

**12<sup>th</sup> MEETING OF THE SCIENTIFIC COMMITTEE**

*30 September to 05 October 2024, Lima, Peru*

**SC12 - Doc 22**

**Annual Report of Chinese Taipei to the SC**

*Chinese Taipei*

**Annual Report of Chinese Taipei on Squid Fishery in  
the SPRFMO Convention Area in 2023  
to the 12th Scientific Committee Meeting**

## **Summary**

Jumbo flying squid widely distributes in the eastern Pacific Ocean and has been targeted by Chinese Taipei's squid-jigging fleet during 2002-2021. The fishery was temporarily suspended since 2022. There was no fishing activity in the SPRFMO Convention Area in 2023 fishing season for Chinese Taipei's fishing fleet. The number of fishing vessels varied from 2 to 29 during 2002–2021 with catches of 665 to 39450 tons. The major fishing grounds located around 13°–18°S and 80°–85°W, while several vessels operated in the equatorial waters (around 1°–4° S and 95°–106° W) since 2017. Data of logbook, observer, transshipment, and landing have been collected entirely and submitted to the Secretariat of SPRFMO.

## **1. Description of the Fishery**

Jumbo flying squid (*Dosidicus gigas*) is a large pelagic squid inhabiting in the eastern Pacific Ocean, distributing across about latitudinal 50 degrees for both north and south hemispheres. Since 2002, this species has been targeted by Chinese Taipei's distant-water squid-jigging fleet in the Southeast Pacific Ocean. However, the number of operating vessels from Chinese Taipei was decreased since 2020, and the fishery was temporarily suspended since 2022. There was no squid jigger fishing in the SPRFMO Convention Area in 2023.

In summary, the number of operating vessels varied from 2 to 29 during 2002-2021, with catches between 665 and 39450 tons (Fig. 1).

## **2. Catch, Effort and CPUE Summaries**

Chinese Taipei has no vessels conducting squid-jigging fishing in the SPRFMO Convention Area in 2023. Therefore, no catch and effort can be provided for 2023 fishing season (Table 1). The nominal CPUE was decreased since 2015 during 2002–2021 (Fig. 2).

The major fishing grounds during 2002–2021 located in the waters of 13°–20° S and 80°–85° W, and in the equatorial area of 1°–3° S and 95°–106° W.

## **3. Fisheries Data Collection and Research Activities**

### **3.1. Data collection**

The captains of Chinese Taipei's squid-jigging fishing vessels, who participate in the squid fishery in the Southeast Pacific, are required to report their fisheries data via electronic logbook system (e-logbook) on a daily basis.

As for landing and transshipment practices, the operators or captains who schedule to land or transship the products (catch) are required to submit the Landing/Transshipment

Notice to the competent authority of Chinese Taipei for approval. When the landing or transshipment practices are completed, the operators or captains are required to submit the Landing/Transshipment Declaration to the competent authority of Chinese Taipei. The competent authority of Chinese Taipei will verify the amounts of products (catch) with e-logbook data and other available information to ensure that those products (catch) are legal and traceable.

In accordance with its domestic regulations and SPRFMO CMM 02-2022, Chinese Taipei has collected transshipment and landing data of Jumbo flying squid fishery in the Southeast Pacific and submitted to the Secretariat of SPRFMO since 2013.

### 3.2. Research activities

The research program on stock status and spatial dynamics of Jumbo flying squid in the Southeast Pacific have been conducted by the scientists of Chinese Taipei. The results showed that high aggregation of squid abundance was located in the waters off central and southern Peru and off northern Chile. The large-sized group of the squid has dominated in the catches during October–December. The results suggested that the variation of squid abundance could be explained by the temporal and spatial variables, which might be a synergistic process of different migration patterns and plasticity in life history traits for the squid. A decreasing trend of the squid abundance index is noted since 2005. However, the research project was temporarily suspended in 2024.

## **4. Biological Sampling and Length/Age Composition of Catches**

### 4.1. Biological sampling

There was no fishing activity in the SPRFMO Convention Area in 2023 fishing season for Chinese Taipei's squid fishing fleet.

#### 4.2. Length/Age composition of catches

The catch data of the squid is categorized by size composition (commercial weight category) into A, <1 kg; B, 1-2 kg; C, 2-3 kg; and D, >3 kg (or miscellaneous). The category D typically comprises extra-large size individuals (>3 kg), although various size categories of the squid may be included. The amount of category D is usually in a condition of processed products, comprised heads, fins and mantle of the squid. The original body weight of category D was then calculated by an empirical equation of fraction between head, mantle weight and body weight of the squid. In summary, the annual size composition of catch for Jumbo flying squid during 2007–2021 was dominated by the large-sized group (Table 2).

### 5. Ecosystem Approach considerations

There was no fishing activity in the SPRFMO Convention Area in 2023 fishing season for Chinese Taipei's squid fishing fleet.

### 6. Observer Implementation Reports

To comply with SPRFMO CMM 16-2019, which was superseded by CMM 16-2021, CMM 16-2022, CMM 16-2023 and CMM 16-2024, Chinese Taipei applied for the certification of the squid-jigging fishery observer programme in 2021 and received the accreditation in the 10th Annual Meeting of the SPRFMO Commission.

The squid-jigging fishery observer programme was implemented in 2021, and one observer was onboard one squid-jigging vessel in 2021 fishing season. The coverage rate of observer was 50% in number of vessels, whereas was 43% in fishing days (observed 82 days). However, the fishery was temporarily suspended since 2022.

Table 1. Annual catch and effort information of Jumbo flying squid for Chinese Taipei's squid-jigging fleet in the Southeast Pacific Ocean during 2007–2023.

Year	No. of vessels	Fishing effort (vessel-day)	Catch (tons)
2007	13	1,393	14,750
2008	13	2,744	31,161
2009	13	1,403	12,319
2010	20	2,874	29,206
2011	21	3,597	35,418
2012	14	2,211	14,177
2013	9	1,045	7,759
2014	5	474	4,795
2015	9	616	10,072
2016	11	1,880	12,989
2017	13	1,228	7,338
2018	14	1,396	3,848
2019	10	611	2,085
2020	5	817	2,087
2021	2	189	665
2022	0	0	0
2023	0	0	0

Table 2. Annual size composition (in live weight, tons) of catch of Jumbo flying squid for Chinese Taipei's squid-jigging fleet in the Southeast Pacific Ocean during 2007–2023 (Category: A, <1 kg; B, 1-2 kg; C, 2-3 kg; D, >3 kg or miscellaneous)

Year	A	B	C	D	Total
2007	45	23	476	14206	14750
2008	144	59	807	30151	31161
2009	80	0	0	12239	12319
2010	163	7	0	29036	29206
2011	57	3	3	35356	35418
2012	1485	138	81	12472	14177
2013	205	0	12	7542	7759
2014	50	1	1	4743	4795
2015	33	41	1	9996	10072
2016	210	62	23	12694	12989
2017	123	12	6	7197	7338
2018	671	25	49	3104	3848
2019	70	12	237	1767	2085
2020	316	125	67	1579	2087
2021	95	0	0	570	665
2022	0	0	0	0	0
2023	0	0	0	0	0



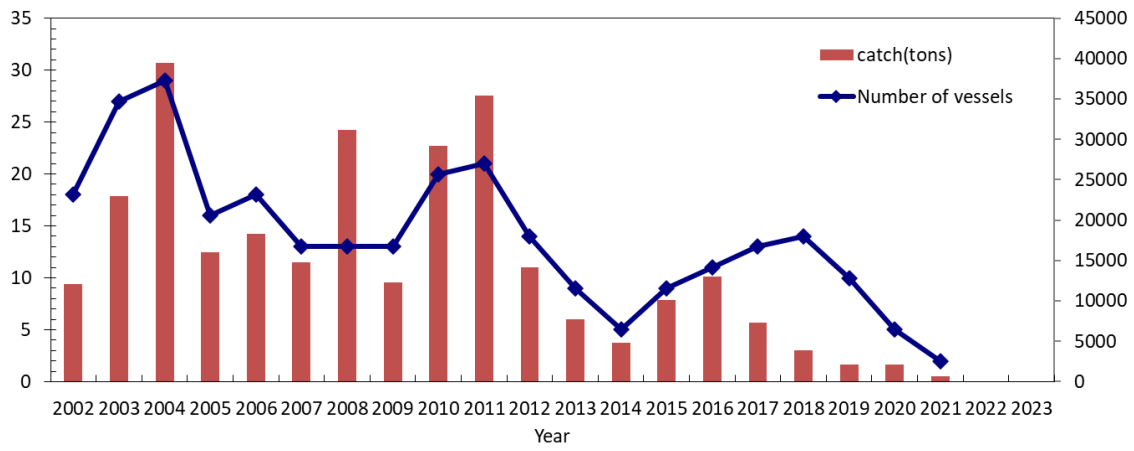


Figure 1. Annual variations in catch and number of vessels for Chinese Taipei's squid-jigging fleet in the Southeast Pacific Ocean during 2002–2023.

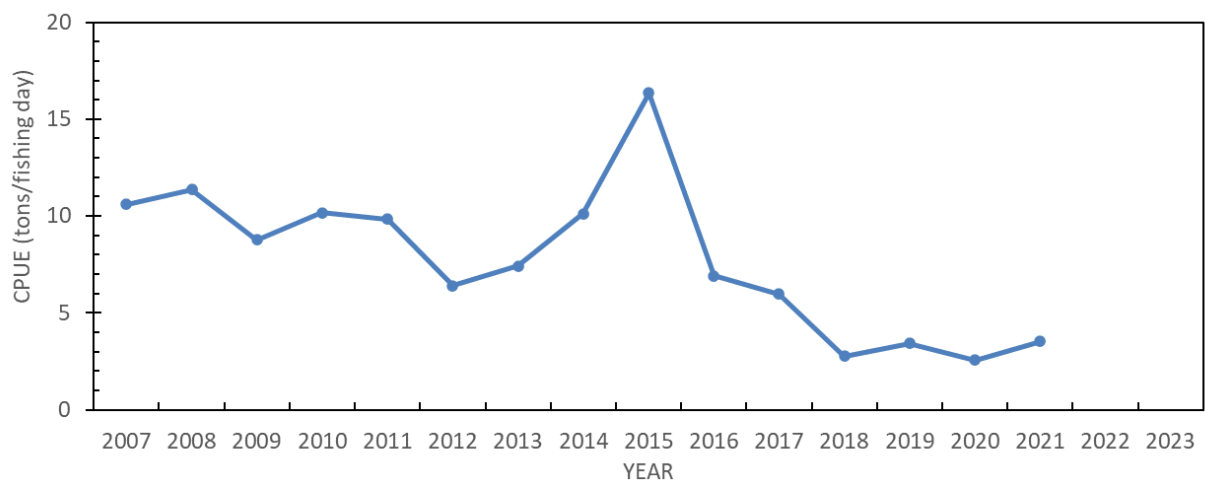


Figure 2. Annual nominal CPUE of Jumbo flying squid of Chinese Taipei’s squid-jigging fleet in the Southeast Pacific Ocean during 2007–2023.