

REMOTE SENSING AND GIS APPLICATION FOR CHANGE DETECTION OF NATURAL RESOURCES IN COASTAL REGION OF UTTARA KANNADA DISTRICT

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Abstract:

The study was taken up in coastal region of UK district to assess the change in natural resources over a period of 17 years using remote sensing and GIS techniques. The LANDSAT TM and ETM+ imageries for the year 1989 and 2006 was downloaded from <http://glcf.umd.edu/data/srtm/> web site. The study area toposheets was georeferenced and area demarcation was done using Arc GIS 10. Land use land cover image and NDVI map was generated. Results indicated that the mixed forest area in the year 1989 was 64.6% which was reduced to 57.66% over a period of 17 years mainly due to human interference which leads to increase in agriculture area from 9.94% in 1989 to 14.29% in 2006. The Agricultural land increase was due to extension of cultivation area. The water body was also increased from 3.4 to 3.95% due to the construction of dam which results to decrease in forest area. The detection of change in vegetation cover is clearly identified through NDVI map. The study indicated that the forest resources are decreasing year by year due to anthropogenic activities. The final map of the change detection in vegetation is prepared using Arc GIS tools.