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China Observer Implementation Report

China

China Observer Program Implementation Report 2021

Gang Li, Bilin Liu and Feng Wu

National Data Centre for Distant-water Fisheries of China

Shanghai Ocean University

Summary

This report is updated based on China Observer Program Implementation 2021 (SC9-Doc29). Two observers as well as the studying fleet were designated to perform the observer program in 2020-2021. Observers ended the onboard observation mission in April 2021 and were back in ZHOU SHAN Port in June 2021. 167 fishing days and 4 transshipments were observed. A total of 21,660 squids were sampled or measured, 12,548 of them were sampled by the observers in 2021 on the sea, the others are sampled by the studying fleet. No birds were found to be caught by the jiggers or entangled by the lines. In addition, a sea turtle was wrapped by jig lines during the period of the observations, and released alive. The studying fleet continued to perform the observation mission after the observers came back to port.

1. Description of the observer program

Authorized by the government, Shanghai Ocean University (SHOU) has been responsible for the observer program since 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 (DCDF), located at SHOU, was founded and took full responsibility for fishery data collection and China Distant-water Fishing Observer Programme. The observer program is financed by the government and organized by Shanghai Ocean University's College of Marine Sciences structurally, 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 in 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 measuring;
- 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 SHOU 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 NDCDF 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 related CMMs of SPRFMO, such as coverage rate. For this purpose, the studying vessels from the squid jigging fishery were designated to collect length data, other than placing observers on board. To reduce the interference to the operations of the vessel and improve the accuracy of data, the mission of studying vessels is to collect and store the samples and ensure that these samples can be delivered to SHOU in good condition.

The information of the observers was shown in table 1. Observer Wang Baolin started out at the ZHOU SHAN port on 19 August 2020, boarded NING TAI 62 on 6 October 2020 and went to work immediately. The observation ended on 8 April 2021, after that Wang Baolin as well as NIGTAI 62 returned to ZHOU SHAN Port On 11 May 2021, however the observer disembarked NIGTAI 62 till 6 June 2021. Thus, 92 fishing days were observed in 2021.

Observer Zhu Guangjian also started at the ZHOU SHAN port, he took a fishing vessel left ZHOU ZHAN Port On 15 September, and embarked on the observed squid vessel ZHOU PU 805 in the convention area on 3 November 2020. The observation work lasted until 17 March 2021, the day that ZHOU PU 805 started to return home. The observer arrived at ZHOU SHAN Port on 21 May, however he left the ZHOU PU 806 on 2 June because of the quarantine measures. In 2021, 75 fishing days were observed. Thus, a total of 167 fishing days were observed by the two observers in 2021.

Table 1 Information of the observers in 2021

No.	Fishery	Period	Observer name	Observed vessel	Observed days
1	Squid jigging	2021/1/1— 2021/3/16	Zhu Guangjian	Zhou Pu 806	75
2	Squid jigging	2021/1/1— 2021/4/8	Wang Baolin	Ning TAI 62	92

Table 2 Transshipment operation observed

Date & time	Position	Species	Product type	No. of cartons	Total of product	Observer
2021/2/6/ 12:00	5.7S, 98.9W	GIS	20	4000	80000	Wang Baolin
2021-3-25 12:00	2.4S, 107.5W	GIS	20	5500	110000	Wang Baolin
2021-1-14 22:00	6.1S, 95.6W	GIS	20	5050	101000	Zhu Guangjian
2021-3-7 20:50	3.0S, 112.06W	GIS	20	5000	100000	Zhu Guangjian

Table 3 Information of the unloading fishing vessel and receiving vessel

Date	Fishing vessel	Flag	IMO	Master	Receiving vessel	Flag	IMO	Master
2021/1/14	ZHOU PU 806	China	9821550	Lu Zhou	HE SHUN	Panama	9158537	MD KHRUL ALAM
2021/3/7	ZHOU PU 806	China	9821550	Lu Zhou	WEI SHUN	Panama	8816156	LI YINDE
2021/1/6	NING TAI 62	China	8778562	HU JINGJIN	TRITON REEFER	Panama	891102	CAO HAIBING
2021/3/25	NING TAI	China	8778562	HU	NING TAI	China	9821134	ZHANG

	62			JINGJIN	LENG 7			JUNLIANG
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4. Type of data collected

Based on the CMM 02 about data standards, the observer collected catch and effort data, biological data, and other relevant information. Furthermore, the observers also monitored and recorded the fishing activities, discards, by-catch species and transshipment.

The observers collected length composition information from the catch, and some specimens were randomly selected to weight and identify sex and 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.

A total of 12,548 squids were measured by observers on the sea from January to April in 2021. The studying fleet measured mantle length from 9,032 specimens onboard and sent 1,846 squids to the lab, and more samples still have been stored in the factory cold storage and are waiting for sent to the lab for analysis because of the COVID-2019 pandemic.

The observers monitored 4 transshipments of jumbo flying squid at sea in the Convention area, the details of the transshipment operations were listed in Table 2 and Table 3.

No mammals, seabirds or turtles were caught by the jiggers or entangled by the lines.

5. Problems encountered

It's the first time to dispatch the observers for the squid jigging fishery officially in 2020. As required by CMM 18-2021, the coverage rate shall be 5% or 5 full-time at-sea observers, however, it's an impossible mission under the circumstance of the COVID-2019. Some crucial aspects such as recruitment, training and dispatching had been restricted or limited greatly. Finally, only two experienced observers were recruited to perform the observation mission and ended the onboard observation mission in April 2021. After observers came back to the port of China in June 2021, the deployment of observers had to be suspended because of concerns about the spread of COVID-2019. In June of this year, the new round of observer deployment was launched. Five trained observers embarked on five squid jigging vessels separately and left ZHOU SHAN port successively in July and August. In addition, 5 squid jigging vessels severed as a studying fleet in 2022.