SCIENTIFIC COMMITTEE
EIGHTEENTH REGULAR SESSION

ELECTRONIC MEETING
10-18 August 2022

ANNUAL REPORT TO THE COMMISSION
PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

WCPFC-SC18-AR/CCM-03 (Rev.01)

CHINA

• ANNUAL REPORT TO THE COMMISSION
PART 1: INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

National report of China

Zhe Geng, Jiangfeng Zhu, Feng Wu, Xiaojie Dai, Yuchen Huang, Shengnan Qu

Shanghai Ocean University, 999 Hucheng Huan Road, Shanghai 201306, 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 2022	**YES**

SUMMARY

There are two types of tuna fisheries in the WCPFC Convention Areas: longline and purse seine fisheries. In 2021, 335 longliners and 16 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 33,745 MT and 36,156 MT (including fishing in the EEZs of PIC), respectively. The catch of bigeye tuna, yellowfin tuna, and albacore by the longline fishery was 5,493 MT, 9,530 MT, and 16,076 MT, respectively. The catch of skipjack, yellowfin tuna, and bigeye tuna by the purse seine fishery was estimated at 30,016 MT, 6,037 MT, and 103 MT, respectively. From July 2020 to March 2022, twenty-five (25) 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 2021, the catch of the four species rebounded to 67,255 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 2017-2021. The number of LL vessels was 362 in 2017, 364 in 2018, 364 in 2019, 352 in 2020, and 341 in 2021.

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 2021. The number of FLL, IFLL, and DFLL vessels was 263, 27, and 51 respectively in 2021.

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 2021 there are 16 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 2017-2021.

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 2017 to 2021 is shown in Table 2. The total catch of tuna and tuna-like species in the longline fishery was 33,745 MT in 2021. The catch mainly consists of ALB, BET, and YFT. In 2021, the percentages of ALB, BET, and YFT by LL were 47.6%, 16.3%, and 28.2%,

respectively.

Table 3 shows the catch of non-target species caught by Chinese LL in the WCPFC Convention Area from 2017 to 2021, 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 2017 to 2021 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 2021, the main catch species by the PS fishery were skipjack and yellowfin tuna. The catch of bigeye tuna (mainly juveniles) was estimated to be 103 MT. The catch of yellowfin tuna was estimated to be 6037 MT. The catch of skipjack was estimated to be 30,016 MT. Before 2020, the chartering CCMs are responsible for reporting the catches from chartered vessels, but in 2021, the catch of the Chinese PS fleet includes all of those caught from chartered and unchartered vessels. Thus, the total catch of Chinese PS fleets in 2021 increased compared with 2020 (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 were sent to the Chinese longline vessels on the high seas in 2011, and then eight (8) observers in 2012, nine (9) observers in 2013, six (6) in 2014, eight (8) in 2015, fifteen (15) in 2016, twenty-seven (27) in 2017, twenty-two (22) in 2018, thirty-nine(39) in 2019 and twenty-five (25) in 2020. In 2021, twenty-five (25) 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 2020 to 2021 were as follows:

- Sun K, Dai X J, Gao C X, et al, The analysis of catch rate and mortality on the bycatch of silky shark(*Carcharhinus falciformis*)in different operating modes of purse seine in the Western and Central Pacific Ocean, Marine Science Bulletin, 2021,4: 434-440(in Chinese)

- Sun K, Dai X J, Wu F, et al, A study on catch rate,sex ratio and fork length of blue shark(Prionace glauca)in longline fishing in Western and Central Pacific Ocean, South China Fisheries Science, 2021,2: 28-35(in Chinese)
- Wang J, Gao C, Wu F, et al. The discards and bycatch of Chinese tuna longline fleets in the Pacific Ocean from 2010 to 2018. Biological Conservation. 2021 Mar 1;255:109011.
- Wang J, Gao X, Chen J, et al. An evaluation of observer monitoring program designs for Chinese tuna longline fisheries in the Pacific Ocean using computer simulations. Environmental Science and Pollution Research. 2021 Mar;28(10):12628-39.
- Sun W, Wang F, Du X, et al. Comparative analysis of regional fisheries management organizations on establishing IUU fishing vessel list conservation and management measures, Journal of Shanghai Ocean University, 2021, 2: 370-380.(in Chinese)
- Han D, Ma Q, Richard K, et al. Length-weight relationships of 10 fish species from the coastal waters of the East China Sea. Journal of Applied Ichthyology. 2021 Apr;37(2):347-9.
- Thierry NN, Cheng Z, Achille NP, et al. Catch per unit effort, condition factor and length-weight relationship of albacore tuna (*Thunnus alalunga*), yellowfin tuna (*Thunnus albacares*) and bigeye tuna (*Thunnus obesus*) in the longline tuna fishery in the eastern Pacific Ocean. Indian Journal of Fisheries. 2021 Jan 1;68(2):23-32.
- Song L, Xu H, Sui H, et al. A review on the mitigation measures of the incidental sea turtles catch in tuna pelagic longline fisheries, Fishery Modernization, 2021, 3: 18-27(in Chinese).

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 130°7′°E to 135°43°E and 11°7′ N to 16°60′N between late August 19th and September 21st in 2021. A total of 22 sets (8588 hooks) were released, and a total of 17 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 2021 in the Convention Area was 19.92 MT, which was reported to the Commission by April 30, 2021.

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 25 trips were sent observers in 2021, and 9.85% of fishing days 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 2020 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.

In 2021, 2 events about 3 cetaceans encircled by the purse seine nets were reported to our official authority and 2 vessels involved were XIANG FA 8 and ZHONG TAI 6. The detailed event record regarding this issue mentioned above can be found in the attachment 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.

Affected by the COVID-19 pandemic, 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. None of the 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 2021 is 19 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 2021 by the China fishery fleet was 2152.1 MT. There were 46 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 2021, the total catch of north Pacific albacore by the Chinese fishing fleet was 579.3 MT in the north Convention area, and 10 vessels (295 vessel days) targeted at albacore in the North Pacific Ocean. Fishing effort in fishing days for North Pacific albacore was shown in Table 11.

Table 1A Number of Chinese tuna fishing vessels operating in the WCPFC Convention area in 2017-2021

Year	LL	PS	Total
2017	362	16	378
2018	364	15	379
2019	364	15	379
2020	352	14	368
2021	341	16	357

Note: Both LL vessels and PS vessels include chartered vessels

Table 1B China LL vessels operation in Convention Area in 2021

Metric Tons	Frozen LL target Albacore	Deep Frozen LL target tropical tuna	Ice Fresh LL vessel target Tropical Tuna
0-50	0	0	0
50-200	53	0	27
200-500	207	8	0
500	3	43	0
Total	263	51	27

Table 2 Nominal catch of tuna and tuna-like species by the Chinese tuna fishery in the WCPFC Convention area in 2017-2021
（Unit of catch: MT in round weight）

Year	Gear	ALB	BET	YFT	SKJ	SWO	BIL	OTH	Total
2017	LL	29252	7023	8526	0	1656	1714	614	48785
	PS	0	326	4254	10895	0	0	0	15475
	Total	29252	7349	12780	10895	1656	1714	614	64260
2018	LL	21295	8695	9031	0	2567	2024	682	44294
	PS	0	26	172	1775	0	0	0	1973
	Total	21295	8721	9203	1775	2567	2024	682	46267
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

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 2017 to 2021
(Unit of catch: MT or individuals)

Species	Billfish (MT)			Sharks(individuals)		
	Striped marlin	Blue marlin	Black marlin	Blue shark	Shortfin mako	Oceanic Whitetip
2017	124	1571	19	/	/	/
2018	277	1724	23	/	/	/
2019	190	1375	11	/	/	/
2020	150	1139	24	/	/	/
2021	114	843	74	11173	1046	920

Table 4 Trip information of Chinese scientific observer deployed in the Pacific Ocean during 2021

Trip	Target	DEPARTURE	RETURN	Fishing days	Total hooks	HPB
1	ALB	2021/4/9	2022/2/9	170	702260	27
2	BET and YFT	2020/5/17	2021/3/5	159	657360	24
3	BET and YFT	2020/6/5	2021/5/17	226	837431	24
4	ALB	2020/5/22	2021/5/13	222	771225	23
5	BET and YFT	2021/3/22	2021/10/28	112	339963	21
6	BET and YFT	2020/4/17	2022/1/14	512	1282220	16
7	ALB	2021/4/21	2022/3/10	201	721656	23
8	ALB	2021/5/5	2021/9/11	79	300200	27
9	ALB	2020/11/15	2021/5/3	111	421642	27
10	ALB	2021/6/9	2021/12/10	22	105600	24
11	BET and YFT	2020/4/30	2020/10/3	96	328536	24
12	ALB	2020/10/5	2021/4/23	141	531840	24
13	ALB	2020/5/9	2021/4/22	144	617787	27
14	ALB	2020/6/3	2020/7/28	43	181216	28
15	BET and YFT	2021/4/23	2021/9/22	103	376992	24
16	ALB	2021/6/1	2022/1/25	130	513600	25
17	ALB	2021/8/9	2022/3/11	101	398355	25
18	ALB	2020/4/29	2020/10/30	101	352205	26
19	ALB	2021/6/10	2021/12/2	60	168560	28
20	ALB	2020/6/15	2022/1/6	418	1624758	24
21	ALB	2020/11/3	2021/4/29	129	472164	23
22	ALB	2020/5/11	2020/10/10	80	291210	23
23	ALB	2020/6/15	2021/3/2	102	445536	24
24	BET and YFT	2021/2/4	2021/3/27	39	139908	26
25	Tuna	2020/3/24	2021/2/4	223	913342	26

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

Table 5 Summary of longline observer coverage (by days fished) for 2021

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	37820	3724	9.85									

Table 6 The summary of transshipment operations by fishery of 2020: (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 EEZ	Inside	Inside	Frozen	Longline	7550	827	2498	3343	0	51	169	46	13	9	594
Offloaded	Beyond EEZ	Inside	Outside	Frozen	Longline	2040	254	60	1259	0	13	140	4	0	4	305
Offloaded	Beyond EEZ	Outside	Inside	Frozen	Longline	1788	309	339	966	1	9	59	8	0	2	97
Offloaded	Beyond EEZ	Outside	Outside	Frozen	Longline	5146	293	191	3790	8	62	83	9	0	4	706
Offloaded	In port	Inside	Inside	Frozen	Purse seiner	30453	69	4356	0	26028	0	0	0	0	0	0
Received	Beyond EEZ	Inside	Inside	Frozen	Longline	2774	300	795	1349	0	18	18	0	0	0	295
Received	Beyond EEZ	Inside	Outside	Frozen	Longline	1160	31	26	853	0	2	37	0	0	0	210
Received	Beyond EEZ	Outside	Inside	Frozen	Longline	922	141	118	563	0	2	26	0	0	0	71
Received	Beyond EEZ	Outside	Outside	Frozen	Longline	3723	129	149	2747	0	49	58	0	0	0	590
Received	In port	Inside	Inside	Frozen	Purse seiner	30453	69	4356	0	26028	0	0	0	0	0	0

*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 EEZ	Inside	Frozen	Longline	134
Offloaded	Beyond EEZ	Outside	Frozen	Lognline	96
Offloaded	In port	Inside	Frozen	Purse seiner	45
Received	Beyond EEZ	Inside	Frozen	Longline	51
Received	Beyond EEZ	Outside	Frozen	Lognline	55
Received	In port	Inside	Frozen	Purse seiner	45

Table 7 Cetacean interactions in purse seine fishery for national fleet

Flag	Gear	Vessel Name	Species	Date	Latitude	Longitude	EEZ	Life Status(Dead/Alive)	Number of Individuals
CN	PS	XIANG FA 8	False kill whale(FAW)	2021/6/23	01°20′S	176°09'E	KI	AL	1
CN	PS	ZHONG TAI 6	Short-fined pilot whale(SHW)	2021/5/17	03°00'S	173°52'E	KI	AL	2

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
2017	35	5484	537	9.79	4	0.007
2018	19	5025	175	3.48	0	0
2019	22	2312	0	0	0	0
2020	26	3121	294	9.42	1	0.003
2021	23	6511	584	8.97	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
2017	7	1915	522	27.2	0	0
2018	10	779	118	15.15	6	0.0508
2019	9	144	12	8.33	0	0
2020	10	745	0	0	0	0
2021	17	959	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
2017	320	129971	7641	5.8	0	0
2018	335	140011	6430	4.59	1	0.00015
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

Table 9 Proportion of mitigation types[1] used by the fleet in 2021

	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%	0%	0%
Options required south of 30°S	TL + WB	100%			
Options required 25°S-30°S	TL + WB		100%		
Options required 25°S to 23°N	TL + WB			100%	
Options required north of 23°N	TL + WB				100%
	Totals	100%	100%	100%	100%

[1] TL = tori line, WB = weighted branch lines.

Table 10 The number of observed seabird bycatch of longline fishery by species and by area in 2021

Year	Species	South of 30°	North of 23°N	23°N-30°S
2020	unidentified	0	0	0

Table 11 Average annual fishing effort for 2002-2004 and annual fishing effort for longline from 2017 to 2021 directed at North Pacific albacore.

CCM	Area	Fishery	2002-04 Average		2017		2018		2019		2020		2021	
			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	850	10	838	10	1249	10	1075	10	295

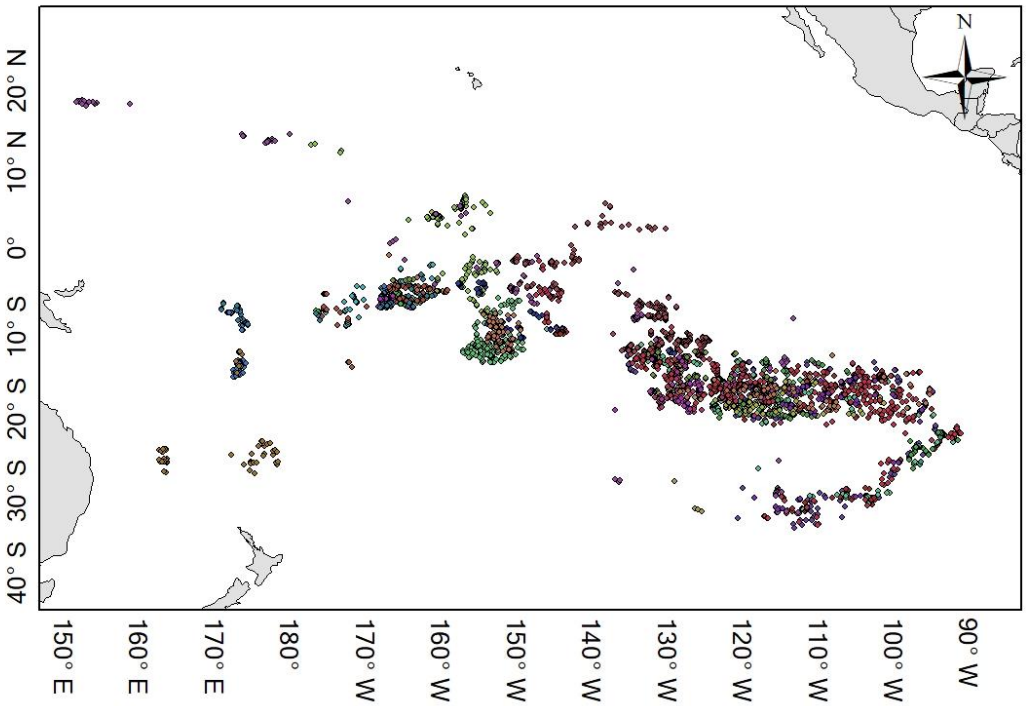

Figure 1 Position of Chinese scientific observer trip during 2021 in the Pacific