

Asirawat Preecha 2011: Effect of Modified Trammel Net on the Catches around Sriracha Bay, Chon Buri Province. Master of Science (Marine Science), Major Field: Marine Science, Department of Marine Science. Thesis Advisor: Mr. Anukorn Boutson, D.MS. 124 pages.

Comparison of the catches by using 4 types trammel nets were determined between conventional and modified nets by 1/3 net height reduced with the inner net mesh size of 40, 42 mm. The field experiments were conducted around Sriracha Bay, Chon Buri Province, 800-1,500 meters from shore since April-September 2010, 12 operations. The study found that numbers of target species (prawn) from both mesh size of modified nets reduced 43.3% in average. Hence fisherman income was also reduced. When comparing sizes of the all catches in the different 2 mesh size of the conventional nets, there were no differences ($p>0.05$). When comparing sizes of the all catches in the 2 different type of nets with the same mesh size, there were no difference ($p>0.05$) in the mesh size of 40 mm, however there were difference at 42 mm ($p<0.05$). The target species sizes of modified nets of 40 mm mesh size was larger than those of 42 mm ($p<0.05$), while there were no difference in conventional nets ($p>0.05$).

According to modified nets with the same mesh size, when reduced 1/3 net height the net area had lost 35% and also affected to all catch rates including target species, particularly, banana prawn (*Penaeus merguensis*) that caught 91.7% by numbers of the target group. The prawn maximum caught was in July to September. There was less effect of modified nets on non target group because of its schooling behavior, the species easy to catch were sardine (*Sardinella* spp.), gizzard shad (*Anodontostoma chacunda*), pony fish (Leiognathidae), short-nose tripodfish (*Triacanthus biaculatus*) and filefish (*Monacanthus chinensis*). sardine and gizzard shad were dominant species caught in the rainy season which had influence from Southwest monsoon. The result of 40 to 42 mm increased inner net on the catch sizes found that, in conventional nets they were no difference ($p>0.05$) in both target and non-target species group, while by modified nets, they was no difference ($p>0.05$) in target species group, however the sizes of non-target species group of 40 mm were larger than 42 mm ($p<0.05$).

Student's signature

Thesis Advisor's signature