

THE EFFECTS OF LEAVING CENTRAL BARE AREAS IN TRADITIONAL  
CIRCULAR BRUSHPARKS ON THE YIELD OF FISH IN THE  
BRUSHPARK FISHERY IN NEGOMBO ESTUARY, SRI LANKA

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ABSTRACT

Experimental brushparks utilizing twigs and branches of mangroves were constructed in the Negombo estuary, Sri Lanka having triangular, circular and square shaped areas devoid of brushwood at the centre. Traditional completely packed circular brushparks served as controls. It was found that the total yield of fish from brushparks having square shaped central areas devoid of twigs and branches was significantly higher than the yields from other types of experimental brush parks and from controls. It is suggested that the quantity of mangrove brushwood used in the construction of traditional brushparks could be considerably reduced without affecting the fish yields by having bare central areas of different shapes as carried out in the present study.

1. INTRODUCTION

Brushparks utilizing twigs and branches of various plants are widely used in shallow lagoons, estuaries, lakes and rivers in most regions of the world as an efficient method of fishing (1),(2),(3),(4). There are advantages as well as disadvantages in brushpark fisheries and these have been described in some detail (5).

In Sri Lanka, the brush park fishery is practised on an extensive scale in Negombo estuary. At any one time, the total number of brush parks could exceed 3000 (2). Here the brush parks are constructed

utilizing exclusively mangrove poles, twigs and branches which are tightly packed and placed vertically or slightly inclined in depths less than 1.5m. Fishing of these is done at intervals of about 30 days. This fishery contributes to about 36% of the total fish catch in this estuary (4). The use of mangroves as brush wood in brush parks fisheries can lead to the partial or total destruction of mangrove forests in a given area and could affect the recruitment of juvenile prawns and fish in lagoons and estuaries (6). Any reduction in the use of mangroves could reduce to some