

1. Project Title : Road Information System (RIS) of Nagaland

2. Scope and Objectives:

GIS Based Road Information System is proposed for the entire state of Nagaland with the objective of creating up-to-date digital database of road connectivity, accessibility along with various public utility services which will enable efficiency in monitoring, management, planning and subsequent development of the road network in the state. It will also help the planners and administrators to identify the problems associated with the road development activities, location and provision of appropriate facilities, monitoring and maintenance management of the assets created in the rural areas. The work will be carried out in collaboration with Nagaland State Science & Technology Council (NASTEC).

Following are the objectives identified for the study-

- Preparation of GIS maps of National Highway, Major, Other District Roads and Urban Roads at 1:50K at District level and 1:25K at Block level.
- Preparation of location specific GIS maps for various public utility services such as educational institutes, medical facilities, police, fire station, bank, market place, post-office, airport etc. showing connectivity and accessibility with existing road network.
- Query based services based on buffering and proximity analysis, route information like shortest route, alternate route, traffic analysis etc. based on network analysis during emergency situation like natural disaster, movement of civil authorities during election etc.

3. Centre/Unit : North Eastern Space applications Centre (NESAC)

4. Funding Agency : NESAC

5. Study Area : Nagaland

6. Methodology: The proposed Road Information System will be realized based on advanced state-of-art technology, including:

- High-resolution satellite images from Indian Remote Sensing Satellites will form the core of the 1:50K & 1:25K mapping activity.
- Global Positioning System (GPS) will be used for field survey to correct the mapping and collection of point information.
- The GIS techniques will be used to develop integrate/application software that will generate outputs for planning and management.

7. Data to be used : Cartosat 1 & 2A with spatial resolution (pan) 2.5m and 1m respectively will be used for the preparation of thematic maps. IRS P6 L4 with a 5.8m spatial resolution (multispectral) will be used in some areas where Cartosat images are not available.

8. Status of the Project: Preparation of base maps for entire state and the road networks, settlements, basic amenities maps for five districts of the state have been completed.

8. Utilization/Success Stories:

Inputs generated under RIS are expected to be used in the various activities under PWD, disaster management, infrastructure development, industry etc.

10. Duration: 2 years