

2018 ANNUAL SCIENTIFIC OBSERVER REPORT FOR KOREAN TUNA LONGLINE FISHERY IN THE IATTC CONVENTION AREA

National Institute of Fisheries Science (NIFS)

216 Gijang-Haeanro, Gijang-eup, Gijang-gun, Busan 46083, Rep. of Korea

(PROVISIONAL VERSION)

Summary

In accordance with IATTC Resolution C-11-08 and the Korean National Scientific Observer Program, 10 observers had been deployed to investigate Korean tuna longline vessel on fishing activities and collect the data on catch, effort, discards and other relevant scientific information in the IATTC convention area, 2018. They observed 379 days and their observer coverage were about 3.9%.

Observer tasks

The observer tasks are basically 1) recording and reporting fishing activities, verifying positions of the vessel, 2) observing and estimating catches as far as possible with a view to identifying catch composition and monitoring discards, bycatch and size frequency, 3) recording the gear type, mesh size and attachments employed by the master, 4) collecting information to enable the cross-checking entries made to the logbooks (species composition and quantities, live and processed weight and location, where available), 5) carrying out other scientific works.

Fishing operations

In 2018, the information from 10 Korean observers deployed on longline vessel operating in the IATTC convention area is as follows. They observed the effort of about 616 thousand hooks in 333 sets during 379 days (Table 1). The observed area during the trips were between 120-150°W of 6°N-15°S, which is shown in Fig. 1.

Table 1. Information on observer trip of Korean tuna longline fishery in the IATTC convention area, 2018

Observer	Observation period	Sets observed	Number of hooks	Day observed
A	8.28-12.8	94	184,195	103
B	10.3-12.20	70	127,271	79
C	11.1-12.31	50	99,322	61
D	11.8-12.13	31	44,428	36
E	11.29-12.30	25	39,712	31
F	12.12-12.31	18	35,832	20
G	12.15-12.31	15	29,660	17
H	12.17-12.31	14	25,776	16
I	12.22-12.31	10	16,128	10
J	3.19-3.24	6	13,650	6

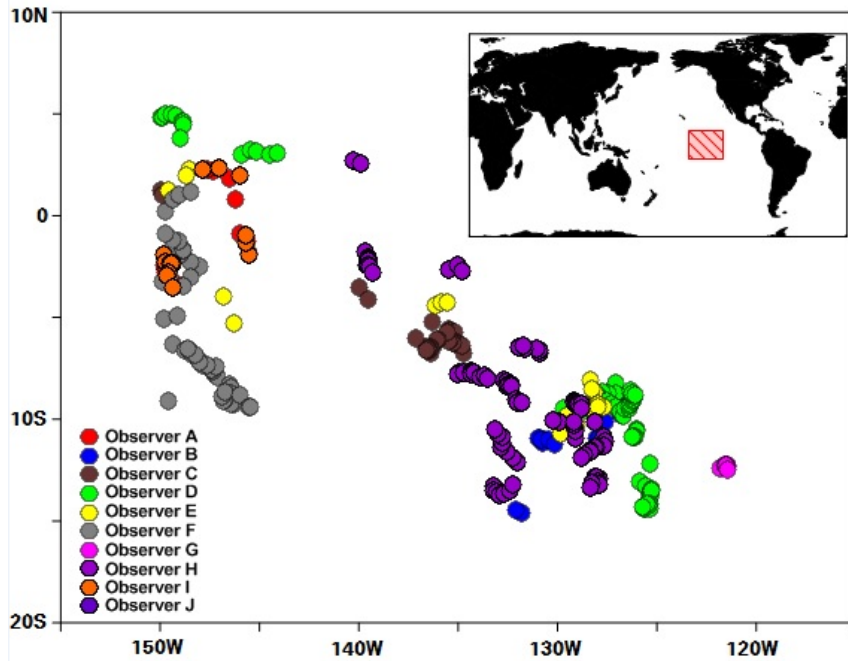


Fig. 1. Fishing positions of Korean tuna longline vessels observed during the each scientific observer trip in the IATTC convention area, 2018.

Catch observed and species composition

Tables 2 and 3 show retained catch and discards or releases by species during the observer trips in the IATTC convention area, respectively. During those trips, 8 mobulid rays, 2 olive ridley turtles, 1 green sea turtle, 2 leatherback sea turtles and 2 dolphins were caught incidentally, but promptly released and discarded. No seabird was caught.

Biological data collected

All the species, if possible, were measured and weighted on board. Stomach content and gonads for target and non-target species were observed.

Tagging

No individual was recaptured during the observer trips in 2018.

Table 2. Total retained catch by species recorded during the observer trip in the IATTC convention area, 2018

Group	Species	Observer A		Observer B		Observer C		Observer D		Observer E	
		Number	Weight	Number	Weight	Number	Weight	Number	Weight	Number	Weight
Tunas	Albacore	840	13,458	437	7,093	7	148	10	174	29	505
	Bigeye tuna	818	48,715	636	35,393	679	31,763	211	12,542	195	10,100
	Skipjack	45	454	89	674	34	317	31	270	3	24
	Yellowfin tuna	224	8,501	242	9,040	204	9,539	177	7,121	58	2,183
Billfishes	Black marlin	1									
	Blue marlin	32	2,711	41	2,829	47	3,548	8	505	9	692
	Indo-Pacific sailfish					2	59				
	Shortbill spearfish	23	359	21	314	4	64	4	59		
	Striped marlin	16	793	3	179	3	156	3	130		
	Swordfish	106	7,041	51	3,115	44	3,085	30	2,196	22	1,499
Sharks	Silky shark	27	882								
	Smooth hammerhead shark	3	158								
Others	Common dolphinfish			1	11						
	Escolar	230	4,130	70	967	26	315	34	447		
	Ocean sunfish					1					
	Oilfish										
	Opah	9	454	15	658	4	197	2	107	2	120
	Short snouted lancetfish										
	Sickle pomfret										
	Snake mackerels, escolars nei									3	52
	Velvet dogfish							1			
Wahoo	72	1,172	37	580	13	172	7	85			
Total		2,446	88,828	1,643	60,854	1,068	49,360	518	23,636	321	15,175

Table 2 cont.. Total retained catch by species recorded during the observer trip in the IATTC convention area, 2018

Group	Species	Observer F		Observer G		Observer H		Observer I		Observer J	
		Number	Weight	Number	Weight	Number	Weight	Number	Weight	Number	Weight
Tunas	Albacore	131	2,331					12	153		
	Bigeye tuna	151	8,958	79	4,931	140	9,372	116	8,216	84	4,876
	Skipjack	17	165	32	248	28	219	2	11	4	26
	Yellowfin tuna	32	1,172	14	523	26	1,030	3	102	6	235
Billfishes	Black marlin										
	Blue marlin	3	176	1	121	7	665			2	167
	Indo-Pacific sailfish										
	Shortbill spearfish	2	22	1	12			2	29		
	Striped marlin	2	150	1	56	1	45	1	46		
	Swordfish	14	842	1	101	21	1,479	3	168	6	332
Sharks	Silky shark										
	Smooth hammerhead shark										
Others	Common dolphinfish										
	Escolar			1	16					2	8
	Ocean sunfish										
	Oilfish							4	31		
	Opah	1	58					2	92		
	Short snouted lancetfish	1	7								
	Sickle pomfret	1	6								
	Snake mackerels, escolars nei	7	79			28	309	1	27		
	Velvet dogfish					2	15				
Wahoo	7	115			6	82			3	31	
Total		370	14,081	130	6,007	259	13,216	146	8,875	107	5,675

Table 3. Number of discarded or released species during the observer trip in the IATTC convention area, 2018

(unit : number of fish)

Group	Species	Obs. A	Obs. B	Obs. C	Obs. D	Obs. E	Obs. F	Obs. G	Obs. H	Obs. I	Obs. J
Tunas	Albacore	7	23				1				
	Bigeye tuna	73	40	31		1	2	3	6		1
	Skipjack	2	23	13		1			1		
	Yellowfin tuna	14	22	5		1	1		2		2
Billfishes	Blue marlin	4	7	2					1		
	Shortbill spearfish	2		1						2	
	Swordfish	63	89	87		2	1		4		
Sharks	Bigeye sandtiger shark		1								
	Bigeye thresher shark	23	17			1			2		3
	Blue shark	172	119	39	2		3	1	1	5	3
	Longfin Mako shark	3		2				1	3		
	Oceanic whitetip shark	5	5	8					2		1
	Pelagic thresher shark	11		1		2					
	Shortfin mako shark	8	4	1							
	Silky shark	5	29	43		6			13		
	Smooth hammerhead shark			2							
	Thresher sharks			11							
Mackerel sharks											1
Others	Common dolphinfish	14	1						1		
	Escolar	219	77	71	1		5	2	53		
	Great barracuda			2		1					
	Lancetfishes nei.	45		26	1		5				
	Long snouted lancetfish		62						5		3
	Oilfish	8	3	6			1		1		
	Pelagic stingray	289	494	230		1	13	7	12	12	11
	Pomfrets, Ocean breams nei	32	44	19	5	4	2		18		1
	Roudi escolar	10	1								
	Short snouted lancetfish		5								
	Sickle pomfret	98	8	14	5		2	1	2		4
	Snake mackerel	48	62	76		2	6	5	15		6
	Velvet dogfish	29	41	34	4				56		
	Wahoo	15	5	3					1		
Others	3	3	10		2	5				1	2
Mobulid rays	Giant manta		4								
	Mobula nei.	3		1							
Turtles	Olive ridley sea turtle		2								
	Green sea turtle			1							
	Leatherback sea turtle								2		
Marine mammals	Dolphins nei.	2									
Sum		1,207	1,191	739	18	24	47	20	201	20	38

**INTER-AMERICAN TROPICAL TUNA COMMISSION
SCIENTIFIC ADVISORY COMMITTEE**

NINTH MEETING

**La Jolla, California (USA)
14-18 May 2017**

DOCUMENT SAC-09 INF A(d)

**2017 ANNUAL SCIENTIFIC OBSERVER REPORT FOR
KOREAN TUNA LONGLINE FISHERY IN THE IATTC
CONVENTION AREA**

National Institute of Fisheries Science (NIFS)

216 Gijang-Haeanro, Gijang-eup, Gijang-gun, Busan 46083, Republic of Korea

Summary

In accordance with IATTC Resolution C-11-08 and the Korean National Scientific Observer Program, 7 observers had been deployed to investigate Korean tuna longline vessel on fishing activities and collect the data on catch, effort, discards and other relevant scientific information in the IATTC convention area in 2017. They observed 587 days and their observer coverage were about 4.1%.

Observer tasks

The observer tasks are basically 1) recording and reporting fishing activities, verifying positions of the vessel, 2) observing and estimating catches as far as possible with a view to identifying catch composition and monitoring discards, bycatch and size frequency, 3) recording the gear type, mesh size and attachments employed by the master, 4) collecting information to enable the cross-checking entries made to the logbooks (species composition and quantities, live and processed weight and location, where available), 5) carrying out other scientific works.

Fishing operations

In 2017, the information from 7 Korean observers deployed on longline vessel operating in the IATTC convention area is as follows. They observed the effort of about 870 thousand hooks in 497 sets during 587 days (Table 1). The observed area during the trips were between 105-150°W of 10°N-15°S, which is shown in Fig. 1.

Table 1. Information on observer trip of Korean tuna longline fishery in the IATTC convention area, 2017

Observer	Observation period	Sets observed	Number of hooks	Day observed
A	1.1-3.7	60	111,775	66
B	10.24-12.30	57	107,077	68
C	8.8-12.14	115	207,700	129
D	1.1-3.29	66	108,833	88
E	8.11-10.26	70	107,831	77
F	9.11-12.28	91	161,480	109
G	1.1-2.19	38	60,741	50

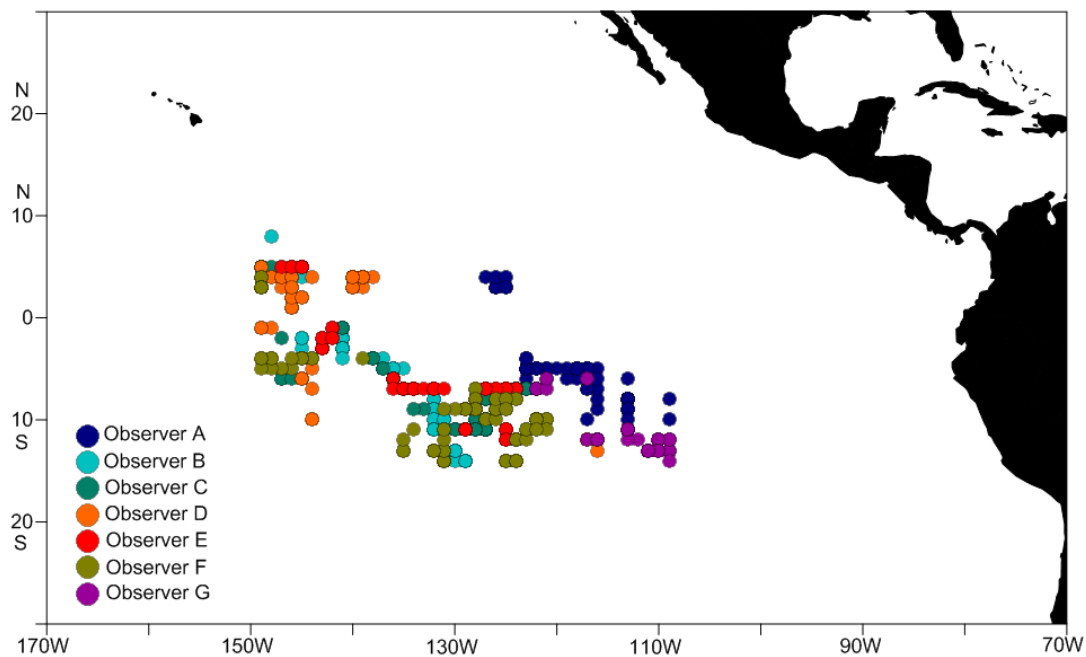


Fig. 1. Fishing positions of Korean tuna longline vessel during observer trips in the IATTC convention area, 2017.

Catch observed and species composition

Tables 2 and 3 show retained catch and discards or releases by species during the observer trips in the IATTC convention area, respectively. During those trips, 12 olive ridley turtles, 1 green sea turtle and 2 leatherback sea turtles were caught incidentally, and no seabird was caught.

Biological data collected

All the species, if possible, were measured and weighted on board. Stomach content and gonads for target and non-target species were observed.

Tagging

No individual was recaptured during those observer trips in 2017.

Table 2. Total retained catch by species recorded during observer trip in the IATTC convention area, 2017

Group	Species	Observer A		Observer B		Observer C		Observer D	
		Number	Weight	Number	Weight	Number	Weight	Number	Weight
Tunas	Albacore			67	1,189	151	2,371	46	814
	Bigeye tuna	561	31,372	521	25,976	1,087	67,213	668	42,068
	Skipjack	30	270	16	151	44	337	40	360
	Yellowfin tuna	78	3,961	49	1,680	403	14,917	82	2,886
Billfishes	Black marlin							1	78
	Blue marlin	17	1,489	11	917			44	2,854
	Indo-Pacific sailfish					33	3,065	9	178
	Shortbill spearfish	9	134	9	145	29	381	1	15
	Striped marlin	21	938	4	195	12	385	5	226
	Swordfish	183	12,655	87	5,938	149	8,710	54	3,368
Sharks	Blue shark			42	678				
	Pelagic thresher shark			2	149				
	Bigeye thresher shark			1	25				
	Silky shark					49	1,845		
Others	Escolar			94	1,463				
	Ocean sunfish					1	100		
	Opah	29	1,620	13	754	20	1,054	13	844
	Smith's escolar	56	762			333	4,711	25	258
	Wahoo	14	173	20	252	81	1,094	19	235
	Other fishes			3	65	11	75		
Sum		998	53,373	939	39,577	2,403	106,258	1,007	54,183

Table 2 cont.. Total retained catch by species recorded during observer trip in the IATTC convention area, 2017

Group	Species	Observer E		Observer F		Observer G	
		Number	Weight	Number	Weight	Number	Weight
Tunas	Albacore	34	590	314	5,363	181	2,710
	Bigeye tuna	375	23,020	924	49,892	279	18,349
	Skipjack	15	140	34	257	25	221
	yellowfin tuna	100	4,222	239	7,357	32	1,355
Billfishes	Black marlin						
	Blue marlin	1	94	31	2,389	12	1,103
	Indo-Pacific sailfish	12	974				
	Shortbill spearfish	28	394	18	255	12	67
	Striped marlin	7	344	3	139	6	259
	Swordfish	37	2,495	151	11,300	45	3,332
Sharks	Blue shark						
	Pelagic thresher shark						
	Bigeye thresher shark						
	Silky shark						
Others	Escolar	83	1,113	400	4,697	21	377
	Ocean sunfish	3	148				
	Opah	17	885	8	283	17	872
	Smith's escolar						
	Wahoo	14	207	67	846	10	154
	Other fishes	4	44	11	152		
Sum		730	34,670	2,200	82,930	640	28,799

Table 3. Number of discarded or released species during observer trip in the IATTC convention area, 2017

Group	Species	Observer A	Observer B	Observer C	Observer D	Observer E	Observer F	Observer G
Tunas	Albacore				1		5	
	Bigeye tuna	53	16	4	27	10	18	2
	Skipjack	1			1		1	
	Yellowfin tuna	2	2	5	16	3	4	1
Billfishes	Blue marlin	1	3		3		4	
	Indo-Pacific sailfish							
	Shortbill spearfish		1	2			1	
	Striped marlin				2			
	Swordfish	15	10	13	34	6	24	
Sharks	Bigeye sandtiger shark							
	Bigeye thresher shark	14	2	41	39		22	
	Blue shark	133	28	146	43	7	96	4
	Common thresher shark	2					19	
	Crocodile shark	176	24	217	103	57	385	1
	Longfin Mako shark		1		2		1	
	Oceanic whitetip shark	10	1	16	8		3	
	Pelagic Thresher Shark	4	8		3	7		
	Sandbar shark						11	
	Scalloped hammerhead shark		1	14				
	Hammerhead Shark						21	
	Shortfin mako shark	1		5			1	
	Silky shark	6	1		31	1	3	
	Smalltooth shark				1			
	Smooth Hammerhead Shark	2		1				
	Thresher sharks				1			
	Velvet dogfish	25	12	27	275	14	26	
Other sharks						4		
Turtles	Olive ridley sea turtle	12						
	Green sea turtle	1						
	Leatherback sea turtle	2						
Sum		460	110	491	590	105	649	8

Report of the National Observer Programs for pelagic fisheries under the IATTC Convention Area

Observer Program

Reporting CPC: Name of the program:
 Scientific contact: Email:
 Year start: Vessel type monitored:
 Average number of vessels Observed per year:

Observer Program: Data Recorded from interactions with fishing operations

Level data record: Other:
 Frequency record: Other:

Data recorded please check if the following information is recorded	target species	Non-target commercial spp	Other bycatch spp
	Catch estimates (Kg/No.)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Dead discards	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Releases alive	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Species identification	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Main taxa groups monitor by Observers	<input checked="" type="checkbox"/> YES
Fish target spp	<input checked="" type="checkbox"/>
All fish species (sharks/rays)	<input checked="" type="checkbox"/>
Sea turtles	<input checked="" type="checkbox"/>
Seabirds	<input checked="" type="checkbox"/>
Mammals	<input checked="" type="checkbox"/>
Other taxa (specify)	

Record on conditions of discards and reasons for	<input checked="" type="checkbox"/> YES
Reason(s) for discard of commercial catches	<input checked="" type="checkbox"/>
General state of live discards	<input checked="" type="checkbox"/>

Biological sampling and samples collections	target sp	Non-target sp	Bycatch
Species identification (photo)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Size & weight measurement	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Sex and/or fecundity status	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Hard parts (otoliths, spines)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tissues (muscle, gonads, blood)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Tagging (release)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Vessel information recorded	<input checked="" type="checkbox"/> YES
ID, Name	<input checked="" type="checkbox"/>
IMO Number	<input checked="" type="checkbox"/>
LOA, GRT, HP	<input checked="" type="checkbox"/>
Main gear(s) operation	<input checked="" type="checkbox"/>
Electronics (GPS, sonar)	<input checked="" type="checkbox"/>
Home port	<input checked="" type="checkbox"/>

At fishing operation please check if the following information is recorded	<input checked="" type="checkbox"/> YES	Start operation	End operation
	Fishing on FADs or not	<input type="checkbox"/>	
Gear type	<input checked="" type="checkbox"/>		
Geo-position (lat - lon)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Date/Type operation	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bait type	<input checked="" type="checkbox"/>		
Crew number	<input checked="" type="checkbox"/>		

Environmental data recorded	<input checked="" type="checkbox"/> YES
Sea surface temperature	<input checked="" type="checkbox"/>
At gear catch sea temp.	<input checked="" type="checkbox"/>
Depth of gear operation	<input checked="" type="checkbox"/>
Wind speed and direction	<input checked="" type="checkbox"/>
Other environmental data	

Observer Program: Qualifications and Training

Observers qualifications and training	Before enter obs. program	Eval. during prg.
Minimum qualifications describe		
Training course	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Training materials and forms	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Observer evaluation(s)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Validation of data recorded	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
On vessel training/supervision	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>