

Assesing Spatio-Temporal Growth of Kochi City Using Remote Sensing Data

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Abstract : This study aims to determine spatio-temporal expansion of Kochi City, situated on the west coast of Kerala State in India. Remote sensing and GIS techniques have been used to determine land use/cover and urban expansion of the City. Classification of Landsat images of the years 1973, 1988, 2002 and 2018 have been used to reproduce a visual story of the growth of the City over a period of 45 years. Accuracy range of 0.79 ~ 0.86 is achieved with kappa coefficient range of 0.69 ~ 0.80. Results show that the areas covered by vegetation and water bodies decreased progressively from 53.0 ~ 30.1% and 34.1 ~ 26.2% respectively, while built-up areas increased steadily from 12.5 to 42.2% over the entire study period (1973 ~ 2018). The shift in land use from agriculture to non-agriculture may be attributed to the land reforms since 1980s.

Keywords : Geographical Information Systems, Kochi City, Land use/cover, Remote Sensing, Urban Sprawl

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