

**PRELIMINARY SPATIAL ANALYSIS OF
PRIMARY PRODUCTIVITY AND MANGROVE
DIVERSITY OF UPPARU MANGROVE FOREST,
KINNIYA**

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Abstract

This study is based on the identification of mangrove species diversity and present status of the primary productivity in the Upparu mangrove forest in Kinniya District secretariat Division of Trincomalee.

Studies on mangrove forests in Sri Lanka are relatively low compared to other countries. Studies on mangrove forests which are located in Eastern province of Sri Lanka are more lacking hence it was decided to study one such mangrove forest, which is associated with Upparu Lagoon.

In this study, the method used by Bunt *et al* (1979) to identify the leaf area index and productivity of the forest was followed. Lux meter readings were taken from randomly selected 600 locations in the forest and the line transects laid perpendicular to the shore were used to identify the diversity of the forest. Diversity was measured by using Shannon Weiner and Simpsons indices.

According to the present study productivity of Upparu mangrove forest is 92.24 (C)mt/ha/yr. and the average canopy cover of the forest is 60.78%. Middle area of the land side mangrove patch has highest productivity, canopy cover and diversity. Islands have somewhat low productivity and canopy cover than that area. Thirteen mangrove species was identified from the forest and *Rhizophora* sp. has highest abundance followed by *Lumnitzera* sp.