

**EFFECTS OF SALINITY INTRUSION IN MANGROVE WETLANDS ECOSYSTEM
IN THE SUNDARBANS: AN ALTERNATIVE APPROACH FOR SUSTAINABLE
MANAGEMENT**

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The wetlands area has often been estimated to account for nearly 50% of the territorial land including estuaries and mangrove swamps along the coastal belt of Bangladesh which is the largest living wetlands in the world. The Sundarbans Ramsar site wetlands are the part of Ganges delta, includes extensive mangrove forests and major river deltas flowing into the Bay of Bengal. It is the hotspot of biodiversity and contain of ecological and economical significance. Besides this wetlands help in the storage of flood water, provide a rich source of fishing, shrimp cultivation, mangrove resource collection and agriculture expansion causing water regime modification. A large part almost 45% of coastal mangrove wetlands has disappeared with in the last three decades. Such degradation and shortage of upstream sweet water flows and high salinity intrusion has brought about a biodiversity loss, degrading water quality, top dying process, reduction in fish habitat, and increase in the flood-proneness of certain floodplains. The high salinity intrusion is one of the main threats to wetlands biodiversity and ecosystems. Biodiversity conservation and ecosystems management policies must there fore be based on a proper appreciation of the social implications of proposed actions. The community as a whole may participate in and all classes benefit from, biodiversity conservation and improvement of the mangrove wetlands. The simulation and Saline water modelling in integrating GIS would be the alternative approach for sustainable management. The paper has prepared based on primary and secondary data sources. The objective of this paper is to understand the significance of coastal mangrove wetlands biodiversity and ecosystems. Critical analysis on ecological and economical benefits, and make recommendations for some practical solutions centred on management and conservation of the Sundarbans mangrove wetlands.