

Composition of Non-economic and Garbage of Bottom Gillnet along the Coast of Rayong Province, Eastern Gulf of Thailand

N. SOMWANTHANA¹, T. SRIKUM¹, W. WUNGKHAHART¹, K. EBATA², A. BOUTSON³, I. CHANRACHKIT⁴, N. YASOOK⁴, T. KUDOH⁵, T. ARIMOTO⁵

1 Eastern Marine Fisheries Development Center (EMDEC), DOF, Thailand

2 Faculty of Fisheries, Kagoshima University, Japan

3 Faculty of Fisheries, Kasetsart University, Thailand

4 Southeast Asian Fisheries Development Center (SEAFDEC), Thailand

5 Tokyo University of Marine Science and Technology, Japan

► **Keywords:** Garbage, Bottom Gillnet, Rayong Province, Thailand

Rayong province is located in the Eastern part of Thailand with approximately 100 kilometers of shoreline along the Eastern Gulf of Thailand. There are several types of fishing gear such as gillnet, trammel net, trap, hook and line can be used for small scale fisheries and crab bottom gillnet is mainly used in this area. The main target species of crab bottom gillnet fishery is blue swimming crab and also various marine animal that live on the bottom of seafloor can be caught. The catch rate, species composition and discard species has been analysed and used for developing and improving crab bottom gillnet fishing, in order to increase the catch of target species and reduce non-target species.

The study was conducted at Kok Leam Tean, Phe sub-district, Muang District, Rayong Province during February to November 2015 with 23 samplings taken from crab bottom gillnet boat. The fishing ground, total catch and fishing effort (kilograms per day) were collected by fishermen interview while species caught were identified and weighed. Data collection was separated into 2 groups which were Target species (Blue swimming crab) and non-target species i.e. economic species and non-economic species including garbage.

The fishing ground of crab bottom gillnet fisheries were generally found at 7-14 m depth and approximately 2-8 km from shore, on the west side of Samed Island and around artificial reefs. The seabed characterization at fishing ground was sand or sand and mud. The result showed that the average catch rate of crab gill net fisheries was 9.02 kilograms per day. Blue swimming crab (*Portunus pelagicus*) was main target species and the catch rate was 4.72 kilograms per day, 52.31 percent of the total catch. The percentage of non-target species was 47.69 of total catch and the catch rate was 4.30 kilograms per day.

Non-target species was separated into 2 groups which were economic species and non-economic species including garbage. The economic species was found to be 11 species in total, 25.88 percent of the total catch and the composition composed of crabs shellfish and others which were 14.54 10.05 and 1.29 percent respectively. The non-economic species including garbage were 21.81 percent of total catch and the composition composed of crabs shellfish fish and garbage which were 10.17 3.14 1.02 and 7.48 percent respectively.

The non-economic species including garbage which crabs were major compositions and its was found to be 16 species such as Red-spotted box crab, Decorator crab, Gladiator Swimming crab, Purple Anemone crab, Box crab, etc. Living fauna and non-living e.g., sea urchin, sea cucumber, sea pen, marine sponge, shell, plastics were classified to the garbage group, which were not used as fishers.