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Annual Report of the People's Republic of China to the SC - Observer Programme

People's Republic of China

China Observer Program Implementation Report 2022

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Summary

The observer program for the squid fishery was executed during the 2022-2023 and 2023-2024 fishing seasons, with the involvement of ten observers and thirteen studying vessels. For the 2022-2023 fishing season, four observers embarked in July and returned to Zhoushan port in July 2023. In the 2023-2024 fishing season, six observers embarked on carrier vessels from domestic ports between the months of July and August 2023, journeying to the squid fishing grounds within the Convention area, then transferred to the fishing vessels to carry out their observer missions. As of July 2024, four of these observers had returned, while two continued their work on board. Throughout 2023, the observers worked on 21 fishing vessels. The eight observers who had already returned to land observed a total of 1,214 fishing days and 50 transshipment events. The returned observers with the studying fleet measured over 100,000 squids in 2023. Additionally, there are still thousands of samples awaiting to send to the laboratory for analysis. The samples collected by the observer program spanned the entire year, encompassing both the northern and southern fishing grounds. No seabirds, reptile or marine mammal were observed to be caught.

1. *Description of the observer program*

Authorized by the government, Shanghai Ocean University (SHOU) was responsible for the observer program in 2007. Initially, the program concentrates on placing observers on pelagic trawlers in the SPRFMO Convention area for biological data

collection of jack mackerel. In the same year, China Distant Water Fishery Association cooperated with SHOU to send scientific observers onboard to collect fishery and environmental data to support the scientific research for jumbo flying squid in the Southeast Pacific. In 2015, the National Data Centre for Distant-water Fisheries of China (NDCDF), located at SHOU, was founded and took full responsibility for fishery data collection and China Distant-water Fishing Observer Program. The observer program is financed by the government and organized by NDCDF, which are responsible for observer missions onboard the Chinese fishing vessels and scientific data collection. The Chinese squid jigging vessels in the SPRFMO Convention area, as well as the studying vessel, were incorporated into the program from 2018.

2. Observer training

The candidates for the observers are required at least a high school pass as a minimum to be eligible and received training. The training courses, including skills in data collection (length measurement, sex and maturity determination, data recording), and management measures, are made of four parts as follows:

- a) Fisheries management and CMMs of SPRFMO;
- b) Skills in data collection, sampling, and measurement;
- c) Knowledge of navigation and communication devices operation;
- d) Safety on the sea.

The Certificate received by the observers on their successful completion of all training courses is issued by the Government. Observers were chosen and received special training at Shanghai Ocean University before embarking. Captains of the studying vessels are also received simple training focused on data recording, sampling skills, method and process of sample preservation and length measurement. Furthermore, data templates on fishing activities and length frequency developed by DCDF are supplied to the captains.

Trainers are from the highly qualified personal teaching at the College of Marine Science at the Shanghai Ocean University, and most of them had been severed as observers in the past and also have other qualifications of expertise.

3. Program design and coverage

The observer program was designed to collect representative biological data and to meet the requirements of the relevant SPRFMO CMMs, such as coverage. To this end, the squid fishing vessels are served as the studying vessels to collect length data in addition to placing observers on board. In order to reduce interference with vessel operations and improve data accuracy, the studying vessels will be responsible for collecting and storing samples and ensuring that these samples can be delivered to SHOU in good condition. In addition, observers are requested to observe and record seabirds around fishing vessels or seabird bycatch.

Information on observers on board squid vessels during the 2022-2023 and 2023-2024 fishing seasons is shown in Table 1. Ten observers have worked on 21 fishing vessels, of which 1,214 days were observed in 2023 with a coverage rate of 1.2%. Four of the six observers deployed in 2023 have returned, while two observers are currently continuing their work on board fishing vessels.

During the 2023-2024 fishing season, the same observer carried out observation missions on multiple vessels for a variety of reasons, which coincidentally helped the observer to expand the range of vessels observed.

Observers usually departed from domestic ports by transport vessels or fishing boats and took about 45 days to reach the fishing grounds to carry out observer missions, which reduced the actually time as well as the number of observed fishing days that the observers were on board the squid jigging vessels. For example, Observer HAN Wei were at sea for almost a year, but spent no more than nine months on board the

squid jigging vessels with monitoring 243 fishing days.

Table 1 Information on the 2022-2023 and 2023-2024 observer mission

Fishing season	Period	Observer name	Observed vessel	Total observed fishing days	Observed fishing days in 2023
22-23	2022/8/8-2023/5/3	HU Maoqing	MING XIANG 868	170	63
22-23	2022/8/8-2023/5/3	QI Lei	MING XIANG 821	173	85
22-23	2022/7/25-2023/7/17	DUAN Meirun	PU YUAN 805	192	103
22-23	2022/7/25-2023/7/17	CHU Zhao	ZHOU PU 806	226	140
23-24	2023/3/15-2024/5/19	ZHANG Rui	NING TAI 52 NING TAI 22	341	252
23-24	2023/5/27-2024/5/15	HAN Wei	LURONGYUANYU186 HONG PU 701	223	145
23-24	2023/5/27-2024/7/5	LIU Bo	RUN DA 9 MING XING	243	134
23-24	2023/5/27-2024/6/2	YUAN Zhi	LURONGYUANYU772 LURONGYUANYU722 HAI XING 1 NINGTAI 75	283	153
23-24	2023/8/10-present	HU Maoqing	MING XIANG 821 MING XIANG 817 MING XIANG 801* MING XIANG 868	291*	76
23-24	2023/8/28-presnet	QI Lei	NING TAI 66 NING TAI 616 NING TAI 55*	277*	63

*Note: As of August 23, 2024

4. Type of data collected

Based on the CMM 02 about data standards, the observer collected fishing activity data, biological data, transshipment data and other relevant information. In addition, the studying fleet collected length composition of the catch and biological samples.

The observers randomly selected and measured the length of 80 squid at a time, of which 30 were measured for weight, sex, and sexual maturity; otherwise, the observer collected some extra samples. These extra samples were bagged with waterproof tags (data, latitude and longitude), frozen on board and transported to the lab of SHOU finally to measure mantle length, weight, sex, maturity, stomach fullness and so on. Some hard structures and muscular tissues of jumbo flying squid were extracted for age reading, trace element, isotope testing and genetic study.

Excluding the 2 observers still at sea, a total of 71,112 individuals of jumbo flying squid were measured for length by observers on board in 2023, and about 30% of them were also measured for weight, sex, stage of maturity, and stomach fullness. In addition, observers collected 1,676 samples for laboratory analysis. In 2023, the studying vessels measured mantle length of a total of 35,572 squid on board, and another 833 squid were sampled and transshipped to the laboratory for analysis. There are still thousands of samples waiting to be returned to the lab for analysis.

During the period January-December 2023, 8 observers recorded a total of 50 at-sea transshipment activities, information on which is presented in tables 2 and 3.

Observers also monitored the bycatch, in particular, observed and recorded seabird activities on and around the fishing vessels. No marine mammals, seabirds or turtles were caught by the jiggers.

Table 2 Transshipment operation observed

Date	Latitude	Longitude	Carton type (kg)	No. of cartons	Total weight	Observer
2023/1/5	-18.15	-80.15	20	2500	50000	HU Qingmao
2023/1/10	-18.55	-79.05	20	6000	120000	HU Qingmao
2023/2/2	-3.46	-102.91	20	4000	80000	HU Qingmao
2023/2/13	-1.89	-107.48	20	7140	142800	HU Qingmao
2023/2/16	-1.91	-107.45	20	5000	100000	HU Qingmao
2023/3/2	-3.76	-103.15	20	7168	143360	HU Qingmao
2023/1/3	-3.88	-109.01	20	6000	120000	QI Lei
2023/1/15	-3.71	-105.91	20	6000	120000	QI Lei

2023/1/24	-4.05	-104.05	20	5000	100000	QI Lei
2023/2/3	-3.91	-103.01	20	2400	48000	QI Lei
2023/2/27	-1.66	-103.48	20	5000	100000	QI Lei
2023/1/5	-4.16	-107.58	20	6000	120000	CHU Zhao
2023/1/16	-3.33	-106.31	20	10917	218340	CHU Zhao
2023/2/20	-2.30	-109.58	20	5400	108000	CHU Zhao
2023/3/12	-3.63	-103.65	20	5340	106800	CHU Zhao
2023/4/21	-2.53	-96.57	20	5000	100000	CHU Zhao
2023/5/8	-9.00	-84.37	20	5500	110000	CHU Zhao
2023/5/14	-9.57	-83.84	20	6000	120000	CHU Zhao
2023/5/24	-8.42	-84.97	20	5500	110000	CHU Zhao
2023/1/2	-4.05	-108.52	20	6000	120000	DUAN Meirun
2023/1/17	-3.18	-106.50	20	6720	124400	DUAN Meirun
2023/2/2	-3.82	-103.20	20	5000	100000	DUAN Meirun
2023/2/25	-1.68	-108.93	20	4000	80000	DUAN Meirun
2023/3/11	-3.73	-103.68	20	6233	124660	DUAN Meirun
2023/3/25	-4.28	-101.67	20	4950	99000	DUAN Meirun
2023/4/12	-2.78	-99.80	20	3440	68800	DUAN Meirun
2023/5/4	-7.88	-85.93	20	5320	106400	DUAN Meirun
2023/5/12	-8.42	-84.40	20	5212	104240	DUAN Meirun
2023/5/21	-8.71	-84.56	20	5395	107900	DUAN Meirun
2023/6/12	-6.45	-85.65	20	5272	105440	ZHANG Rui
2023/6/24	-8.21	-85.02	20	3923	78460	ZHANG Rui
2023/7/4	-17.55	-79.50	20	6000	120000	ZHANG Rui
2023/11/5	-20.35	-75.27	20	6341	126820	ZHANG Rui
2023/11/26	-19.25	-76.78	20	3203	64060	ZHANG Rui
2023/12/11	-19.81	-75.73	20	5500	110000	ZHANG Rui
2023/12/5	-0.92	-103.65	20	5088	101760	ZHANG Rui
2023/7/16	-8.87	-85.03	20/12.5	7671/1040	166420	HAN Wei
2023/8/28	-5.93	-85.47	20/12.5	2292/7100	134590	HAN Wei
2023/10/26	-17.11	-79.50	20/12.5	4847/300	100690	HAN Wei
2023/11/25	-17.38	-78.93	20	6000	120000	HAN Wei
2023/12/6	-19.80	-75.97	20	5718	114360	HAN Wei
2023/7/24	-7.8	-85.1	20	10310	206200	LIU Bo
2023/10/28	-17.9	-80.4	20	9140	182800	LIU Bo
2023/11/29	-17.6	-78.7	12.5	7754	96925	LIU Bo
2023/12/11	-17.9	-78.7	12.5	7166	89575	LIU Bo
2023/8/10	-3.7	-85.1	15	9840	147600	YUAN Zhi
2023/10/11	-17.8	-78.4	15	13600	204000	YUAN Zhi
2023/11/19	-19.3	-76.8	15.2	16485	250572	YUAN Zhi
2023/12/1	-19.9	-75.3	15	6817	102255	YUAN Zhi
2023/12/31	-19.2	-76.7	20	10000	200000	YUAN Zhi

Table 3 Information of the unloading fishing vessel and receiving vessel

Date	Fishing vessel	IMO	Receiving vessel	Flag	IMO
2023/1/5	MING XIANG868	9822657	WEI NING	CHN	9821134
2023/1/10	MING XIANG868	9822657	HE TAI	PAN	9152181
2023/2/2	MING XIANG868	9822657	NING TAI LENG 6	CHN	8779126
2023/2/13	MING XIANG869	9822658	DA PING YU YUN 99	VUT	9016961
2023/2/16	MING XIANG868	9822657	TRITON REEFER	CHN	9882085
2023/3/2	MING XIANG868	8778562	OCEAN STAR86	CHN	9797527
2023/1/3	MING XIANG 821	9822669	TRITON REEFER	PAN	8911102
2023/1/15	MING XIANG 821	9822669	PRINCE OF SEAS	RUS	9014444
2023/1/24	MING XIANG 821	9822669	NING TAI LENG 6	CHN	8779126
2023/2/3	MING XIANG 821	9822669	PRINCE OF SEAS	RUS	9014444
2023/2/27	MING XIANG 821	9822669	HE TAI	PAN	9070137
2023/1/5	ZHOU PU 806	9821550	HE SHUN	LBR	9044358
2023/1/16	ZHOU PU 806	9821550	LU WEI YUAN YU YUN 777	PAN	8782654
2023/2/20	ZHOU PU 806	9821550	YONG FA YUN 12	CHN	9797527
2023/3/12	ZHOU PU 806	9821550	LURONGYUANYUYUN177	CHN	9860130
2023/4/21	ZHOU PU 806	9821550	SHEN JU	VUT	9189885
2023/5/8	ZHOU PU 806	9821550	SHEN JU	VUT	9189885
2023/5/14	ZHOU PU 806	9821550	SHEN JU	VUT	9189885
2023/5/24	ZHOU PU 806	9821550	SHEN JU	VUT	9189885
2023/1/2	PU YUAN 805	8778603	HE SHUN	LBR	9044358
2023/1/17	PU YUAN 805	8778603	LU WEI YUAN YU YUN 777	CHN	8782654
2023/2/2	PU YUAN 805	8778603	DA PING YU YUN 99	CHN	9931202
2023/2/25	PU YUAN 805	8778603	FU YUAN YU YUN 65	CHN	8549404
2023/3/11	PU YUAN 805	8778603	LURONGYUANYUYUN177	CHN	9860130
2023/3/25	PU YUAN 805	8778603	LURONGYUANYUYUN177	CHN	9860130
2023/4/12	PU YUAN 805	8778603	LURONGYUANYUYUN177	CHN	9860130
2023/5/4	PU YUAN 805	8778603	SHEN JU	VUT	9189885
2023/5/12	PU YUAN 805	8778603	SHEN JU	VUT	9189885
2023/5/21	PU YUAN 805	8778603	SHEN JU	VUT	9189885
2023/6/12	NING TAI 52	9859284	HE TAI	PAN	9070137
2023/6/24	NING TAI 52	9859284	HE TAI	PAN	9070137
2023/7/4	NING TAI 52	9859284	NING TAI LENG7	CHN	9821134
2023/11/5	NING TAI 22	8778718	LURONGYUANYUYUN898	CHN	9961178
2023/11/26	NING TAI 22	8778718	NING TAI LENG 5	CHN	9893694
2023/12/11	NING TAI 22	8778718	NING TAI LENG 5	CHN	9893694
2023/7/16	LURONGYUANYU186	9869643	HUAXIANG8	CHN	9930533
2023/8/28	LURONGYUANYU186	9869643	LURONGYUANYUYUN177	CHN	9860130
2023/10/26	LURONGYUANYU186	9869643	LURONGYUANYUYUN177	CHN	9860130
2023/11/25	LURONGYUANYU186	9869643	HUAXIANG8	CHN	9930533
2023/12/6	HONGPU701	8780292	LURONGYUANYUYUN898	CHN	9961178
2023/7/24	RUN DA 9	8776289	HUAXIANG8	CHN	9930533
2023/10/28	RUN DA 9	8776289	LURONGYUANYUYUN177	CHN	9860130

2023/11/29	MING XING	8775273	RUI SHENG	PAN	8688755
2023/12/11	MING XING	8775273	RUI SHENG	PAN	8688755
2023/8/10	LU RONG YUAN YU 702	9870795	HUAXIANG 8	CHN	9930533
2023/10/11	LU RONG YUAN YU 702	9870795	HAI FENG 688	VUT	9016985
2023/11/19	LU RONG YUAN YU 702	9870795	LURONGYUANYUYUN898	CHN	9961178
2023/12/1	LU RONG YUAN YU 702	9870795	HUAXIANG 8	CHN	9930533
2023/12/31	HAI XING1	8776382	HAI FENG678	VUT	9016961