

**INVESTIGATION OF THE FACTORS GOVERNING THE  
RESOURCE SHARING MECHANISM THROUGH  
INDIGENOUS KNOWLEDGE IN THE STAKE NET  
FISHERY OF NEGOMBO LAGOON, SRI LANKA**

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## ABSTRACT

The traditional community based management systems have been in existence in many part of the world especially in Asian countries. It is among the few instances where territorial uses in fisheries rights (TURF) are in force.

An artisanal fishery known as the Stake net fishery, in the Negombo estuary of Sri Lanka is essentially a community – based fisheries activity. In this fishery effective mechanism has been evolved for resource sharing among communities and it has a long history dating back to 18<sup>th</sup> century. For equity sharing of the resources, different fishing dates are assigned to the rural fishery societies as well as fishing sites allocated to individual fishers, using a lottery system.

The present study was carried out to investigate whether the equity sharing mechanism of the resources among members of three communities are scientifically sound. Data were collected from five stake net sites daily, from August 2007 to May 2008. Information was collected from the records maintained in the stake net societies. The cross checking was done by visiting fishing sites at least twice a month. The CPUE expressed as kg per net per day for three components (Shrimps, Anchovies, Others), were  $\ln(\text{CPUE} + 1)$  transformed before analysis.

The shrimp yields were significantly higher during full moon phases in all months. Higher shrimp catches were also reported during new moon phases. There was site wise variation in shrimp catches. Anchovies and others also showed significant

differences with lunar phases. Rainfall has not influenced shrimp catches and finfish catches. Shrimp yields and income derived from the stake net fishery among three stake net societies are not significantly different.

This evidence suggests that the equity sharing procedure that has been evolved over a long period through indigenous knowledge in the stake net fishery is scientifically sound. As the socioeconomic characteristics of the three communities are more or less similar, the equity sharing procedure appears to help fishing communities to maintain fairly acceptable socioeconomic standards.