

National Report of Korea

Zang Geun Kim, Seon Jae Hwang and Doo Nam Kim
National Fisheries Research and Development Institute,
Busan 619-705, Republic of KOREA

INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

ANNUAL FISHERIES INFORMATION

In accordance with IOTC Resolution 10/02 scientific data was provided to the IOTC by June 2010 for all fleets other than longline	YES (Jun. 30 2010)
Longline data was provided on 30 Dec 2009 for final data from longline fleet operating in the high sea, and 30 June 2010 for provisional data.	YES (Jun. 30 2010)
If no, please, indicate the reason(s) and intended action	

1) SUMMARY

It is with longliners that the Korean distant-water fishery has engaged in fishing for tunas and tuna-like species in the Indian Ocean in 1957. 21 longliners were operated in 2009, which were the smallest number as it ranged from 31 to 24 during previous 5 years. With this fishing capacity, Korean longliners caught 2,978 mt in 2009, which was a bit of small increase in about 8% out of the catch of the year 2008. The catch of 4 target species were 903 mt of yellowfin tuna, 694 mt of southern bluefin tuna, 495 mt of bigeye tuna, 325 mt of albacore. In addition, 524 mt of billfishes were bycaught. 6 mt of sharks were also reported but without species identification. Notedly, among target species albacore increased 2.7 times and as bycatch billfishes 1.6 times to the catch of previous year, while other tunas decreased in the vicinity of 10%. In 2009, 3 scientific observers were dispatched for monitoring compliance and scientific data collection and, as results, carried out 14.5 % of observer coverage to the total fishing efforts in terms of the number of hooks used.

2) GENERAL FISHERY INFORMATION

Korean tuna longliners have engaged in fishing for tuna species in the Indian Ocean since

the mid-1950s. Their major target species were yellowfin tuna, bigeye tuna and albacore tunas. Southern bluefin tuna has been included since 1991 as it became of the highest value in Japanese sashimi market. The traditional fishing grounds of Korean tuna longliners were mainly the central tropical area between 20°N and 20°S. In the meantime, some of them have moved to higher latitude (43°S) of the Indian Ocean since 1991 as they found a fishing possibility of the target species such as southern bluefin tuna, yellowfin tuna, bigeye tuna and albacore. In recent years, Korean longliners has been expanding the fishing ground further in latitude and longitude to 20°N-45°S and to 15°-115°E.

The number of active vessels peaked at 185 in 1975 and then has been gradually decreasing to 24 in 2008 and 21 in 2009, respectively. The catch culminated in 71,100 mt in 1978 and has also been gradually decreasing to 2,762 mt in 2008 and 2,978mt in 2009. The gradual reduction both in fishing capacity and the catch was mainly attributed to the shifting to the tropical central Pacific fishing grounds and making fishing capacity commensurate with fishing possibility. However, Indian Ocean under competence of the IOTC is of importance for Korean tuna fisheries in future fishing possibility, the reason for which the through and effective conservation and management measures to be taken by the IOTC is critical.

3) CATCH AND EFFORT (BY SPECIES AND CATCH)

In 2009, the total catch of tuna and tuna-like species by Korean longliners was 2,978 mt in round weight which was 8% increasing to 2,762mt in 2008 but more than 50% reduction of those in 2005-2007. 4 major target species accounted for 81% of total catch. The catch of yellowfin tuna decreased from 1,010 mt in 2008 to 903mt in 2009, so did southern bluefin tuna 757 mt to 694 mt and bigeye tuna 505 mt to 495 mt, 3 species of of which were decreased about 10% but that of albacore increased 2.7 times from 119 mt to 325 mt, respectively. Billfishes increased 1.6 folds from 322 mt in 2008 to 524 mt in 2009. 6 mt of shark species were reported without species identification. CPUE (number of fish/100 hooks) increased from 0.66 to 1.02, which is the the average of last 10 years and distributed throughout the Indian Ocean (Table 1a, 1b, figure 1 and 2).

Table 1a. Annual catch, effort and CPUE by Korean tuna longline fishery in the Indian Ocean, 2000-2009.

Year	No. of vessel	Catch (mt)	CPUE (No of fish / 100 hooks)
2000	38	6,888	0.83
2001	23	4,033	0.92
2002	11	1,259	0.47
2003	25	3,840	1.12
2004	36	7,735	1.42
2005	28	6,958	1.49
2006	26	7,375	1.14
2007	31	5,860	1.13
2008	24	2,762	0.66
2009	21	2,978	1.02

Table 1b. Annual catch by species and FAO statistical area for the Korean longline fishery in the Indian Ocean, 1999-2009

Species	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
SBT	896	710	649	221	114	32	93	411	757	694
YET	1,811	1,401	332	2,100	4,068	3,295	3,210	3,452	1,010	903
ALB	95	31	10	95	350	183	237	115	119	325
BET	3,220	1,401	186	1,121	2,466	2,481	2,945	1,291	505	495
Other T	529	323	22	99	178	400	409	180	49	31
SWO	63	37	12	85	255	316	176	106	39	79
Blue marlin	79	16		11	44	20	17			9
Striped marlin	20	3		6	28	22	39	6	8	7
Sailfish							2	24	5	11
Black marlin	25	23	6	36	114	106	109	76	39	60
Other billfishes	148	78	42	66	116	102	132	187	231	358
Sharks	2	10			1	1	6	12		6
Total	6,888	4,033	1,259	3,840	7,735	6,958	7,375	5,860	2,762	2,978

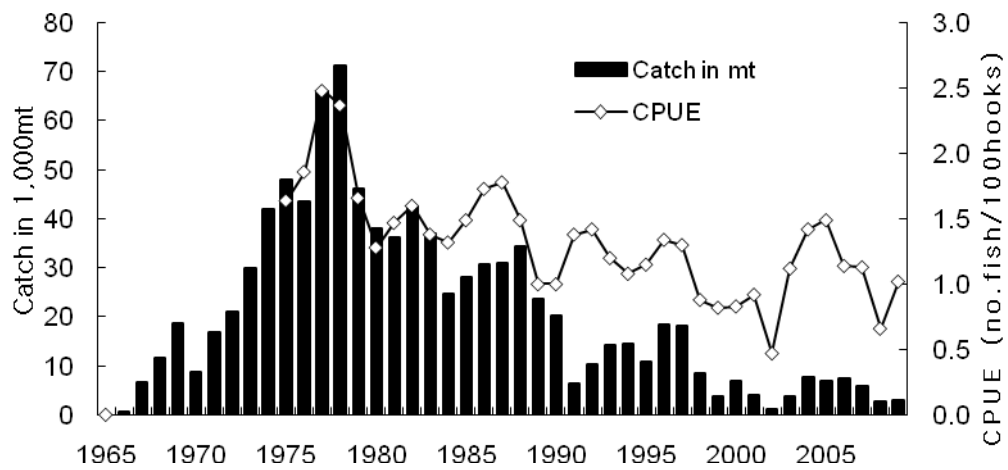


Fig 1. Historical catchannual catch and CPUE for Korean longliners in the IOTC Convention area, 1965-2009

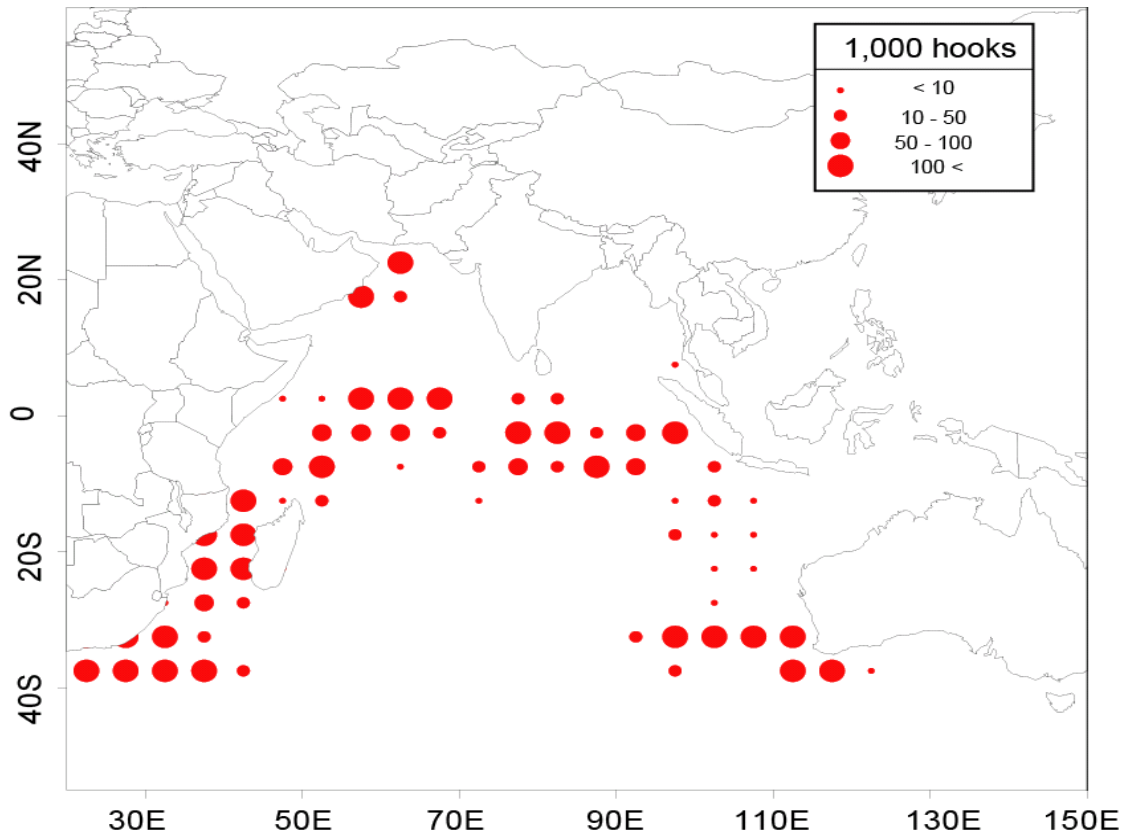


Fig.2. Map of distribution of fishing effort for the Korean longliners for the IOTC Convention area, 2009.

4) FLEET STRUCTURE

Korean tuna fishing fleet are all deep freezing tuna longliners. The size of Korean tuna

longliners ranges from 258 to 424 gross tonnage classes. Total number of Korean tuna longline fishing vessels in the Indian Ocean reduced from 187 in 1975 to less than 31 in 2007. In 2009, 21 vessels were operated in the Indian Ocean, which is a decrease by 7 vessels to 2007.

Table 2. Number of Korean longline tuna fishing vessels, by size category, active operating in the IOTC Convention Area in 2005 to 2009

GRT	2005	2006	2007	2008	2009
Total	28	26	31	24	21
0-50					
51-200					
201-500	28	26	31	24	21
501-1000					
1001-1500					
1500+					

5) IMPLEMENTATION OF SCIENTIFIC COMMITTEE RECOMMENDATION

As a responsible fishing nation, Korea has implemented recommendations and resolutions adopted by regional fisheries organizations. Legislation of domestic regulations, initiation of observer program, and submission of fisheries statistics are among its efforts to meet the requirements by various fisheries bodies including IOTC. In accordance with the last year's recommendation by the Scientific Committee, size frequency distribution of the Korea tuna catch was corrected to be distributed by 2 cm instead of 5cm interval by separating when coming from onboard observers. With regard to improvement of scientific data of the bycatch and ecologically important species such as sharks, seabirds, sea turtles and marine mammals, the columns were added in the logsheet and species identification guides was provided to facilitate for fishermen to fill out the necessary informations and thus those information would be available from 2011. In addition, the National Fisheries research and Development Institute instructed the fishing companies and fishermen to submit the logbook data in electronical format as soon as the fishing operation ends.

6) ECOSYSTEM AND BYCATCH

Korea has just started for the fishermen to report the ecologically important species with new logbook sheet adding those species since 2010 and so this section would be available from 2011. The NPOA regarding sharks, seabirds and sea turtle has also been in preparation for implement from 2011.

7) NATIONAL DATA COLLECTION AND PROCESSING SYSTEM

- a. Logbook data collection and verification (including data commenced and status of implementation)

Korean longline fisheries in the Indian Ocean usually have operated in all year round since the fishery started. Thus, fisheries statistics are collected and reported for a calendar year. Coverage rate in catch of all species was 52 to 69% during the 1981-1985 periods, but it increased to the highest level of 91% in 1987. In recent years, the coverage rates maintained over 50%.

There are two national data collection systems for Korean tuna fisheries. The first system has been operated by the Korean Deep-Sea Fisheries Association to collect total catch by species. All Korean distant-water fishing vessels report their catch records in terms of weight by species to their companies once a week or at 10-day intervals. The Association compiles the data by month and by FAO fishing area to submit to the Ministry for Food, Agriculture, Forestry and Fisheries (MFAFF) for the final review and publication. Both the Association and the Ministry publish the catch statistics for official use annually.

The second data collection system is to sample catch and effort data based on the logbooks. This system was lawful in 1977 by the MFAFF. According to this domestic regulation, distant-water fishing vessels have to submit the reports of their fishing operations within 30 days (home-based) or 60 days (foreign-based) after completion of their operations to the National Fisheries Research and Development Institute (NFRDI). The NFRDI of Korea has monitored and compiled catches and fishing-efforts of tuna longliners in the Indian Ocean. The requested catch and efforts data were already provided to the IOTC secretariat.

- b. Vessel Monitoring System (including Data commenced and status of implementation)

All the deep freezing longliners have been equipped with the VMS system.

- c. Scientific Observer program (including data commenced and status, number of

observer, including percentage coverage by gear type)

The National Fisheries Research and Development Institute (NFRDI) began to operate fisheries observer program in 2002 to monitor Korean distant-water fisheries including those for tunas and to meet the requirements of regional fisheries bodies. At the initial stage, the scale of observer program will be fairly small to cover only for the fisheries to be urgently implemented such as a southern bluefin tuna longline fishery in CCSBT convention area, but it will be gradually developed to a bigger scale to cover all required areas of fisheries.

The goal of the first stage of observer program development is to establish a domestic training system to educate national observers. In 2008, a total of 3 observer candidates received a trainship from Korean longline observer program provided by NFRDI and all 5 observers joined 2-3 months on-board Korean tuna longline and purse seine fishing vessels in Pacific and Atlantic Ocean. In 2009, 3 observers made the onboard trip and covered 14.5% to the fishing effort of Korean longliners practiced in the Indian Ocean.

d. Port sampling program (including date commenced and status of implementation)

Korea is in the status of preparation to intend implementation in 2011.

8) NATIONAL RESEARCH PROGRAM

No specific national research program has been carrying out in the IOTC area of competence.

9) RECREATIONAL FISHERIES

Not relevant to Korea as there is no recreational fisheries.

10) LITERATURE REFERENCES

1. Seon-Jae Hwang, Doo-Hae An and Doo-Nam Kim. National report of Korea in IOTC waters in 2008. IOTC-2009-INF16.