

# Comparison of the Catch and Income from the Crab Gillnet Fishery between Summer and Rainy Season around the Laem Phak Bia Coast, Petchaburi Province

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## Introduction

Around the coastal area of Laem Phak Bia, Petchaburi province, bottom crab gillnet targeting blue swimming crab (*Portunus pelagicus*) is the typical fishing gear that conducted almost whole year in every season. The fishing boat mainly are small scale boat (< 10 GT). The gillnet made from nylon monofilament (PA), 10 cm mesh size, about 0.5 hanging ratio, 12 mesh depth, 450 m/set (1 set connected by 5 net panels). Fisher hauls the net 2-4 sets for 1-2 GT boat while 18-20 sets/operation day for 8-10 GT boat. The head rope made of polyethylene (PE) z twisted, diameter 4 mm, connected to the flag buoys. The plastic float size of 38x10mm, 2.0 m interval. The foot rope tied to anchor or stone weight 5-8 kg, made of polyethylene (PE) z twisted, diameter 3 mm. Sinker size was 10 g, 0.45m interval. A set of the net plan shown in Figure 1.

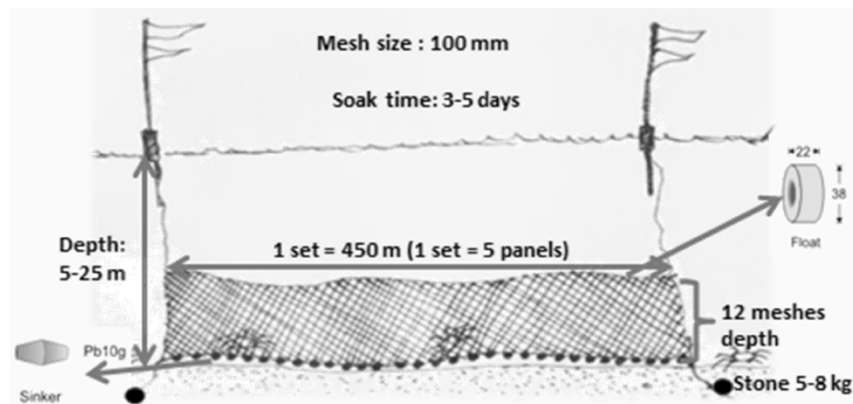


Fig. 1 A set of bottom gillnet around Laem Phak Bia, Petchaburi

Fishers (8-10 GT boat) usually operate the fishing at 2-7 am in the fishing ground of 18-25 m depth with the soaking time of 3-5 days. Some marketable bycatch are flathead lobster (*Thenus orientalis*), ray, flatfish and horseshoe crab. Statistics on Fishing community production survey by species of fish, shrimp, crab, shellfish, jellyfish, other aquatic animals, the crab species, highest value was 3,624.24 million baht at 21,570 ton. The crab is an important economic fish for Thai fishery. Thailand is under the influence of southwest and northeast monsoon those impact to the fishing activities. The rainy season (May-Oct) is influenced by southwest monsoon while the winter season (Nov-Jan) influenced by the northeast monsoon. This study aimed to compare the catch, income, operation days and fishing ground of a crab gillnet fisher (9 GT boat) between summer and rainy season.

## Methodology

The fishers in the study site were interviewed. A logbook fisher was recorded daily in 2018 by a fisher (9 GT boat). The logbook provided the data of the fishing gear used, number of the set,

the catch species, the catch amount and prices, the reason why if the fisher did not go for fishing, etc. Onboard surveys with GPS tracking were conducted. The information and data were analyzed regarding the season and compare the results among the seasons particularly summer and winter

## Results

It was different of catch amount and income of the fisher between the summer and rainy season. The crab price depends on the crab size. It categorized as 3 groups; small size with the price of 170-300 baht/kg (11-15 ind), medium size with the price of 270-400 baht/kg (6-10 ind) and large size with the price of 370-500 baht/kg, (4-5 ind). The catch amount and highest income were in April (summer), as 316.6 kg and 115,873 baht respectively. The lowest was in September (rainy) as 171.3 kg with the income of 48,441 baht respectively (Fig 2). The CPUE was highest in January (winter) as 29.0 kg/operation day with the income of 10,416 baht/operation day and lowest in September (rainy) as s 10.1 kg/day operation, 2,849 baht/operation day (Fig 3). The catch and income in summer were better than rainy season. Comparison of the numbers of operation day between summer and rainy was shown in the Fig 4. Future works and apply for sustainable resource management will be discussed.

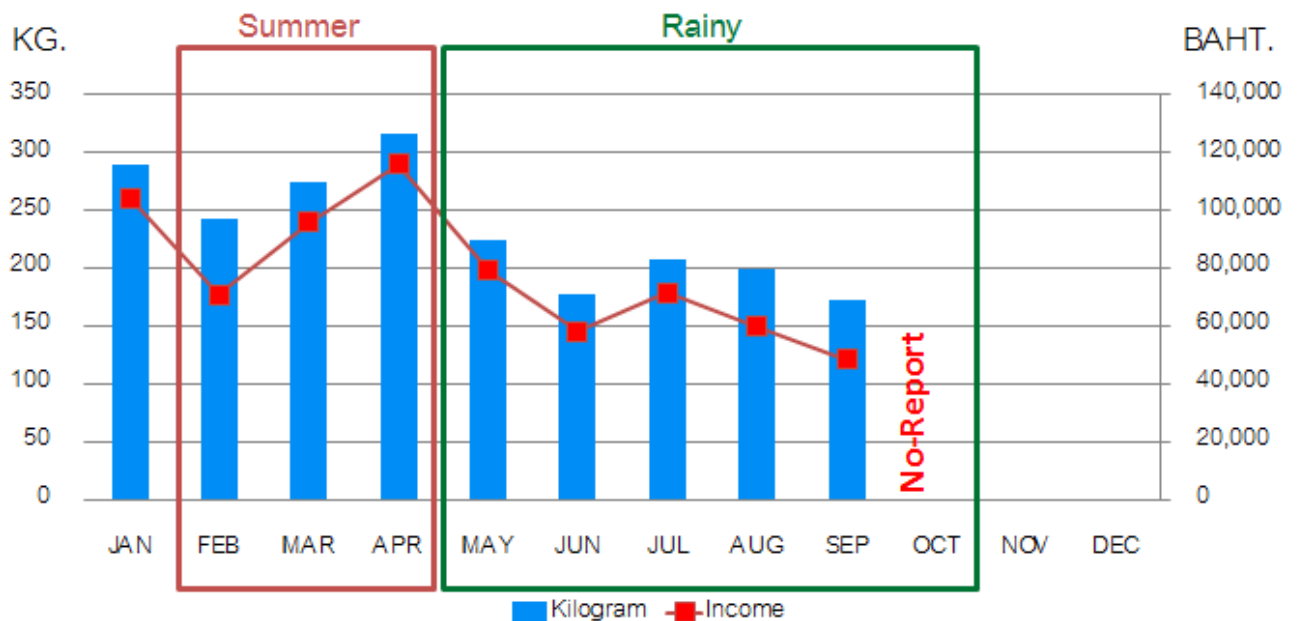


Fig. 2 The catch and Income of crab gillnet in 2018

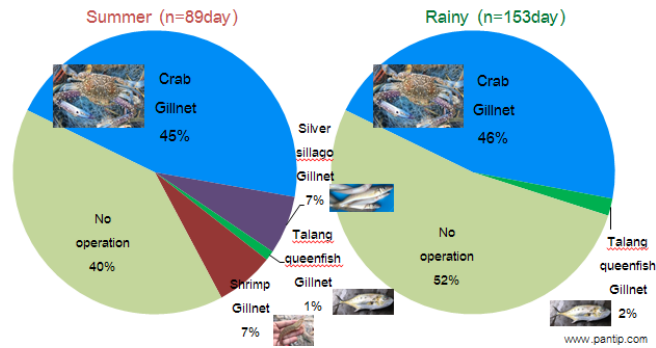
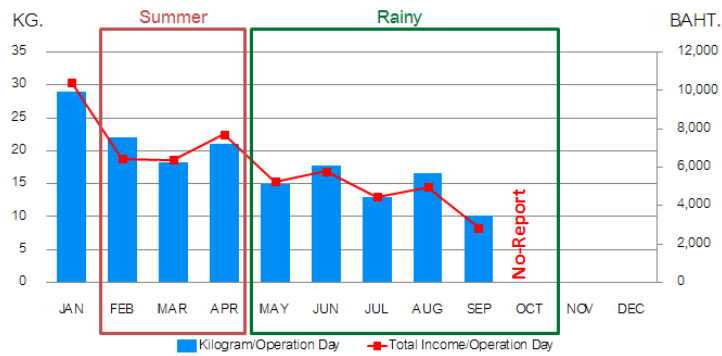


Fig. 3 CPUE (kg/operationday) and income Fig. 4 Compare of operation days between summer and rainy

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