fished			No. Of hooks			Days at sea			No. Of trips		
		Total est.	Obs.	%	Total est.	Obs.	%	Total est.	Obs.	%	Total est.	Obs.	%
China	Distant-water				87071665	8967442	10.30						

Table 6 The summary of transshipment operations by fishery of 2023: (1) the total quantities, by weight (M.T.); (2) the number of transshipments

(1)

Offloaded and Received	Transhipment in port, transhipped at sea in areas of national jurisdiction, and transshiped beyond areas of national Jurisdiction	Transhiped inside the Convention Area and Transhipped outside the Convention Area	Caught Inside the convention Area and Caught outside the Convention Area	Product Form	Fishing Gear	Total	BET	YFT	ALB	SKJ	Striped Marlin	SWO	BUM	Shark	BLM	Others
Offloaded	Beyond EEZs	inside	inside	Frozen	longliner	10686	902	5085	3875	5	14	71	127	0	2	606
Offloaded	Beyond EEZs	inside	outside	Frozen	longliner	1306	139	40	886	0	6	111	3	0	8	113
Offloaded	Beyond EEZs	inside	both	Frozen	longliner	1149	157	37	841	0	3	39	3	0	0	68
Offloaded	Beyond EEZs	outside	inside	Frozen	longliner	1484	345	330	684	0	8	6	2	0	0	109
Offloaded	Beyond EEZs	outside	outside	Frozen	longliner	8037	456	128	6155	0	116	232	14	0	9	928
Offloaded	Beyond EEZs	outside	both	Frozen	longliner	746	67	34	516	0	3	54	2	0	1	68
Received	Beyond EEZs	inside	inside	Frozen	longliner	3492	236	837	2171	0	12	24	5	0	2	206
Received	Beyond EEZs	inside	outside	Frozen	longliner	1201	74	15	937	0	6	45	0	0	5	120
Received	Beyond EEZs	inside	both	Frozen	longliner	915	76	22	770	0	3	6	0	0	0	38
Received	Beyond EEZs	outside	inside	Frozen	longliner	1469	341	336	673	0	8	6	2	0	0	104
Received	Beyond EEZs	outside	outside	Frozen	longliner	7840	399	119	6165	0	116	122	14	0	0	904
Received	Beyond EEZs	outside	both	Frozen	longliner	639	32	23	515	0	3	8	2	0	0	56

*Catches from both inside and outside of the convention area involved in one transshipment event will be separated into two rows in this table.

(2)

Offloaded and Received	Transhipment in port, transhipped at sea in areas of national jurisdiction, and transshiped beyond areas of national Jurisdiction	Transhiped inside the Convention Area and Transhipped outside the Convention Area	Product Form	Fishing Gear	Number of Transshipments
Offloaded	beyond EEZs	inside	Frozen	longliner	179
Offloaded	beyond EEZs	outside	Frozen	longliner	105
Received	beyond EEZs	inside	Frozen	longliner	76
Received	beyond EEZs	outside	Frozen	longliner	99

Table 7 Incidents of cetaceans encircled by purse seine nets during the operation of Chinese flagged purse seine vessels in 2023

Species	Date	Latitude	Longitude	EEZ	Life Status(Dead/Alive)	Number of Individuals
Dolphins	2023/9/17	03°33'S	176°4'W	In the EEZ	Al	2
False killer whale (FAW)	2023/7/28	00°51'S	172°53'E	In the EEZ	Al	1
False killer whale (FAW)	2023/6/22	02°49′N	175°20′E	In the EEZ	Al	3
False killer whale (FAW)	2023/7/6	00°10′N	176°24′E	In the EEZ	Al	15
False killer whale (FAW)	2023/7/10	02°42′S	178°53′E	In the EEZ	Al	1
False killer whale (FAW)	2023/7/16	03°22′S	179°25′E	In the EEZ	Al	1

Table 8 Effort, observed and estimated seabird captures by fishing year for China

a) South of 30°S

Year	Fishing effort (1000 hooks)				Observed seabird captures	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate
2019	22	2312	0	0	0	0
2020	26	3121	294	9.42	1	0.003
2021	23	6511	584	8.97	0	0
2022	52	2286	899	39.33	0	0
2023	47	572	74	12.94	0	0

b) North of 23°N

Year	Fishing effort (1000 hooks)				Observed seabird captures	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate
2019	9	144	12	8.33	0	0
2020	10	745	0	0	0	0
2021	17	959	0	0	0	0
2022	9	183	0	0	0	0
2023	0	0	0	0	0	0

c) 23°N - 30°S

Year	Fishing effort (1000 hooks)				Observed seabird captures	
	Number of vessels	Number of hooks	Observed hooks	% hooks observed	Number	Rate
2019	339	159311	10040	6.3	6	0.0006
2020	349	152897	10792	7.06	5	0.00046
2021	308	140551	12911	9.19	0	0
2022	263	122494	7850	6.41	0	0
2023	335	86500	8893	10.28	23	0.00259

Table 9 Proportion of mitigation types[1] used by the fleet in 2023

	Combination of Mitigation Measures	Proportion of observed effort using mitigation measures					
		South of 30°S	25°S-30°S	25°S to 23°N	North of 23°N		
	No mitigation measures	0%	0%	54%	0%		
Options required south of 25°S	TL + NS						
	TL + WB	100%	100%	9.8%			
	NS + WB						
	TL + WB + NS						
	HS						
Other options 25°S-30°S	WB			17.6%			
	TL			18.6%			
Other options north of 23^{0}N	SS/BC/WB/DSLS						
	SS/BC/WB/(MOD or BDB)						
Provide any other combination of mitigation measures here							
	Totals (must equal 100%)	100%	100%	100%	100%		

[1]TL = tori line, NS = night setting, WB = weighted branch lines, SS = side setting, BC= bird curtain, BDB = blue dyed bait, DSLS = deep setting line shooter, MOD = management of offal discharge, HS = hook-shielding device.

Table 10 The number of observed seabird bycatch of longline fishery by species and by area in 2023

Year	Species	South of 30°	25°S—30°S	North of 23°N	23°N—25°S	Total
2023	*Ardenna tenuirostris*	0	8	0	0	8
2023	*Diomedea exulans*	0	11	0	0	11
2023	*Phoebastria immutabilis*	0	2	0	0	2
2023	*Thalassarche melanophrys*	0	1	0	0	1
2023	*Thalassarche bulleri*	0	1	0	0	1
Total		**0**	**23**	**0**	**0**	**23**

Table 11 Average annual fishing effort for 2002-2004 and annual fishing effort for longline from 2019 to 2023 directed at North Pacific albacore.

CCM	Area	Fishery	2002-04 Average		2019		2020		2021		2022		2023	
			No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days	No. of vessels	Vessel days
China	N Pacific	LL	10	1250	10	1249	10	1075	10	295	10	429	10	524

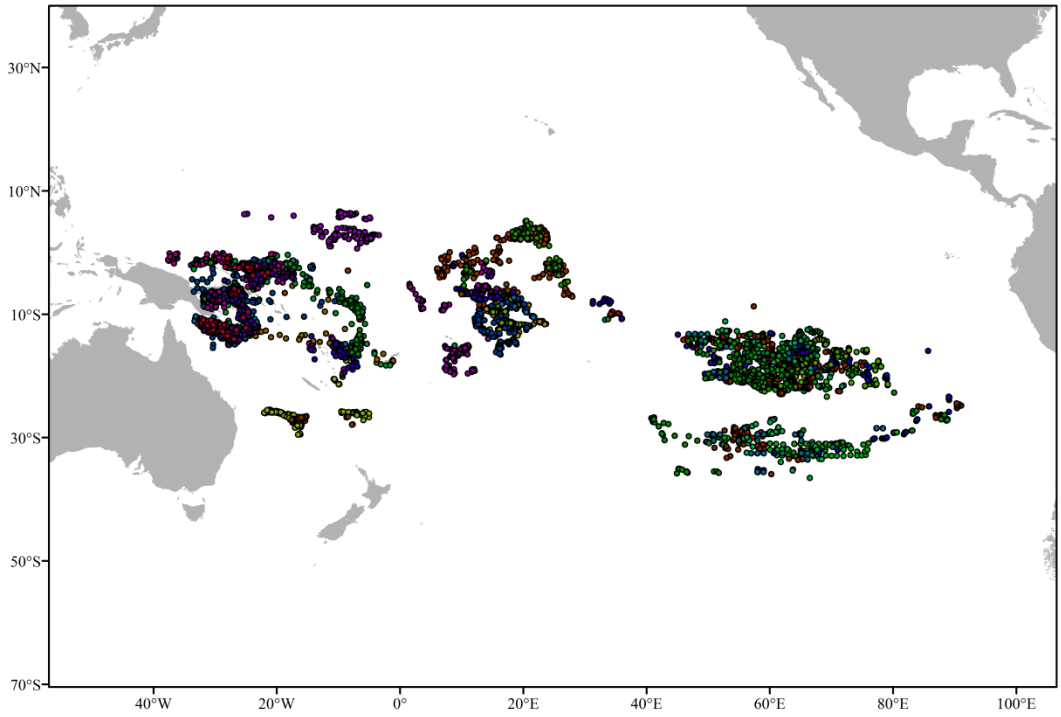

Figure 1 Position of Chinese scientific observer trip during 2023 in the Pacific