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**Distribution of Salt Marsh Plant Species in the Jaffna District, of Sri Lanka
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Abstract

Salt marsh plants are salt tolerant rooted vegetation that are found in low-energy transition zone between submerged and emerged environments, occupying the upper margins of the inter-tidal landscape. Salt marshes provide a unique habitat for a large number of species. Jaffna district harbors some of the major salt marshes in Sri Lanka, with large extents of undisturbed salt marshes. Salt marsh diversity and distribution has never been studied in Jaffna district since 1969 due to three-decade long armed conflict that prevailed in the entire northern part of Sri Lanka. The objective of the present study was to identify the dominant salt marsh plant species and their distribution in the Jaffna District. The study was conducted in the Jaffna District from 2014 to 2018. Line transects and spot-check methods were used to determine the distribution and abundance of salt marsh plant species. Distribution of salt marshes in the entire district was surveyed using GPS and the distribution maps were prepared using Q-GIS and ArcView. Then the distribution maps were intersected with Grama Niladhari division maps and salt marsh species distribution was evaluated by Grama Niladhari division level. Salt marsh plant species recorded in the present study are *Suaeda maritima*, *S. vermiculata*, *S. monoica*, *Halosarcia indica* and *Salicornia brachiata*. Total extent of the salt marshes in the Jaffna district was estimated to be around 1,105 hectares. Saltmarsh plant species are distributed in 25 Grama Niladhari divisions where large extents (over 100 ha) of salt marshes are found in 3 divisions (totaling 638 ha). Higher number of salt marsh species were found in Mandaitivu, Thanankilappu, Navali South, Arali-Navali, Ariyalai East and Chvachcheri. These species are found in high salinity areas especially in southern and western parts of Jaffna main land and the islands. *Salicornia brachiata* is the most common species which was found in the entire study area. In the low salinity areas such as Vallai and Vatharavaththai small extents of salt marsh species were found. Jaffna salt marshes are one of the most overlooked coastal ecosystems. The study revealed that five salt marsh species, belonging to three families occur in the Jaffna District, distributed over a 18 number of Grama Niladhari divisions in Southern coastal line, 5 division in the Islands. At present, improper road constructions, hotel development, and lack of awareness on salt marsh ecosystems have negatively impacted on these ecosystems. Hence, more attention should be given to protect the salt marsh ecosystem and environmentally friendly development activities should be promoted to conserve them.

Keywords: Salt marsh, Jaffna district, Grama Niladhari Divison, Mandaitivu, *Salicornia*