

ABSTRACT

The results of a study on some aspects of biology and fishery of Amblygaster sirm in the coastal waters around Negombo, Sri Lanka, carried out during September 1984 to August 1988 is presented.

Fishery for Amblygaster sirm in the coastal waters around Negombo, Sri Lanka, is carried out by small meshed gill nets with mesh sizes ranging from 2.3 cm to 3.8 cm.

Around 3500 MT of A.sirm is produced annually by a fleet of about 450 boats in this area.

Although this is a year round fishery, there exists a seasonal variation in the abundance of the resource. The best catch per unit effort values were observed during the period of April to September/October. This could be attributed to the nutrient rich south west monsoonal current period of April to October.

The analysis of catch and effort statistics indicates a maximum sustainable yield of around 3500 MT and an optimum daily effort of 400 boats. The length based analysis indicates that the resource is over exploited and a reduction in effort by about 70% is necessary to put back the fishery to an equilibrium level.

The yield per recruit analysis shows that to maintain the exploitation rate at a level of 0.5 with the possible maximum yield, nets with mesh sizes larger than 3.04 cm should be used in the fishery.

The overall sex ratio was found to be 1:1 throughout the year except in January and February, which is probably due to the selective capture of gravid males and females separately by gill nets with different mesh sizes during this period.

The study indicates the possibility of two recruitment and spawning pulses separated by an interval of two months. The fecundity as the number of eggs that are to be shed was estimated to vary between 40000 - 70000.