ABSTRACT

MUHAMMAD SYAHRIR R.  Fishing Management of Pelagic Fish in Apar Bay of Paser Regency East Kalimantan Province. Supervised by MULYONO S. BASKORO, DARMAWAN, ERNANI LUBIS and EKO SRI WIYONO.

The objectives of this research were to 1) determine the fishing season pattern; 2) determine the technique-economic characteristic of fishing gear; 3) determine both the effort level and the optimum utilization of fishery enterprises; and 4) measure the fishing capacity in Apar Bay. The results showed fishing season pattern of pelagic fish in Apar Bay for a) fishing season of short-bodied mackerel, b) fishing season of scad mackerel and yellow striped trevally, c) fishing season of anchovies, d) fishing season of frim gescale sardine, spotted spanish mackerel and frigate mackerel. Pelagic fish production in Apar Bay obtained from eleven of fishing gear which on average showed that purse seine was most productive (at average of 465,033 tonnes per year). In terms of feasibility showed that boat lift net has the greatest benefit (Rp 54,116,000.00 per year). In terms of quantity showed that the most number of fishing gear was drift gill net (at average of 295 fishing gears). Based on CPUE trends showed that scad mackerel and anchovies were the greatest values (at average of 5,513 tonnes per year and at average of 3,507 tonnes per year). The utilization level of frigate tuna and spotted spanish mackerel (at average of 90.33% and 90.67%) higher than other pelagic fish. Even though the utilization level of anchovies (45.67%) was the smallest of utilization level. The effort level of frigate tuna (at average of 96.67%) higher than other pelagic fish. Based on analysis of optimization using linear programming (LP) toward objective function and constraint that have been determined previously, obtained optimum values for each type of fishing gears that recommended in 2009 were drift gill net, encircling gill net, set gill net, stationery lift net and guiding barrier, respectively for 261, 392, 916, 88, and 476 units and the results of optimum fishing was 204,786 tonnes per year. The capacity of purse seine and stationery lift net per quarterly were not optimum due to over capacity. Repairing the fishing units capacity that have not been optimum could be done by reducing the input variables (VIU) such as ABK (crew), BBM (oil fuel), and HOP (fishing effort) for purse seine and VIU BBM, HOP and ABT (fishing auxiliaries) for stationery lift net. Priority fishing management of pelagic fish in Apar Bay in relation to pelagic fish resource was respectively for scad mackerel, anchovies, frim gescale sardine, yellow striped trevally, short-bodied mackerel, spotted spanish mackerel, and skipjack. Priority fishing management of pelagic fish in Apar Bay in relation to pelagic fish resource was respectively for scad mackerel, anchovies, frim gescale sardine, yellow striped trevally, short-bodied mackerel, spotted spanish mackerel, and frigate mackerel. Whereas in relation to fishing gear of pelagic fish was respectively for purse seine, boat lift net, drift gill net, stationery lift net, encircling gill net, guiding barrier, set long line, set gill net, other pole, drift long line other and troll line.

Keywords: fishing season, effort, utilization level, fishing capacity, pelagic fish, Apar Bay.