

DETERMINATION OF THE MOST EFFECTIVE MESH SIZE
FOR THE CAPTURE OF SKIPJACK (KATSUWONUS PELAMIS)
AND YELLOW FIN TUNA (THUNNUS ALBACARES)
FROM SELECTIVE STUDIES

R. Maldeniya
National Aquatic Resources Agency, Colombo

Exploratory offshore tuna fishery with gillnets of three different mesh sizes viz. 12.5cm, 15.0cm and 17.5cm, was carried out in the western and southern seas of Sri Lanka from January 1987 to December 1988. Among tuna species Skipjack and Yellowfin dominated the catches.

Over 62.0% of Skipjack were caught by gilling. Major portion of Yellowfin were entangled, whereas gilled percentage was only 36.9%. Considering the percentage contribution by weight to the total catch, the most effective mesh size for both species was 15.0cm.

The optimum retention length of Skipjack and Yellowfin were estimated for each mesh size using the Baranov-Holt method. The optimum length estimated for the three different mesh sizes were 49.6cm, 56.5cm and 62.1cm for Skipjack and 50.8cm, 55.8cm and 58.8cm for Yellowfin.

The longterm biological effects by harvesting juveniles are discussed using mean maturity lengths of each species.