

**Forest structure and litter production of naturally regenerated white mangrove  
*Avicennia marina* in subtropical estuarine coast**

ABSTRACT

The present work deals with plant structure, phenology, litter production and decomposition of mangrove *Avicennia marina* in the newly re-generated mangrove forest in sub-tropical coast. The natural generation in this accreted coastal land of mono-specific *A. marina* forest stand was prominent, with 45% seedlings and 32% saplings. Peak flowering and fruiting were noticed in May and August, respectively. Reproductive components contribute countable percent into the total litter production during the peak flowering (60%) and fruiting (86%) season. The percentage of leaf litter fall fluctuated throughout the year and contributed 13-99% (73% in average) of the total litter production of 11.53 tones ha<sup>(-1)</sup>yr<sup>(-1)</sup>. The total litter production differed with season and influenced by local climate, pore water salinity and phenology of the mangrove. The naturally generated young (7 years) *A. marina* with 1.8 m height produced more leaf litter as compared to similar tree height elsewhere. Decomposition rate was related to season, with higher litter loss during rainy season which could help cycling nutrients and support estuarine food web by supplying organic matter into the sub-tropical coastal environment.

**Keyword:** Mangrove; Forest; *Avicennia*; Coastal

