

STUDY OF PERIODICAL CHANGES IN FOREST COVER LAND OF MANGAON, RAIGAD DISTRICT, MAHARASHTRA; USING CHANGE DETECTION TECHNIQUES AND SPATIAL REGRESSION MODEL

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Abstract:

This paper does research on the very crucial issue i.e. deforestation in Mangaon Tahsil, District Raigad, Maharashtra India. The LANDSAT datasets for the year 2000, 2006 and 2013 were acquired from freely available online sources (USGS, GLCF- ESDI). First part of the analysis is the change detection using Land Use - Land Cover maps of all the three years and demarcation of the deforested areas by comparing NDVI maps of each year. In the second part this paper applies the spatial regression model to analyze the rate of periodical changes in the forest cover land from 2000 to 2013 and predict the possibility of degradation of forest cover land in next 10 years. The newly built Konkan Railway Route, Rapidly Developing Industrial areas, Road Constructions, Growing Settlement, and Mining Activities etc. are the main parameters taken into consideration for spatial regression model. Software Used: ArcGIS 10.1

Keywords: deforestation, Periodical changes, LANDSAT, Land Use Land Cover, NDVI