

SYMPOSIUM ON INTEGRATED APPLICATIONS (B5)  
Integrated Applications End-to-End Solutions (2)

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GEOSPATIAL DATABASE FOR NATURAL RESOURCES MANAGEMENT IN THE STATE OF  
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**Abstract**

Karnataka State Remote Sensing Applications Centre (KRSRAC) has varied set of satellite images with different resolution and temporal datasets. It has generated over 50 natural resources datasets useful for planning, management and monitoring at various levels. The datasets are available ranging from 1:10 K to 1:50K scale using Cartosat-1, LISS-III/LISS IV satellite images for entire State of Karnataka. The cadastral referenced dataset of 100 years or more, hard copies have been digitized and geo-referenced. Seamless mosaicking of maps for 30,464 villages of the State has been created which is very useful for planning, management and monitoring the natural resources at Revenue Survey number level. The important thematic layers generated are Base map, LU/LC, drainage, waterbodies, wastelands, degraded land, ground water prospects maps, soils, slope etc. Under Forest Information System, Forest Vegetation Types/Forest density mapping including forest administrative boundaries and important forest assets are mapped at 1:50000 scale. Under Eco-sensitive zone boundaries of States, National Parks, Wildlife Sanctuaries, Protected Forest, Reserve Forests which are very essential for the Natural Resources Management and under the coastal regulation zone mapping indicating the change in the land use/land cover in the coastal zone have been generated. Unfortunately, the lots of eco-sensitive zones mangrove areas are converted into Prawn culture areas (60 sqkm has reduced to less than 10 sqkm in a span of 3 decades). The different thematic layers has been used viz. geology, soils, LU/LC, base map details for site suitability for solid waste disposal and site suitability of stone crushing units in the State of Karnataka, which has become input for Central Pollution Control Board. The water resource boundaries for larger area of watersheds (1 lakh hectares) have been delineated into smaller areas, micro-watersheds (500Ha) with unique codes and names for entire State of Karnataka.

Keywords: Natural Resources, Thematic database, Scale of mapping, planning, management