

A COMPARATIVE STUDY OF THE NUTRIENT RELEASE BY
AVICENNIA MARINA (FORSK.) LEAVES IN THE
MANGROVE FOREST AND IN THE BRUSH PILES OF NEGOMBO LAGOON

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It was found necessary to evaluate the impact of using mangroves for brushpile fishery, on the nutrient release to the mangrove-lagoon ecosystems. Forty eight litterbags of 5 mm mesh size with fresh and dry leaves of A.marina were deployed in brushpiles and in the forest. The litter bags were withdrawn at regular intervals in duplicate for a period of 3 months and the percentage of N,P,K,Ca,Mg,Na and organic matter were determined. The decomposition rate (K) ranged from 0.013-0.032, which was lower than that of Sinharaja Forest (Gunatilleke & Maheswaran, 1987) but higher than that of a mangrove forest in the Philippines (Pajarillo, 1984). Decomposition rate (K) was highest in fresh leaves in the lagoon. With decomposition, nitrogen enrichment occurred in the leaves, kept in the forest, but in the lagoon, nutrients leached out fast. Potassium, Calcium, Magnesium, and Sodium contents decreased rapidly during the first few weeks and slowly thereafter. The study showed that nutrient release and decomposition of A.marina leaves was faster when they are placed in brushpiles than in the forest indicating that brushpile fishery may enhance the rate of nutrient cycling in the mangrove ecosystem.

References:

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