

Billfishes landings in Phuket Ports by foreign vessel, 2017

Kanokwan Maeroh, Sichon Hoimuk, Noppadon Somkliang,
and Supachai Rodpradit

Upper Andaman Sea Fisheries Research and Development Center (Phuket)
77 Tumbon Vichit, Maung District, Phuket 83000 Thailand

Abstract

Billfishes were landing in Phuket, Thailand almost from foreign tuna longline vessels. The first nationality is Taiwanese. The high season occurred at the beginning of the year. The total billfishes unloaded in Phuket ports, Thailand was 893.99 tons (39.4% the whole landing). From the recorded data, billfishes can be classified into six species. Swordfish (*Xiphias gladius*) was the highest quantity equal 21.78 % of total landing in 2017, followed by Blue marlin (*Makaira mazara*), black marlin (*M. indica*), short bill spearfish (*Tetrapturus angustirostris*), striped marlin (*Tetrapturus audax*) and sailfish (*Istiophorus platypterus*) as 6.07%, 4.78%, 4.47%, 2.22% and 0.11%, respectively.

Keywords: tuna longlines, marlins, swordfish, Port Inspection, Port State Measures

Introductions

Data collection on Billfishes in Thailand has begun since 1994 which divided into three periods. The First period, data were from customs recording. The second period, data has come from 2 sources. The first was from the record of customs and the second was from port sampling, where the information of fishing vessels and catch composition were acquired. As the total entries per year and landing catch recorded by customs, that information was first used to plan for port sampling procedure due to the first point of declaration. Port sampling result will be used to calculate the quantity of each species that unloaded through the customs. Tuna ports mostly located at Maung District, Phuket Province. The third period, the data collection was from port state measure.

From statistics on the unloading of imported tuna from the past to the present. Foreign tuna longline vessels unloading in Phuket consisted of several nationalities, such as Taiwanese, Indian, Indonesian, Chinese, and Malaysian, depending on the year. The quantity of tuna unloading in Phuket has increased, the imported tuna trend since 1994 has increased over the years which the maximum volume occurred in 2015. However, the amount of total landing is opposite to the direction of the no of entry. There was a decreasing trend for several years. The decreasing trend may be due to Thailand has strengthened its inspection and rigorous control of vessels to prevent and eliminate illegal IUU vessels. Lack of employment and uncontrolled or possibly displaced by migration of tuna and other aquatic resources. However, Billfish is a group of marine species that Thailand attaches importance species to import and export.

Data collections

In 2017, Billfish data was collected from Port State Measure. Thailand had practiced the PSM Inspection in Phuket since 2013 as a pilot project before a declaration of the designated port in 2015 and ratified the FAO Port State Measure Agreement in 2016. Currently, there is six designated port in Phuket from the total 27 ports entire the country. Since 2016, the coverage of inspection was 100% of landing. However, the primary purpose of the port inspection was to approve the landing catch of groups of fish to import rather than to identify the catch into species level. Therefore, except tuna, without sampling, the information of billfish species is still limited from PSM information (Sampan, 2016). Phuket Fish Inspection Office is in Fish Quarantine and Inspection Regional Center 3 (Songkhla). The job descriptions of Phuket fish Inspection Office is to analysis, research and suppression, Control of import and export of aquatic animals, and the inputs are in accordance with the relevant laws, carry out licensing services, and import / export certificates through fish and feed inputs, prevent the violation of the Fisheries Act 2015, the Animal Disease Act BE 2558 Reserve. 1992 Animal Health Quality Control Act, BE 2535, Hazardous Substance Act, BE 2535 (1992). And import into the Kingdom, the 1979 product and other relevant laws. 3. Supervise and implement ports state measures, Quarantine or seizure of aquatic products and inputs To be close to like to be right, to comply with the law and according to national standards and international. The fourth to serves as a service point, Consult the use of the central request link system and licensing system, certificate via the internet in the catchment area. Fifth to providing the health certificate for export of carcasses to foreign countries as assigned. Sixth to coordinate with related international agencies and to carry out ports state measures, porters and other tasks related to the mission. Seventh to cooperate with or support the performance of other related agencies or as assigned. The foreign tuna longline vessel was landing in Phuket, and fishing grounds were mainly in the Eastern coast of Indian Ocean.

Data summary

The entries data were used to calculate the number of trips by month, total catch, and effort, species, and composite on of total catch, species, and compositions of billfish. All the data are summarized by monthly showed in figure 1-4.

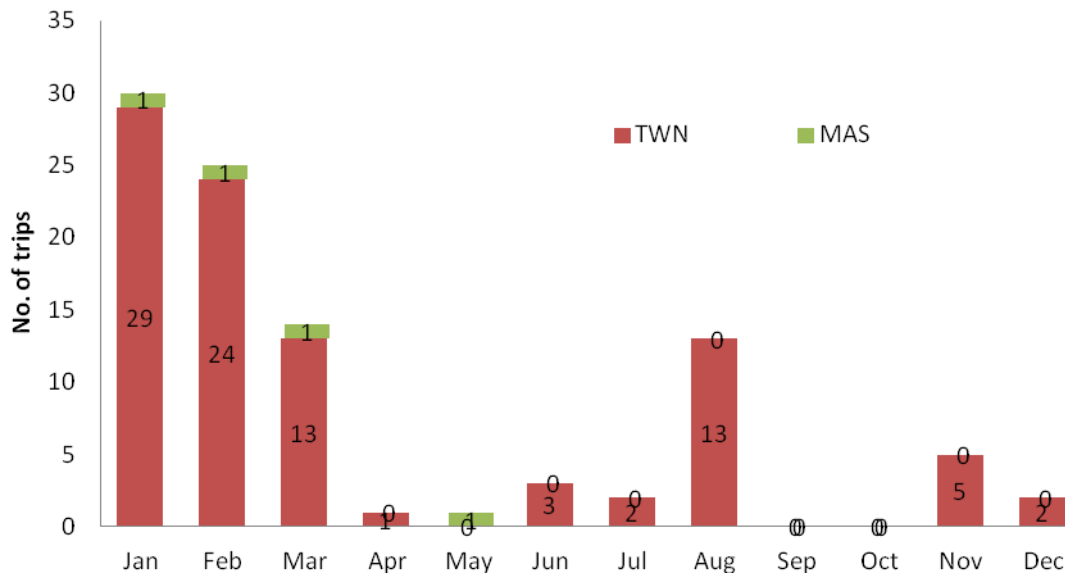


Figure 1 Statistic of entries of the foreign longline vessel in port of Phuket in 2017

The statistics for the arrival of foreign tuna longline vessel unloaded to Phuket in 2017. Figure 1 showed that there were 96 trips arrived and unloaded tuna and bycatch in Phuket, 92 visits were Taiwanese vessels, and 4 were Malaysian vessels. Malaysian vessels were found only at the beginning of the year. Taiwanese vessels landed through the year. During January to March was the peak season, with the highest peak in January and gradually decreased in February and March. The most top landing was 30 vessels which occurred in January and followed by 25, 14 and 13 vessels in February, March, and August, respectively. During September and October, there was nil foreign fishing vessel was found.

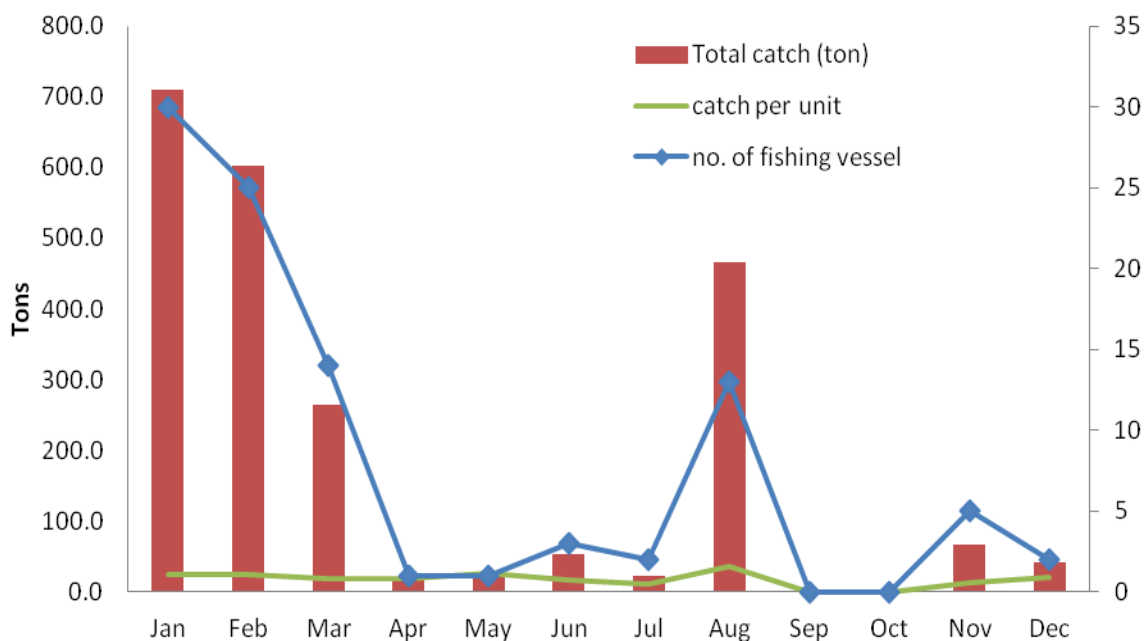


Figure 2 Total catch of the foreign longline vessels landing in Phuket 2017

According to recorded data from customs in 2017. (Shown in Figure 2) The highest catch 709.48 tons was found in January, followed by February, August and March with a gain of 601.83, 465.26 and 263.99 tons, respectively. The lowest caught took place from April to July and November to December. While in September to October, there was nil vessel landing in Phuket ports.

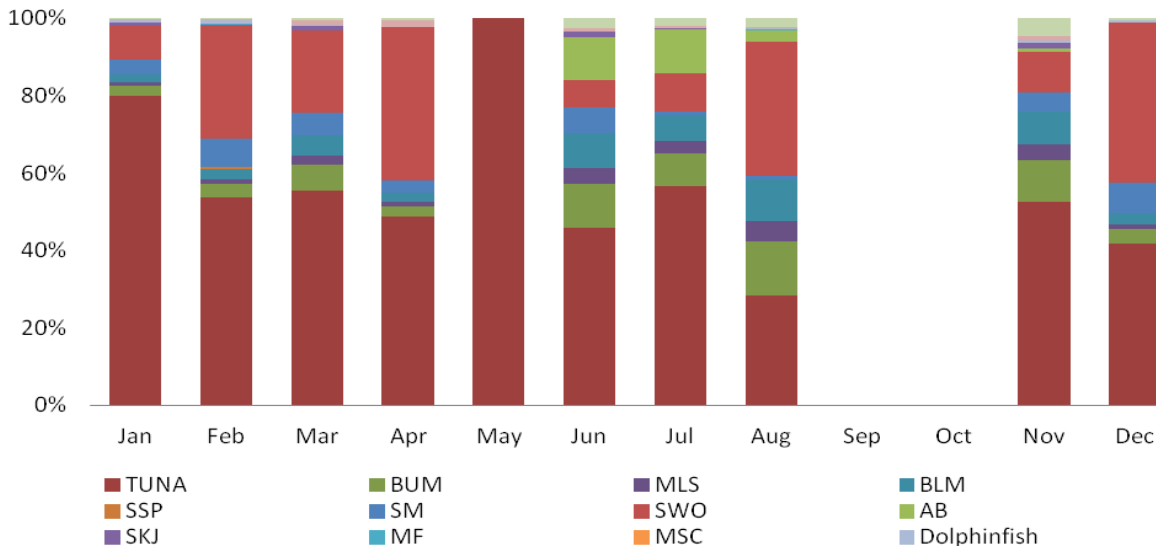


Figure 3 Catch compositions (percentage) of the foreign longline vessel landing in Phuket ports, Thailand by month, 2017

Compare with the unloading proportion of each species of billfishes. (Shown in Figure 3) The highest import was in August with 304.47 tons, representing 34.06% of the total catch. The lower was in February, January and March, there were 266.19, 128.59, 109.27 tons in which the percentage of total catch were 29.78%, 14.38%, and 12.22%, respectively. In May, although there was foreign tuna longline vessel on board, there were not any billfishes loaded. In September and October, they also did not have any fish landing due to the absence of foreign tuna longline vessels. There are six species of billfishes that landing at the Phuket port. Billfishes comprised of blue marlin (*Makaira mazara*), striped marlin (*Tetrapturus audax*), black marlin (*M. indica*), sailfish (*Istiophorus platypterus*), short bill spearfish (*Tetrapturus angustirostris*) and swordfish (*Xiphias gladius*). The species that unloaded the most was swordfish, blue marlin, black marlin, sailfish, striped marlin and short bill spearfish as 55.26%, 15.39%, 12.11%, 11.33%, 5.64%, and 0.27% of total billfishes landing in 2017, respectively.

Comparing the number of billfishes by species with total landing in 2017. The proportion of blue marlin, striped marlin, black marlin, sailfish, short bill spearfish, and swordfish was 6.07, 2.22, 4.78, 0.11, 4.47, and 21.78 by percentage. In 2017, the total

amount of billfish is 893.99 tons. The Billfish caught landing in Phuket Ports by month was shown in Figure 4. The maximum Billfish was in August as 304.47 tons, followed by February, January, and March as 266.19, 128.59, 109.27 tons. However, there are unknown fish recorded as mixed fish or miscellaneous grope. It will be better if we have some program to take a sampling at that part. Moreover, some of them were imported through the trimming process, which is difficult to identify. So, analyzing on catch and composition of them should be done the record as carefully as possible.

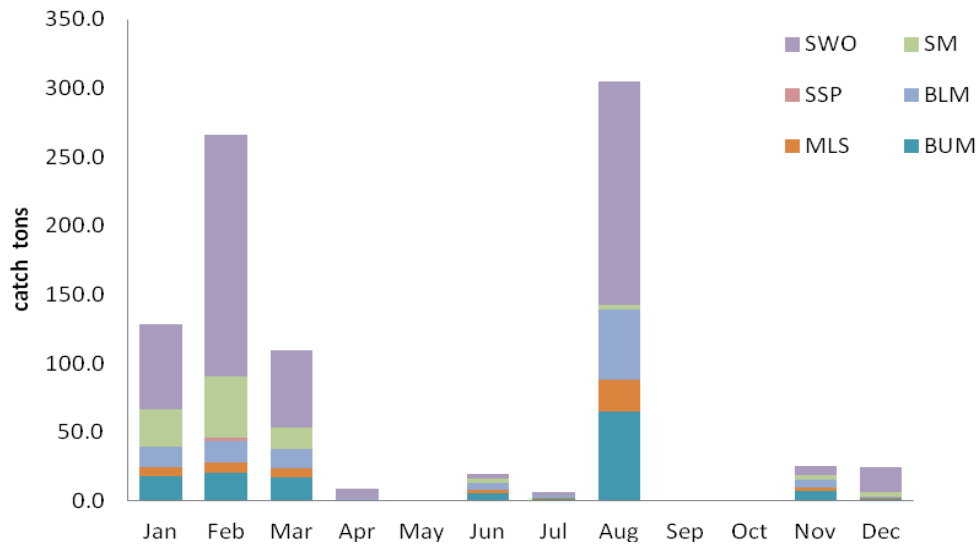


Figure 4 Billfishes catch landing ratios from foreign longline vessels in port of Phuket 2017

Conclusions

In 2017, Billfish data came from port state inspection and customs, covering all the entries vessels. In case of port inspection, it's hard to make species identification because some landed fish were wrapped with plastic seal. Result in size measurement is difficult. However, species identification and size sampling are still important to scientific and scientific action in assessing the species and stock of fish in the billfish group, as well as the importance of preventing IUU fishing.