

Impact analysis of land use dynamics on coastal features of Deshapran block, Purba East Medinipur, West Bengal

[Sambandan Rajakumari](#), [Sethu Sundari](#), [Manickam Meenambikai](#),
[Vijayakannan Divya](#)

Journal of Coastal Conservation volume 24, Article number: 19, February 26, (2020)

Abstract

Coastal tract of India endorses diverse land cover features such as mangroves, mudflats, sand dunes, beaches, spits, sand bars and barrier islands. Land use pattern portrays the interaction between human and the environment. Increased anthropogenic activities in the form of urbanization and transformation of landscape into commercial activities like aquaculture would endanger the coastal land cover pattern. Multi temporal time series data facilitate in analyzing the Land use/Land cover (LULC) change dynamics using Remote Sensing and GIS techniques. Present study evaluates the changes in coastal features due to alteration of human intervened land uses in Deshapran block of Purba East Medinipur district of West Bengal. The study was attempted to assess the LULC changes in the past 4.5 decades and its impacts on the coastal features. The changes were detailed in different scenarios of definite time intervals. The study was further up scaled to predict the expected changes in the land cover for the next two decades using CA-MARKOV prediction model. The forecast study indicated that the haphazard expansion of aquaculture would impose severe stress to the crop lands and coastal features as well as menacing the coastline dynamics of Deshapran block. The outcome of the LULC dynamics provide changes in LULC at different period due to increasing human interventions and the forecast study will serve as a key information for policy makers for coastal sustainability of Deshapran.

Keywords: *Land use / Land cover, temporal analysis, Change detection, prediction model*