INTER-AMERICAN TROPI CAL TUNA COMMISSION

SCIENTIFIC ADVISORY COMMITTEE

TENTH MEETING

San Diego, California (USA) 13-17 May 2019

DOCUMENT SAC-10 INF-A(h)

Report of Japan's scientific observer program for tuna longline fishery in the convention area of Inter-American Tropical Tuna Commission in 2017 calendar year

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Summary

In accordance with Resolution C-11-08, Japan commenced its scientific observer program for longline fishery in the convention area of Inter-American Tropical Tuna Commission (IATTC) from 1 January 2013. This document provides the scientific observers' information in 2017 calendar year. In 2017 calendar year, 17 observer trips were conducted on Japanese tuna longline vessels in the Convention Area.

Keywords

Longline, Japan, Scientific observer, Tuna fisheries

Introduction

In accordance with Resolution C-11-08, Japan commenced its scientific observer program for longline fishery in the convention area of Inter-American Tropical Tuna Commission (IATTC) from 1 January 2013. This document provides the scientific observers' information in 2017 calendar year.

Training of the scientific observer

In principal, all scientific observers attend a training class held by Overseas Fishery Cooperation Foundation of Japan (OFCF) and Japan NUS (JANUS) under Japan's observer program before their departure for the cruise. The National Research Institute of Far Seas Fisheries (NRIFSF) provides an observer manual and supervises the training course. Under the course scientific observers are trained in skills necessary for conduct its part, including species identification, data recording protocols *etc*.

Results

i) Observer trip number, observed fishing operations and observer coverage

In 2017 calendar year, 17 observer trips were conducted on Japanese tuna longline vessels. Total number of observed fishing operations of the 17 trips was 920 sets. Information on the 17 trips are shown in Table 1. The observer coverage rate was calculated to be 8.5% (920/10,852).

ii) Catch records, including bycatch data

Observers recorded every item taken on deck and identified the species by themselves. Observers also collected bycatch data. They took photo of bycatch species according to the procedures given in the observer manual made by NRIFSF scientists. Bycatch experts in NRIFSF identified species using these photos.

The list of species from these trips was shown in Table 2. In relation to paragraph 3 of Resolution C-11-10, fifty-seven interactions of oceanic whitetip shark were recorded by observers in 8 trips (Table 2). Twenty-seven whitetip sharks were dead discarded and others were released alive. In relation to paragraph 4 of Resolution C-15-04, twenty-two interactions of mobulid ray were recorded by observers in 6 trips (Table 2). In relation to paragraph 4.a of Resolution C-04-05, nineteen interactions of sea turtles were recorded by observers in 10 trips (Table 2), and all of them were released.

Table 1. Information on the trip of the scientific observer for Japanese tuna longline in the convention areas of Inter-American Tropical Tuna Commission during 2017 calendar year.

Trip ID	Range of	Range of	Start date of	End date of	Number of	Number of
Trip ID	latitude	longitude	operation	operation	operations	hooks
Trip 1	10.1-14.0S	105.9-111.9W	2017/1/1	2017/1/26	23	55,200
Trip 2	7.9-13.4S	107.2-111.6W	2017/1/1	2017/1/30	28	73,440
Trip 3	7.0-13.7S	106.7-117.8W	2017/2/4	2017/4/17	67	171,520
Trip 4	3.1N-8.8S	124.6-136.0W	2017/4/4	2017/5/24	46	122,310
Trip 5	14.3-18.0S	108.1-114.6W	2017/6/22	2017/9/1	69	166,800
Trip 6	5.8N-18.7S	112.7-137.8W	2017/7/12	2017/9/4	46	111,775
Trip 7	16.3-21.3S	79.3-86.2W	2017/6/26	2017/8/12	47	145,644
Trip 8	5.4-13.0S	110.6-134.4W	2017/7/28	2017/10/26	87	282,500
Trip 9	7.0-18.8S	117.9-123.3W	2017/7/26	2017/11/2	93	237,920
Trip 10	16.9-17.9S	86.3-87.1W	2017/8/25	2017/9/13	19	60,469
Trip 11	7.1-14.5S	116.2-130.3W	2017/9/1	2017/12/31	110	360,005
Trip 12	6.0-12.9S	114.1-122.5W	2017/10/13	2017/12/24	70	166,617
Trip 13	9.1-14.3S	102.5-111.3W	2017/10/8	2017/12/11	59	141,120
Trip 14	9.5-13.0S	110.5-112.6W	2017/12/3	2017/12/31	27	68,510
Trip 15	7.3-13.1S	112.7-123.2W	2017/10/5	2017/12/31	81	194,400
Trip 16	7.2 - 9.3 S	120.2-123.9W	2017/12/15	2017/12/31	16	40,420
Trip 17	6.7-12.1S	107.9-118.1W	2017/11/26	2017/12/31	32	80,410
Total	_	_	_	_	920	2,479,060

Table 2. List of species recorded by scientific observer on longline fishery in the Convention Area in 2017 calendar year (Unit: Number of individuals).

Trip Species	- 1	2	3	4	5	6	7	8	9
Albacore	10	33	33	90	1337	586	1700	138	544
Yellowfin tuna	32	36	60	204	223	83	80	317	439
Bigeye tuna	168	232	566	557	621	564	629	822	775
Skipjack tuna	11	6	41	41	45	14	10	47	62
Sailfish	0	2	3	1	0	4	0	0	0
Black marlin	0	0	0	0	1	1	0	1	0
Blue marlin	7	12	26	39	3	14	1	25	16
Spearfishes	27	9	20	42	144	69	2	111	187
Striped marlin	3	5	12	5	25	25	1	15	27
Sword fish	24	120	129	127	154	121	219	145	261
Other teleosts	63	281	363	270	1295	598	1425	936	1195
Thresher sharks	0	23	96	32	11	13	10	96	63
Shortfin mako	0	3	1	4	5	7	1	9	25
Blue shark	26	101	305	78	90	46	143	127	270
Oceanic whitetip shark	0	0	28	8	0	2	0	6	7
Other Sharks	20	410	375	231	81	30	78	417	576
Sting ray	38	208	229	255	90	14	76	123	621
	0	0	0	0	0	0	0	4	6
Mobulid Rays				0					
Other Rays	0	0	1		0	0	0	0	0
Sea Birds	0	0	0	0	5	0	22	0	0
Sea Turtles	1	0	0	0	0	1	1	1	4
Mammals	0	0	0	0	2	0	2	0	0
Unidentified	0	0	0	0	2	0	0	0	0
Total	430	1481	2288	1984	4134	2192	4400	3340	5078
Trip	10	11	12	13	14	15	16	17	Total
Species	10	11	12	13	14	13	10	17	Total
Albacore	368	257	18	28	2	44	0	0	5188
Yellowfin tuna	140	1.50							
Bigeye tuna		150	130	293	141	144	7	36	2515
0-7	250	1130	607	293 522	141 268	621	114	36 230	2515 8676
Skipjack tuna									
	250	1130	607	522	268	621	114	230	8676
Skipjack tuna	250	1130 19	607 19	522 22	268	621 10	114	230 13	8676 363
Skipjack tuna Sailfish	250 0 0	1130 19 1	607 19 3	522 22 0	268 2 1	621 10 0	114 1 0	230 13 0	8676 363 15
Skipjack tuna Sailfish Black marlin	250 0 0 0	1130 19 1 2	607 19 3 2	522 22 0	268 2 1 0	621 10 0	114 1 0	230 13 0 1	8676 363 15 10
Skipjack tuna Sailfish Black marlin Blue marlin	250 0 0 0 0	1130 19 1 2 26	607 19 3 2 28	522 22 0 1 24	268 2 1 0	621 10 0 1 17	114 1 0 0 4	230 13 0 1 6	8676 363 15 10 265
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes	250 0 0 0 0 0	1130 19 1 2 26 100	607 19 3 2 28 41	522 22 0 1 24 87	268 2 1 0 17 28	621 10 0 1 17 53	114 1 0 0 4 2	230 13 0 1 6 27	8676 363 15 10 265 949
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin	250 0 0 0 0 0 0	1130 19 1 2 26 100	607 19 3 2 28 41 35	522 22 0 1 24 87 33	268 2 1 0 17 28 20	621 10 0 1 17 53 34	114 1 0 0 4 2	230 13 0 1 6 27	8676 363 15 10 265 949 288
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish	250 0 0 0 0 0 0 0 0	1130 19 1 2 26 100 19 468	607 19 3 2 28 41 35 281	522 22 0 1 24 87 33 86	268 2 1 0 17 28 20 59	621 10 0 1 17 53 34 694	114 1 0 0 4 2 12 76	230 13 0 1 6 27 17 136	8676 363 15 10 265 949 288 3161
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts	250 0 0 0 0 0 0 0 0 61 467	1130 19 1 2 26 100 19 468 2422	607 19 3 2 28 41 35 281 629	522 22 0 1 24 87 33 86 926	268 2 1 0 17 28 20 59 109	621 10 0 1 17 53 34 694 851	114 1 0 0 4 2 12 76 103	230 13 0 1 6 27 17 136 318	8676 363 15 10 265 949 288 3161 12251
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks	250 0 0 0 0 0 0 0 61 467	1130 19 1 2 26 100 19 468 2422 40	607 19 3 2 28 41 35 281 629	522 22 0 1 24 87 33 86 926 71	268 2 1 0 17 28 20 59 109 27	621 10 0 1 17 53 34 694 851 28	114 1 0 0 4 2 12 76 103 5	230 13 0 1 6 27 17 136 318	8676 363 15 10 265 949 288 3161 12251 541
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako	250 0 0 0 0 0 0 0 61 467 0 3	1130 19 1 2 26 100 19 468 2422 40 12	607 19 3 2 28 41 35 281 629 12	522 22 0 1 24 87 33 86 926 71 10	268 2 1 0 17 28 20 59 109 27 0	621 10 0 1 17 53 34 694 851 28 6	114 1 0 0 4 2 12 76 103 5	230 13 0 1 6 27 17 136 318 14 0	8676 363 15 10 265 949 288 3161 12251 541
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark	250 0 0 0 0 0 0 0 61 467 0 3 44	1130 19 1 2 26 100 19 468 2422 40 12 246 3	607 19 3 2 28 41 35 281 629 12 5 236	522 22 0 1 24 87 33 86 926 71 10 135	268 2 1 0 17 28 20 59 109 27 0 68	621 10 0 1 17 53 34 694 851 28 6 170	114 1 0 0 4 2 12 76 103 5 0 29	230 13 0 1 6 27 17 136 318 14 0 48	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark	250 0 0 0 0 0 0 0 61 467 0 3 44	1130 19 1 2 26 100 19 468 2422 40 12 246 3 387	607 19 3 2 28 41 35 281 629 12 5 236 0 509	522 22 0 1 24 87 33 86 926 71 10 135 0 329	268 2 1 0 17 28 20 59 109 27 0 68	621 10 0 1 17 53 34 694 851 28 6 170 2 725	114 1 0 0 4 2 12 76 103 5 0 29 0 82	230 13 0 1 6 27 17 136 318 14 0 48	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57 4682
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark Other Sharks Sting ray	250 0 0 0 0 0 0 0 61 467 0 3 44 0 19	1130 19 1 2 26 100 19 468 2422 40 12 246 3 387 286	607 19 3 2 28 41 35 281 629 12 5 236 0 509 563	522 22 0 1 24 87 33 86 926 71 10 135 0 329 263	268 2 1 0 17 28 20 59 109 27 0 68 0 180 41	621 10 0 1 17 53 34 694 851 28 6 170 2 725 627	114 1 0 0 4 2 12 76 103 5 0 29 0 82 105	230 13 0 1 6 27 17 136 318 14 0 48 1 233 104	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57 4682 3657
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark Other Sharks Sting ray Mobulid Rays	250 0 0 0 0 0 0 0 61 467 0 3 44 0 19 14	1130 19 1 2 26 100 19 468 2422 40 12 246 3 387 286 3	607 19 3 2 28 41 35 281 629 12 5 236 0 509 563 2	522 22 0 1 24 87 33 86 926 71 10 135 0 329 263 0	268 2 1 0 17 28 20 59 109 27 0 68 0 180 41	621 10 0 1 17 53 34 694 851 28 6 170 2 725 627 0	114 1 0 0 4 2 12 76 103 5 0 29 0 82 105 0	230 13 0 1 6 27 17 136 318 14 0 48 1 233 104 6	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57 4682 3657 22
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark Other Sharks Sting ray Mobulid Rays Other Rays	250 0 0 0 0 0 0 0 0 61 467 0 3 44 0 19 14	1130 19 1 2 26 100 19 468 2422 40 12 246 3 387 286 3	607 19 3 2 28 41 35 281 629 12 5 236 0 509 563 2	522 22 0 1 24 87 33 86 926 71 10 135 0 329 263 0	268 2 1 0 17 28 20 59 109 27 0 68 0 180 41 1	621 10 0 1 17 53 34 694 851 28 6 170 2 725 627 0 8	114 1 0 0 4 2 12 76 103 5 0 29 0 82 105 0	230 13 0 1 6 27 17 136 318 14 0 48 1 233 104 6	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57 4682 3657 22 10
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark Other Sharks Sting ray Mobulid Rays Other Rays Sea Birds	250 0 0 0 0 0 0 0 61 467 0 3 44 0 19 14 0 0	1130 19 1 2 26 100 19 468 2422 40 12 246 3 387 286 3 0	607 19 3 2 28 41 35 281 629 12 5 236 0 509 563 2 0 0	522 22 0 1 24 87 33 86 926 71 10 135 0 329 263 0 0	268 2 1 0 17 28 20 59 109 27 0 68 0 180 41 1 0 0	621 10 0 1 17 53 34 694 851 28 6 170 2 725 627 0 8	114 1 0 0 4 2 12 76 103 5 0 29 0 82 105 0	230 13 0 1 6 27 17 136 318 14 0 48 1 233 104 6	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57 4682 3657 22 10 31
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark Other Sharks Sting ray Mobulid Rays Other Rays Sea Birds Sea Turtles	250 0 0 0 0 0 0 0 61 467 0 3 44 0 19 14 0 0	1130 19 1 2 26 100 19 468 2422 40 12 246 3 387 286 3 0 0	607 19 3 2 28 41 35 281 629 12 5 236 0 509 563 2 0 0	522 22 0 1 24 87 33 86 926 71 10 135 0 329 263 0 0 4	268 2 1 0 17 28 20 59 109 27 0 68 0 180 41 1 0 0 1	621 10 0 1 17 53 34 694 851 28 6 170 2 725 627 0 8 0 3	114 1 0 0 4 2 12 76 103 5 0 29 0 82 105 0 0	230 13 0 1 6 27 17 136 318 14 0 48 1 233 104 6 1 0	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57 4682 3657 22 10 31
Skipjack tuna Sailfish Black marlin Blue marlin Spearfishes Striped marlin Sword fish Other teleosts Thresher sharks Shortfin mako Blue shark Oceanic whitetip shark Other Sharks Sting ray Mobulid Rays Other Rays Sea Birds	250 0 0 0 0 0 0 0 61 467 0 3 44 0 19 14 0 0	1130 19 1 2 26 100 19 468 2422 40 12 246 3 387 286 3 0	607 19 3 2 28 41 35 281 629 12 5 236 0 509 563 2 0 0	522 22 0 1 24 87 33 86 926 71 10 135 0 329 263 0 0	268 2 1 0 17 28 20 59 109 27 0 68 0 180 41 1 0 0	621 10 0 1 17 53 34 694 851 28 6 170 2 725 627 0 8	114 1 0 0 4 2 12 76 103 5 0 29 0 82 105 0	230 13 0 1 6 27 17 136 318 14 0 48 1 233 104 6	8676 363 15 10 265 949 288 3161 12251 541 91 2162 57 4682 3657 22 10 31

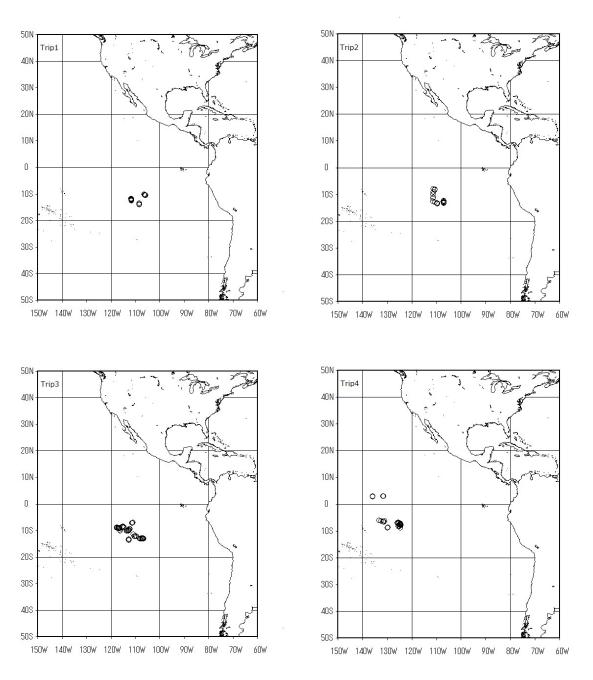


Fig 1. Line setting locations of Japanese tuna longline for the trips with the scientific observer onboard in the convention areas of Inter-American Tropical Tuna Commission during 2017 calendar year

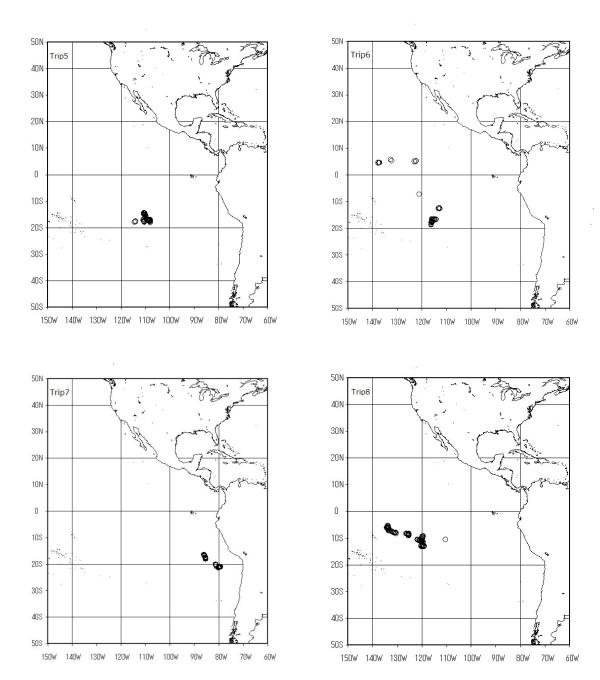


Fig 1. Continued.

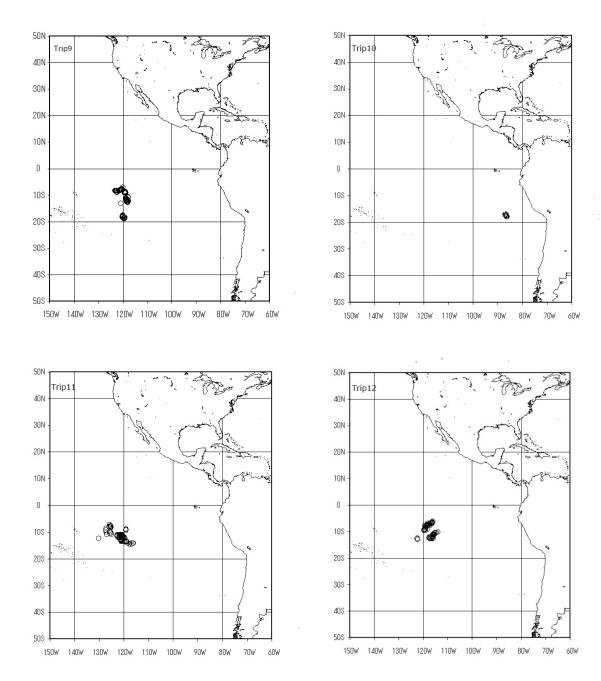


Fig 1. Continued.

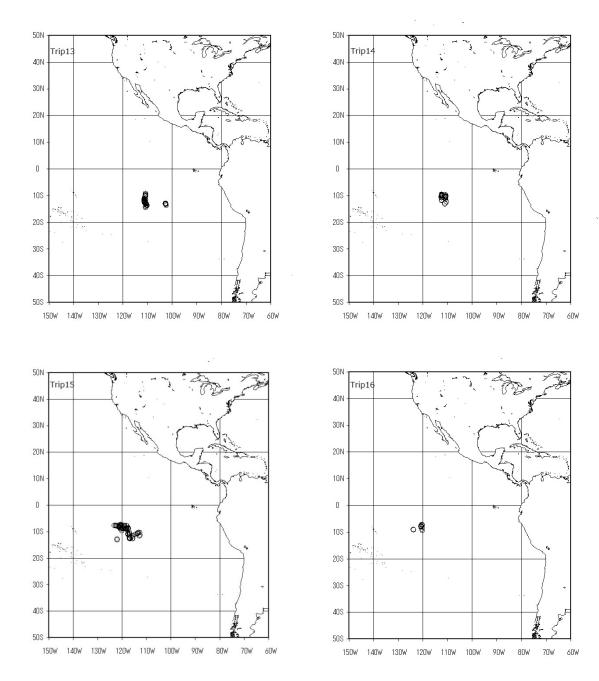


Fig 1. Continued.

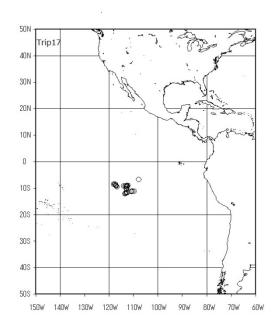


Fig 1. Continued.

Acknowledgement

We greatly appreciate all scientific observers for their efforts in order to collect valuable data and samples on the Japanese longline vessels. We would also like to express special thanks to all crews of the longline vessels for their understanding and cooperation to the observer program.