

An Investigation on Total Catch, Catch Composition, Catch Quality Variation Based on Different Effort Levels in Multiday Boats in Kalutara District

A.W.K. Fernando¹, N.D.P. Gunawardane², I.U. Wickramarathna¹, S.C. Jayamanne¹

¹Department of Animal Science, Uva Wellassa University, Badulla, Sri Lanka.

²Department of Fisheries and Aquatic Resources, Colombo 10, Sri Lanka.

Deep sea fisheries commenced in late 1980s and introduction of Multiday boats with modern technologies (GPS, SSB radio, Freezer unit, Fish detecting sonar) and synthetic nets increased the pelagic fish production. The multi-day boats in operation today are of several types, varying according to their length and the degree of sophistication. Those vessels use several types of fishing gears based on their preference and also fishing duration also differ with those boats. Fishermen have their own selections on those variables according to their knowledge, experience to maximize their catch with good quality by applying minimum effort. This study was carried out to identify the deep sea fishery trends and optimum efficiency levels in Kalutara fishery district using landing statistics (Catch) and fishing inputs (effort) and to give recommendation on management of Kalutara fishing fleet. In this study, total catch per fishing trip and species wise catches taken as output data and gear type, fishing trip duration, boat length, facility level, no. of crew and boat capacity are taken as input data. Parallel organoleptic survey of fish catch was conducted to measure the quality level of fish. The study found that only the gear type is significantly affecting total catch per trip and other five factors (Boat length, Boat capacity, No. of crew, Trip duration, and Facility level) do not affect the total catch per trip. Three types of fishing gear including longline, gillnet and ring net and combination of gears was used basically and the catch composition of the single species catch is not significantly affected by gear type. Longline, gillnet and ring net when taken individually, significantly affects the species catch variation. The fish quality is significantly affected by total catch, trip duration, and boat capacity while not significantly affected by gear type and facility level. So according to the study it can be recommend that gear combination (better to use Longline cum Gill net) is the most suitable fishing method as it gives high fish catch (2427 236) with medium quality (1.8571 0.1650) fish and more emphasis should be given on fish quality improvement in Beruwala fishery harbor.

Keywords: Deep sea fishery, Multiday fishing vessels, Catch, Fishing effort, Fish quality, Fisheries management