

SESSION -1 - MARINE RESOURCES

BIO-SOCIO-ECONOMIC ASSESSMENT OF THE PURSE-SEINE FISHERY IN THE SOUTH-WEST COAST OF SRI-LANKA

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The rapid development of the purse seine fishery in the south-west coast of Sri-Lanka led to several fishing conflicts with the other resource users such as beach seiners and small mesh gill netters. This study was therefore carried out as a part of the integrated study on the Bio-Socio-Economic assessment of the small pelagic fisheries in this area during the period Oct. 91 to Feb. 93.

Bio-Economic data were collected from the major fish landing sites by making fortnight visits. The Socio-Economic data were collected through a frame survey followed by a systematic survey of the randomly selected households representing all craft gear combinations. All the data collected were processed through the computer programs developed for this purpose. Analyses of biological parameters were carried out by using the ELEFAN and LFSA computer packages.

The purse seine fishery in the study area is a seasonal fishery. Fishing is carried out within the depth range of 36 - 62 m by the 3.5 t crafts using nets of 200 m long and 50 m deep with 16 - 23 mm mesh size. In Oct. 1991 there were 69 purse seiners in operation in the study area. The total production from the purse seine fishery in the study area was estimated at 615 t in 1992. The average catch per fishing operation during this period was 101.8 kg. *Amblygaster sirm* represent 48% of the purse seine catch followed by 28% squids. The size range of *A.sirm* was 5.0 - 24.0 cm with 87% of the catch consisting of fish larger than 15.2 cm. The bio-economic analysis showed that the present fishery as it is could give a maximum yield of 930 t and an economic yield of 36 million Rupees. However the maximum economic yield from this fishery could be obtained by increasing the present fishing effort by 370%.

The average monthly income and expenditure from this fishery was Rs. 81653/= and Rs. 13060/= respectively. The owner, skipper and the crew members each received an income of Rs. 36045/=, Rs. 5194/= and Rs. 3463/= respectively. The purse seine operators conduct other fishing activities during the S.W.monsoon period and get an average income of Rs 10300/= and Rs 3433/= for the owner and the crew respectively. The Socio-economic data gives the detail information on the other income activities and the detail picture of the household structure.