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A preliminary investigation on desalination function of mangrove plants

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This study was conducted to identify the desalination potential of mangrove species. The study carried out with mangrove plant samples collected from Kirinda, Rakawa and Kalametiya in Hambanthota District. Mangrove species found at study sites were *Avicennia marina, Lumnitzera racemosa, Aegiceras corniculata* and *Exoecaria agallocha* (Kirinda), *Avicennia marina, Lumnitzera racemosa* (Kalametiya) and *Avicennia offcinalis, Ceriops tagal* (Rakawa). Desalination of sediment by

mangrove species was measured by calculating the percentage NaCl content in samples of leaves and sediment in vicinity. Sediment samples were obtained from 0m, 1/2m and 1m distance from the same tree from which leaf-samples were collected. Percentage NaCl content in samples of leaves and sediment were measured by using aqueous extractions of leaves and sediments and titrating them with 0.01 $AgNO_3$ in the presence of potassium thiocynate as an indicator. According to results, mature leaves of *Avicennia marina*, contain relatively high percentage of NaCl content (7.42 %). Percentage NaCl content in sediments taken from the vicinity of A. *marina* trees increased gradually with distance from the plants. A. *marina* is a salt secretor, which absorbs relatively a high amount of salt from the substratum than that of salt non- secretors. Hence this investigation identified A. marina as the best mangrove species capable of desalination of mangrove soils.

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