

Biological Diversity Assessment of Tok Bali Mangrove Forest, Kelantan, Malaysia

ABSTRACT

This paper attempts to give information about the structure of mangrove distribution at Tok Bali, Kelantan in order to initiate for management and rehabilitation program. A study was conducted in July to November 2006 to determine the species composition, diversity index and above-ground biomass in 15.8 ha Mixed Mangrove Forest. A transects forest profile length of 30 meter and 20 plots were established, a Diameter Breast Height (DBH) and height were measured and recorded, and also diversity index and above-ground biomass were determined. A total of 10 species consisting of nine exclusive and one non-exclusive mangrove were recorded. The common species found were *Sonneratia alba* (1,170 trees/ha, 330 saplings/ha and 22,680 seedlings/ha) followed by *Ceriops decandra*, *Excoecaria agallocha*, *Avicennia alba*, *Bruguiera cylindrica*, *B. sexangula*, *Rhizophora apiculata*, *Aegiceras corniculatum*, *Nypa fruticans* and *Derris trifoliata*. From the results an average of 595 trees/ha, 598 saplings/ha and 646 seedlings/ha represented a moderate good condition and regeneration potential. Total above-ground biomass was 2664.57 kg/ha and *S. alba* also recorded the highest because the of wide range of diameter and height. Mangrove trees showed total average of species richness (S) was 8.0, evenness (E) was 0.793 and diversity (H') was 1.603.

Keyword: Biodiversity, Mangrove, Distribution, Structure, Above-ground biomass