

PRESENT STATUS OF THE SEINE FISHERY IN NEGOMBO  
LAGOON OF SRI LANKA.

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Abstract

Studies on the seine fishery of Negombo Lagoon in the west coast of Sri Lanka (7°10' N and 79°50' E) were carried out for a period of one year from May 1989 to April 1990. In the operation of this gear, 2 or 4 standard nets, each with a length of 32 m are used. Each net was made up of 4 or 5 vertically joined pieces of nets, with a stretched mesh size of 1.25 cm. 3 and 5 men are involved in 2 net and 4 net operations respectively. Total production from this gear was estimated to be around 36,000 kg/year. During the present study, 82 species of fish ranging in size from 2.5 cm to 130.0 cm were encountered together with 6 species of commercially important penaeid prawns. The catch and fishing effort were low from August to December. Catch per unit effort was high from February to May. Salinity and fish catch showed a significant positive correlation probably due to immigration of allochthonous marine organisms into the lagoon with increasing salinity. Fishing effort also showed a significant positive correlation with salinity. Significant difference between the catches of 4 net-piece and 5 net-piece nets was not observed ( $P > 0.05$ ). Although the catch and catch per fisherman were significantly higher in 4 net operations than in 2 net operations ( $P < 0.05$ ), significant difference in catch per net between the two operations was not observed ( $P > 0.05$ ). 2 Net operations were observed to provide more employment opportunities and better distribution of income than 4 net operations. Threat of overexploitation of the resource was observed to be high in 4 net operations.

Key words : Negombo Lagoon, Seine fishery.

1. Introduction

The Negombo Lagoon on the West coast of Sri Lanka (7° 10' N and 79° 50' E) with a surface area of 3100 ha has been identified as one of the most productive coastal environments in the tropics. Its annual fishery production has been estimated to be around 150 kg/ha (Samarakoon and van Zon 1991). As in most other tropical waters, variety of fishing gear is operated in this