Land Use and Land Cover Changes Using Remote Sensing and GIS: A Case Study in Krishna River Basin

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ABSTRACT

Land use and land cover is an important component in understanding the interactions of the human activities with the environment and thus inevitable to assess properly for simulating any changes. In this paper an attempt is made to study the changes in land use and land cover in Krishna river basin over a period of 15 years (1992-2007). The study has been carried out through remote sensing approach using Land Sat imageries of 1992 and 2007. The land use land cover classification was performed based on Global Land Cover Facility (GLCF) an Earth Science Data Interface Satellite imageries. GIS software is used to prepare the thematic maps. Accuracy assessment was performed using standard procedures explained. The present study has brought that, major changes have been occurred in the agriculture land followed by forest land, habitants, open lands, water bodies and sand respectively in both the years of assessment. The increase in the agricultural land is from 217588 to 306769 ha and where as forest land decreased from 168066 to 63253 ha. Similarly, habitats increase is noticed from 46889 to 62605ha and then Open land has decreased from 46126 to 38928 ha. This study indicates that proper land use planning is essential for a sustainable development of Krishna river basin in future years to come.

Key words : Accracy Assessment, Enhanced thematic mapper, Land use, Land cover, Thematic Mapper .