# ODISHA GEO-PORTAL: ([http://gisodisha.nic.in](http://gisodisha.nic.in))

Geographic Information System (GIS) plays an important role in all walks of our life and it is said that the geographic information affects about 80% of our decisions. It provides a better understanding of the spatial phenomenon that occurs around us. Such phenomenon however is complex in nature and requires a vast collection of data- the integration of geographic data from different sources therefore is fundamental requirement to analyze and understand the problems that keeps relation with geography in one way or another. This implies that the data that are produced by an agency need to be shared with others, which can be viewed as unlocking of data to its potential users. The power and potential of GIS is limited only by ones imagination.

e-Governance has emerged as one of the driving forces for the Government by enabling the administration to re-design and improve its existing processes, connect with citizens and facilitate interactions with and within the society. E-governance is seen as an effective tool to pave the way for good governance. But is e-governance enough in this era? There exists an opportunity for the country to further build upon its existing mapping/imaging and IT strengths and position a national GIS (NGIS) that will enable g-governance and bring wide-ranging benefits. There is a strong motivation within the country for the realization of NGIS as the next technology paradigm for effective governance; thereby enabling better planning processes, delivery systems, and increasing transparency and efficiency in decision-making and reaching developmental benefits to citizens in a unique manner. NGIS would help India in migrating from e-governance to g-governance in the long term. It would also catalyse and transform the methods in which GIS is practised in the country, the way maps/images as GIS-ready data gets organised and the way customised GIS applications products get created, value added, managed and deployed as unique NGIS services. These unique and innovative NGIS applications would serve the needs of natural resources management, planning and decision support systems and help position transparent and participatory governance by focusing on GIS-based citizen services.

GIS-enabled Web sites can provide services for the following:

- Government-to-business applications for economic development, land development, licensing, or permitting.

- Government-to-citizen applications for online information on government services and to streamline interaction for accounting and feedback.

- Government-to-government applications to improve the amount, quality, and speed of information exchange within and among various levels of government.

- Better communication to enable governments and citizens for using resources more wisely. In addition, it also allows agencies to collaborate on large-scale planning problems and respond to emergencies.

Web Based GIS Framework "ODISHA GEO-PORTAL" has been developed where Geo-Spatial layers of Administrative boundaries of entire state starting from State to Village level have been created with other Natural resources Layers & Communication Layers which covers ( Forest, Soil, LULC, Rivers, Water *Bodies, Drainage, Roads, Rails) in 1:50K scale .R*eference data from Survey of India, ISRO, FSI, RGI and so on.

All the Administrative Layers are subsequently mapped with LGD codes ( Standard code for E-Gov. applications) and further integrated with Socio-Economic, Demographic & Sectoral data sets for value addition which paves the way to monitor various E-Gov. applications and developmental schemes running at Micro-Level. These rich data sets are published in National GIS Portal called "BHARAT MAPS" using NICMAPs Services (https://bharatmaps.gov.in/)

On top of these Base layers (1:50K map), further we build the application Layers ( Roads, Rivers, Water Bodies, Canals, Settlements etc.)     by using high resolution Satellite Imagery (Cartosat-I & II, LISS-IV, IKNOS and other products) on 1:10K scale for Rural areas and 1:4K scale for Urban areas.

All the layers are brought in to WGS-84 Datum and OGC (Open Geospatial Consortium) standard followed to mash-up with Global Imagery services like ESRI Map, Google Map, Bing Map etc.

To consume these Geo-spatial layers as GIS services by various Govt. departments, ODISHA GEO-PORTAL has been developed and hosted in ArcGIS Server platform mash-up with Global Imagery Services as Back Ground Map for G2G & G2C applications.

GIS standard tools such as: Zoom In, Zoom out, Search, Measurement, Identification, Full extent etc. have been incorporated in Geo-Portal to make the application robust and more user friendly.

## Layer list of NIC MAP Service

| Level | Scale | No of layers | Contents | Labels (yes/no) | Source |
|---|---|---|---|---|---|
| | | 1 | State Hq | yes | SOI topo map |
| | | 2 | Dist Hq | yes | SOI topo map |
| | | 3 | State boundary | | SOI digital data |
| | | 4 | District boundary | yes | SOI digital data |
| | | 5 | Census towns | yes | SOI topo map |
| | | 6 | Sub dist hq | yes | SOI topo map |
| | | 7 | Panchayat Hqs | | SOI topo map |
| | | 8 | Villages | yes | SOI topo map |
| | | 9 | Point layer(Air port, temple,hut , well, tube well etc) | no | SOI topo map |
| | | 10 | Railways | no | SOI digital data |
| | | 11 | Railway stations | | SOI digital data |
| | | 12 | National Highways | yes | SOI digital data |
| | | 13 | State highways | yes | SOI digital data |
| | | 14 | MDR | yes | SOI digital data |
| | | 15 | Other road | no | SOI digital data |
| | | 16 | Tracks | | SOI digital data |
| | | 17 | Drainage | no | SOI digital data |
| | | 18 | River | yes | SOI digital data |
| | | 19 | River PAN | | Extracted from LISS-3 imagery |
| | | 20 | Canal | no | SOI digital data |
| | | 21 | Foot prints of towns and villages | | Extracted from LISS-3 imagery |
| | | 22 | Settlement | no | SOI digital data |
| | | 24 | Water bodies | yes | SOI digital data |
| | | 25 | Forest (RF/PF) | | SOI digital data |
| | | 26 | Forest (Wild life Sanctuaries) | | Lat-long based |
| 1 | 1:50k | 27 | Forest FSI Image | | FSI |

| Level | Scale | Contents | Source |
|---|---|---|---|
| 2 | 1:10K & 1:4K | Roads (NH, SH, MDR, ODR, GP Road, Village Road etc. Railway Track and Stations Rivers/Reservoirs/Water Bodies etc Canal Settlements | High Resolution Satellite Imagery ( Cartosat-1 & 2, LISS-IV, IKNOS & other products |