Natural resource catalogue for decision making and developmental planning

Geospatial layers

Land use	Drains	Forest boundaries	Rail network
Geomorphology	Canal network	Well observation data	Ground water prospects
Lithology	Micro watersheds	Settlement locations	Wastelands
Geological structures	LSGI boundaries	Road Network	Wetlands

LRIS - Palakkad District

Geo spatial layers along with linked attribute data capable of viewing, querying, analysing and printing for Palakkad District is available at ***gis.iiitmk.ac.in/LRIS***

Applications

A wide range of benefits will be derived in planning, implementation and monitoring of developmental activities like MNREGA, Watershed Management, Wasteland Development, Food Security, ultimately stimulating rural development

Looking Forward

Presently, Kerala lacks reliable large scale spatial information for the conservation, development and management of the natural resources on a sustainable basis. The deployment of Land Resources Information System by integrating large scale spatial layers enables administrators, planners and local bodies in taking right decisions for the management of resources in the perspective of decentralized planning at Panchayat level.

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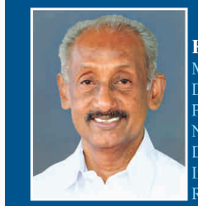
Every piece of land should be used for the purpose for which it is best suited

Web GIS Based Land Resource Information Support for Decentralized Planning

Oommen Chandy
Chief Minister

I am extremely happy to note that Kerala State Land Use Board has taken a path-breaking initiative to design and implement Land Resources Information System (LRIS). It is definitely a milestone development in the State as it has demonstrated how ICT can effectively be used for resource planning.
I appreciate the initiative and wish all the very best



KC Joseph
Minister for Rural Development, Planning, Culture, NORKA, Dairy Development and Information & Public Relations

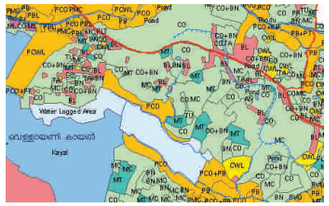
I am happy to note that LRIS developed by Kerala State Land Use Board is a Web based Geographical Information System which will provide concurrent access to land resources information at various administrative levels. I am sure this will ensure efficiency, transparency, speed and accuracy in decision support mechanism at various levels. This will also facilitate access to the most updated information on land resources
I appreciate the initiative and efforts taken by Kerala State Land Use Board and I wish all the very best.

Introduction

Planning at grass root level aims at inclusive, participatory and co-ordinated approach in decentralized manner for local area development to ensure that each Panchayat or local body is treated as a planning unit. Various departments are involved in the collection of information on resources for planning and are mostly available in a format which can't be effectively utilized in timely and cost effective manner

In the present day context of watershed based action plans for MNREGS and other development activities, LSGIs are to be equipped with better and scientific management of the land and its resources at grass root level in the planning process. GIS is having the capability for preparing and integrating the data from various sources (spatial and non spatial) and is playing an important role in resource development, management and planning.

Land Resources Information System (LRIS) is a web based GIS project implemented by Kerala State Land Use Board, with the technical assistance of IIITM-K. The objective is to demonstrate and promote the use of spatial data technologies for local level planning and to provide software support for data management, modeling and operation research.



Web based GIS technology for planning, implementation and monitoring

Goals

The spatial information developed under LRIS project includes the large scale spatial database with detailed inventory of natural resources such as land use, landforms, geology, soil resources, water resources, ground water potential, watershed, etc. The multi-layered information system contains a comprehensive status of land and water resources in a spatial framework. It provides grass root level information on natural resources for planning and successful management of land and water resources at micro level. Web based GIS application developed as part of the project is a robust and scalable framework that will facilitate concurrent access and timely updation of land resources information leading to effective planning.

Objectives

Spatial Geo database creation

Spatial depiction of land & water resource information integrated with geo referenced cadastral database. State-of-the-art web technology tools and systems conforming to Services Oriented Architecture. The Web GIS application is developed using Open Source Tools and Standards.

Decision making tool & dissemination

The entire application is Web based and can be accessed through any standard web browser with user-friendly navigational approach. Dissem - inate resource information to the people at grass root level for supporting decision making and developmental planning.

Capacity building

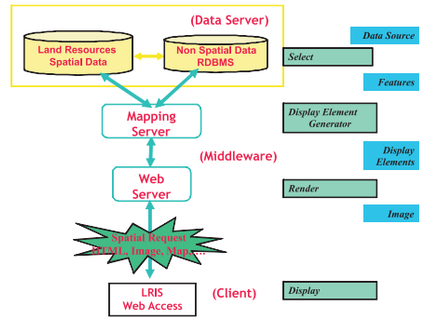
Demonstrate and promote the use of spatial data technologies for local level planning. Provide software support for data management, modeling and operation research. Promote R & D in spatial data technologies. Technology transfer and capacity building of potential users

Geo spatial technology for facilitating decentralized planning

Approach

Creation of resource information from four major sources

- High resolution satellite imagery
- Participatory resource mapping at cadastral level
- Existing thematic resource database
- Attribute information



Architecture of Web Based Land Resource Information System

The web based LRIS will facilitate dissemination of dynamic geo data and allows to virtually integrate dynamic information from multiple sources. This system will have high significance and utility in decentralized planning exercise.