World Academy of Science, Engineering and Technology
International Journal of Mathematical and Computational Sciences
Vol:14, No:12, 2020

Effects of Net Height of Crab Entangling Nets on the Capture of Targeted Economically Important Portunid Species and Non-Target Species

Authors : Rizalyn Gonzales, Harold Monteclaro

Abstract : This study determined the effects of net height on the capture performance of crab entangling nets. Fishing trials were conducted using nets with the following net heights: 1) 12 meshes down (MD), 2) 24 MD and 3) 50 MD. A total of 1,290 individuals comprising of 87 species belonging to 53 families were caught. One-way ANOVA showed that net height significantly affects various catch parameters such as catch per unit effort (CPUE) of the total and target catch, amount of non-target catch, sizes and species richness. The use of appropriate net height is a potential technical measure for a selective but still efficient crab entangling net fishery. Lower net height significantly reduced non-target catch up to 70%. While lower nets decreased the CPUE of target catch such as blue swimming crab Portunus pelagicus and christian crab Charybdis feriatus up to 65% in 12 MD, catch in 24 MD was not significantly different with that in 50 MD. The use of 24 MD also resulted in capturing larger-sized Portunus pelagicus. Catch species richness decreased up to 58% in lower nets. These results are useful to fisheries managers and government institutions to develop or improve existing regulations towards a sustainable crab fishery particularly blue swimming crabs.

Keywords : blue swimming crabs, catch per unit effort, crab entangling nets, net height
Conference Title : ICSRD 2020 : International Conference on Scientific Research and Development
Conference Location : Chicago, United States
Conference Dates : December 12-13, 2020