

Billfishes landings in Phuket Ports by foreign tuna longline fishing vessel in 2018

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ABSTRACT

In 2018, billfish was unloaded at Phuket, Thailand equal 522.91 tons (46.52% of total catch). All of them were caught by foreign tuna long-line fishing vessels those operated in the Indian Ocean. There were six species of billfish included swordfish (*Xiphias gladius*) which was the highest proportion as 62.21%, followed other marline (*Makaira spp.*) 18.01%, indo-pacific sailfish (*Istiophorus platypterus*) 12.32%, blue marlin (*Makaira mazara*) 4.43%, striped marlin (*Kajikia audax*) 2.35% and black marline (*Istiompax indaca*) 0.68%.

Keywords: billfish, tuna long-line fishing, Thailand

INTRODUCTION

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 two water area, the Gulf of Thailand and the Andaman sea coast of Thailand. Phuket is a province located in the south of Thailand that connect to the Indian Ocean. According to the FAO Port State Measure Agreement that Thailand established Phuket Fish Inspection which under Department of Fishery 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.

Phuket had 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. In the part, there were several countries came to Phuket port for unloading their goods. Taiwan, Province of China, is the highest number often founded, other counties were Indonesia, Belize, Bolivia, India, and Malaysia for instance. For the past three years (2015-2017), the number of unloading was declined significantly as 295 204 and 96 trips per year respectively. This report aims to present the number of foreign tuna longline vessel and the amount of catch which unloaded at Phuket port in 2018.

DATA COLLECTIONS AND ANALYSIS

The data contained in this paper based on the report of marine importing and Phuket inspection office (personal contact). The marine importing report can be download via the website of Fish inspection division, Department of Fishery (link shown at reference). The marine importing data were categorized how it's imported for example by fishing area (country or high sea), transportation (by ship, plane or container truck), fish species and weight, for instance. However, it did not consist of vessel name and fishing gear. Thus, personal contact with Phuket inspection office is necessary. In addition to knowing the details of each ship that requests to transfer aquatic animals (such as the name of a nationality boat). Moreover, we can find the information on the fishing operation from their fishing logbook that contained all data over the need.)

Tuna fishing information from the high seas (in this case mean the information of tuna longline fishing vessel which operated in the India Ocean) will be sort from the database. The number of trips unloading will be count, catch composition and weight by species and group will be summarized by month. All species was classified into three groups, they are tropical tuna, billfish and bycatch species. Tropical tuna comprises Yellowfin tuna (*Thunus albacares*) and Bigeye tuna (*T. obesus*), billfish were blue marlin (*Makaira mazara*), striped marlin (*Kajikia audax*), black marlin (*M. indica*), sailfish (*Istiophorus platypterus*), swordfish (*Xiphias gladius*) and other marlin fish. while bycatch consists of small tuna, albacore (*T. alalunga*) and skipjack (*Katsuwonus pelamis*), oilfish (*Ruvettus pretiosus*), wahoo (*Acanthocybium solandri*), mahi (*Coryphaena hippurus*), barracuda (*Sphyraena* spp.), pomfret (*Taractichthys steindachneri*) and others.

RESULT

There were 38 trips form 28 foreigner tuna longline fishing vessels that unload their goods at Phuket. All of them was Taiwan, China fishing vessel. Total catch in weight was 1,123.96 tons. Total catch was loaded through the year except for August September and December. The highest catch occurred in March equal 410.06 tons accounting to 36.48% of the total catch of the year. Total fish was separated into three groups, tropical tuna, billfish and other bycatch as 571.87 522.92 and 29.20 tons equal 50.88 46.52 and 2.60 % of total catch respectively. (Table 1)

Total amount of billfish was 522.92 tons. Swordfish was the highest proportion as 62.21 % of the total catch, followed by Other marlin, Indo-Pacific sailfish, Blue marlin, Striped marlin, and Black marlin as 18.01 12.32 4.43 2.36 and 0.68% respectively. (Figure 1)

Table 1. Number of trip per month, total catch (tons) by fish group and catch rate (tons per trip) in 2018 base on Phuket inspection office

Month (2018)	no. of trip	billfish	tuna	bycatch	total catch	catch/trip
Jan	8	95.59	125.94	2.02	223.55	27.94
Feb	4	43.83	68.32	0.94	113.08	28.27
Mar	13	210.24	195.74	4.08	410.06	31.54
Apr	2	27.4	27.46	0.76	55.61	27.81
May	3	34.36	55	3.75	93.11	31.04
Jun	3	27.63	18.17	3.94	49.73	16.58
Jul	2	0	38.68	0	38.68	19.34
Aug	0	0	0	0	0	-
Sep	0	0	0	0	0	-
Oct	2	29.42	33.6	8.04	71.06	35.53
Nov	1	54.45	8.96	5.67	69.08	69.08
Dec	0	0	0	0	0	-
total	38	522.92	571.87	29.20	1123.96	29.58
%		46.52	50.88	2.60	100.00	

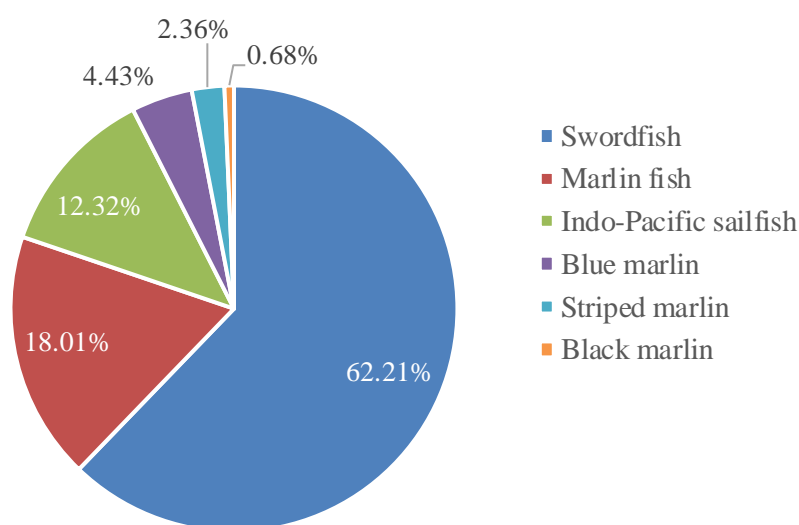


Figure 1. Species composition of billfish unload at Phuket in 2018 by foreigner tuna longline fishing vesse

Consider the monthly catch landing of billfish. There is regularity in the first half of the year from January to June, the catch loaded was in the range of 27.40 – 210.24 tons, while the second half part of the year (July to December) although there are three months of unloading but only two months of October and November which the billfish was unloaded as 29.42 and 54.45 tons respectively. (Figure 2)

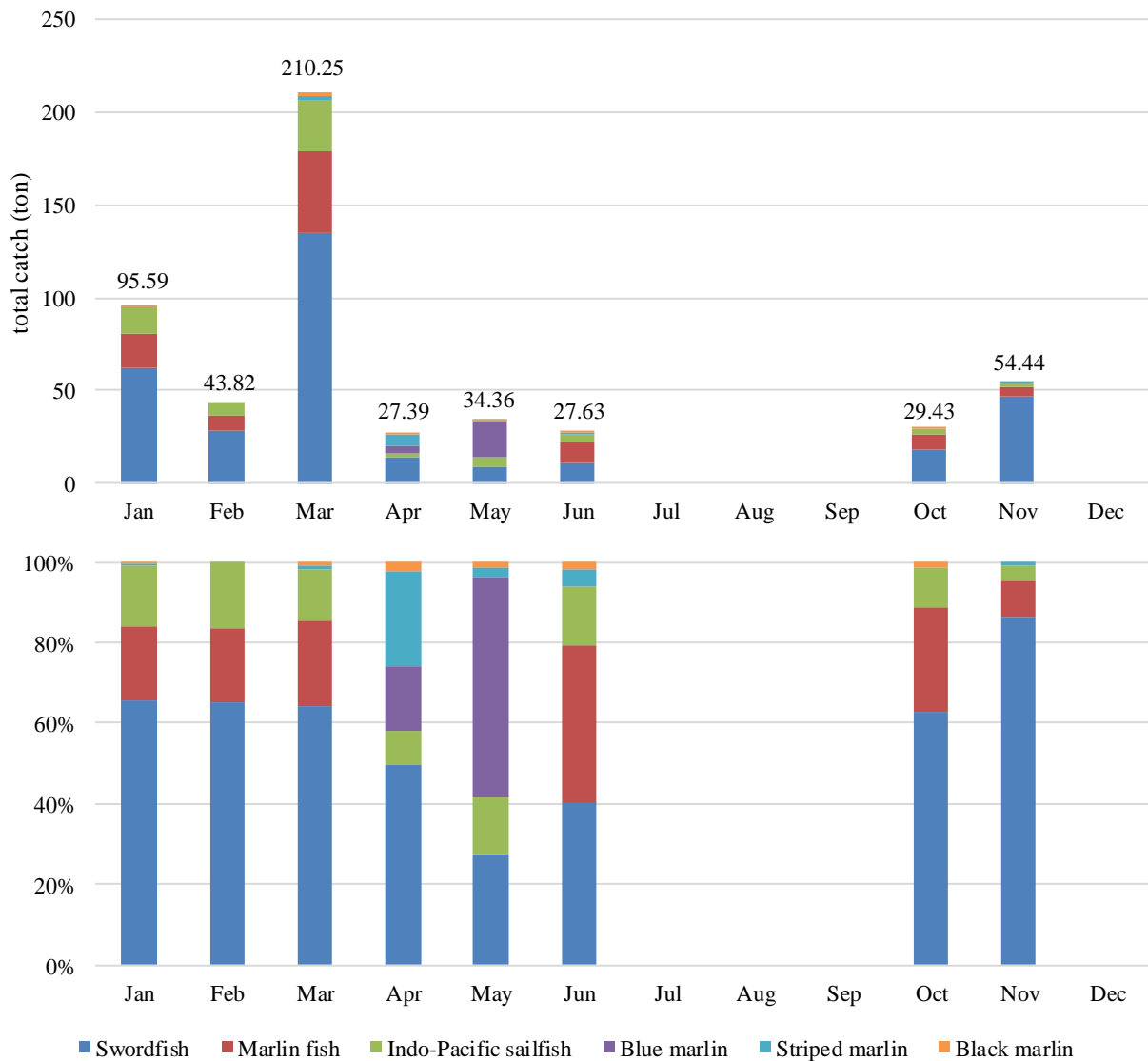


Figure 2. Amount of billfish unloading and species proportion by month

- Swordfish and Indo-Pacific sailfish were the outstanding species so they were found regularly when unloading occurred. The largest quantity of swordfish and Indo-Pacific sailfish was in March equal 134.69 and 26.70 tons accounting for 64.06 and 12.70% of billfish at that month. (Table 2 and 3)

- Others marlin was found in January, February, Mar, June, October and November. The highest value was in March equal 44.70 tons (21.26% of total catch of the month) but the highest proportion appeared in June (39.52%)

- Blue marlin was found in April and May. In May, it was an outstanding species which was the most quantity and proportion as 18.76 tons accounting for 54.60%.

- Striped marlin was unloading in January, March, April, May, June, and November. The highest quantity of unloading was in April equal to 6.36 tons equal to 23.22% of the month.

- Black marlin appeared in January, March, April, May, June, and October with tiny quantity. The highest quantity of unloading was in March equal to 1.38 tons (0.66% of the month) while the highest proportion happened in April equal to 2.48%.

Table 2. Quantity (ton) of billfish species were unloading at Phuket ports in 2018.

Billfish	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	total
Swordfish	62.69	28.55	134.69	13.60	9.35	11.05				18.43	46.96		325.32
Marlin fish	17.81	8.16	44.70	0.00	0.00	10.92				7.70	4.87		94.16
Indo-Pacific sailfish	14.19	7.11	26.70	2.36	4.98	3.97				2.95	2.13		64.39
Blue marlin	0.00	0.00	0.00	4.39	18.76	0.00				0.00	0.00		23.15
Striped marlin	0.68	0.00	2.78	6.36	0.76	1.25				0.00	0.48		12.31
Black marlin	0.22	0.00	1.38	0.68	0.51	0.44				0.35	0.00		3.58
total	95.59	43.82	210.25	27.39	34.36	27.63	0.00	0.00	0.00	29.43	54.44	0.00	522.91

Table 3. Proportion (%) of billfish species were unloading at Phuket ports in 2018.

Billfish	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	total
Swordfish	65.58	65.15	64.06	49.65	27.21	39.99				62.62	86.26		62.21
Marlin fish	18.63	18.62	21.26	0.00	0.00	39.52				26.16	8.95		18.01
Indo-Pacific sailfish	14.84	16.23	12.70	8.62	14.49	14.37				10.02	3.91		12.31
Blue marlin	0.00	0.00	0.00	16.03	54.60	0.00				0.00	0.00		4.43
Striped marlin	0.71	0.00	1.32	23.22	2.21	4.52				0.00	0.88		2.35
Black marlin	0.23	0.00	0.66	2.48	1.48	1.59				1.19	0.00		0.68
total	100.00	100.00	100.00	100.00	100.00	100.00				100.00	100.00		100.00

CONCLUSIONS

- The amount of billfish is high in catch proportion accounting to 46.52% of the total catch.
- Swordfish was the main species equal to 62.21 % of total weight of billfish, followed by unspecific marlin, Indo-Pacific sailfish, Blue marlin, Striped marlin, and Black marlin as 18.01 12.32 4.43 2.36 and 0.68% respectively.
- The number of foreign tuna longline fishing vessel entered to Phuket port has been steadily decreasing. In 2018, there are only 38 trips, less than 7.7 times when compared to the year of 2015 (295 trips).

REFERENCE

Department of Fishery. Quantity of marine fish importing to Thailand in 2018.

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