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# Landscape Dynamics of Uttara Kannada District

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The land use, land cover (LULC) changes of a region and its interactions with climate, ecosystem processes, biogeochemical cycles, biodiversity provides insights to assess global changes. Remote sensing data with integration of Geographical Information System (GIS) provides spatially consistent data sets with high spatio temporal details which help in detecting and monitoring the drivers for change at various scales. The present study analyses spatio temporal changes in land use pattern of Uttara Kannda district from 1973 to 2010 and also accounts drivers for the rate of change in forest landscape. The monoculture forest management activities, adoption of a market economy crops diversified agricultural activities, such as growing cash crops, fruits and aquaculture. Spatial dependency of land use changes and variations of land development are witnessed in the region by loss of evergreen forest from 87.29% (1973) to 35.42% (2010) and increase in agriculture activities from 2.51% (1973) to 15.96% (2010). The landscape metrics analysis was considered to analyse changes and emphasise the better planning of the region. The outcome of metric analysis shows increase in number of patches (NP), decrease in class area (CA) of forest cover. Computing and defining land use land cover changes are crucial for assessing the effect of land management policies, essential for monitoring and implementation of effective management of the natural resources for environmental protection.

***Key words:*** *Land use, Land cover, Remote sensing, GIS, Vegetation indices, land scape metrics.*