Nagaland **GIS & Remote Sensing** Centre

● Remote Sensing ● Photogrammetry ● Geographic Information System ● Geospatial Software Applications ● Application Software Development ● Location Based Services (LBS)

Overview

Since its inception Nagaland State GIS & Remote Sensing Centre has been providing full spectrum of innovative geospatial services and solutions, application softwares, geospatial data engineering and analytics services to facilitate all line departments, resource managers, planners and decision makers for sustainable development planning activities in the state of Nagaland. Indian Space programme emphasizes on utilization of space technology for the betterment of the society. Towards realizing this objective the centre is acting as an apex body of the state of Nagaland for space technology applications such as Remote Sensing, GIS, GPS, IT & ICT. The center has now become a geospatial resource hub and the repository of various thematic layers; geospatial applications satellite imageries, most modern hardware and software (Image Processing, GIS, GPS/DGPS) installations in addition to a team of scientists and technical staffs.

Initiatives and Achievements: Nagaland GIS & Remote Sensing Centre

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SSDI

Nagaland State Spatial Information System : A web – enabled enterprise GIS application, in compliance with the Govt. of Nagaland (GoN) envisions to implement e-governance in the state of Nagaland, aims to provide administrators and planners with an accurate spatial view of the state at different administrative levels viz. district, circle up to individual village level . The geospatial web portal provides 160 fields and 25 layers of information starting from road network, rail, drainage, industries, assembly constituencies, polling stations, tourist spots and much more useful information.

DEM

Digital Elevation Model (DEM) for the entire state of Nagaland : Presently an ongoing project in association with Geospatial Division, Govt. of India for developing digital elevation model at 1: 4000 scale combined with high resolution orthorectified satellite imageries for seamless 3D terrain visualization of the entire state of Nagaland and to evaluate terrain conditions in remote and urban areas. In this regard a statewide DGPS survey has been done. The overall objective of the project is to allow planners to plan field operations in a computer environment, ensuring that the best access is provided and project objectives are achieved for environmental studies, urban modeling etc.

In the first phase the center has already produced DEM for the entire state of Nagaland at 1:50000 scale by digitizing contours at 20m interval from Survey of India (SOI) toposheets.

CONTACT US

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LAND USE

Nagaland State Land Use Information System (NLUIS) : Presently an ongoing project for development of a web enabled enterprise GIS based land use /land cover web portal to provide land-use information at 1:50000 scale using LISS-III and Cartosat satellite imageries as well as Survey of India toposheets in order to understand the trend of land utilization for the entire state of Nagaland. The aim is to provide planners a decision support system or tool to prepare long-term strategic plans, as well as detailed local-area plans, for physical development, then coordinates and guides efforts to bring these plans to reality. Land use/land cover classes or categories have been made while considering NRIS / IMSD/ DMS classification system.

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URBAN MAPPING

Urban Mapping at 1:4000 Scale for 8 major towns of Nagaland : The announcement of the 74th Constitution Amendment Act in 1992 brought in an objective of empowerment and devolution of powers to the Urban Local Bodies (Municipal Boards, Municipal Councils and Municipal Corporations) making them responsible for preparing City Development Plan.

Presently an ongoing project, Nagaland Urban Information System (NUIS) provides a well thought out Spatial Decision Support system (SDSS) required for city level urban planning, implementation of e-governance solutions in urban areas. This is going to be used as a state level urban information repository and will enable access by Town Planning department, UDAs, ULBs, State level officials as well as Citizens.

It is envisaged that the NUIS will support the e-governance initiative of GoN, support various urban development efforts like preparation of Master Plan/Zonal Development Plans, aid city administration/management and also with special emphasis on property details. In this regard various thematic layers viz. buildings, streets, transport facilities, public facilities, health, education and financial institutes, tourist places, emergency facilities have been prepared in GIS environment. Now activity is ongoing in terms of design and development to give it a shape of a web portal.

HEALTH

Health Infrastructure Management System : The department of Health and Family Welfare, GoN provides health care facilities to the people by constructing CHCs, PHCs, SCs, hospitals, dispensaries, clinics and other heath care centers. It undertakes schemes for acquisition of medical equipment and implementation of infrastructure facilities; improves the functioning of hospitals.

The Nagaland Health Infrastructure Management System is a centralized web-based GIS enabled Health Infrastructure Management System that covers entire gamut of basic health infrastructure management functions in the state government currently being performed in accordance with National Rural Health Mission (NRHM) as well as Indian Public Health System (IPHS) guidelines. i.e. facilities/equipments, drugs and consumables, human resource, health institution specific coverage of village as well as population details, institute specific document uploading, activity specific performance monitoring, report generation.

The GIS browser interfaces have features/functionalities/tools for mapping of health institution, identify distribution of resources/facilities, search, on map tabular (attribute) data access, query, buffer, measuring distance between health units/facilities as well as between health units/facilities and habitations.

EDUCATION

Education Infrastructure Management System : The web based GIS enabled School Mapping & Infrastructure (includes School Building Asset, Facilities, Student Enrolment and Staff etc.) management system for Dept. of Education ,GoN is to keep administrators on top of all facets of school infrastructure management for the state of Nagaland.

The application is built from the ground up to automate the School mapping, Physical distribution of schools along with categories (primary, middle, upper etc),individual school wise Facility Details, Construction Details, Infrastructure Details, Village Served, Student Enrolment Details (class wise), Post Filled Details, Post vacant Details, Sanctioned Post Detail, document management, and many more.

ROAD

Road Information Management System : Public Works Department (PWD), Government of Nagaland is the principal governing body for planning, design, construction and maintenance of roads and bridges in the entire state. The system of archival of road data prevalent in PWD observed is mainly through traditional paper road maps, engineering drawings and road statistics registers. In this context, a prototype for utilizing GIS in Road Information and Management System is being developed in association with Road & Bridges Department to create a state wide, up-to-date digital database of roads that would induce efficiency and accuracy in monitoring, management, planning and subsequent development of the road network for the state of Nagaland.

DISASTER MANAGEMENT

Nagaland State Disaster Management System : A Comprehensive Incident Management System in spearheading and implementing a holistic and integrated approach to Disaster (natural and man-made) Management in the state. Nagaland State Disaster Management System manages disparate and related resources as a single interrelated operation and acts as a central repository of spatially enabled information on everything from personnel and equipment, to facilities and supplies.

The application fully complies with our national objective (Ref: The Disaster Management Act, GoI 2005) from a response and relief centric approach to proactive and comprehensive mindsets. Nagaland State Disaster Management System provides a comprehensive suite of integrated capabilities that maximize situational awareness, strategic decision-making effectiveness, and tactical execution for all-hazards incidents and for all phases of the incident life cycle. The system's holistic approach combines intelligence and information management, integrated communications, and automated Incident Command System (ICS) work flow. Finally, the robust solution provides utility for day-to-day operations as well as a coordinated and timely response to events as they occur.

VEHICLE TRACKING

Vehicle Tracking System : The on-going project of Vehicle tracking System will enable the state government to keep track of the government vehicles on a detailed map. Vehicles will be tracked using GPS technology in real time which will allow personnel to view vehicle position on a map in real time. The effort is expected to combat administrative problem such vehicle theft, proper utilization of the Government vehicles, monitoring of the fleets etc.