

Theme 13: Open source GIS, Application of Geoinformatics in conservation and management

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ROLE OF REMOTE SENSING AND GIS IN URBAN LAND USE PLANNING- PALANI TALUK – DINDIGUL DISTRICT

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The use of open GIS as the major component for a planning support system for the significant spatial information, interactive data, concerning in planning and development needs was updated frequently. The implementation of GIS had been contributed to raise the recognition of the importance of vertical integration of the developed and maintained datasets at regional and local levels. This approach and strategies were employed in the preparation of GIS database and development plans monitoring system for Palani taluk in Dindigul district. GIS and remote sensing are land related technologies and are therefore very useful in the formulation and implementation of the land related component of the sustainable development strategy. The different stages in the formulation and implementation of a sustainable regional development strategy can be generalized as determination of objectives, resource inventory, analysis of the existing situation, modeling and projection, development of planning options, selection of planning options, plan implementation and plan evaluation, monitoring and feedback. GIS and remote sensing techniques are developed and operational to implement such a proposed strategy. In India, unprecedented population growth coupled with unplanned developmental activities has led to urbanization, which lacks infrastructure facilities. The direct implication of such urban sprawl is the change in land use and land cover of the region. The ability to service and develop land heavily influences the economic and environmental quality of life in towns. Identification of the patterns of sprawl and analysis of spatial and temporal changes would help immensely in the planning for proper infrastructure facilities. Population increase as well as Immigration from rural area towards larger cities, particularly in developing countries result in considerable increase in urban area. Such an unplanned urban growth leads to agricultural depredation as well as environmental pollution. Rapid urban development and increasing land use changes due to population and economic growth in selected landscapes is being witnessed of late in India and other developing countries. In the recent times, Remote Sensing and GIS

are gaining importance as vital tools in the analysis and integration of spatio-temporal data. The present study highlights a coordinated significance of Remote Sensing and GIS techniques in detecting land use changes that have been experienced.

Keywords: Spatial development, Evaluation, Multi-temporal satellite imageries, Geographic information systems, Remote sensing.