



**INDONESIA National Report to the
Scientific Committee of the
Indian Ocean Tuna Commission, 2012**

Authors

**Fayakun Satria¹⁾, Ali Suman²⁾, Anung Widodo³⁾
Lilis Sadiyah³⁾ and Budi Nugraha⁴⁾**

1) Research Institute for Fisheries Enhancement and Conservation

2) Research Institutes for marine Fisheries

3) Research Center for Fisheries Management and Conservation

4) Research Institute for Tuna Fisheries



INFORMATION ON FISHERIES, RESEARCH AND STATISTICS

<p>In accordance with IOTC Resolution 10/02, final scientific data for the previous year was provided to the Secretariat by 30 June of the current year, for all fleets other than longline [e.g. for a National report submitted to the Secretariat in 2011, final data for the 2009 calendar year must be provided to the Secretariat by 30 June 2011)</p>	<p>YES or NO [delete one] DD/MM/YYYY [Add submission date here]</p>
<p>In accordance with IOTC Resolution 10/02, provisional longline data for the previous year was provided to the Secretariat by 30 June of the current year [e.g. for a National report submitted to the Secretariat in 2011, preliminary data for the 2010 calendar year was provided to the Secretariat by 30 June 2011).</p> <p>REMINDER: Final longline data for the previous year is due to the Secretariat by 30 Dec of the current year [e.g. for a National report submitted to the Secretariat in 2011, final data for the 2010 calendar year must be provided to the Secretariat by 30 December 2011).</p>	<p>YES or NO [delete one] DD/MM/YYYY [Add submission date here]</p>
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Executive Summary

Fisheries management Areas (FMA) 572 (Indian Ocean – west Sumatera) and 573 (South of Java – East Nusa Tenggara), are two fisheries management area among eleven FMAs that located within the IOTC area of competence. Long liners is the main fishing gear type operated in those FMAs, increase from 1118 vessels in 2010 to 1256 vessels in 2011. The national catch of four main tuna species in 2011 was estimated 161,454 t while the total catch for all species by all gears type was estimated 429,751 t.. Through Research institute for Tuna fisheries at Benoa both port sampling and scientific observer programs continuing is conducted. Indonesia since 10 October 2010 already has a National Plan of Action of the Shark (NPOA-Shark) and recently through ministerial decree of MMAF no 12 year 2012 under chapter X formally regulate a management and conservation of bycatch and ecological related species on tuna fisheries. Template of Indonesia fishing logbook was developed and regulated, however it is required more effort to introduce and implement for both to fishers as well as port officers as required by the commission.



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1. BACKGROUND/GENERAL FISHERY INFORMATION

Indonesia is an archipelagic nation located between the continents of Asia and Australia surrounded by two oceans, Pacific Ocean in the northern part and Indian Ocean in southern part. It consist of 17,508 islands and coast line of approximately 81,000 km. Totally, Indonesia has 5.8 million km² of marine waters consisting of 3.1 million km² of territorial waters (<12 miles) and 2.7 million km² of EEZ (12-200 miles). For fisheries management purpose Indonesia waters is divided into eleven Fisheries Management Areas (FMAs) (Figure 1). FMAs 572 (Indian Ocean – west Sumatera) and 573 (South of Java – east Nusa Tenggara), are located within the IOTC area of competence (Figure 1).

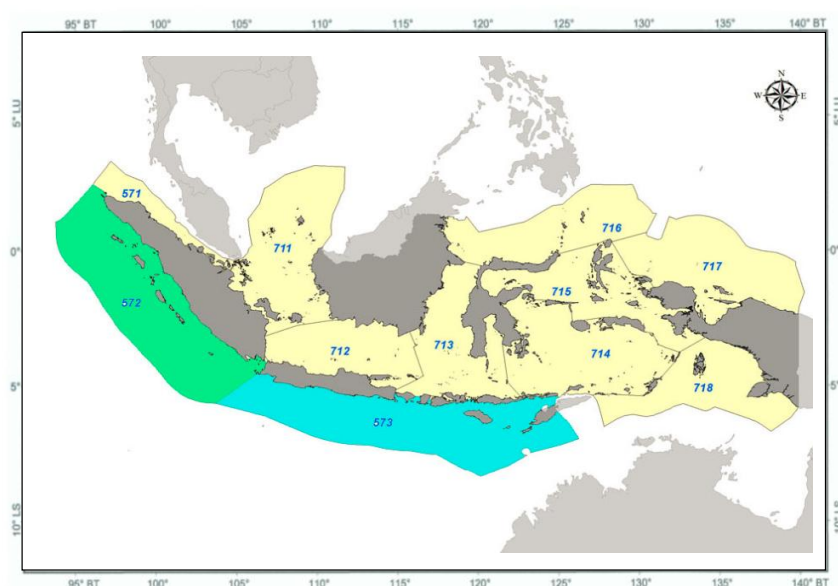


Figure 1. The eleven of fisheries management area in Indonesian marine waters

Across South Indonesian marine waters from Banda Aceh to NTT (East timor) there are at least 12 fishing ports as landing site for tuna. Three main landing sites for Indian Ocean tuna industrial fleet are Bena Fishing Port (Bali), Muara Baru Port (Jakarta) and Cilacap Port (Central Java) (Proctor et al., 2003). There are also several non industrial fishing ports located in Sumatera, Jawa, Bali and NTT Island that known as tuna landing place (Figure 2). Bena Fishing Port is considered as main tuna landing port for Indonesian tuna catch

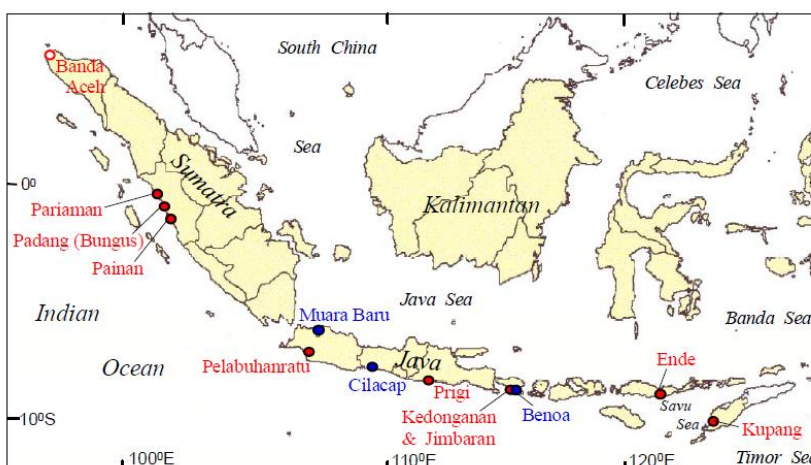


Figure 2. Primary fishing port/landing sites the industrial (*blue label*) and artisanal (*red label*)
Source: RCCF- ACIAR Report 2003 (Source of map Proctor *et all* 2003)

There are several fishing gears targeting tuna operating in the area such as longline , purse seine, pole and line, drifting gill net, hand line and troll line.

2. FLEET STRUCTURE

The number of registered fishing boats operated, as reported to IOTC as per 2010, in the FMAs 572 and 573 was 1203 with breakdown for longline (1256), purse seine (19), gillnet (2) , carrier boat (1). Those fishing boats were vary in size from less than 50 GT to 1025 GT, among them 33 vessels over 200 GT and mostly 100-200 GT. the number of tuna longline fishing in the Indian ocean has slightly increase from 1,188 boats in 2010 to 1256 boats in 2012. However, there are fishing fleets targeting tunas less than Loa 24m operated in the territorial water up to Indonesian EEZ that not included in the table 1.

Table 1. Registered Indonesian vessels by size (GT) as reported to IOTC as per 30 november 2012 (Source DGCF 2012)

size	Longline	Purseseine	Gillnet	Carrier	Total
<50	160	0	1	0	161
51-100	408	6	1	0	415
101-200	659	10	0	0	669
201-300	4	0	0	0	4
301-500	11	0	0	1	12
501-800	14	0	0	0	14
>800	0	3	0	0	3
Total	1256	19	2	1	1278

3. NATIONAL CATCH

Indonesian national statistic reported that annual catch of four (4) main species such as bigeye tuna, yellowfin tuna, skipjack tuna and albacore as described in the (Table 2). , the average of tunas catch since 2005 to 2011 is estimated 123,880 t (tonnes). Total catch of main tunas in 2011 was 161,454 ton which composed of yellowfin tuna (38,550 t); bigeye tuna (26,859 t), skipjack tuna (56,239 t ,) and albacore (11,444 t). The catch proportion was yellowfin tuna (29.26%), bigeye tuna (15.56%), skipjack tuna (47.68%) and albacore (7.50%). Long line was the main fishing gears targeting tuna that contribute a significant proportion among others gear type. Table 2 did not yet include data for tuna like species, sharks, billfishes, seerfish and others associated species, therefore the actual total catch of all species might be much larger, for example the total catch for all species caught by all gears type in 2007, 2008, 2009 and 2010 was 250,296 t, 334,559 t, 336,372 t and 604,452 t respectively, while in 2011 it is estimating for 429,751 t (*DGCF 2011*).

Table 2 . Annual catch estimation by main tuna species and by gears during 2005-2011

Gear type	Tuna Species								Average	*)
		2005	2006	2007	2008	2009	2010	2011	(MT)	(%)
Longline	Yellowfin	47.570,0	27.090,0	15.837,1	15.133,4	13.487,7	14572	8.976,0	20.381	49,20
	Bigeye	13.337,0	13.278,0	12.708,5	11.830,4	10.001,7	14202	6.014,0	11.625	28,06
	Skipjack	1.850,0	2.741,0	1.306,4	492,4	585,3	1463	4.666,0	1.872	4,52
	Albacore	10.839,0	2.383,0	10.190,5	11.159,5	4.015,6	5505	8.736,0	7.547	18,22
	Total	73.596,0	45.492,0	40.042,5	38.615,7	28.090,3	35.742,0	28.392,0	41.424	
Purse-seine	Yellowfin	651,0	371,0	1.282,5	3.373,2	1.717,9	4334	8.331,0	2.866	10,41
	Bigeye	-	237,0	1.478,9	726,6	2.125,9	8226	7.385,0	2.883	10,47
	Skipjack	22.960,0	11.722,0	16.982,3	13.216,9	27.209,7	22652	36.016,0	21.537	78,25
	Albacore	-	-	218,3	86,6	-	341	1.027,0	239	0,87
	Total	23.611,0	12.330,0	19.962,0	17.403,3	31.053,5	35.553,0	52.759,0	27.525	
Pole and Line	Yellowfin	684,0	373,0	-	-	358,7	457	1.639,0	502	17,24
	Bigeye	-	-	-	-	-	0	2.506,0	358	12,30
	Skipjack	2.071,0	3.780,0	-	-	3.613,1	2255	2.631,0	2.050	70,45
	Albacore	-	-	-	-	-	0	-	-	
	Total	2.755,0	4.153,0	-	-	3.971,8	2.712,0	6.776,0	2.910	
Handline	Yellowfin	80,0	554,0	856,0	5.256,5	3.028,8	3117	2.133,0	2.146	48,98
	Bigeye	-	-	1,8	58,9	200,8	200	239,0	100	2,28
	Skipjack	66,0	353,0	685,3	2.947,1	3.720,2	3373	2.743,0	1.984	45,27
	Albacore	-	-	0,6	984,8	-	39	39,0	152	3,47
	Total	146,0	907,0	1.543,7	9.247,3	6.949,8	6.729,0	5.154,0	4.382	
Others	Yellowfin	8.343,0	2.196,0	10.979,4	969,1	13.664,9	25446	17.471,00	11.296	23,71
	Bigeye	-	732,0	2.843,8	-	5.848,6	2142	10.715,00	3.714	7,80
	Skipjack	21.721,0	31.922,0	28.723,0	30.222,6	30.155,7	38723	38.545,00	31.430	65,98
	Albacore	63,0	-	1.716,6	-	1.544,4	7145	1.642,0	1.730	3,63
	Total	30.127,0	34.850,0	44.262,8	31.191,7	51.213,6	73.456,0	68.373,0	47.639	
Grand Total	Yellowfin	57.328	30.584	28.955	24.732	32.258	47.926	38.550	37.190	30,02
	Bigeye	13.337	14.247	17.033	12.616	18.177	24.770	26.859	18.148	14,65
	Skipjack	48.668	50.518	47.697	46.879	65.284	68.466	84.601	58.873	47,52
	Albacore	10.902	2.383	12.126	12.231	5.560	13.030	11.444	9.668	7,80
	Total	130.235	97.732	105.811	96.458	121.279	154.192	161.454	123.880	100,00

Source data: Indonesia capture Fisheries statistic (2000-2011)

*) : catch proportion (%) by species for all gears.

3.1 Annual Catch Estimation at Benoa Fishing Port

Estimation of annual catch through port sampling program at Benoa, reported a decrease trend of total tuna landed 6,326 ton in 2011 with dominant catch of Yellowfin tuna 3,006 t, Big eye tuna 2,504 t, southern bluefin tuna 432 t, Albacore 384 t (Table 3).

Table 3. Estimation of annual catch (in tonnes) of primary species by longline landed at the Benoa Port (YFT=Yellowfin tuna, BET=Bigeye tuna, SBT=Southern bluefin tuna, ALB=Albacore)

YEAR	YFT	BET	SBT	ALB	TOTAL
2004	4.413	4.184	613	1.906	11.116
2005	4.196	3.939	1.690	1.494	11.319
2006	4.323	4.366	558	1.450	10.697
2007	5.354	5.292	1.077	1.132	12.855
2008	6.924	5.033	905	2.811	15.673
2009	7.240	4.680	746	1.020	13.686
2010	5.372	2.168	566	983	9.089
2011	3.006	2.504	432	384	6.326
TOTAL	40.828	32.166	6.587	11.180	90.761

The number of tuna longliner unloaded the catch at Benoa fishing port since 2004 showing a steady decrease trend down up to 68% in 2011 compare to 2004 (Figure 3), indicate decrease production of catch from the Indian Ocean

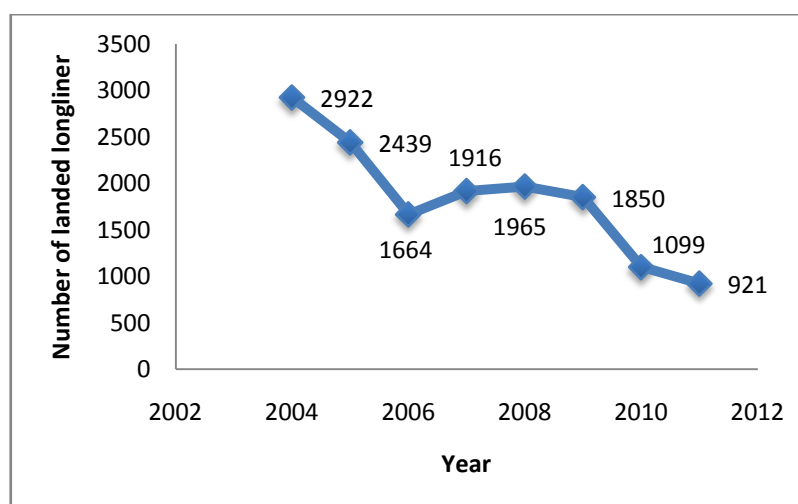


Figure 3. The number of tuna longliner landed at Benoa Fishing Port during 2004-2011

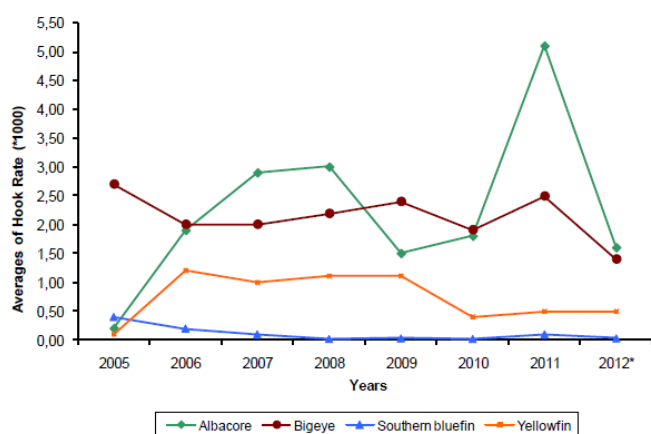


Figure 4. Fluctuation of average hook rate (*1000) for tuna (SBT, YFT, BET, ALB) based on scientific observer program in the Indian Ocean. 2011 (was presented in satria et al 2012)

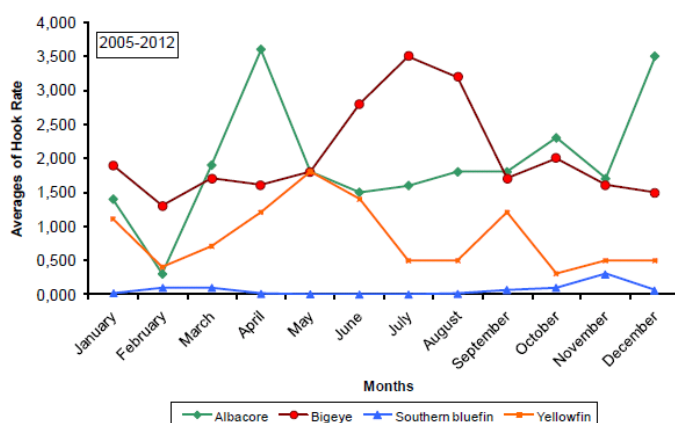


Figure 5. Average hook rate (*1000) by month for SBT, YFT, BET and AIB based on scientific observer program data (was presented in satria et al 2012)

4. RECREATIONAL FISHERY

There is no official reported catch from Indonesia recreational fishing. An organization deal with sport fishing has been established since 1997 “FORMASI” (*Indonesia Fishing Sport Federation*) and this organization is a member of International game fish association (IGFA). FORMASI regularly conduct international sport fishing tournament at least once time a year in the Indian Ocean, information could be accessed at www.formasi.or.id activities in the convention area.

5. ECOSYSTEM AND BYCATCH ISSUES

5.1 Sharks

Recent progress related to the management of shark in Indonesia after establishment of National Plan of Action of the Shark (NPOA-Shark) on 10th October 2010 is the issuance of ministerial decree no 12, 2012 chapter X which regulate a management and conservation of bycatch and ecological related species on tuna fisheries. Several activities in 2012 is raising the fishers awareness on the important of sharks resource sustainability through workshops, seminars and producing and distribute posters which prohibit several keys species of sharks to catch. Due to budget constraint, implementation of the key actions is being focussed in Tanjung Luar Fish Landing Center (East Lombok), since this place is considered a main place where sharks is landed. Research collaboration between RCFM and ACIAR through project FIS/ 2006/142, is just finished in July 2012. The project output has improved our knowledge on sharks landed across south of java and Tanjung luar lombok and provide a good knowledge for shark management in Indonesia.

5.2 Seabirds

Scientific observer program also include seabirds on their data record and since 2005 to 2010, *black albatross* was observed several time by observer in 2007 whilts other seabirds also recorded in dead condition in total 42 seabirds (9 black albatross, 33 other seabirds).The scientific observer from RITF Benoa reported that there was no seabird caught during the longline operation until October 2011. Indonesia currently do not has national plan of action for seabird mitigation.

5.3 Marine Turtles

Through Benoa observer program during 2005 – 2010 the total marine turtles caught by longliner operated in Indian ocean was 51, with dead 14, release alive 37. There were 5 species recorded by the observer leatherback turtle, Olive ridley turtle, Loggerhead turtle, Hawksbill turtle, Green turtle. Among them Olive ridley turtle was the most dominant sea turtle caught by longliner during the observation. Up to mid 2011 the observer reported leatherback sea turtle (*Dermochelys coriacea*) which was recorded on July 2011, coordinate: 13⁰ 40.234” S and 117⁰ 04.284” E and Olive ridley sea turtle (*Lepidochelys olivacea*) which was recorded several times on March, July, and November 2010 and on June 2011.

Since 2005, WWF-Indonesia has facilitated efforts to reducing sea turtle bycatch in tuna longlines. WWF collaborates with the Research Centre for Capture Fisheries, Currently naming as Research center for fisheries management and conservation (RCFMC). The onboard observers are well accepted and supported by the Indonesian



Tuna Longline Association (ATLI), the Indonesian Tuna Association (ASTUIN) as well as by other individual tuna long-line Industry members. In Bena only, data collected by the onboard observer since September 2006 – June 2012 covering 35 vessels documented 71 sea turtles by-catch, most of the sea turtle bycatch was olive ridley. Among 71 sea turtles, 58 was alive and 13 was dead. All sea turtles released back to the ocean. Besides collecting data, the onboard observer also required to share the knowledge in how to handle sea turtle bycatch, in order to increase the survival rate of the animal. During that time, WWF cover 115 fishing trips, and succeeded train 400 crews in how to handle sea turtle bycatch properly. The result is promising, each year the death rate of sea turtle bycatch is decreasing. (source WWF 2011). Currently Indonesia does not have NPOA for marine turtles in Indonesia.

5.4 Bill fish

There were at least 5 species of billfish recorded as bycatch of Indonesian tuna longliners operated in the Indian ocean observed by scientific observer includes 3 species of marlins; black marlin (BLM) (*Makaira indica*), blue marlin (BLZ) (*Makaira mazara*), striped marlin (MLZ) (*Tetrapturus audax*), and two species non-marlin species such as sailfish (*Istiophorus platypterus*) and the swordfish (*Xiphias gladius*). Result of observer program activity year 2005-2010 show that the total hook rate of billfish fluctuates every year and ranged between 0,032 and 0.123. Total production of billfish in 2010 was 6148 mt decrease 50 % from the previous year as reported by Anung *et al* 2011

5.5 Albacore Tuna

Catch and size distribution of Albacore (*Thunnusalalunga*) was continuing monitored on three major landing fishing ports i.e. Bena, Cilacap, and Muara Baru through catch monitoring and scientific observer program from 2011 – 2012 (June). The catch estimation of ALB landed at Bena fishing port in 2011 about 384.3 tons lower compared to ATLI (Indonesia Tuna Longline Association) which up to 2,303 tons. The discrepancy of albacore catch was remain unsolved since identified in 2010. It is mainly due to sampling for frozen catch (including ALB) could not be conducted in some companies. Length distribution of albacore ranging from 36 – 128 cm (FL) and dominated by size 90 – 115 cm (FL).

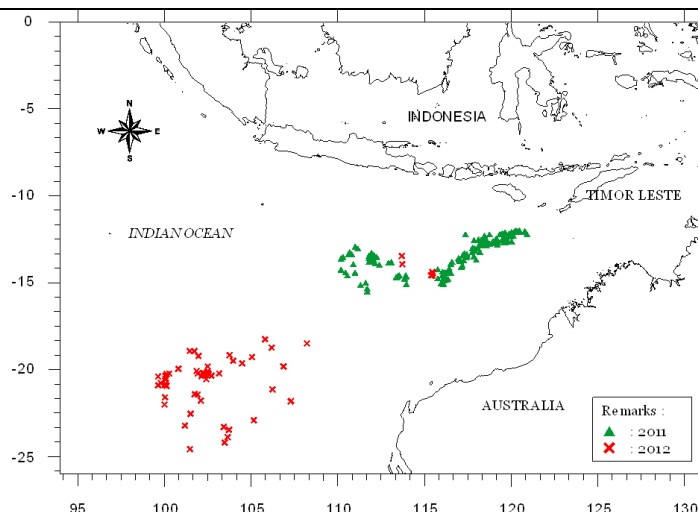


Figure 6. Distribution of Albacore caught by Indonesian tuna longline fleet from 2011 – 2012 (June) (Source LPPT observer program)

5.6 Neritic Tuna

Bullet and frigate tuna in the Indian Ocean were caught by various of fishing gears including, drifting gillnet and landed in various fishing port in along coastal of west Sumatera (Banda Aceh, Pariaman, Bungus/Padang and Painan) as well as south Java, Bali and Nusatenggara (Muarabaru/Jakarta, Pelabuhanratu, Cilacap, Kedonganan, Benoa). In Cilacap, especially tuna drifting gillnet fishery produces bullet and frigate tuna as by product. This paper presents the information on catch and size distribution of bullet tuna (*Auxis rochei* Risso, 1810) and frigate tuna (*Auxis thazard* Lacepède, 1800) caught by drifting gillnet based at Cilacap Fishing Port. Data and information obtained through catch monitoring, port sampling and landing report of Cilacap Fishing Port 2011 as well as from Capture Fisheries Statistics of Indonesia 2010. The catch estimation of bullet and frigate tuna on drift gillnet fishery based at Cilacap fishing port in 2011 about 3.220 and 47.346 tons respectively. Size (FL) of bullet tuna ranged between 16-39 cm and frigate tuna ranged between 25-46cm (Widodo *et al* 2012)

5.7 Southern Bluefin Tuna

The number of registered tuna longliners in the port of Benoa (Bali) that mainly target tuna was 757. Indonesia longliners registered in CCSBT was 187. Those fishing boats vary in size from 23-594 GT. About 85% of Indonesia's catch of SBT is landed in the port of Benoa. Based on CDS Report from Bali and Jakarta showed that the catch of SBT in 2011 was 672 mt. The result of estimation on the basis of data from Benoa catch monitoring SBT was 432 t. Monitoring of fish size landed in Benoa revealed that size distribution of SBT mainly was range from 160 cm to 180 cm of FL with mean length at about 169 cm, there was no significance change of the mean length of SBT in 2010-2012 compare to the length of SBT in 2002/03, this has fluctuated between 168



and 171 cm FL. The nominal CPUE 2005-2012 showed higher catch rates in the temperate regions. The average hook rate was 0.1 per 1000 hooks. A higher hook rate of SBT in 2011 occurred on October, November for 0,1-0,3 per 1000 hooks. Lower hook rate occurred on April to August 0-0,01 per 1000 hooks. Indonesia and Australia (CSIRO) is continuing to work together to provide age composition data (based on direct ageing using otoliths) and close kin analysis. Scientific observer program activities in 2011 cover 210 days at sea, and up to July 2012 the observer coverage up to 283 days with average 56 days at sea (Satria *et al* 2012).

6. NATIONAL DATA COLLECTION AND PROCESSING SYSTEMS

6.1 Logsheet data collection and verification

Template of Indonesia fishing logbook was developed under the collaboration with IOTC, WCPFC, CCSBT and OFCF Japan. There are three (3) kind of logbook template such as longline/handline; purse-seine/pole and line and other gear. For implementation of this logbook program, Ministry of Marine Affairs and Fisheries has released Regulation Number 18 Year 2010 of 5 October 2010. It is stipulated that logbook report has to be submitted to port authority prior to catch landing and mandatory to vessels above 5 GT. For a time being, data taken from logbook may not be able yet analysed due to limited submission by fishers. For effective implementation of this program, it is necessary to increase efforts to introduce this program both to fishers as well as port officers

6.2. Vessel Monitoring System

Ministrial decree No PER.05/MEN/2008 article 88 was issued in 2008 regulate the obligation of fishing boats to have transmitter of Vessel monitoring system onboard, particularly for fishing boats larger than 30 GT. Raising awareness on the importance of VMS for managing and ensuring the sustainability of fisheries resourced is one of a crucial field to underpin the successful VMS program. fisheries Information and services for Indonesia VMS is provided and could be accessed at <http://dkpvms.dkp.go.id>.

6.3. Observer programme

Indonesia fishing vessels has joined Regional Observer Programme for Transshipment at Sea since 2009 under resolution IOTC No. 08/02, which has been superseded by Resolution 11/05 and Resolution 12/05 concerning on establishing a programme for transshipment by large-scale fishing vessels stated that “*Each CPC shall ensure that all carrier vessels transhipping at sea have on board an IOTC observer.*” Scientific observer program in Benoa Bali was initially a collaboration program between Indonesia’s Ministry of Marine Affairs through research center for capture fisheries and CSIRO Marine and Atmospheric Research (Australia), in 2005 (see

sadiyah *et al* 2011). Later, in 2011 a new research institution namely Research Institute for Tuna Fisheries (RITF) with full funded by Indonesian government is established that basically conduct continuation of port sampling and scientific observer program for tuna fisheries in the Indian Ocean. The number of scientific observer involved in 2011 was 7 observers. The average day sea /trip was vary from 20 d/trip to 50 d/trip thus the total day at sea also vary from 150 days to 758 days /total number (Table 5). The Observer Program data set is currently the most detailed and most reliable data available from the fishery, in providing catch and effort information.

Table 5 Activity summary of observer based at Benoa Fishing Port

YEAR	No. of Obs	No. of trips	No. of Comp	Total day at sea	days/trip	Avg (d/trip)
2005	6	6	1	251	19 – 22	20
2006	6	19	5	758	7 – 99	39
2007	6	14	5	648	21 – 108	34
2008	5	15	7	481	23 – 66	30
2009	5	14	8	535	15 – 59	38
2010	5	8	4	240	40 - 50	45
2011	5	6	3	210	30 - 50	40
2012	7	8	6	540	30 - 94	67

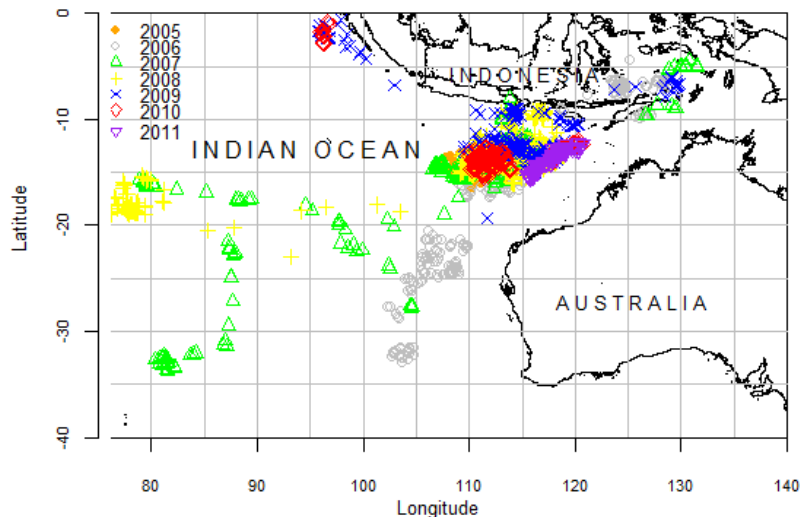


Figure 7. Spatial distribution of the observed sets from 2005 to 2011 (source: Observer Program data).

The observed longline sets from 2005 to 2011 covered the Eastern Indian Ocean between latitudes 0° and 34°S and longitudes 75° and 132°E, but also the Banda Sea (Figure 7). The observed sets mostly occurred within the area between 10° - 20°S

and 105° - 120°E. The furthest distance of these sets occurred in 2006 and 2007. Smaller area was covered by the observed longline sets in 2011. Since 2008, the observed setting positions have never extended to south of 20°S.

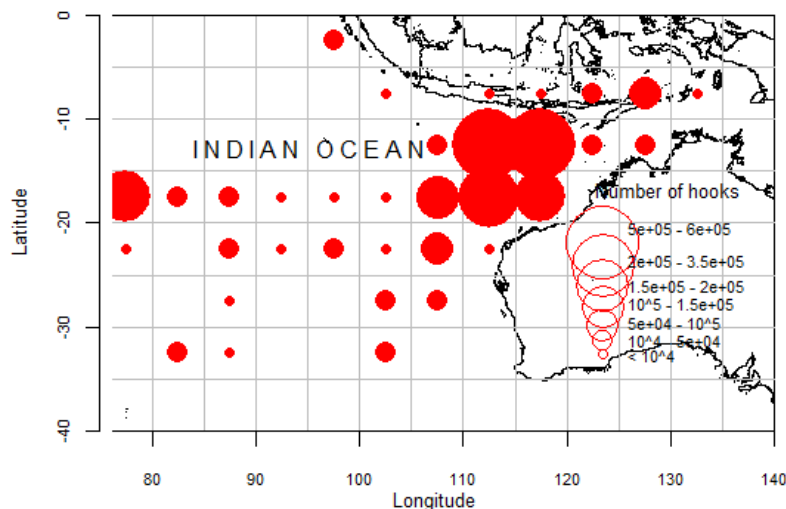


Figure 8. Spatial distribution of observed longline effort (hooks) by 5-degree blocks, aggregated from 2005 to 2011 (source: Observer Program data).

The spatial distribution of observed effort is presented by 5-degree blocks (5° latitude x 5° longitude) (Figure 8). More than 50% of the total number of hooks recorded were concentrated between 110° and 120°E and 10° and 20°S (Figure 8). South of 20°S (the temperate area of the Indian Ocean) and in the Banda Sea, the effort recorded in any 5-degree block never exceeded 100,000 hooks.

6.4 Port sampling programme

Port sampling program at three major Indonesian ports, Nizam Zahman Jakarta fishing port, Benoa-Bali fishing port and Cilacap fishing port central of Java was initially commenced in the mid 2002. This was a collaborative research program between Indonesia's Research Centre for Capture Fisheries/Research Institute for Marine Fisheries (RCCF/RIMF) and Directorate General for Capture Fisheries (DGCF), CSIRO Marine and Atmospheric Research, Australia's Department of Agriculture of Fisheries and Forestry (DAFF), Australian Centre for International Agricultural Research (ACIAR), Indian Ocean Tuna Commission (IOTC) and Overseas Fisheries Cooperation Foundation of Japan (OFCF) (see Lilis *et al* 2011). The aim of this port sampling program was to monitor the catches of all tuna species landed, and also to record the number of landings by Benoa-based longline vessel (Proctor *et al.*, 2006). Port sampling program at two sampling sites (Nizam Zahman and Cilacap fishing ports) have been undertaken by DGCF since 2007, and Benoa

sampling port also covered by DGCF since 2010. In February 2010, the RIMF commenced to undertake the sampling, collecting and monitoring activities (Nugroho *et al.*, 2010). In 2011 RITF continue the tuna catch landed monitoring program at Bena Fishing Port with a minimum 30% coverage of landings at each processing plant as a target coverage, as result in average the port sampling in 2009 – 2011 was range from 37 – 57 % coverage (Table 6).

Table 6. Summary of RITF Monitoring activities at Bena during 2009-2011 (Technical report of port sampling monitoring program RITF November 2011-Update)

Years	Month	Number landings	Number sampled	% covered	Number of Weight Recorded	Number of length weight measured
2009	January	211	108	51,18	18199	695
	February	89	47	52,81	11291	619
	March	156	71	45,51	16399	445
	April	210	100	47,62	26187	681
	May	157	71	45,22	14132	389
	June	189	90	47,62	21805	503
	July	130	60	46,15	15180	960
	August	110	56	50,91	14168	896
	September	160	76	47,50	19228	1216
	October	140	72	51,43	18216	1152
	November	120	68	56,67	17204	1088
	December	170	75	44,12	18975	1200
2010	January	no sampling				
	February	9	5	55,56	730	302
	March	25	13	52,00	3866	210
	April	100	39	39,00	11868	655
	May	111	52	46,85	13200	870
	June	155	68	43,87	22315	782
	July	144	67	46,53	17143	1625
	August	104	47	45,19	13602	756
	September	131	63	48,09	9285	730
	October	109	46	42,20	13812	546
	November	117	51	43,59	15005	580
	December	94	37	39,36	5962	485
2011	January	125	53	42,40	8602	984
	February	73	30	41,10	6648	458
	March	81	31	38,27	6680	798
	April	88	37	42,05	9431	835
	May	77	30	38,96	5432	540
	June	60	26	43,33	6291	859
	July	65	24	36,92	3719	228
	August	98	43	43,88	9782	488
	September	46	23	50,00	4840	341
	October	80	32	40,00	6671	635
	November	85	26	30,59	3527	304
	December	43	17	39,53	2461	193

7. NATIONAL RESEARCH PROGRAMS

1. Project title: Indian Ocean Pelagic fisheries research through Port sampling and observer program, Project Duration: 2010-2013
Objectives: Continuation of port sampling and observer
Implementing unit: RITF Bena
2. Project title: Developing capacity for management of Indonesias pelagic fisheries resources , Planned Project Duration : 2012-2015 .
Objectives: To improve Indonesia's capacity to assess and manage its tuna fisheries to improve Indonesia's pelagic fisheries research capacity
Implementing Unit : RCFMC – ACIAR
recent progress: A training activity for marine parasites associated with tuna was conducted recently in November 2012 in Jakarta with CSIRO supervision.

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

Indonesia participates in several IOTC SC working parties. Scientific observer and port sampling program are continuing to monitor catch and effort of tuna and other ecologically related species in order to implement scientific Committee Recommendation.

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9. LITERATURE CITED

- Directorate General of Capture Fisheries, Ministry of MAF, 2007. *Statistics of Marine Capture Fisheries by Fisheries Management Area, 2001 – 2005*. Jakarta.
- _____, 2008. *Capture Fisheries Statistics of Indonesia, 2001 – 2006*. Jakarta.
- _____, 2008. *Statistics of Marine Capture Fisheries by Fisheries Management Area, 2002 – 2006*. Jakarta.
- _____, 2009. *Capture Fisheries Statistics of Indonesia, 2002 – 2007*.
- _____, 2011. *Capture Fisheries Statistics of Indonesia, 2005– 2010*
- Directorate General of Capture Fisheries, Ministry of MAF, 2010. National Plan of Action (NPOA) Shark and Rays Management
- Proctor, C. H., Merta, I. G. S., Sondita, M. F. A., Wahju, R. I., Davis, T. L. O., Gunn, J. S. and Andamari, R. (2003) A review of Indonesia's Indian Ocean tuna fisheries. ACIAR Country Status Report. 106 pp
- Proctor, C. H., Andamari, R., Retnowati, D., Herrera, M., Poisson, F., Fujiwara, S. and Davis, T. L. O. (2006) The catch of SBT by the Indonesian longline fishery operating out of Benoa, Bali in 2005. CCSBT 7th Meeting of the Stock Assessment Group and the 11th Meeting of the Extended Scientific Committee, Tokyo, Japan, 4-11 September and 12-15 September 2006
- Satria, F., Suman, A, Nugroho, D. Nugraha, B., Widodo, A., Sadiyah, L Barata, A. and Siregar K (2011) National report Indonesia southern bluefin tuna fisheries. Japan, July 2012. CCSBT – ESC/ 1208/SBT FISHERIES – Indonesia A National Report Year 2011 (Rev 1)
- Sadiyah, L., Nugraha, B., Widodo (2011) catch and effort Information for Albacore by Indonesia's Indian Ocean Tuna Longline Fishery based at Benoa Fishing Port . IOTC–2011–WPTmT03–14
- Widodo, A. Satria ,F. Sadiyah, L. And Riyanto J. Neritic Tuna Species Caught Drifting Gillnet in Indian Ocean Based In Cilacap-Indonesia IOTC-2011- WPNT01-21
- Widodo, A. Nugraha B, Satria F, and Barata A. (2011) Species composition and size distribution of billfish caught by Indonesian tuna long-line vessels operating in the Indian Ocean IOTC-2011-WPEB.
- Widodo, A, Satria F, and Barata A. (2012) Catch and Size Distribution of Bullet and Frigate Tuna Caught by Drifting Gillnet in Indian Ocean Based at Cilacap Fishing Port, Indonesia. INDONESIA National Report To The 2nd Working Party on Neritic Tuna Indian Ocean Tuna Commission Penang-Malaysia, 19-21 November 2012
- Zainudin, IM, Soede LP., Hittipeuw C., and Adnyana I.B. (2007) Reducing Sea Turtle Bycatch and Other Marine Endangered Species of Indonesian Tuna Longline through Onboard Observer Program, Data from field observation 2006 to 2007. WWF - NOAA-PIRO