National Centre of Geo-Informatics (NCoG) - https://ncog.gov.in/

Who are we?

National Center of Geo-Informatics (NCoG) is a Geographic Information System (GIS) based decision support system platform, under National e-Governance Division (NeGD), which was launched on 28th December, 2015 by Honorable Minister of Communications and Information Technology, Shri Ravi Shankar Prasad. NCoG is being supported by “Bhaskaracharya Institute for Space Applications and Geo-Informatics (BISAG)”, Gujarat, as its Knowledge partner.

What are our objectives?

- Provide a national platform for developing geo-informatics related resources and capabilities in the country
- Provide applications and solutions to all Governments, Central, State, Local self-governments in the area of geo-informatics
- Integration of Geo-informatics with Management Information System (MIS) for more value based outcomes and decision making
- Take up programmes for human resource development in the area of geo-informatics
- Take up R&D in the area of geo-informatics

What is GIS?

Geographic Information System (GIS) is integral to Planning, Decision Making & Electronic Delivery of Services. It geo-enables e-Governance to facilitate location based information for all. Thus, implementation of GIS based Decision Support Systems (DSS) through NCoG is essential for ushering ‘Good Governance’ as it facilitates transparency, responsiveness, efficiency & effectiveness, accountability and participation across Government.

What do we do?

NCoG provides one of its kind of ‘GIS platform’, for sharing and collaborating GIS data source, location based analytics and ‘Decision support system’ serving to Central/State government and departments across the country. Geo-Informatics is integral to planning, decision making & electronic delivery of services, geo-enabling e-governance to facilitate location based information for all.

NCoG has facilitated the integration of GIS platform with the MIS data for Ministries and Departments across India. By enabling a better understanding of the geographic aspects, NCoG via GIS is transforming India and taking good governance to a whole new level.
Main Features of NCoG can be understood through the following diagrams:

- **Information Science**
  - Web
  - Mobile
  - MIS
  - ERP

- **Mathematics**
  - Geometry
  - Trigonometry
  - Algebra
  - Fluid Mechanics

- **Geospatial Science**
  - GIS
  - Remote sensing
  - Image Processing
  - GPS, GNSS

- **Processes**
  - Guidelines
  - Rules
  - Regulation

- **GIS PLATFORM**
  - 1:5000 Basemap
  - Web enabled & deployed on Cloud

- **AUTHENTICATION**
  - By Owner agency

- **DYNAMIC QUERY**
  - Boolean & logical
  - Dashboard

- **OPEN SOURCE & IN-HOUSE**
  - No use of proprietary software, **cost saving**

- **TRAINING**
  - Two way Capacity Building

- **COMPATIBILITY**
  - Multi-purpose geodatasets
What have we done?

NCoG has launched many GIS based applications, which are at various stages of implementation, that have helped address a number of areas ranging from Government Land Information, Rural Electrification, Irrigation & Water Resources, Industrial Information and Aspirational Districts to Mining Surveillance, Saltpan Information, National Highways, Coal Mines Surveillance and ITBP among others. With each new day and fresh challenges, NCOG is leveraging geo-informatics to transform India into a digitally empowered society and knowledge economy.

Synopsis of some key Projects undertaken by NCoG:

- **Government Land Information System**: Mapping of Government’s owned land and assets in all parts of the country.
- **Mining Surveillance System**: Monitoring mining activities and checking illegal mining through remote sensing technology.
One stop shop for complete industrial infrastructure, as provided by states, including clusters, parks nodes, zonal focal points etc. of the country is mapped and available as DSS.

Check Dam Planning and Water Harvesting Management are the key objectives being achieved based on gradient, topography, contour & simulation for water volume.

Aims to quickly and effectively transform the selected districts by identifying their area of issue and solution for its improvement through GIS.

Crime mapping and one touch app for emergency and easy approach to the Delhi police.

Note: All the projects of NCoG can be found at https://ncog.gov.in
NGIS Outcomes

GOOD GOVERNANCE
- Administrative Functions
- Monitoring of programmes
- Gap Identification
- Allocation of resources
- Management of resources

DEVELOPMENTAL PLANNING
- Problem specific / Integrated
- Programme Convergence

APPROVALS / PERMISSIONS
- GIS based
- Transparent

SERVICES
- G2G
- G2B
- G2C

DISASTER MANAGEMENT
- Disaster Mitigation
- Simulations – 3D

SPATIAL DECISION SUPPORT SYSTEMS
- District level - DSS
- Bottom to Top approach