

National report of Korea to the SPRFMO Science Working Group

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1. Description of the fishery

Jack mackerel fishery

Korean trawl fishery targeting for jack mackerel was commenced in 2003 for the scientific research survey by R/V Tamgu No. 1 and two commercial mid-water trawl vessels. Since then the Korean jack mackerel fishery has operated in this fishing ground until recent years. The number of active fishing vessels was 2 in 2010 (Table 1).

Table 1. Number of vessels and size for jack mackerel fishery in the SPRFMO area

Years	Number of vessels	Gross registered Tonnage			
		2,000-2,999	3,000-3,999	4,000-4,999	5000<
2004	3	1	1	1	-
2005	2	1	1	-	-
2006	3	1	1	1	-
2007	3	1	1	1	-
2008	3	1	1	1	-
2009	2	-	1	1	-
2010	2	-	1	-	1
2011	2	-	1	-	1

Bottom fishery

Korean bottom trawl fisheries were operated in high seas by 1-2 vessels during 2004-2007. There was no bottom trawl fishery in the SPRFMO area since 2008 (Table 2).

Table 2. Number of vessels and size for bottom fishery in the SPRFMO area

Years	Number of vessels	Gross registered Tonnage		
		600-699	700-799	800-899
2004	2	1	-	1
2005	-	-	-	-
2006	1	-	-	1
2007	1	-	-	1

2008	-	-	-	-
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2. Catch, effort and CPUE summaries

Catch by species for jack mackerel fishery

Trends in annual jack mackerel and other species catches from 2004-2010 are summarized in Table 3 and shown in Figure 1. In 2010, 2 Korean trawler were operated in the SPRFMO area and caught a total of 8,183 ton, which was decreased compared to those of the previous years. Almost 99% of the total catches were jack mackerel in the SPRFMO area in 2010.

Table 3. Catch by species for jack mackerel fishery in the SPRFMO area

Years	Number of fishing days	Total Catches (ton)	Catches (ton)		
			<i>Trachurus murphyi</i>	<i>Scomber japonicus</i>	Others
2004	205	8,146	7,438	708	-
2005	170	9,507	9,126	381	-
2006	232	11,934	10,474	1,460	-
2007	237	12,180	10,940	1,240	-
2008	249	13,568	12,600	968	-
2009	182	14,534	13,759	716	59
2010	136	8,267	8,183	84	-

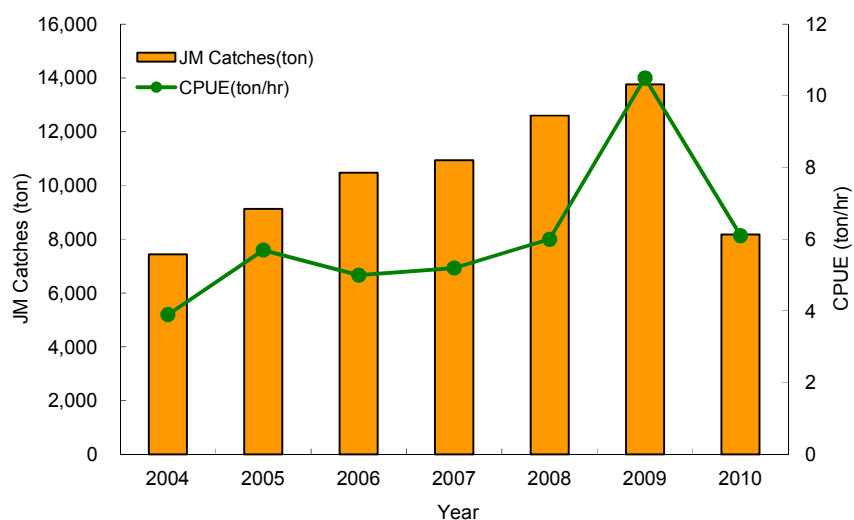


Figure 1. Trends in jack mackerel catch and catch per unit effort (ton/hr) of jack mackerel in the SPRFMO area from 2004-2010.

Fishing season was March to September in 2010 in this area (35°S~45°S, 80°W~105°W). Geographical distributions of the CPUE for jack mackerel catch are shown in Figure 2.

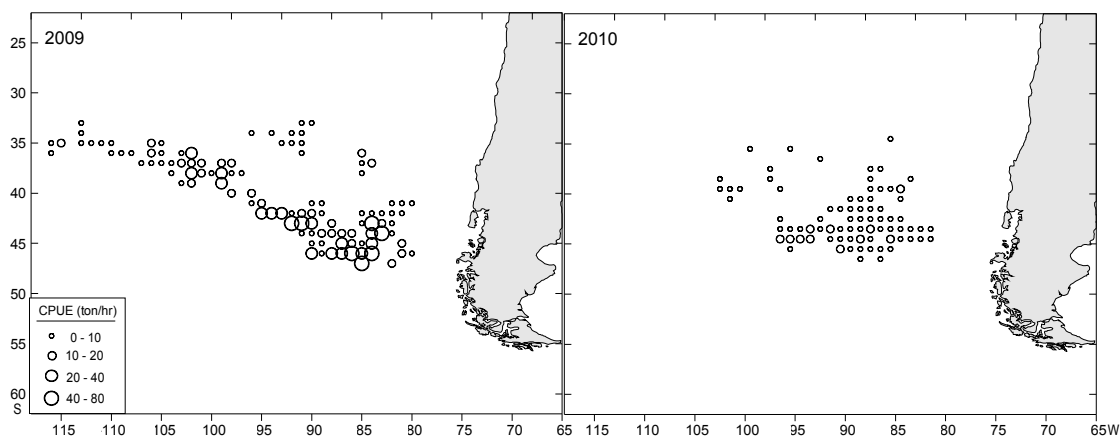


Figure 2. Distribution of Korean jack mackerel fishing ground in the SPRFMO area in 2009-2010.

Catch by species for bottom fishery

Table 4 represents total annual catches and fishing effort (number of fishing days) for the Korean bottom trawl vessels during 2004-2010 in the SPRFMO area. The decrease in orange roughy catch over 2004-2007 is shown in Figure 3.

Table 4. Annual catches for bottom fishery in the SPRFMO area

Years	Number of fishing days	Catches (ton)	Orange roughy (ton)	Others
2004	51	143.8	137.9	5.9
2005	-	-	-	-
2006	32	83.1	77.2	5.9
2007	29	48.8	44.2	4.4
2008	-	-	-	-

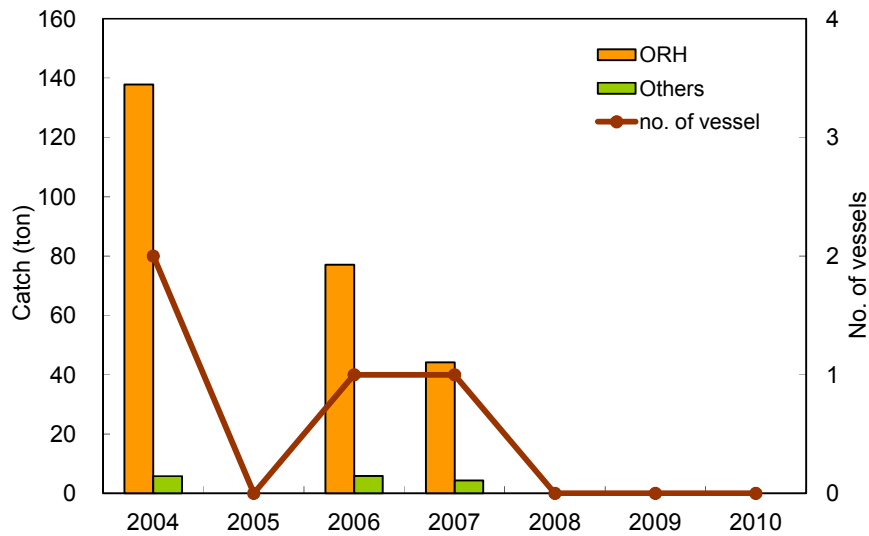


Figure 3. Trends in annual orange roughy catch by Korean bottom trawl vessels in the SPRFMO area from 2001-2010.

3. Fisheries data collection

Official catches by distant-water fishery is obtained from two sources of data reports. Korea Overseas Association (KOFA) collects total catches by gear type from Korean distant-water fishery industries, which are used as our official total catch. National Fisheries Research and Development Institute (NFRDI) collect logbook data from vessels. The logbook contains daily catch and effort data on the basis of tow-by-tow.

Data collection from the vessel

Each commercial vessel of distant-water fisheries submits the "Catch Report and Biological Report (logbook)" which recorded data on vessel, fisheries and biological information by domestic regulation on the tow-by-tow basis. The logbook and catch data have been submitted to the SPRFMO Interim Secretariat in accordance with the data standards of SPRFMO.

Data collection by observer at sea

For the analysis of the biological characteristics for jack mackerel, fork length, body weight, sex and reproduction indices have been collected from the commercial vessels.

4. Summary of observer program

The scientific observer program of distant-water fisheries of Korea was started in 2002. National Fisheries Research and Development Institute (NFRDI) is responsible for implementing and developing the program.

The qualification for observers is college graduated where major field is natural science or fisheries high school graduated with at least 1-year experience on board and certificate of qualification to deck officer. Candidate for observer who have passed the paper review (including medical check) and oral interview have to take training programs for 3 weeks.

Observer training programs include basic safety training for seafaring, operations of navigation devices, biological information training for target and non-target species and data collection method for fishing activities.

During the training program they have two kinds of test. First is the test for a technical term of fisheries and biology, and the other is the test for species identification. The person who scored 70% overall in the two tests and attended 100% of the course timetable can be qualified and deployed on board as a scientific observer.

Two Korean vessels operated in the SPRFMO area in 2010 but scientific observer was not deployed on these trips. In 2011 scientific observer embarked one vessel and scientific observation is in progress (Table 5).

Table 5. Scientific observer dispatches in 2008 and 2011 in the SPRFMO area

Date	Vessel name	Days observed	Coverage rate (%, tows)
2008. 10	Insungho	9	4
2011.8-	Kwangjaho	In progress	In progress