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**2016 ANNUAL SCIENTIFIC OBSERVER REPORT FOR  
KOREAN TUNA LONGLINE FISHERY IN THE IATTC  
CONVENTION AREA**

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**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 in 2016. They observed 694 days and their observer coverage were about 6.9%.

**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.

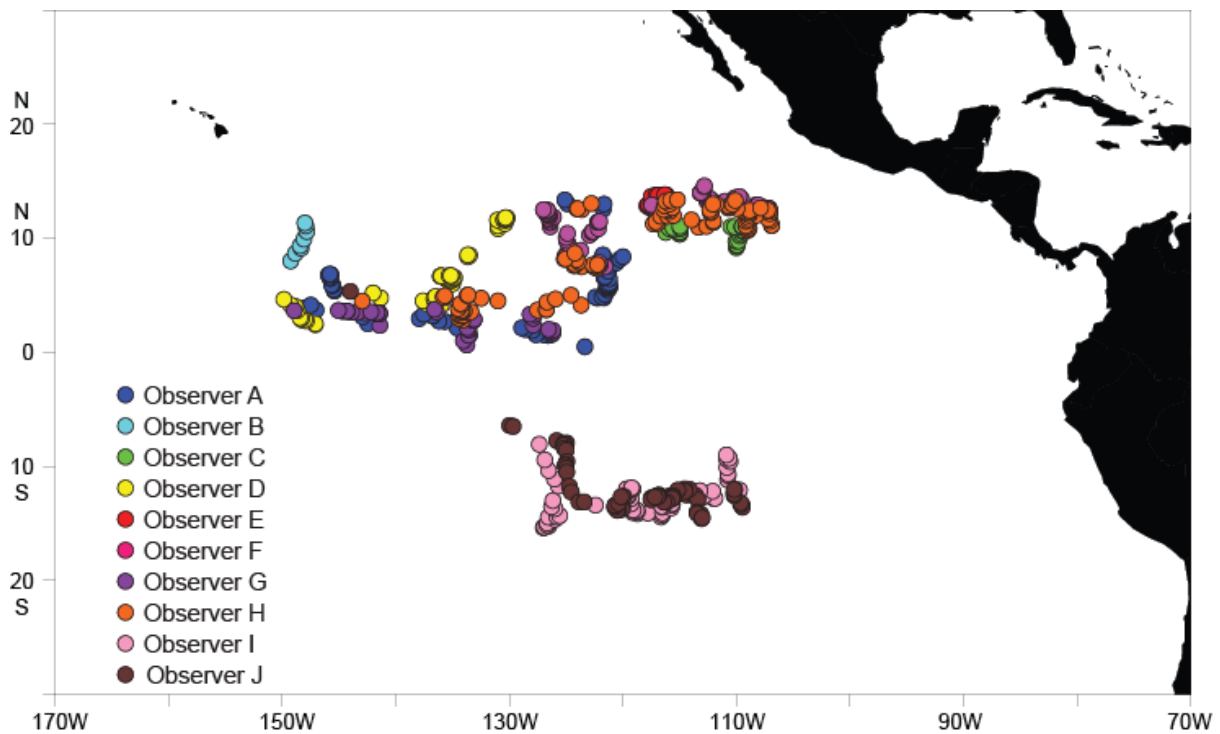
**Fishing operations**

In 2016, 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 one million hooks in 613 sets during 694 days (Table 1). The observed area during the trips were between 100-150°W of 20°N-20°S, which is shown in Fig. 1.

**Table 1.** Information on observer trip of Korean tuna longline fishery in the IATTC convention area, 2016

Observer	Observation period	Sets observed	Number of hooks	Day observed
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A	1.1-3.17	68	121,312	77
B	7.6-7.13	8	985	8
C	11.27-12.31	34	64,371	35
D	6.10-8.21	63	108,239	73
E	11.27-12.31	34	58,429	35
F	8.1-11.23	103	162,705	115
G	1.5-2.21	35	68,714	48
H	7.25-11.28	110	195,677	127
I	10.1-12.31	86	150,034	92
J	8.31-11.22	72	116,963	84



**Fig. 1.** Fishing positions of Korean tuna longline vessel during observer trips in the IATTC convention area, 2016.

### 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 these trips, fourteen olive ridley turtles were bycaught, and no seabird was bycaught.

### 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

One bigeye tuna was recaptured in 2<sup>nd</sup> February, 2016 (Table 4).

**Table 2.** Total retained catch by species recorded during observer trip in the IATTC convention area, 2016 (blank means “0”)

Group	Species	Observer A		Observer B		Observer C		Observer D		Observer E	
		Number	Weight	Number	Weight	Number	Weight	Number	Weight	Number	Weight
Tunas	Albacore	1	14	99	1,742	18	258	66	1,028	201	3,171
	Bigeye tuna	449	24,494	83	2,821	418	26,032	724	28,106	283	19,206
	Skipjack	50	471			20	204	65	458	16	155
	yellowfin tuna	68	2,330	28	925	59	3,676	399	12,565	18	722
Billfishes	Black marlin	1	72			2	235				
	Blue marlin	58	4,675	12	812	8	740	41	3,161	16	1,335
	Indo-Pacific sailfish	2	50					5	70		
	Shortbill spearfish	9	134			2	36	23	335	24	339
	Striped marlin	12	519	1	83	1	107	6	396	5	256
	Swordfish	116	8,191	1	64	108	7,015	26	1,390	52	3,687
Sharks	Blue shark	8	355								
	Shortfin mako										
	Silky shark										
Others	Other fishes	50	1,125	18	354	102	2,714	93	1,285	65	1,227
Sum		824	42,430	242	6,801	738	41,019	1,448	48,793	680	30,096

**Table 2 cont..** Total retained catch by species recorded during observer trip in the IATTC convention area, 2016 (blank means “0”)

Group	Species	Observer F		Observer G		Observer H		Observer I		Observer J	
		Number	Weight	Number	Weight	Number	Weight	Number	Weight	Number	Weight
Tunas	Albacore	292	4,776			116	1,870	347	6,013	223	3,795
	Bigeye tuna	1,057	58,739	237	12,089	1,261	76,215	804	51,777	622	38,789
	Skipjack	39	408	14	109	60	605	39	385	32	348
	yellowfin tuna	164	7,934	37	950	241	10,732	149	6,924	142	6,566
Billfishes	Black marlin	1	130								
	Blue marlin	13	1,411			22	2,367			12	1,258
	Indo-Pacific sailfish			25	1,866	1	37	19	1,865		
	Shortbill spearfish	33	581	3	50	35	614	30	453	22	347
	Striped marlin	15	1,166	4	167	14	672	5	420	2	151
	Swordfish	174	9,958	28	2,051	158	11,099	195	12,054	84	4,275
Sharks	Blue shark	9	404			51	2,093				
	Shortfin mako	3	222			1	53				
	Silky shark					24	733				
Others	Other fishes	260	6,806	6	175	145	3,762	273	4,951	134	2,623
Sum		2,060	92,535	354	17,457	2,129	110,852	1,861	84,842	1,273	58,152

**Table 3.** Number of discarded or released species during observer trip in the IATTC convention area, 2016 (blank means “0”)

Group	Species	Observer A	Observer B	Observer C	Observer D	Observer E
<b>Tunas</b>	Albacore			3		6
	Bigeye tuna	20		11	23	29
	Skipjack	4			2	3
	Yellowfin tuna	4		2	16	13
<b>Billfishes</b>	Blue marlin	6			1	
	Indo-Pacific sailfish				1	
	Shortbill spearfish	1				1
	Striped marlin	1			1	
	Swordfish	24		3	12	3
<b>Sharks</b>	Bigeye sandtiger shark			3		
	Bigeye thresher	25	2		22	4
	Blue shark	7	1	65	41	52
	Common thresher shark					1
	Crocodile shark	55		194	52	50
	Longfin Mako				2	
	Oceanic whitetip shark	1			4	
	Pelagic Thresher Shark			1	3	1
	Sandbar shark					
	Scalloped hammerhead shark					
	Other sharks					
	Shortfin mako				1	1
	Silky shark	12			23	1
	Smalltooth shark					
	Smooth Hammerhead Shark				1	1
Thresher sharks						
Velvet dogfish	17	2	2	6	1	
<b>Turtles</b>	Olive ridley turtle	1			5	
<b>Others</b>	Other fishes	117	22	99	140	492
<b>Mobulidae</b>	Mobulid Rays	1			1	
<b>Sum</b>		296	27	383	357	659

**Table 3 cont.** Number of discarded or released species during observer trip in the IATTC convention area, 2016

Group	Species	Observer F	Observer G	Observer H	Observer I	Observer J	Sum
<b>Tunas</b>	Albacore	1		1		2	13
	Bigeye tuna	55	9	36	14	17	214
	Skipjack	2	1				12
	Yellowfin tuna	14		6	2	7	64
<b>Billfishes</b>	Blue marlin					1	8
	Indo-Pacific sailfish						1
	Shortbill spearfish	1		1			4
	Striped marlin						2
	Swordfish	4	5	18	1	7	77
<b>Sharks</b>	Bigeye sandtiger shark						3
	Bigeye thresher	30		10	9	1	103
	Blue shark	27		1	19	22	235
	Common thresher shark						1
	Crocodile shark	124	1	155	16	154	801
	Longfin Mako						2
	Oceanic whitetip shark	1		1		1	8
	Pelagic Thresher Shark			1			6
	Sandbar shark				1		1
	Scalloped hammerhead shark			3			3
	Other sharks					2	2
	Shortfin mako			2		2	6
	Silky shark	1		5			42
	Smalltooth shark	1					1
	Smooth Hammerhead Shark	1		3	1		7
	Thresher sharks					7	7
Velvet dogfish	4	2	7		1	42	
<b>Turtles</b>	Olive ridley turtle		1	7			14
<b>Others</b>	Other fishes	231	18	158	65	139	1,485
<b>Mobulidae</b>	Mobulid Rays				1	1	4
<b>Sum</b>		497	37	415	129	364	3,164

**Blank means 0.**

**Table 4.** Information on tag-recaptured bigeye tuna

Date	Tag no.	Location		Fork length (cm)	Head length (cm)	Body height (cm)	Weight (kg)	Sex	Maturity stage	Gonad weight (g)
		Latitude	Longitude							
2 <sup>nd</sup> Feb.	No.22722	4°S	122°W	187.0	50.0	51.0	123	Male	Gravid	800