

Mangrove Plantation in a Reclaimed Land From the Sea

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Abstract : To establish the Bangabandhu Sheikh Mujib Shilpa Nagar in Mirsarai, Chattogram land was reclaimed from the river mouth of the Feni River in the Bay of Bangle. The sandy land has a salinity of 9.5 EC ds/m, and the water of the adjacent Bay was 13.2 EC ds/m during winter, i.e., it has moderate salinity. The selection of plant species for the plantation was following the local practices. Mangrove plantation in a such landscape is not common in the country, and some actions towards the plantation seem ineffective and could be accomplished differently. The aim of this paper is to analyze the trial and develop a strategy for mangrove afforestation in reclaimed land where the tidal effect does not occur year-round. Though the Keora (*Sonneratia apetala*) is the priority species in a typical mangrove plantation, the success rate is comparatively high for the Baen (*Avicennia officinalis*) and Sada Baen (*Avicennia alba*). The natural growth was recorded for Keora, Goran (*Ceriops decandra*), Lal Jhau (*Tamarix dioica*) and Baen. Though there was the natural growth of Durba grass (*Cynodon dactylon*) and Motha Gash (*Cyperus rotundus*), no growth of climber was reported at the early stage of the natural growth. The transplanted growth of Keora, Gewa (*Excoecaria agallocha*), and Baen was found not suitable for plantation. The saplings growing from the viviparous germinated bean show no germination failure. Since the plantation site remains dry for 5 months, there was irrigation from the river; though it resulted in an increase in land salinity. To increase fertility, cow dung was used, and green manuring by planting Doincha (*Sesbania bispinosa*) shows a very insignificant contribution. The plantation of, only one and a half years old, is now a habitat of more than 100 species. The learning from the mangrove plantation from August 2021 to February 2023 assumes that in reclaimed land where there is inundation during monsoon only and salinity is moderate, the plantation from viviparous germinated Baen is better.

Keywords : mangrove plantation, reclaimed land, climate change, habitat restoration

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