

**PRELIMINARY INVESTIGATION OF SBT CATCHES IN SPAWNING AREA  
FROM INDONESIA FLEETS**

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### **Summary**

This paper presents preliminary result on data validation process to confirmed location where SBT catch by longline vessel Indonesia. Data validation conducted by utilized various data source such as logbook, Port Sampling and VMS data to verify CDS data. Result analysis from CDS data 2015-2018 showed that proportion number of small SBT (<160 cmFL) catches in spawning area increased in recent years.

### **Size structure SBT catches 2015-2018**

Southern Bluefin Tuna (*Thunnus maccoyii*) was not primary target by Indonesia longline fishery, therefore historically caught as by-catch from yellowfin and bigeye fishery. Since Indonesia implement Catch Documentation Scheme to improve data collection and monitoring SBT catch, fishing company shall fulfilled information related fishing location and size frequency into CDS form. Based on CDS data, it was reported that number of proportion SBT size less than 160 cmFL increased since 2012, this happened commonly due to LL fishery operated outside spawning area. However in 2015-2016 CDS data, even though all SBT catches declared from spawning area, number of small SBT (less than 160 cmFL) catches still record and increased in recent years (Figure 1).

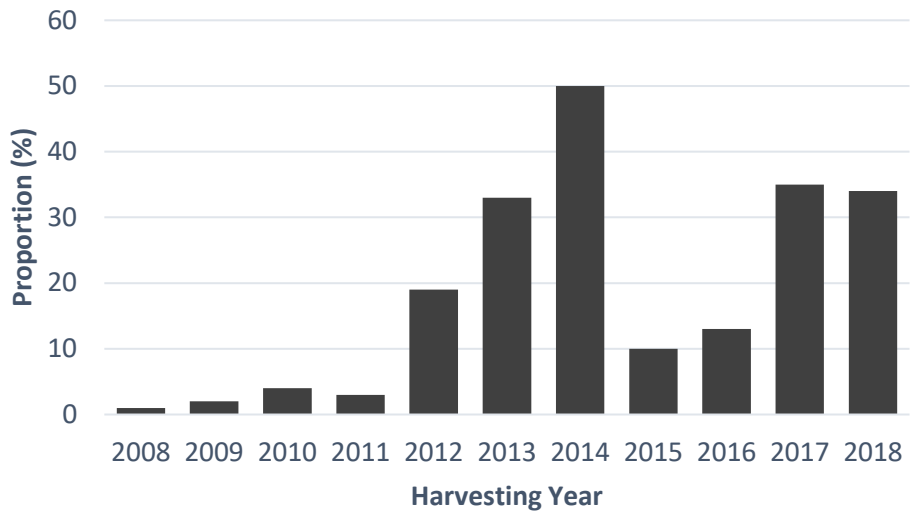


Figure 1. Proportion of small SBT (<160 cmFL) caught during calendar year 2008-2018

### Data Validation Method

Data analysis had been conducted to confirmed the captured of SBT size less than 160 cmFL in spawning area by utilized data from observer program, logbook and VMS tracking. Data cleaning and truncation primarily based on VMS data tracking, classified if number of tracking vessel more than 70% from all tracking data in one trip was classified operated in spawning area (Figure 2).

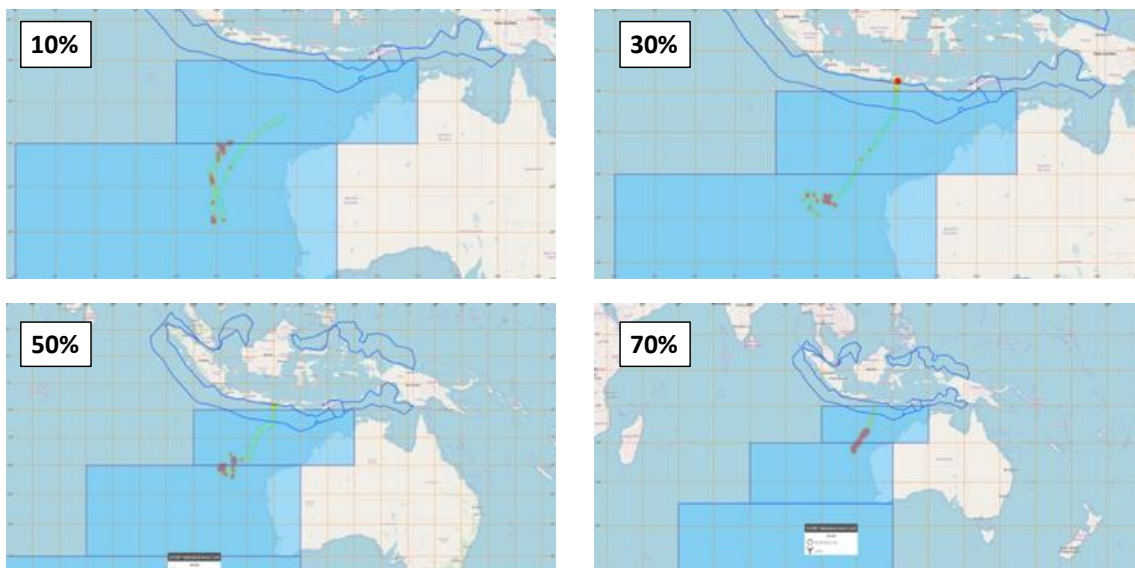


Figure 2. Classification of proportion number of tracking in one trip from Indonesia LL vessel based on VMS data

Based on analysis result, we can confirmed number of SBT less than 160 cmFL catches in spawning area since 2015-2018 were 214, 350, 621 and 701 respectively (Table 2). Length frequency distribution mostly ranged from 110 – 160 cmFL.

Table 2. Size frequency SBT catches less than 160 cmFL in spawning area

Lcat (cmFL)	Harvesting Year			
	2015	2016	2017	2018
70	0	0	0	1
75	0	0	41	1
80	0	0	0	1
85	0	0	0	0
90	0	0	0	0
95	0	0	0	0
100	3	0	0	0
105	1	0	0	0
110	3	0	16	0
115	3	0	10	0
120	6	2	1	5
125	7	3	3	30
130	19	16	15	20
135	40	33	112	34
140	42	64	170	33
145	37	78	71	82
150	53	72	103	115
155	0	82	79	246
160	0	0	0	133

This Preliminary Result Analysis provide several importance information as follows :

1. Catches of Indonesian SBT reported through CDS data submission 2015-2018 recorded an increased in number of small SBT (<160 cmFL) in the recent years with the proportion from total catches were 36.2% (2,107 fish), 37.3% (2,392 fish), 50.4% (4,851 fish) and 33.57% (3,637 fish) consecutively.
2. Size frequency of SBT less than 160cmFL confirmed being caught from spawning area, ranged between 100 – 155 cmFL in 2015, 120-155 cmFL in 2016, 75 – 155 cmFL in 2017 and 67 – 159 cmFL respectively.
3. The proportion from total catches of SBT less than 160 cmFL origination from spawning area were 4.76% in 2015, 7.79% in 2016, 13.82% in 2017 and 6.41% in 2018 respectively.

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