

## **Role of Spatial Data Infrastructure in Sustainable Development: Indian Perspective**

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### **Abstract**

Adoption of eco-friendly sustainable development strategies has become an imperative necessity to achieve economic and food security while maintaining environmental harmony. Drawing up such strategies demands reliable information on various natural and other resources in spatial format at different level of details, methods of integrating such information with a large volume of attribute information to understand interconnections, spatial modeling tools to generate alternate planning scenarios and methods of impact analysis. While earth observation systems from space and aerial platforms offer a variety of data in spatial domain, techniques of geographic information systems provide tools for varied analysis. Using data from the state-of-the art Indian remote sensing satellites, spatial databases on various themes such as land use/cover, soils, wastelands, wetlands, hydrogeomorphology, coastal landforms have been generated. Analysis of this data along with other collateral data has lead to generation of locale-specific action plans for suggesting alternate land use plans, soil conservation, surface water harvesting and ground water exploration/recharge for sustainable development of land and water resources. National (natural) Resources Information Systems have been set up at district/state levels to facilitate decision-making. Disaster monitoring, mitigation and damage assessment is another major area in which spatial data infrastructure thus developed has been extensively utilised. Another major role of spatial data infrastructure has been in facilitating infrastructure development in the country. The presentation plans to illustrate a variety of examples in which spatial data infrastructure has been utilized in national development and possible future scenarios.

**Full paper not available**