EARTH OBSERVATION SYMPOSIUM (B1)
Earth Observation Applications and Economic Benefits (5)

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EO AND GIS BASED PUBLIC ASSETS AND BENEFICIARY MAPPING AND MONITORING SYSTEM

Abstract

The progressive state of Karnataka is establishing Karnataka (State) GIS (K-GIS) – which will realise the true power of EO and GIS by embedding them "within governance" and taken to "every citizen". As part of various developmental programmes, Governments fund, establish and maintain various types of assets and provide social benefits to citizens. There is no state-level Asset Register that can be monitored – thus same type of assets/works are taken up again and again and there is no transparent method of identifying beneficiaries.

In the state of Karnataka a unique programme has been taken up to map and create a geo-spatial database of all public-funded Assets and map beneficiaries. While the GIS-based Asset register provides an inventory and helps monitoring/maintaining assets, it also helps in planning new developmental programmes/asset creation and also in planning social programmes for rightful beneficiaries. The Asset-GIS also helps in undertaking a financial analysis of allocation and ROI analysis - as it helps Government and citizens to immediately locate all Assets, their status and also identify distribution of Assets and funding status. The Assets under question total to about 45 individual Assets under 9 categories - agriculture assets, water resources assets, roads, education-assets, health assets, civic assets, communication assets, heritage assets and many others.

Mapping and documentation of all public assets and beneficiaries of government support has already been undertaken for almost 1 Million Assets in 5 districts (later to expand to another 10 Million Assets in the state) using EO-image as a map/image base; survey grade precision GPS inventory and geo-tagged to individual Asset-MIS data – leading to a comprehensive Asset-GIS database. A GIS-based Decision Support System allows querying tools, allocation analysis, gap analysis, various MIS reports and other innovative EO-based GIS mapping services. This EO/GIS project in Karnataka is serving as a "common repository" accessible to all departments and citizens – leading to a transparent process of information flow for governance, financial allocation, planning and maintaining Assets – apart from identifying gap areas in developments and also identifying social benefits.

The paper thus outlines the scope of the Asset-GIS application and describes how geo-spatial techniques – a combination of EO images+GPS survey+ GIS Applications have enabled this unique and innovation project. Specific examples of Asset-GIS Applications DSS for planning, monitoring and citizen interface are highlighted.