

Abstract

The area covered by Mawella lagoon is about 91 ha (HICZMP,1999), which is situated in Hambanthota district and located within longitudes 80° 43' - 80° 45' and latitudes 5° 58' - 6° 00'.

Before mid 1950 s', it was said to have been in a sound environmental conditions with a high level of productivity (HICZMP, 1999) which has been largely distracted at present. Also fishery resources are said to be depleted. Narrow strip of mangroves are remaining in Mawella lagoon without proper demarcations. But, studies on Mawella lagoon are scanty. The objectives of the study were determining the structural properties of mangroves around Mawella lagoon, to build up the database to use future researches and to provide management options for mangroves based on structural properties. Structural diversity of the lagoon, representing the three locations was studied in terms of floristic composition, density, basal area, mean stand diameter, tree height, and complexity index.

Total number of species enumerated in the study locations at Mawella lagoon was three. *Sonneratia caseolaris* (Kirtala) was identified as the prominent species. The average values of structural properties of Mawella lagoon possesses a 55.2m² of average basal area, 13.1 of average complexity index and 1130 (Trees/ha) of stand density. The highest relative density, relative frequency, relative dominance and hence the highest importance value was shown by *Sonneratia caseolaris*. Natural regeneration of existing mangrove species found to be low.

Replanting of mangroves around the lagoon should be strongly recommended to enhance the contribution of mangroves to the lagoon's productivity.