South Pacific Regional Fisheries Management Organisation

11th Meeting of the Science Working Group

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SWG-11-06

Chinese Taipei 2012 Report

2012 National Report of Chinese Taipei to SPRFMO Scientific Working Group on the Squid Jigging Fishery in the South Pacific Ocean

1. Description of the Fishery

Our squid-jigging fleet initially harvested jumbo flying squid (*Dosidicus gigas*) in the waters off the EEZ of Peru in 1992. However, taste of muscle of this squid appeared to be sour, which resulted in low price in the market, and thus no fishing vessel moved on after the exploratory operation. Poor catches of Argentine shortfin squid (*Illex argentinus*) in the Southwest Atlantic Ocean in 2000 and 2001 triggered 18 jiggers to restart seasonal fishing on jumbo flying squid in the Southeast Pacific Ocean (SEPO) in 2002 after the *Illex* fishing season. Over the past five years, the number of fishing vessels have maintained 13 from 2007 to 2009, increasing to 20 and 21 for 2010 and 2011, respectively (Figure1).

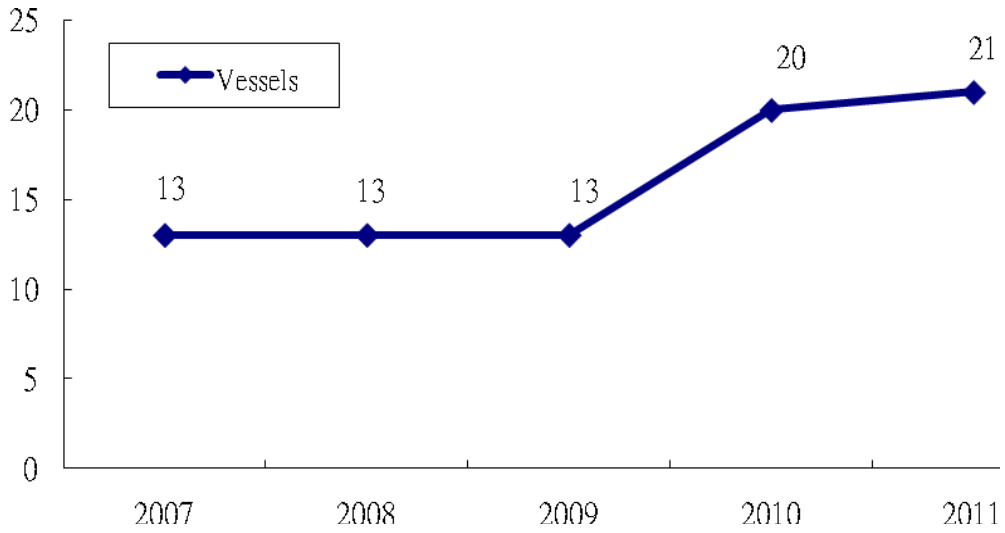


Figure 1 Number of vessels of our squid fishery in the Southeast Pacific Ocean between 2004 and 2011.

Monthly fishing days of our squid-jigging vessels in the SEPO in 2011 are shown in Figure 2. A significant increase in June is noted, which could be caused by fishing vessels shifting from the Southwest Atlantic Ocean after the end of *Illex* fishing season.

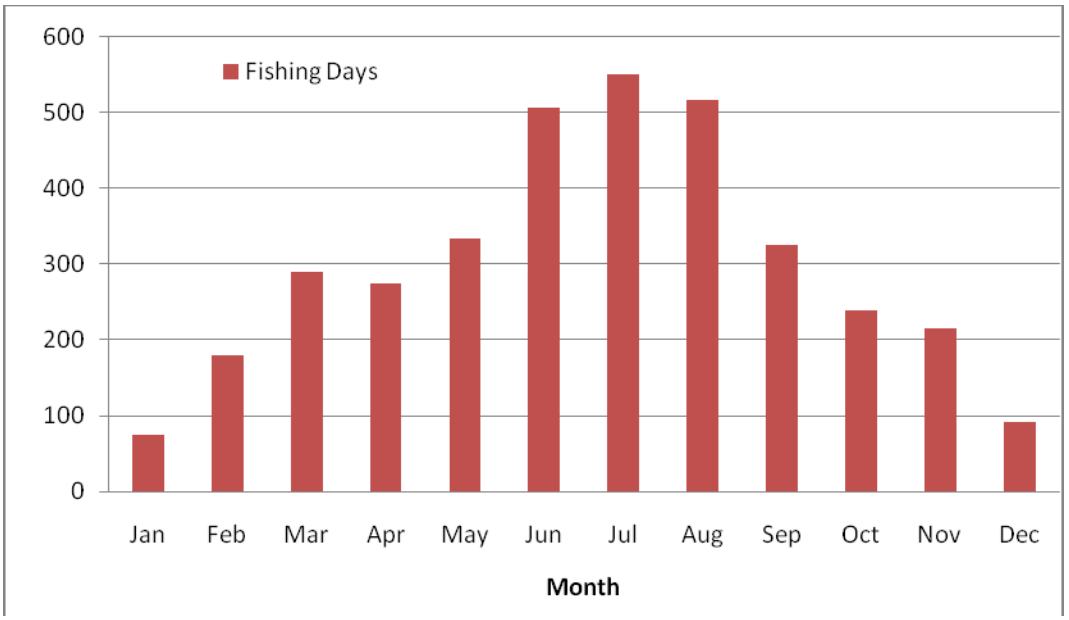


Figure 2 Monthly fishing days of our squid fishery in the Southeast Pacific in 2011.

Beginning in 2007, some fishing vessels changed their fishing patterns and started operating in this area all year round. However, when catch of Illex in the Southwest Atlantic are good in 2009 and 2010, only one vessel operated in the SEPO in January. The pattern can therefore be noted that other vessels tended to start shifting fishing grounds from April in recent

years. In 2011, there were 3 fishing vessels operating in the SEPO in January, and the number of vessels increased to 10 when vessels shifted from the Southwest Atlantic Ocean in February (Figure 3).

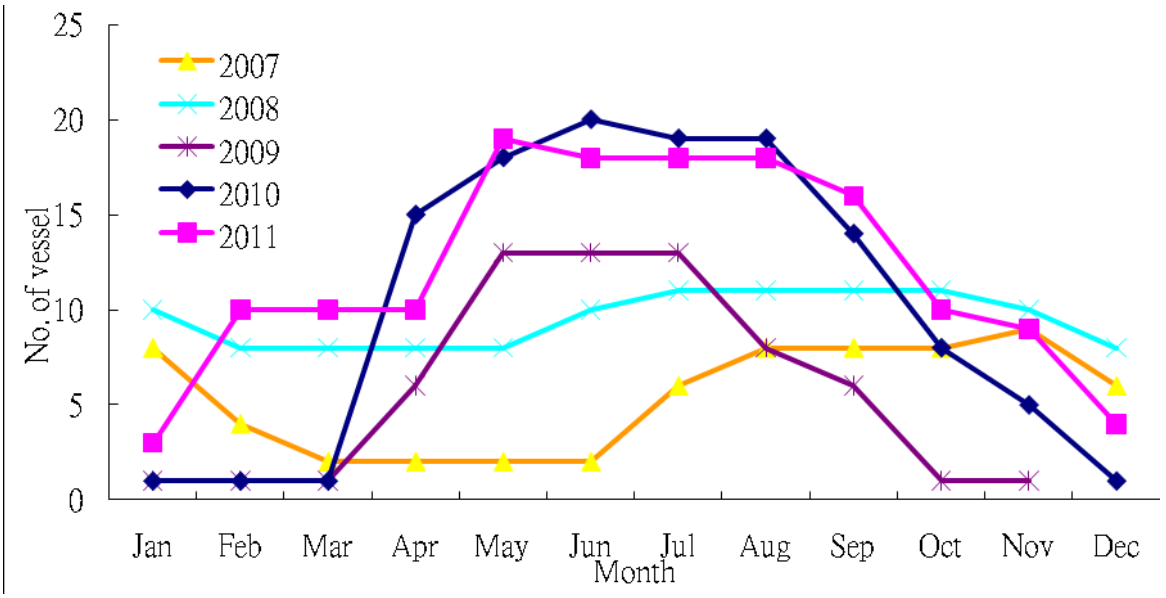


Figure 3 Monthly variation in the number of vessels of our squid fishery operating in the Southeast Pacific Ocean between 2007 and 2011.

2. Catch, Effort and CPUE Summaries

Catch and effort information on our squid fishery in the SEPO between 2007 and 2011 are shown in Table 1. The catch increased along with the rise in the number of vessels and fishing days.

Table 1 Catch and effort of our squid fishery in the Southeast Pacific Ocean from 2007 to 2011

Year	2007	2008	2009	2010	2011
No. of vessels	13	13	13	20	21
Fishing days	1,393	2,744	1,403	2874	3,597
Catch (tons)	14,750	31,161	12,319	29,206	35,418

Annual variation in nominal CPUE of our squid fishery in the Southeast Pacific Ocean from 2007 to 2011 is shown in Figure 4. The nominal CPUE ranged from 8.8 tons/day in 2009 to 11.4 tons/day in 2008.

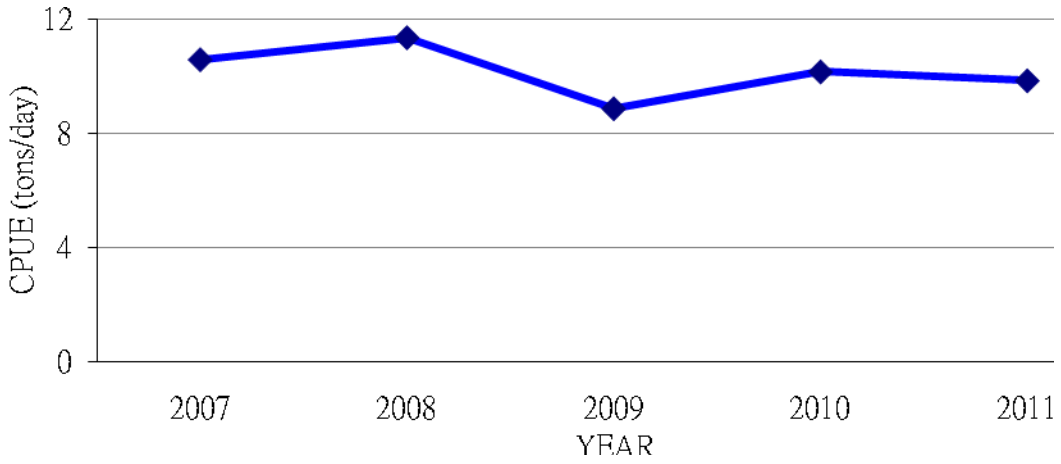
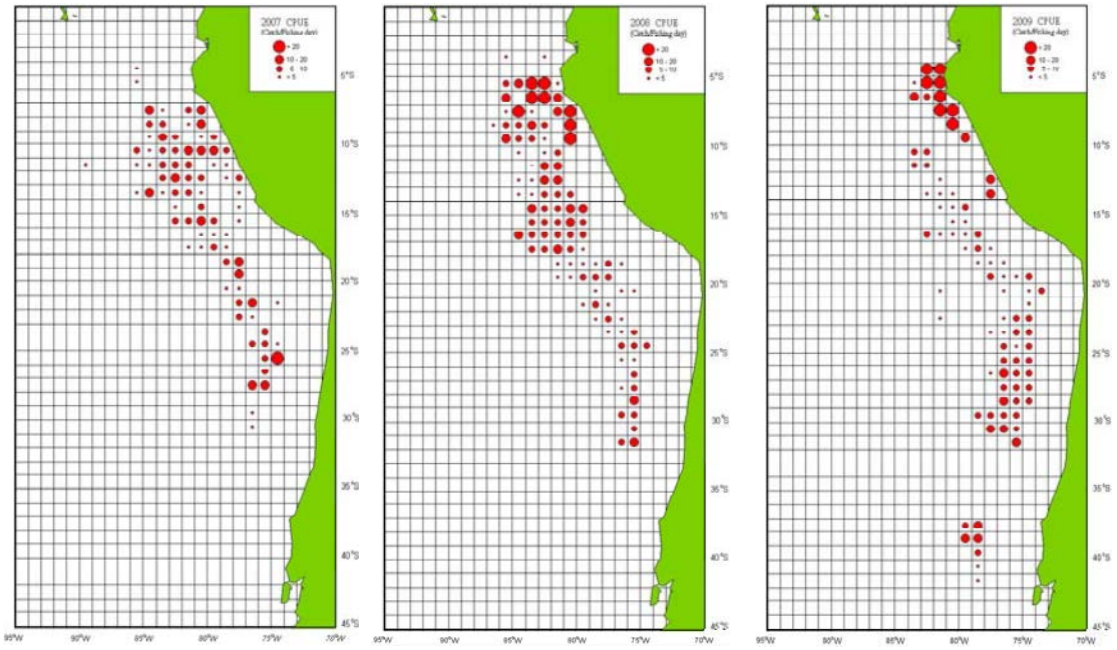


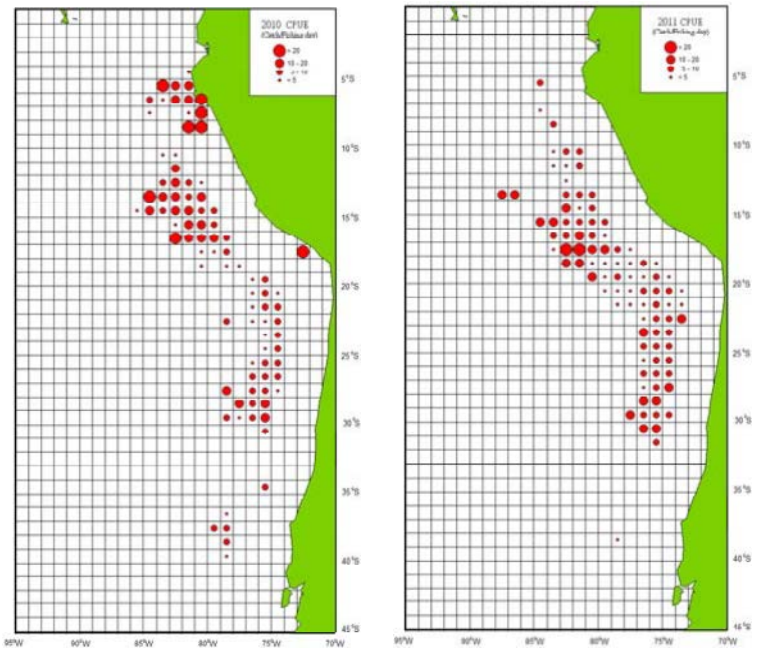
Figure 4 Annual variation of nominal CPUE of our squid fishery in the Southeast Pacific Ocean from 2007 to 2011

No bycatch was recorded in logbooks. Our squid fleet harvest squid by jigs which are highly selective fishing gear for target species.

Spatial patterns of annual average CPUE (tons/ day) of our squid fishery in the SEPO from 2006 to 2011 is shown in Figure 5. The major fishing area located around 76–84 °W and 5–30 °S. There were fishing vessels operating within the EEZ of Peru between 2007 and 2010 under the licenses issued by the Peruvian government. Our squid-jigging fleet operated on the high sea in 2011 because no vessels applied to operate within the EEZ of Peru.



2007 2008 2009



2010 2011

Figure 5 Spatial patterns of annual average CPUE of our squid fishery in the Southeast Pacific Ocean from 2007 to 2011

3. Fishery Data Collection and Research Activities

3.1 Logbook system

All the logbooks of our squid fishery in the Southeast Pacific Ocean are retrieved. The squid jiggers have been required to report their catches in a timely manner through the e-logbook system since 2007.

3.2 Research

Research on the effects by environmental factors on the abundance variation of jumbo flying squids was conducted. In recent years, research programs have been carried out on spatial distribution patterns, CPUE trend, stock status and exploitation rate of this species.

4. Biological Sampling and Length/Age Composition of Catches

The size composition data are collected from the logbooks in commercial category. The columns are designed to record the number of boxes containing squid for various categories of body weight (<1kg, 1~2kg, >2kg), as well as the number of boxes containing processed products (head, tube, and fin).

5. Summary of Observer and Port Sampling Program

No observer or port sampling program is implemented for our squid fishery in the SEPO.

6. Implementation of Management Recommendations

Although there are no interim measures with respect to squid fisheries, we, in accordance with relevant regulations of the Data Standard and the Guidelines for Annual National Reports, have provided as many data on the squid fishery as possible.