



# A preliminary study of Biodiversity and abundance of salt marsh species at Kandakuliya, Sri Lanka

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**Abstract:** Organisms living in salt marshes should have very special adaptations to deal with highly stressful environmental factors. Eighteen (18) species of salt marsh plants have been reported from South Asia recently. Among them only five species of salt marsh plant have been recorded in Sri Lanka. A total area of 23,819 ha are covered with salt marshes at Puttalam, Gampaha, Mannar, Jaffna, Kilinochchi, Mullaitivu, Trincomalee, Batticaloa, Ampara, Hambantota and Galle districts in Sri Lanka. Since the salt marsh species diversity in Sri Lanka has not been identified completely, the present study was focused to identify the dominant salt marsh plant species in Kandakuliya-Kalpitiya area. The study was carried out from 21<sup>st</sup> May to 25<sup>th</sup> May 2022 at Kandakuliya. Quadrats and spot check methods were used to determine the abundance of salt marsh plant species. A total of 130 (1 m × 1 m) quadrats were used from 13 selected sites in Kandakuliya-Kalpitiya area. Six salt marsh species were identified from selected sites in percentages (*Halosarcia indica*) 83%, (*Puccinella maritima*) 15%, (*Heliotropium curassavicum*) nearly 1.7%, (*Salicornia branchiate*), 0.3%, (*Suaeda maritima*) 0.06% and (*Sesuvium portulacastrum*) 0.01%. Three of species namely *P. maritima*, *H. curassavicum*, and *S. portulacastrum* have not been recorded in Sri Lanka as salt marshes species before. Two species namely *S. maritima* and *S. portulacastrum* were recorded only at one site at Kandakuliya, Kalpitiya area. Even though salt marshes are very productive ecosystems, in this study noted many negative impacts because of lack of awareness on salt marshes. However, further studies and preservation are required to determine the diversity, distribution and abundance of the salt marshes in Sri Lanka for the future generations.

**Keywords:** Diversity, Kalpitiya Kandakuliya, Plant species, Salt marsh