Korea National Report to the Scientific Committee of the Indian Ocean Tuna Commission, 2020

Sung Il Lee, Jung-hyun Lim, Mi Kyung Lee and Youjung Kwon

National Institute of Fisheries Science
216 Gijang-Haeanro, Gijang-eup, Gijang-gun, Busan 46083, Republic of Korea

INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

In accordance with IOTC Resolution 15/02, final scientific data for the previous year was provided to the IOTC Secretariat by 30 June of the current year, **for all fleets other than longline** [e.g. for a National Report submitted to the IOTC Secretariat in 2019, final data for the 2018 calendar year must be provided to the Secretariat by 30 June 2019)	YES 30//06/2020
In accordance with IOTC Resolution 15/02, provisional **longline data** for the previous year was provided to the IOTC Secretariat by 30 June of the current year [e.g. for a National Report submitted to the IOTC Secretariat in 2019, preliminary data for the 2018 calendar year was provided to the IOTC Secretariat by 30 June 2019). **REMINDER:** Final longline data for the previous year is due to the IOTC Secretariat by 30 Dec of the current year [e.g. for a National Report submitted to the IOTC Secretariat in 2019, final data for the 2018 calendar year must be provided to the Secretariat by 30 December 2019).	YES 30/06/2020
If no, please indicate the reason(s) and intended actions:	

Executive Summary

The number of active vessels in 2019 was 10 for longline fishery and 2 for purse seine fishery. With this fishing capacity, Korean tuna longline fishery caught 3,208 ton in 2019, which was 14% higher than that of 2018. The fishing efforts in 2019 were 5,899 thousand hooks and distributed in only the western Indian Ocean, while the fishing efforts averaged for 5 recent years (2015-2019) were 6,328 thousand hooks and distributed in the western tropical areas around 0-20°S as well as in the western and eastern areas around 20°S-40°S. Since 2015, some vessels have moved to the western tropical area between 5°N-10°S to fish for bigeye tuna and yellowfin tuna. Korean tuna purse seine fishery in the Indian Ocean recorded 20,650 ton in 2019. In 2019, 2 vessels of Korean tuna purse seine fishery operated mainly in the western and central tropical areas around 10°N-10°S. The fishing efforts in 2019 were 763 sets, which mainly distributed in the western and central tropical areas around 40°E-70°E. In 2019, 3 national scientific observers for longline fishery were dispatched onboard for implementing observer program and scientific data collection, which carried out 4.7% of observer coverage in terms of the number of hooks. And regional scientific observers were dispatched onboard for purse seine fishery.

Contents

1. BACKGROUND/GENERAL FISHERY INFORMATION

Korean tuna longline fishery in the Indian Ocean commenced in 1957, and its target species were yellowfin tuna, bigeye tuna and albacore tuna from the beginning. Since 1991, southern bluefin tuna has been targeted because of the highest value in market price. And Korean tuna purse seine fishery initiated operating in 2012, and has targeted tropical tunas.

The traditional fishing grounds of Korean tuna longline fishery were mainly distributed in the central tropical area between 20°N-20°S, and extended south to 45°S and east to 120°E for fishing for southern bluefin tuna in recent years. The number of active vessels peaked at 185 in 1975, but after that gradually decreased to 21 in 2009 and 7 in 2011, and has increased to 12-14 since 2013. The catch recorded the highest with about 70 thousand ton in 1978, since then also has gradually decreased, and is showing a level of about 3.2 thousands ton in recent years.

Since 2012, Korean tuna purse seine fishery has operated mainly in the central and western tropical area. In 2019, 2 vessels operated and recorded about 20.7 thousand ton in total catch.

2. FLEET STRUCTURE

Korean tuna longline fleets in the Indian Ocean are all deep freezing tuna vessels. In 2019, the size ranges from 200 to 1,000 in gross tonnage class (Table 1). Total number of vessels had decreased from 185 in 1975 up to 7 in 2011, but it showed somewhat of increasing after 2013. Since 2015, 12 vessels of Korean tuna longline fishery on average have operated in the Indian Ocean.

Korean tuna purse seine fishery initiated operating in 2012 with 3 vessels, and its number of vessels increased to 5 in 2015-2016, but decreased to 2 after 2018 (Table 1).

Table 1. Number of vessels operating in the IOTC area of competence, by gear type and size, 2015-2019

Gear type	GT	Year				
		2015	2016	2017	2018	2019
Longline	200-500	3	3	3	3	2
	500-1,000	11	10	10	9	8
Purse seine	1,000-2,000	1	1	-	-	
	2,000-3,500	4	4	3	2	2

3. CATCH AND EFFORT

Total annual catch of Korean tuna longline fishery steeply increased from the mid-1960s, and peaked at about 70 thousands ton in 1978, and then has decreased with large fluctuations, where the decadal average of catch was about 39 thousands ton in the 1970s, 33 thousands ton in the 1980s, 12 thousands ton in the 1990s, 5 thousands ton in the 2000s, and 3 thousands ton in the 2010s, respectively (Fig. 1a). In 2019, the total catch was 3,208 ton, which accounted for 14% increasing from that of 2018 (2,815 ton). The changes in the number of active vessels closely coincided with the catch trend throughout the periods. The number of active vessels peaked at 185 in 1975, after that sharply decreased to 7 vessels in 2011-2012, and increased to 12-14 vessels in 2015-2018. In 2019, the fishing efforts were 5,899 thousand hooks and distributed in only the western Indian Ocean, while the fishing efforts averaged for 5 recent years (2015-2019) were 6,328 thousand hooks and distributed in the western tropical areas around 0-20°S as well as in the western and eastern areas around 20°S-40°S (Table 2a, Figs. 2a and 2b). Since 2015, some vessels have moved to the western tropical area between 5°N-10°S to fish for bigeye tuna and yellowfin tuna (Table 2a, Figs. 1a, 3a and 3b).

Korean tuna purse seine fishery in the Indian Ocean commenced in 2012 and recorded about 21 thousand ton in 2019 (Table 2b, Fig. 1b). In 2019, 2 vessels of Korean tuna purse seine fishery operated mainly in the western and central tropical areas around 10°N-10°S to catch tropical tunas (Table 1, Fig. 3a). The fishing efforts in 2019 were 763 sets, which mainly distributed in the western and central tropical areas around 40°E-70°E (Table 2b, Figs. 2a).

Table 2a. Annual catch (in number) and effort of Korean tuna longline fishery by primary species in the IOTC area of competence, 2015-2019

Year	No. hooks ($X10^3$)	BET	YFT	SKJ	ALB	SBF	SWO	BLM	BUM	MLS	SFA	NEI	Total
2015	7,365	10,675	47,387	512	16,656	3,690	2,654	531	1,314	277	2,308	36,991	122,995
2016	5,862	7,519	33,060	302	9,640	3,054	1,790	230	1,137	1,321	1,225	25,302	84,580
2017	6,463	10,383	50,378	984	6,625	515	3,036	58	1,225	705	1,585	18,254	93,748
2018	6,052	8,758	51,763	1,681	18,394	2,780	1,606	52	597	261	1,947	21,187	109,026
2019	5,899	9,945	62,318	1,340	20,288	687	1,568	174	672	167	1,350	27,046	125,555

Table 2b. Annual catch (in ton) and effort of Korean tuna purse seine fishery by primary species in the IOTC area of competence, 2015-2019

Year	No. sets	SKJ	BET	YFT	NEI	Total
2015	922	5,896	1,152	7,507	4	14,559
2016	1,220	13,670	604	10347	14	24,635
2017	697	10,981	844	6,362	59	18,246
2018	522	12,732	1,058	5,415	54	19,259
2019	763	10,043	1,797	8,730	80	20,650

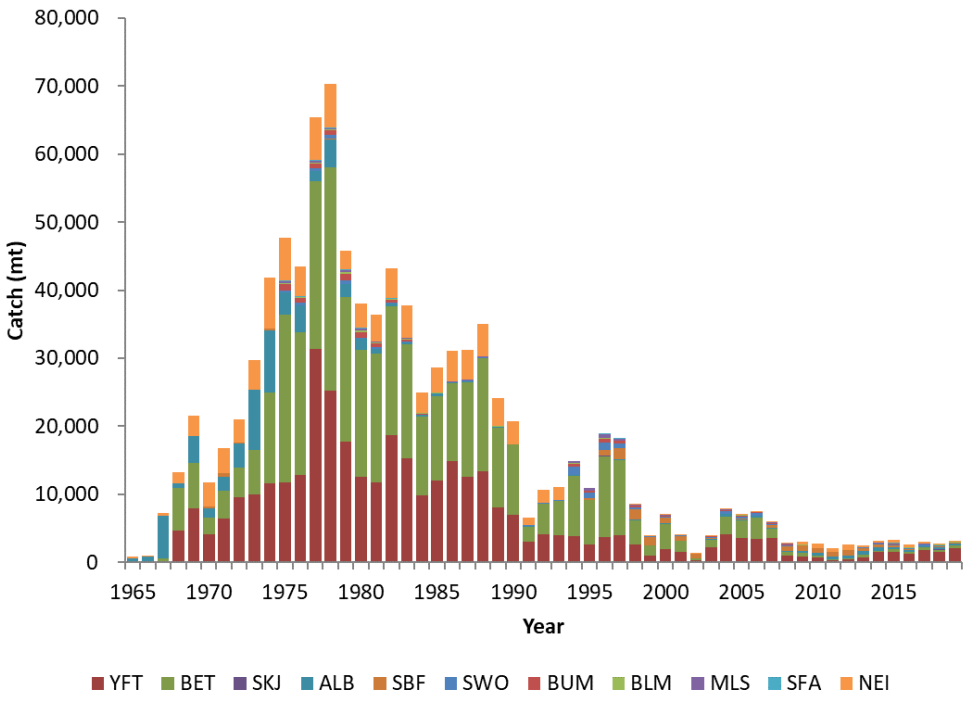


Figure 1a. Historical annual catch for Korean tuna longline fishery by primary species, for the IOTC area of competence.

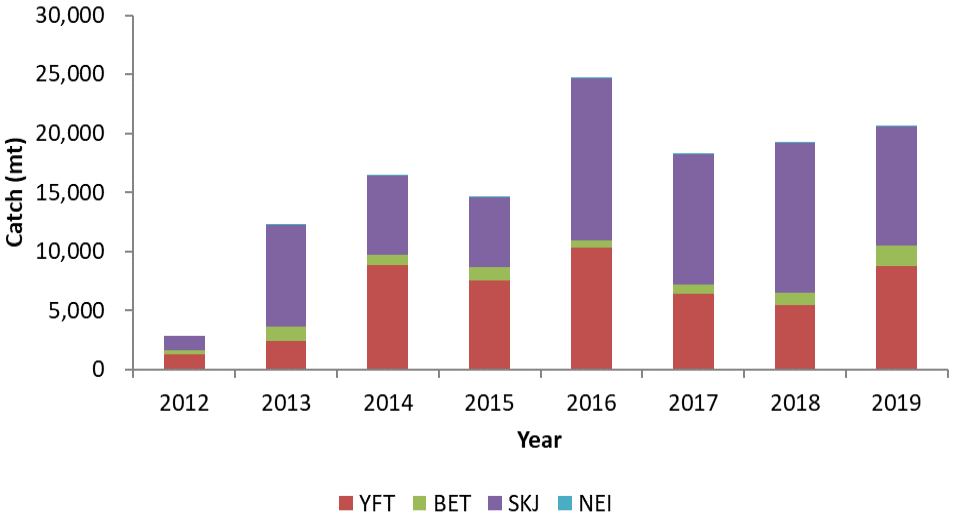
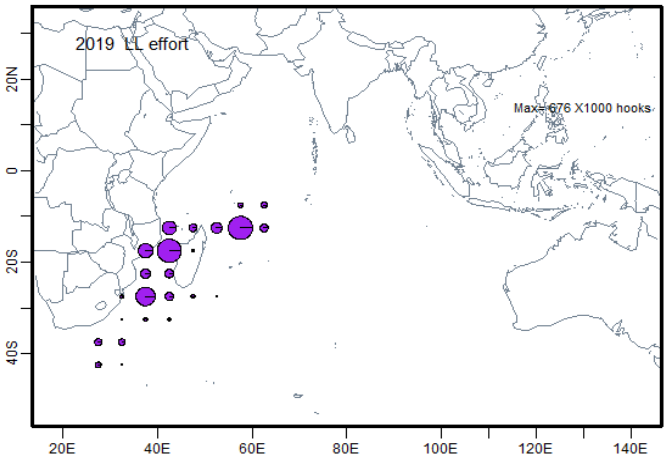
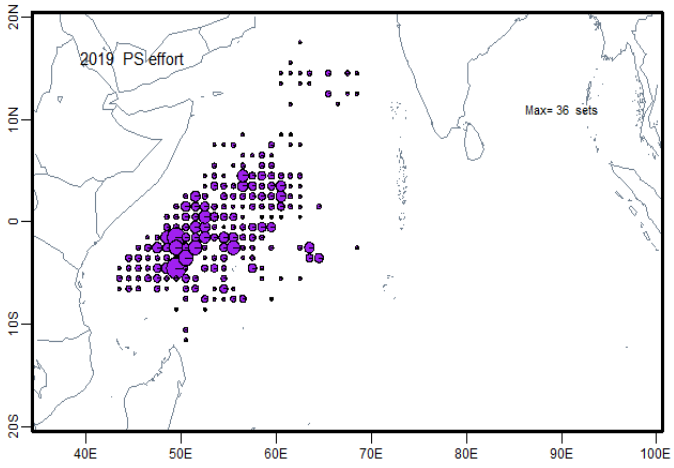


Figure 1b. Historical annual catch for Korean tuna purse seine fishery by primary species, for the IOTC area of competence.

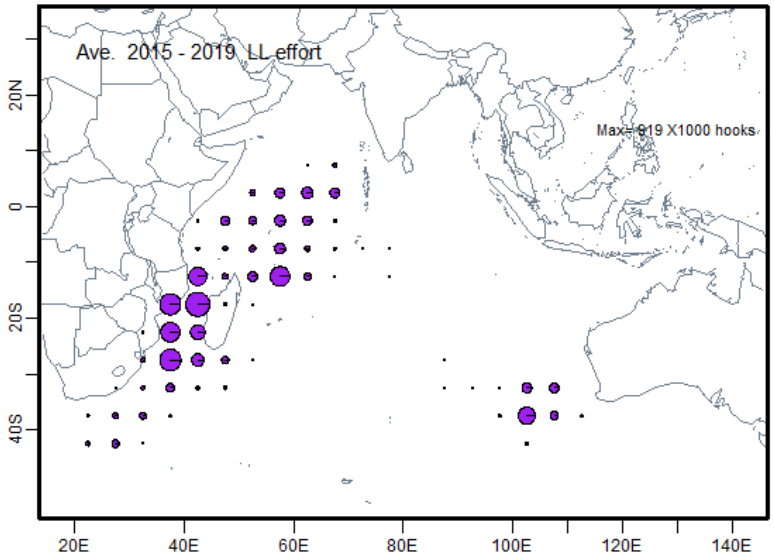


(a) Longline



(b) Purse seine

Figure 2a. Map of the distribution of fishing effort by gear type in the IOTC area of competence, 2019.



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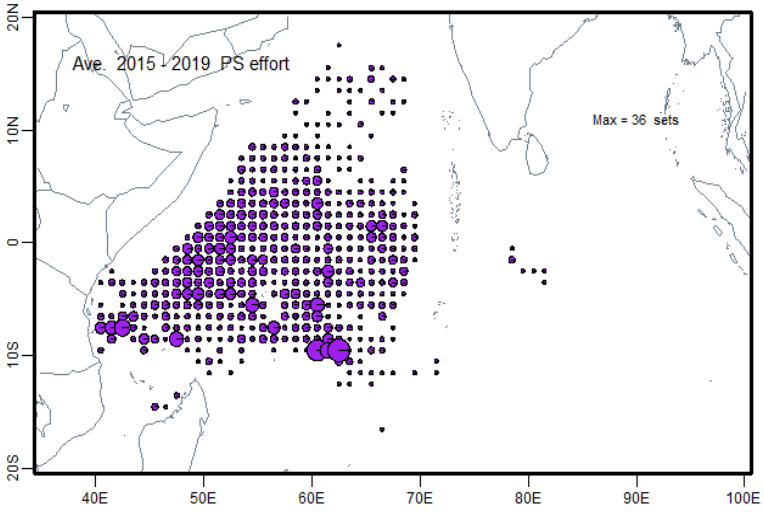
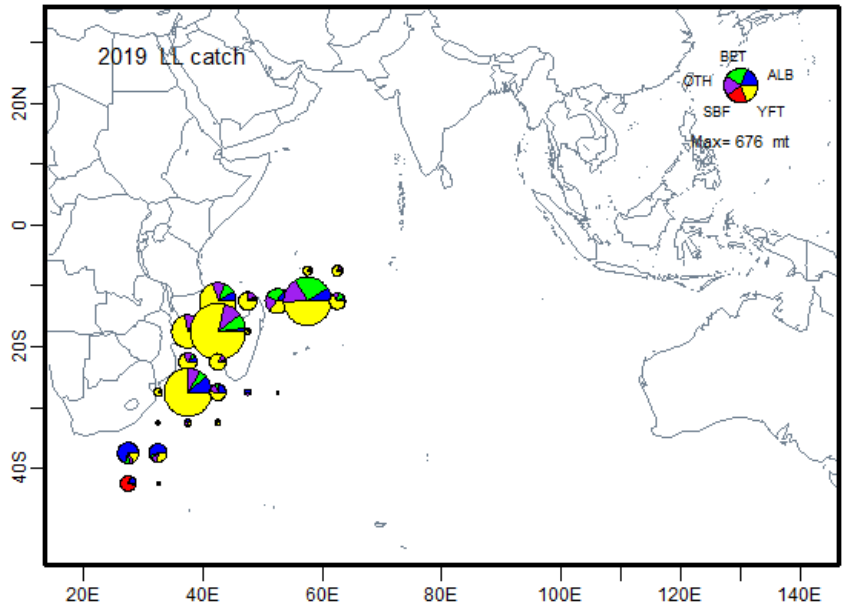
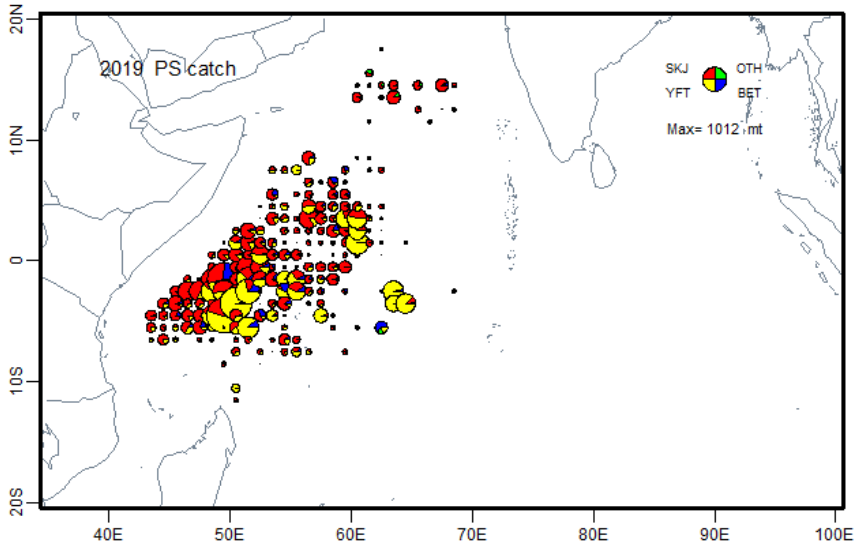


(b) Purse seine

Figure 2b. Map of the distribution of fishing effort by gear type in the IOTC area of competence for average of the 5 previous years, 2015-2019.

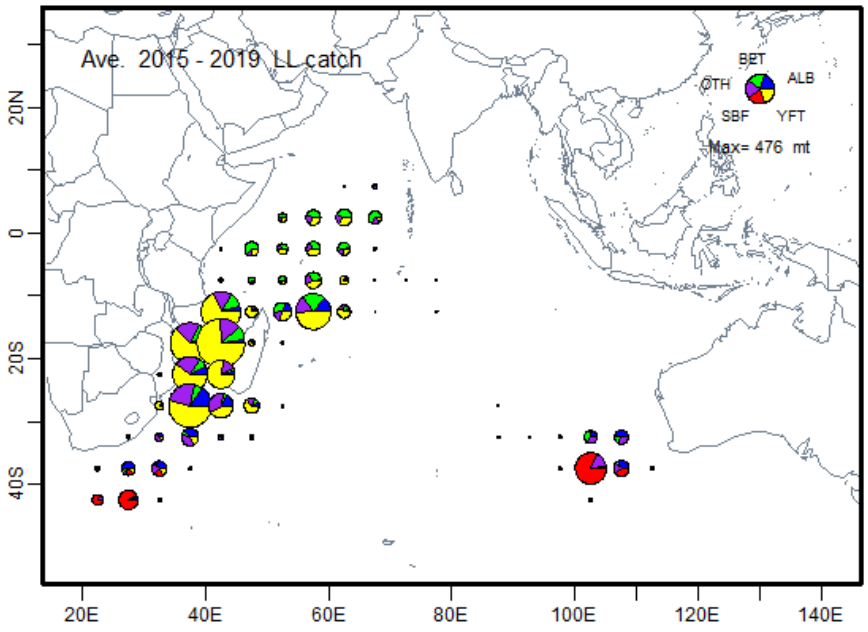


(a) Longline

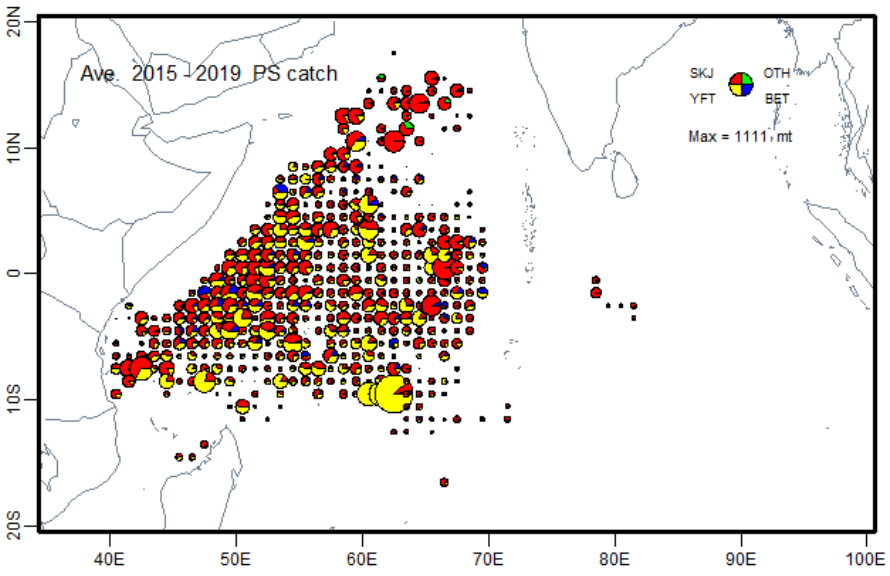


(b) Purse seine

Figure 3a. Map of distribution of catch by species for Korean tuna longline and purse seine fisheries in the IOTC area of competence, 2019.



(a) Longline



(b) Purse seine

Figure 3b. Map of distribution of catch by species for Korean tuna longline and purse seine fisheries in the IOTC area of competence for average of the 5 previous years, 2015-2019.

4. RECREATIONAL FISHERY

Korea has no recreational fishery.

5. ECOSYSTEM AND BYCATCH ISSUES

Environmental issues have been administrated with various individual laws since the 1960s. In relation to Korean national fisheries, there are the law of preservation and management of marine ecosystem (2007), the

framework act on marine fishery development (2009) and the law of fisheries management (2010). In particular, with regard to Korean distant water fisheries, they comply with the measures related to ecosystem and bycatch, taken by the 5 tuna Regional Fisheries Management Organizations (RFMOs) to which Korea acceded, in accordance with Article 16 of the Distant Water Fisheries Development Act. And to address the increasing data collection and reporting requirement by the tuna RFMOs for ecologically related species (ERS) such as sharks, seabirds, marine turtles, etc., the Act on Fisheries Information and Data Reporting was revised in December, 2012. It includes the data recording and reporting requirements recently adopted by the tuna RFMOs regarding catch by species, discards/release (alive/dead), seabird mitigation measures used, etc.

5.1 Sharks

5.1.1. NPOA sharks

Korean National Plan of Action for the Conservation and Management of Sharks (NPOA-sharks) was developed and approved in August 2011. Statistical and biological information on sharks have been collected through logsheet compiled from fishermen onboard and national scientific observer program (Tables 3 and 4).

5.1.2. Sharks finning regulation

Korean longline vessels land frozen sharks, and according to the NPOA-sharks and the Distant Water Fisheries Development Act entered into force in 2008, fishing vessels that land frozen sharks shall do not to have onboard fins that total more than 5% of the weight of sharks onboard, up to the first point of landing. It is monitored by scientific observer program.

5.1.3. Blue shark

All Korean fishing vessels shall record and report data of not only shark catch by species but also discard/release through Electronic Reporting System, and Korea has provided the data in full accordance with the Resolution 18/02.

Table 3. Total number and weight of sharks by species, retained by Korean tuna longline and purse seine fisheries in the IOTC area of competence for the most recent five years, 2015-2019

Fishery	Year	Retained catch by species (ton/inds.)							
		Blue shark	Mako sharks	Porbeagle shark	Oceanic whitetip shark	Hammerhead sharks	Thresher sharks	Others	Total
Longline	2015	230 /12,334	40 /1,072	1 /63	0 /0	<0.5 /4	0 /0	11 /345	283 /13,818
	2016	240 /9,783	41 /1,007	4 /101	0 /0	0 /0	0 /0	11 /319	296 /11,210
	2017	106 /3,857	25 /599	2 /73	0 /0	0 /0	0 /0	3 /111	136 /4,640
	2018	26 /938	21 /472	<1 /27	0 /0	0 /0	0 /0	<0.1 /1	48 /1,438
	2019	0 /0	11 /244	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0
Purse seine	2015	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0
	2016	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0
	2017	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0
	2018	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0
	2019	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0	0 /0

Table 4: Total number of sharks by species, released/discarded by Korean tuna longline and purse seine fisheries in the IOTC area of competence for the most recent five years, 2015-2019

Fishery	Year	Released/discarded by species									
		Blue shark	Mako sharks	Porbeagle shark	Silky shark	Oceanic whitetip shark	Hammerhead sharks	Bigeye thresher shark	Thresher sharks	Others	Total
Longline (inds.)	2015	2,156	21	205	0	2	0	1	1	207	2,593
	2016	126	22	58	0	0	0	0	4	1	211
	2017	2,698	181	114	31	0	0	0	0	67	3,091
	2018	5,045	2	0	22	7	1	3	2	0	5,172
	2019	3,507	2	0	0	0	0	0	0	0	3,509
Purse seine (ton)	2015	0	0.117	6.554	2.810	0	0	0	0	0.917	10.398
	2016	0	0	4.964	27	0.965	0	0	0	0	29.328
	2017	0	0	0	8.480	0.210	0	0	0	0	8.690
	2018	0	0	0	1.5	15*	0	0	0	0	1.5
	2019*	0	0	0			0	0	0	0	284/58

* indicates the number of individuals.

5.2 Seabirds

Korean National Plan of Action for Reducing Incidental Catch of Seabirds in Longline Fisheries (NPOA-seabirds) was established in January 2014. Interactions and mortality of seabirds have been collected through national scientific observer program and logsheets compiled from fishermen onboard (Table 5). Although it has been encouraged fishermen to record on logsheets and report the data for seabirds, fishermen are not familiar with data recording and reporting for seabirds due to difficulty in species identification. Hence, it has recommended that fishermen take a picture when not being able to identify seabird species, and the National Institute of Fisheries Science (NIFS) has educated and requested fishermen to record and report the required data with great emphasis on ERS and implementation of its mitigation measures in close cooperation with the NIFS. And the NIFS has distributed the field guide for identifying seabird to fishermen and scientific observers. In 2019, Korean tuna longline vessels operated in the areas south of 25°S used bird-scaring lines and line weighting as seabird mitigation measures.

5.3 Marine Turtles

Interactions and mortality of marine turtles have been collected through national scientific observer program and logsheets compiled from fishermen onboard (Table 5). The field guide for identifying marine turtle has been distributed on board to encourage fishermen to record and report the data for marine turtles, likewise the case of seabirds. And Korean fishing vessels keep the device for landing and releasing marine turtles onboard.

5.4 Other ecologically related species (e.g. marine mammals, whale sharks)

Interactions and mortality of marine mammals and whale sharks have been collected through national scientific observer program and logsheets compiled from fishermen onboard (Table 5). When marine mammals and whale sharks are observed during fishing operation, fishing vessels shall stop all the operations until they have been release safely.

Table 5. Observed annual catches of species of special interest by species (seabirds, marine turtles and marine mammals) by Korean tuna longline and purse seine fisheries in the IOTC area of competence for the most recent five years, 2015-2019

(a) Seabirds

Fishery	Year	Seabirds									
		Yellow nosed albatross	Royal albatross	Black browed Albatross	Buller's albatross	Cape petrel	Grey headed Albatross	Southern Giant Albatross	Wandering Albatross	Sooty albatross	Unidenti-fied sp.
Longline	2015	1	0	0	0	0	0	0	1	0	0
	2016	0	0	0	0	0	0	0	0	0	0
	2017	0	0	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	3	0	0	1	0
	2019	3	0	0	0	0	0	0	0	1	0

* Data were compiled by national scientific observers.
** No seabird was bycaught by purse seine fishery.

(b) Marine turtles and other ecologically related species

Fishery	Year	Marine turtles					Marine mammals			Whale shark
		Loggerhead turtle	Olive ridley turtle	Green turtle	Leatherback turtle	Uniden-tified sp.	Spinner dolphin	Pygmy killer whale	Uniden-tified sp.	
Longline	2015	0	0	0	0	0	0	0	0	0
	2016	0	0	1	0	0	0	0	1	0
	2017	0	0	0	0	0	0	0	0	0
	2018	0	0	0	0	0	0	0	0	0
	2019	0	0	0	0	0	0	0	0	0
Purse seine	2015†	0	1	0	0	1	2	0	0	0
	2016	0	2	0	1	0	0	0	0	0
	2017†	0	1	0	0	0	0	0	0	0
	2018†	0	1	0	0	0	0	0	0	1
	2019†	0	0	0	0	0	0	0	0	0

* Data were compiled by national scientific observers and fishing vessels, of which † indicates data compiled by fishing vessels.

6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

6.1. Logsheet data collection and verification

The NIFS has collected the data of Korean tuna fisheries, and data are available from 1971. In 2012, Korean domestic law (Distant Water Fisheries Development Act) was revised that the time for data submission was changed from within 30 days (home-based) or 60 days (foreign-based) after completion of their operations to monthly report for improving the data collection to meet the timely submission of data and to have higher quality and quantity of the data. A series of subsequent has been made on logsheets updates including the amount of discard/release, the incorporation of ERS, implementation of the biological measurement and sampling required, seabird mitigation measures used, etc. After September 2014, the Act obliged fishers to report the catch statistics to the NIFS every week, and since 1st September 2015, the Distant Water Fisheries Development Act has obliged fishers to report the catch statistics every day to the NIFS through the Electronic Reporting System in order to manage/cross-check the data in real time.

Catch statistics of Korean fishing vessels are obtained from two sources of data reporting. The Korea Overseas Fisheries Association (KOFA) collects catch by species and by vessels from fishery industries, and the NIFS collects logbook data from vessels filled out by captain onboard. The data collected are verified and confirmed through cross-checking between the NIFS and the KOFA. In addition, catch

data are cross-checked between those of the NIFS and the National Fishery Products Quality Management Service (NFQS) prior to issuing Catch Documentation Scheme (CDS).

6.2. Vessel Monitoring System

Korea operates Vessel Monitoring System (VMS) program to comply with the requirement of the RFMO's VMS. All Korean flagged fishing vessels and carrier vessels are equipped with VMS and have implemented in compliance with the IOTC Resolution 06/03 and the Korean Act of the Distant Water Fisheries Development (2008). And Korea established the Fisheries Monitoring Center (FMC) in March 2014 to monitor/manage the VMS data so that the data are cross-checked with fishing position from logbook.

6.3. Observer scheme

Korean scientific observer program for distant water fisheries was started in 2002. The NIFS is responsible for implementing and developing the observer program. The qualification for being observers is college graduated where major field is nature science or fisheries high school graduated with at least 1-year experience on board having a certificate of qualification to deck officer. Candidates 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. One is the test on a technical term of fisheries and biology, and the other is the test on species identification. The person who scored above 70 in the two tests and attended 100% of the course timetable can be qualified and deployed on board as a scientific observer. At present, Korea has 55 persons being able to be deployed onboard as an active scientific observer.

In 2019, Korean had deployed 3 national scientific observers on 3 longline vessels operating in the Indian Ocean and dispatched regional scientific observers for purse seine vessels (Fig. 4). They observed the fishing efforts of 277 thousands hooks for longline fishery, which their observer coverages were estimated to be 4.7% (Table 6).

The observers collected the data which are required by the IOTC scientific observer program standards. The data collected were vessel and gear characteristics, setting and catch (retained/discarded) details, ERS interaction, biological information, sighting of marine mammals, etc. The biological measurements were conducted on all species, if possible.

Table 6. Annual observer coverage (%) by Korean tuna longline and purse seine fisheries for the most recent five years, 2015-2019

Fishery	2015	2016	2017	2018	2019
Longline	4.3	4.3	5.9	4.0	4.7
Purse seine*	2.5	7.8	8.4	17.0	-

* It does not include the coverage implemented by regional observer programs.

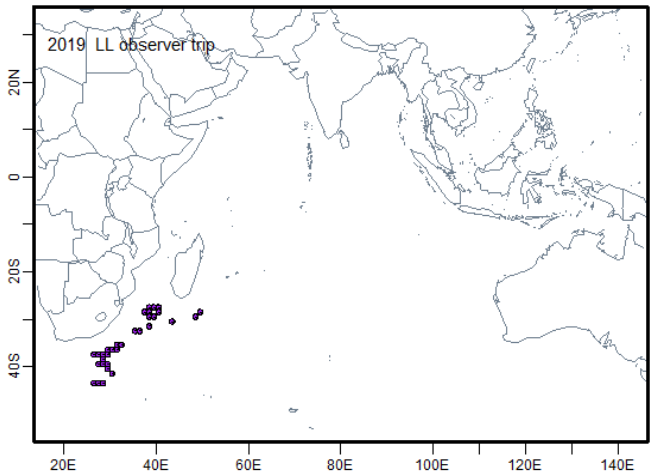


Figure 4. Map showing the spatial distribution of observer coverage in 2019.

6.4. Port sampling programme

Korea did not conducted any port sampling program within the IOTC Convention Area in 2019.

6.5. Unloading/Transhipment

The information on the unloading and transhipment of Korean tuna fleets within the IOTC area of competence in 2019 is summarized in Table 7 and 8.

Table 7. Quantities by species and gear landed in ports located in the IOTC area of competence

IOTC Species	Unloading in ports (kg)
Yellowfin	9,574,202
Bigeye	1,707,649
Skipjack	8,140,269
Southern Bluefin	0
Blue Marlin	28,789
Striped Marlin	3,455
Swordfish	25,156
Others	440,256

Table 8. Quantities by species and gear transhipped in ports located in the IOTC area of competence

IOTC Species	Transhipment in ports (kg)
Yellowfin	119,441
Bigeye	73,567
Skipjack	115
Southern Bluefin	129,689
Blue Marlin	3,950
Striped Marlin	376
Swordfish	6,165
Others	7,124

6.6. Actions taken to monitor catches & manage fisheries for Striped Marlin, Black Marlin, Blue Marlin and Indo-pacific Sailfish

All Korean fishing vessels shall record and report data of the billfishes that they retain onboard and discard/release, and Korea has provided all the data in full accordance with the Resolution 18/05.

6.7. Gillnet observer coverage and monitoring

Korea has no gillnet fishing vessels within the IOTC Convention Area.

6.8. Sampling plans for mobulid rays

No sampling plans for mobulid rays.

7. NATIONAL RESEARCH PROGRAMS

No program in 2019.

8. IMPLEMENTATION OF SCIENTIFIC COMMITTEE RECOMMENDATIONS AND RESOLUTIONS OF THE IOTC RELEVANT TO THE SC

Table 9. Scientific requirements contained in Resolutions of the Commission, adopted between 2012 and 2019

Res. No.	Resolution	Scientific requirement	CPC progress
11/04	On a regional observer scheme	Paragraph 9	Korea reports annually the number of vessels monitored, observer coverage with its trip report.
12/04	On the conservation of marine turtles	Paragraphs 3, 4, 6–10	Data and interaction on marine turtles are collected through observer programs and logsheets. Study on use of circle hook was conducted in the Pacific Ocean in 2006. The NIFS conducts education for conservation of marine turtles to the fishermen, and fishing vessels carry the device for handling and releasing marine turtles onboard.
12/06	On reducing the incidental bycatch of seabirds in longline fisheries.	Paragraphs 3–7	Korea has provided information on how we are implementing this measure and have conducted sea trials for developing seabirds mitigation measure since 2013. Korean longline fishing vessels have implemented seabirds mitigation measures in accordance with IOTC resolution.
12/09	On the conservation of thresher sharks (family alopiidae) caught in association with fisheries in the IOTC area of competence	Paragraphs 4–8	Thresher sharks are prohibited to retain onboard Korean longline vessels. If bycatch occurred, fishermen shall cut the line, promptly release unharmed them with proper handling and record the interaction on logbook.
13/04	On the conservation of cetaceans	Paragraphs 7– 9	Korea collects the data on cetaceans through logsheets and observer programs.
13/05	On the conservation of whale sharks (*Rhincodon typus*)	Paragraphs 7– 9	Korea collects the data on cetaceans through logsheets and observer programs.
13/06	On a scientific and management framework on the conservation of shark species caught in association with IOTC managed fisheries	Paragraph 5–6	Fishermen shall record and report the incidental catch with interaction information in accordance with IOTC logsheets template.
15/01	On the recording of catch and effort by fishing vessels in the IOTC area of competence	Paragraphs 1–10	Fishermen shall record catch and effort data on logbook and keep it onboard. And they shall daily report logbook data, in accordance with IOTC logbook template, to the NIFS, Korea. Korea has submitted the official logbook template used in Korean vessel and catch and effort data on an aggregated basis to the Secretariat.

Res. No.	Resolution	Scientific requirement	CPC progress
15/02	Mandatory statistical reporting requirements for IOTC Contracting Parties and Cooperating Non-Contracting Parties (CPCs)	Paragraphs 1–7	All Korean fishing vessels shall record and report the data to government on daily basis, and measure biological information on at least1 fish per a ton of catch.
17/05	On the conservation of sharks caught in association with fisheries managed by IOTC	Paragraphs 6, 9, 11	Korea has collected shark catch by species, and provided the data in time.
18/02	On management measures for the conservation of blue shark caught in association with IOTC fisheries	Paragraphs 2-5	All Korean fishing vessels shall record and report data of shark catch by species, and Korea has provided the data in full accordance with the Resolution.
18/05	On management measures for the conservation of the Billfishes: Striped marlin, black marlin, blue marlin and Indo-Pacific sailfish	Paragraphs 7 – 11	All Korean fishing vessels shall record and report data of the billfishes that they catch, and Korea has provided the data in full accordance with the Resolution.
18/07	On measures applicable in case of non-fulfilment of reporting obligations in the IOTC	Paragraphs 1, 4	Korea has collected and provided the data described in the paragraphs.
19/01	On an Interim Plan for Rebuilding the Indian Ocean Yellowfin Tuna Stock in the IOTC Area of Competence	Paragraph 22	Korea has no gillnet fishing vessels within the IOTC Convention Area.
19/03	On the Conservation of Mobulid Rays Caught in Association with Fisheries in the IOTC Area of Competence	Paragraph 11	There is no any catch of Mobulid Rays by Korean fishing vessels in 2019. However, we will monitor the catch through scientific observer program, if occurred.

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