

Catch statistic form Tuna Longline Landing at Port of Phuket, Thailand, during 2013-2017

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Abstract

Catch statistic from foreign tuna longline fishery unloading at Phuket ports, Thailand during 2013-2017 show that there were 1,097 trips and 29,890 tons of total catch. The highest number of trip and total catch was in 2015 as 295 trips and 10,575 tons. Taiwan was a major part which accounted for 69.74% of total trips and 63.15 % of total catch (5 years average). In 2017, the number of vessels unloading was declined sharply when compared to 2015 and the trend of total catch per trip was decreased dramatically since 2015 as well. These cause the total catch in 2017 (2,268 tons) lower than ever. Catch composition, tuna species were accounted for 67.66% of total catch, the remaining was billfish and other fish as 23.64 and 8.70%. Considering specific to tropical tuna, the highest amount occurred in 2015 equal 8,508 tons. After that, tuna catch was reduced continuously due to the decreasing of vessels and catch rate, tuna was unloading 1,788 tons in 2017. Yellowfin tuna was mainly species followed by bigeye, skipjack and albacore tuna as 85.26 13.57 0.59 and 0.58%, respectively.

Keywords: catch statistic, tropical tuna, foreign longlines, Phuket

Introductions

Thailand has attended to a member of the Indian Ocean Tuna Commission (IOTC) since 1996 for maintaining the right of tuna fishing. There were two Thai tuna fishing vessels operated in the area with a short period in 2014. Thailand has developed a facilitate structures for supporting and allowing foreign tuna fishing vessel that can be unloading tuna for processing and exporting to the consumer countries. The major country of a fishing vessel that unloading to Phuket port consists of Taiwan China Indonesia Belize Bolivia India and Malaysia etc. Catch data of tropical tuna unloading in Thailand are collected by Phuket customs and Phuket Fish Inspection. Firstly, Phuket customs has recorded the amount of tuna since 1994 until now. By the regulation, all foreigner fishing vessel must declare their goods before unloading. Another government agency, Phuket Fish Inspection which was established after Thailand ratified the FAO Port State Measure Agreement in 2016. The main function is to record the amount and species of fish and for inspection and rigorous control of fishing vessels to prevent and eliminate IUU fishing as well. The report aims to present the number of foreign tuna longline

vessel and the amount of catch which unloading in Phuket port, Thailand during 2013-2017.

Data collections and data analysis

Set of data was collected from Phuket Customs that has been informed by the entry tuna longline vessel before unloading any goods or fish at the fishing port into the Kingdom of Thailand, during 2013-2017. The information includes vessel names, ship codes, nationality, dates, species and the number of aquatic animals.

The data was analysed for the number and trend of tuna longline vessel that comes into Thailand by nationality annually. In addition, total catch and by species each year will be summarized. Catch per unit effort (CPUE), in this case, the average of total catch and by species per trip will be calculated yearly as well.

Data summary

1. Number of foreigner tuna longline fishing vessel unloaded at Phuket port

During 2013-2017, there were 1,097 trips of foreign tuna longline unloaded at Phuket port. Taiwan was the most accounted for 69.97% of total landed, which followed by Indonesia, Bolivia, Belize, India and Malaysia as 22.61, 4.10, 1.64, 1.55 and 0.36%, respectively (Table 1).

Taiwan has been in the port through the period, but most countries were not entry. For instance, Indonesia was disappeared in 2017, India has not entered in 2016, Bolivia and Belize did not come since 2015, while Malaysia came in the last year 2017.

Since 2016, the number of ships has decreased dramatically. This may due to several reasons. Firstly, developing deep-sea ports of neighbour countries that attract the entrepreneur move to the new place for reducing the budget especially for the oil costly. Secondly, may cause from strict compliance of Thailand that follows the Port state measure agreement.

2. Total catch, catch rate and composition

2.1 Total catch

Total catch during 2013-2017 was 4,918 5,930 10,575 6,198 and 2,268 respectively (Figure 1). The highest catch occurred in 2015 after that its trend was declined significantly. Considering the catch rate (ton per trip), the lowest point was in 2013 (18.84 tons/trip), then the catch rate was increasing until to the maximum point in 2015 as 33.85 ton/trip. After that catch rate trend was continued decreasing till in 2017 (23.63 tons/trip). So, reducing the amount of catch loaded in Phuket port caused by decreasing the number of ships entry and the catch rate.

Table 1 Number of foreigner tuna longline fishing vessel unloading at Phuket port, Thailand by country

COUNTRY	Year					total	% by country
	2013	2014	2015	2016	2017		
Taiwan	148	129	200	196	92	765	69.74
Indonesia	77	75	88	8		248	22.61
Bolivia	22	23				45	4.10
Belize	14	4				18	1.64
India		10	7			17	1.55
Malaysia					4	4	0.36
Summary	261	241	295	204	96	1,097	1,933
% difference when compare to 2015	-11.5	-18.3	0.0	-30.8	-67.5		

Total catch separated into three main groups such as tropical tuna, billfish, and others. In the study period, the most proportion belongs to tuna as 67.66 % followed by billfish and others as 23.64 and 8.70 %. But in 2017 found that the percentage of tuna was decreased, while billfish was increased (Figure 2).

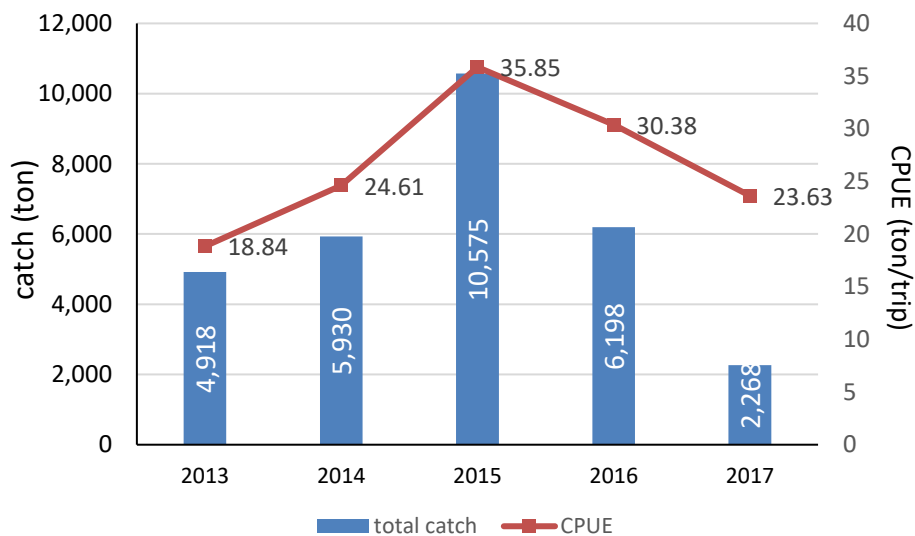


Figure 1 Total catch and catch rate (ton per trip) of foreigner tuna longline fishing vessel unloading at Phuket port, Thailand during 2013-2017

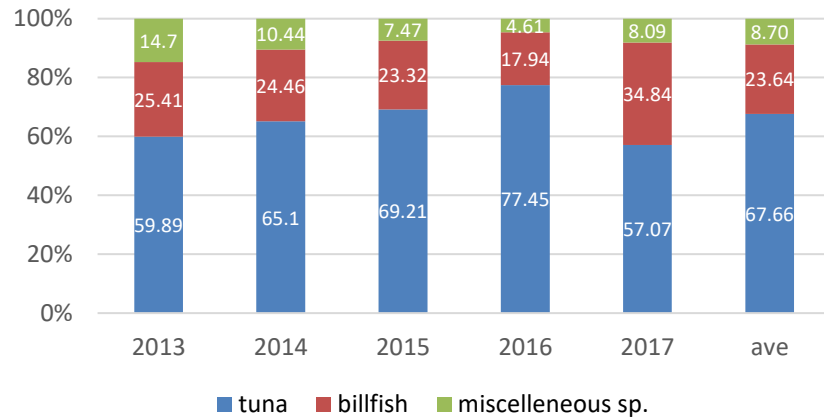


Figure 2 Composition of total catch of foreigner tuna longline fishing vessel unloading at Phuket port, Thailand during 2013-2017

2.2.1 Tropical tuna

There were four species of tropical tuna comprise of yellowfin tuna, bigeye tuna, albacore tuna, and skipjack tuna. A large number of unloading catches was found in 2015 as 7,319 tons and the lowest number was in 2017 equal 1,294 tons. Considering the catch rate, the high number was shown in 2015 equal to 24.81 tons per trip. After that, it was slightly declined in 2016 and sharply decreased in 2017 equal 23.54 and 13.48 tons per trip (Figure 3).

In term of an average of catch composition during the study time, yellowfin tuna was the main species about 85.26 %, the remained were bigeye tuna, skipjack tuna, and albacore tuna equal 13.57 0.59 and 0.58 % respectively. It is noteworthy that, the last two-year data showed only the proportion of yellowfin and bigeye tuna (Figure 4). For yellowfin tuna can be described in further detail.

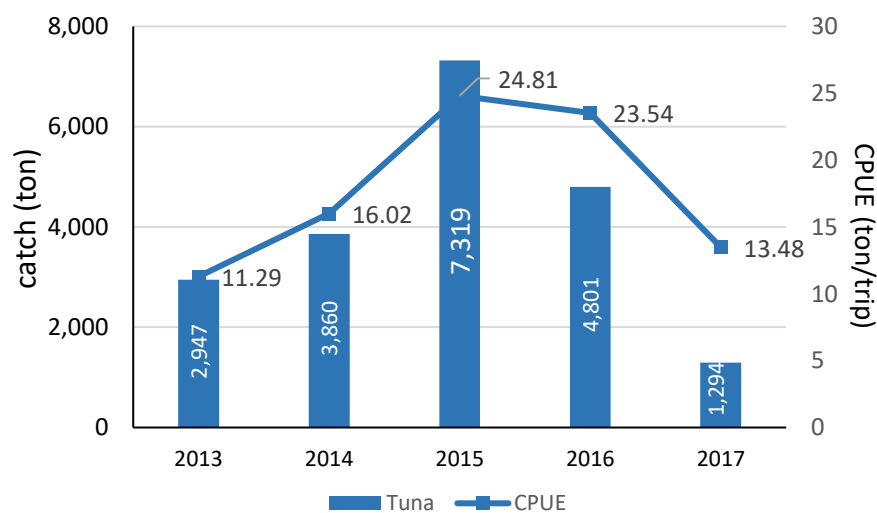


Figure 3 Catch and catch rate (ton per trip) of tropical tuna from foreigner tuna longline fishing vessel unloading at Phuket port, Thailand during 2013-2017

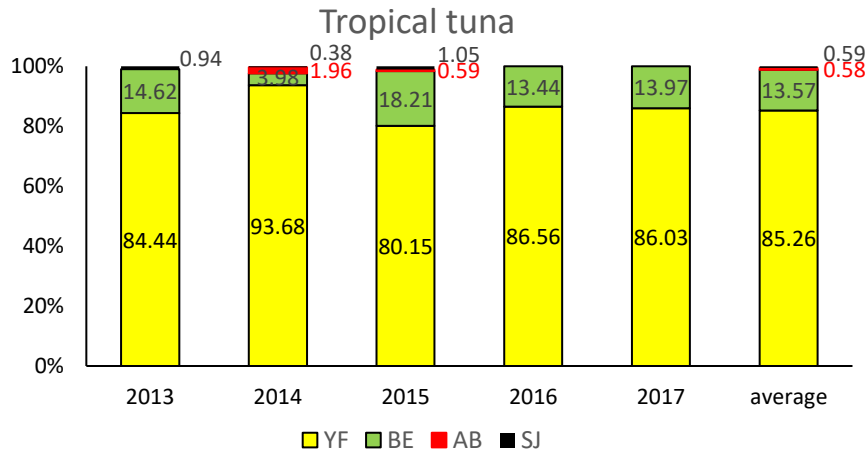


Figure 4 Composition of tropical tuna of foreigner tuna longline fishing vessel unloading at Phuket port, Thailand during 2013-2017

Yellowfin Tuna has a highest unloading in 2015 was 5,866 tons. The lowest in 2017 was 1,113 tons, representing 81 and 73 % reduced when compared to 2015 and 2016, respectively. For the catch rate found that the higher rate occurred during 2015-2016 as 18.89 and 20.37 tons per trips. Then the catch rate in 2017 was dropped to 11.60 tons per trip representing a reduction of 43% compared to 2016 (Figure 5). However, the lowest point during studies year occurred in 2013 equal 9.53 tons per trip.

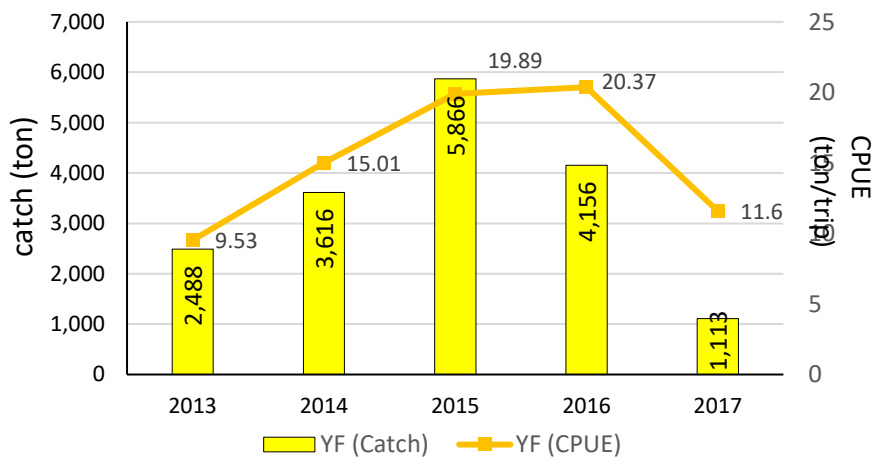


Figure 5 Total catch and catch rate (ton per trip) of yellowfin tuna unloading by foreigner tuna longline fishing vessel at Phuket port, Thailand during 2013-2017

Conclusions

Total landing catch of foreigner tuna longline fishing vessel which unloading at Phuket port since 2015 was dramatically reduced due to the number of that vessel decreasing. Taiwan was the main country that comes to Phuket port in the highest number of entry and catch, but those number likely to decline. Decreasing in the number of fishing vessel entry may due to the relocation of processing bases to other countries ports. Catch

composition during the year recorded did not change much. Tropical tuna is also a major component in total catch, and the most common tuna species still was a yellowfin tuna which followed by bigeye tuna. The catch rate for all component likely decrease whether total catch, tropical tuna group, yellowfin tuna or even bigeye tuna. However, although this is a small piece of data, it is necessary to continue collecting the data for further tuna resource management in the region.