

ABSTRACT

Fisheries Resource Survey in the Gulf of Thailand off Thailand and Cambodia by Using Bottom Trawl

Prasit Kongpornprattana ^{1*}, Weerapol Thitipongtrakul ², Sakol Pheaphabrattana ²,
and Pavarot Noranarttragoon ²

¹ Deep Sea Fisheries and Resources Assessment Group, Marine Fisheries Research and Development Division,
Department of Fisheries

² Fisheries Resources Assessment Group, Marine Fisheries Research and Development Division,
Department of Fisheries

The survey on fisheries resource in the Gulf of Thailand (GOT) was conducted in Thai and Cambodian waters during 17 August – 11 October 2019. Otter board trawl was used in the survey and operated by M.V. SEAFDEC 2. Trawling time was one hour per haul and trawl operations were done during daytime. The survey consisted of 48 stations in Thai waters, which were divided into five sub-areas, i.e., Eastern, Inner, Upper Western, Lower Western, and Central GOT, and 23 stations in Cambodian waters.

The results showed that catch per unit effort (CPUE) in Thai and Cambodian waters were 43.29 and 26.27 kg/hr respectively which was significant difference ($p < 0.05$). In addition, the CPUE of each sub-area in Thai waters was 32.11, 26.04, 39.55, 43.77, and 53.01 kg/hr respectively which was not significant difference ($p > 0.05$). Ratio of economic fish and trash fish in Thai and Cambodian waters was 51.55 : 8.45 and 78.79 : 21.21 respectively. The percentage of trash fish in each sub-area was 18.70%, 20.88%, 31.69%, 57.84%, and 61.20% of the total catch respectively.

There were at least 299 species found during the survey in Thai waters which were divided into 190 economic species and 109 trash fish. Whereas, at least 134 species were found in Cambodian waters which were divided into 97 species of economic fish and 37 species of trash fish. In addition, the analysis of species composition for economic fish revealed that demersal fish, pelagic fish, and cephalopod were the main composition both in Thai and Cambodian waters. In Thai waters, doublewhip threadfin bream, *Nemipterus nematophorus*, was the highest composition of economic fish, 4.39% of the total catch, followed by obtuse barracuda, *Sphyraena obtusata*, and Japanese goatfish, *Upeneus bensasi*, 3.25% and 2.71% respectively. While, orangefin ponyfish, *Leiognathus bindus*, was the highest composition of trash fish, 18.42% of the total catch, followed by longfin mojarra, *Pentaprion longimanus*, and whipfin ponyfish, *Leiognathus leuciscus*, 13.60% and 2.70% respectively. In Cambodian waters, dark-barred goatfish, *Upeneus luzonius*, was the highest composition of economic fish, 9.44%, followed by doublewhip threadfin bream and pink ear emperor, *Lethrinus lentjan*, 6.99% and 6.70% respectively. Whereas, longfin mojarra was the highest composition of trash fish, 11.84% of the total catch, followed by orangefin ponyfish and live sharksucker, *Echeneis naucrates*, 3.16% and 0.74% respectively.

The measurement of fish length caught during the survey disclosed that, in Thai waters, the average length of 10 species was smaller than their length at first maturity (L_m); while, average length of 3 species was larger than their L_m . Meanwhile, in Cambodian waters, the average length of 5 species was smaller than their L_m ; whereas, average length of 5 species was larger than their L_m . However, there is no length at first maturity of some low abundance species reported in the Gulf of Thailand. Most average length of the species found in Cambodian waters was larger than those found in Thai waters.

Keyword: fisheries resource, Gulf of Thailand, Thai waters, Cambodian waters, otter board trawl