

ASSESSMENT OF THE BIODIVERSITY AND RICHNESS OF THE ECOLOGICAL RESOURCES OF COX'S BAZAR BEACH

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ABSTRACT

Sandy beaches are natural dynamic ecosystems, which are becoming worldwide increasingly disturbed by intensive human direct use, coastal development and erosive evolution. In this study, we have examined potentially increased human pressures that have resulted in significant changes in the macro-faunal assemblages' structure and composition of Cox's Bazar sandy beach, Bangladesh. Data on macro-benthic fauna as well as the physic-chemical factors of Cox's bazaar beach were collected seasonally during 2013–2014. The physical variables did not change significantly in different sites. However, the Laboni point (Site 2) was subject to an increase of human pressures (tourism and shoreline modifications). A total of 90 samples were collected from three sites namely Shomiti Para (Site 1), Labolni point (Sit 2) and Uttar pachar dwip (Site 3) throughout the study. 53 species/taxon were identified in the present study. In the present study both diversity and species richness were highest in the Site 1 and lowest in the Site 2 in the winter and monsoon. The similarities in the group Site1 & Site 2 and Site 2 & Site 3 were found to be lowest comparing with the group Site 1 & Site 3. Therefore, it can be concluded that the macro-benthic faunal community composition in Site 2 was impacted by tourism activities that ultimately indicated the extinction of natural resources of Cox's bazaar sea beach.