Major Geo-portals of India: A Study

Dr. Vaishali Malode (Wadnerkar)

Librarian

Dhanwate National College, Nagpur

Abstract:

Information is the most unique resource for development and is considered as "engine of progresses' and libraries methodologically collect, record, classify and makes it available through wide range of information sources for diverse range of users to provide the thrust of knowledge. Present study emphasize the Geo-portals as an open source for disseminating geo-spatial information on various themes which provides geographic information through geographical source map, being the most useful tool for every man in the society and for the nation.

Keywords: ICT, Web-portal, Map, Geo-portal, Geographical Sources

Introduction:

Map is an important and major source of geographic information. It is a symbolic representation of selected characteristics of a place, usually drawn on a flat surface. Map present information about the word in a simple, visual way depicting important geographic facts for certain place which is used extensively, for planning, analysis for decision making by planners,administrators,policy makers, town planners,administrators,policy makers, town planners,engineers,natural resources mapping and monitoring institutes or, agencies,academicians,ministries,social groups, NGO's and etc.

With the components of information technology and most handy tool of digitisation has brought revolution to making, displaying, editing, manipulating the map information through digital cartography and paved the way for creating geo-portals which is useful for social, economic and cultural matters.

Definition of Geoportals:

A geoportal is a type of web portal used to find and access geographic information (geospatial information) and associated geographic services (display, editing, analysis, etc) via the Internet. Geoportal are important for effective use of Geographic information systems (GIS) and key elements of spatial Data infrastructure (SDI) (Wikipedia 2020)

A web site that presents an entry point to geographic content on the Web used to discover and access geographic information and associated services on the Web (IGI Global 2012)

Objectives of the Study:

- To Study Spatial and Non-Spatial information, portal and Geo-portal.
- Scenario of National Geo-portal.
- To find out the facilities by provided by Geo-portal.

Methodology:

The investigative method is followed which includes surfing the internet on Geo-portal at National and State level. The major portals are thoroughly navigated and collected all the related information as well as related reports available or uploaded there in, such as water, Agriculture Satellite Imageries, National Spatial Data Infrastructure and State example of Maharashtra Geo-portal.

Scope and Limitations:

The scope of the work is undertaken related four National level open access Geo-portal for Water the basic input for life India –WRIS, Agricultural –the important segment of food provider for the nation-KRISHI-ICAR, Indian Earth Observation multi resolution images from multi sensor IRS Satellites of India –BHUVAN,A network of National level data nodes for sharing Standardised Spatial Data for Decision support, National Spatial Data Infrastructure –NSDI and the State level Geo-portal –MRSAC .The study is restricted through surfing the internet for searching the related websites of the Geo-portals of India for collecting the data and information provided for the specific user group.

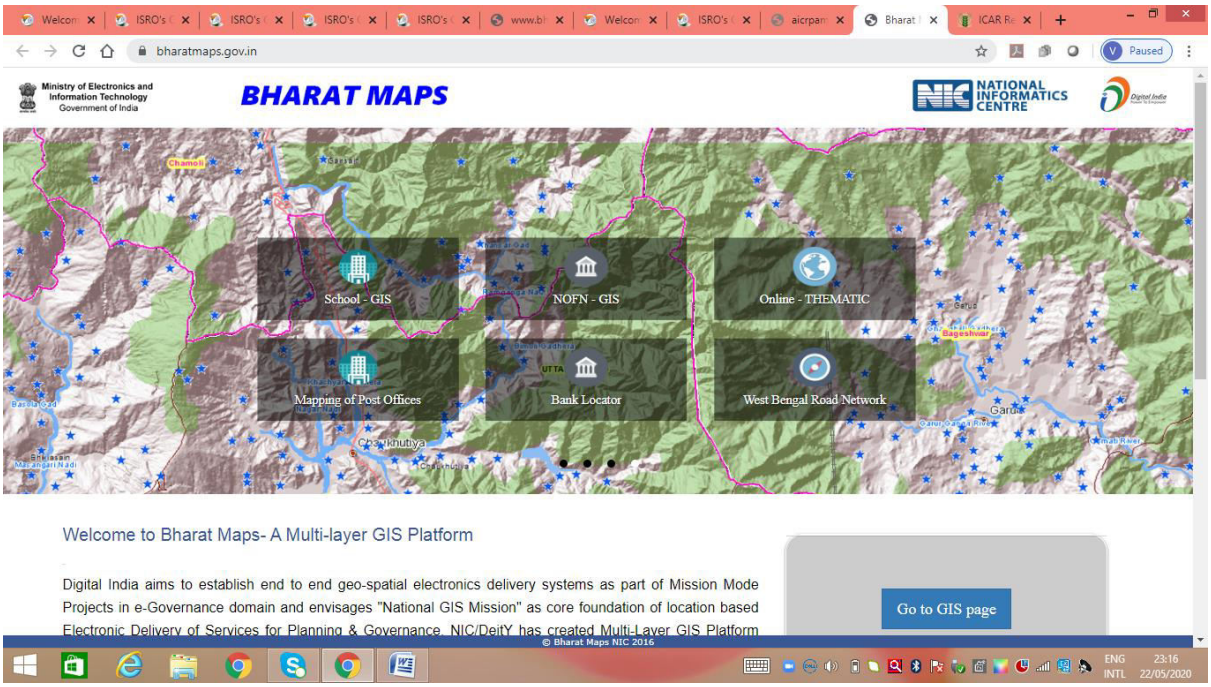
Krishi ICAR Geo Portal:

KRISHI –Knowledge based resources Information Systems Hub for Innovation in Agriculture, is an initiative of Indian Council of Agricultural Research (ICAR) to bring its knowledge resources to all stakeholders at one place.The portal is being developed as a centralized data repository system of ICAR consisting of Technology, Data generated through Experiments/surveys/Observational studies.Geo-spatial data,publications,Learning resources etc.

Home page of the Portal

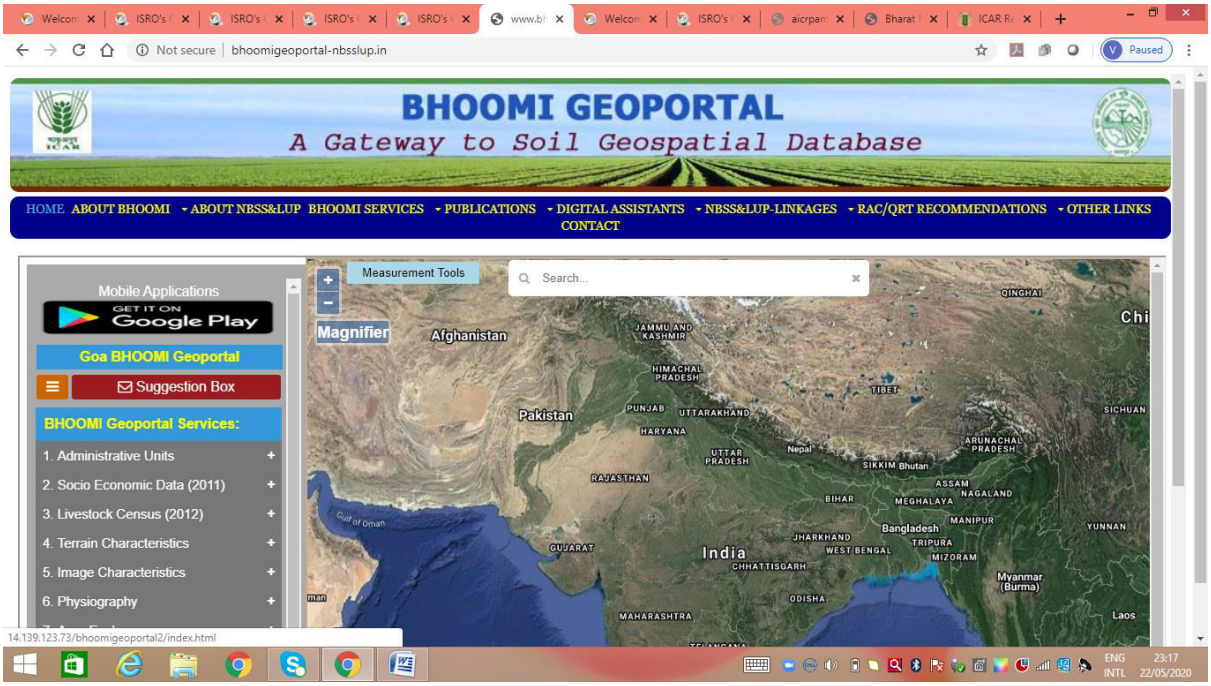
Information Systems of ICAR GEO Portals

BHARAT MAPS : A Multi layer GIS Platform



BHOOMI

A Gateway of Geospatial Database

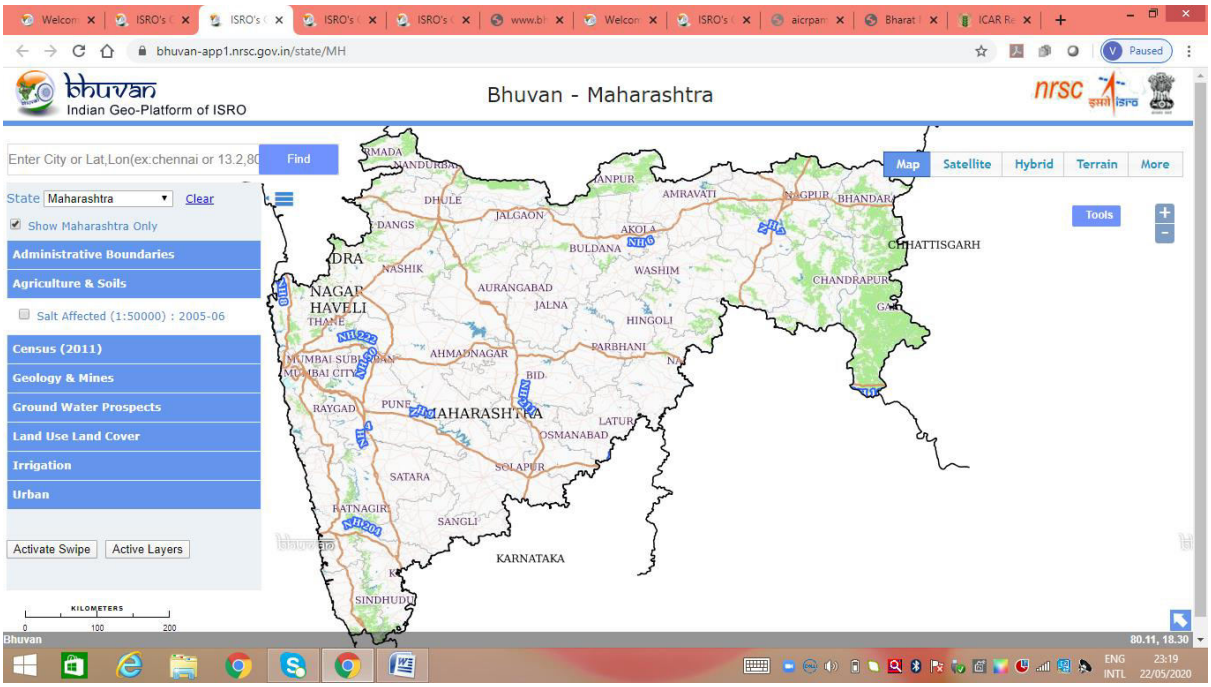


The importance of spatial databases in management and optimum utilization of natural resources is well recognized. In four decades journey of ICAR-NBSS&LUP generated

voluminous information on several parameters of soil resources at various scales in the country and these have been scattered at various places in form of database, maps, research paper and reports. Keeping this in view, development of dedicated Bhoomi Geo-portal has been initiated to systematically develop, organize and deploy the soil information through collating geo-referenced soil and allied resources database in Geographic Information System (GIS). It provides a knowledge gateway to visualize, access, query soil data and disseminate the land resource information to the users. The advantage of developing such Geo-portal is to eliminate redundancies and duplication of efforts, and enforcing consistency, standards, and sharable protocols to build a cross-domain soil knowledge base for effective utilization of limited natural resources in the country. The user interface of NBSS Geo-portal enables to visualize various point, line and polygon thematic layers on soil and land resources.

BHUVAN

Indian Geo-platform of ISRO



Source –ISRO 2020

Bhuvan as a platform is open and being used by diverse user community. The Government agencies use this platform to share and host their data, as per their requirements, enabling specific applications of theory choice, some of the State Governments and departments are using BHUVAN platform for specific applications of State's departments.

BHUVAN Platform for States

Every State developed their own Geo-Portals for providing geospatial information to its various ministries and department of decision making. Bhuvan provided robust platform

for state to host their geoportals, thus giving platform a service. State portal consists of all the data sets pertaining to particular state belonging to different categories. This includes huge amount of spatial and non-spatial data shared by State departments. Other state departments can use these state portals as a platform to host their data. Databases are devided in different categories for each state portal. Following figure shows the participating States hosting their geospatial data in BHUVAN.

National Spatial Data Infrastructure (NSDI)

All over the world there is growing emphasis on sustainable management of natural resources and preservation of environment due to the realization that these are vital to our socio-economic development. Citizens have to provide with better quality of life, health care and education. Challenges like internal security, energy security, inclusive growth, climate change, disaster mitigation etc, are required to be effectively addressed. Towards this goal, there is need to design, implement and monitor focused interventions measures while taking into multiple issues involved in each of the situations. At the core of the strategy lie the appropriate compilation, sharing, and integration of the spatial data(data with reference to a location on the earth's surface) supported by incisive analysis and enablement of decision support systems. NSDI was formally constituted as per the approval of the Union Cabinet by setting up of a two-tier structure for the Governance of Spatial Data.

NSDI established with vision to develop –

- National Infrastructure for availability of and accessibility to organised collection of standard spatial data.
- Use of the Infrastructure at National, state, district and village levels for sustained economic growth.
- NSDI National Spatial Data Infrastructure has been jointly launched by the Department of Science and Technology and the Department of Space in 2001 with the objective of—
- Developing and maintaining standard digital collection of spatial data.
- Common solutions for discovery, access and use of spatial data in response to needs of diverse user groups.
- Increasing awareness and understanding of the vision, concept and benefits of NSDI.

MRSAC Geoportal

The Maharashtra Remote Sensing Application Centre (MRSAC) has been established in 1988 as an autonomous body under the administrative control of planning Department, Government of Maharashtra. Centre has completed more than two and half decades of journey and a over a period of time,MRSAC has generated geo-spital databases at various scales for use by the different state Government departments and users. This wealth of databases included village cadastral database and aggregated administrative boundaries

apart from the mapping of natural resources using satellite remote sensing and GIS Technologies.

MRSAC has become unique Centre having technical expertise to create the Geo-spatial databases from satellite remote sensing and conventional resources and its effective management. At present it acts as Nodal Agency to advice the State Government for its geospatial database and Information needs.

Geo-Spatial Databases and MRSAC Geo-Portal

In order to make the effective use of these databases and to help e-governance practices in the state, the strong information system is inevitable. To accomplish this task, MRSAC has organised the state wide database at WGS-84 Datum. Further , the integrated information system/unified geo-portal have been initiated by MRSAC with the inputs and the guidance of planning department, Government of Maharashtra.

The aim of creation of integrated information system was multi-fold

- To create a central repository of GIS assets with MRSAC as Nodal Centre.
- To develop graphic rich integrated information system/geo-portal with sector specific requirements.
- To Create Web services of various databases so that these could be used by various departments for consuming these Web services in their own applications.
- To minimize the physical supply of databases to the users and create an easy access through the Web to avoid data duplication and inconsistency at various departments.

To create inventory of government assets using innovative GIS technologies through centralised Web server. Most of the geospatial databases are generated by MRSAC using remote sensing & GIS Technologies and some of the databases are created using the inputs provided by various Govt. Departments. These entire databases are collated together on the central server so as to avoid redundancy and in-consistency of geo-spatial databases is another key issue which is looked after by MRSAC from time to time.

Conclusion

A portal is a “Single Window” source for all information on a specific domain or an array of domain. The usefulness of designing the portal is to bring and provide the open access for huge information and to locate service resources available from many sources to many users in a fruitful way for intended results. These portals provide open source information , which are very much useful for library and information science professional for dissemination of precise information in the field of geography and allied subjects at national and state level. Further, portals are very important for faculty members to interact with the expert in the domain of their subject and to acquaint the student with the latest development and the progress in the field. The other benefits of these Geoportals is in its impressive display and designing style, it is for the aspirants or prospective

candidates who wants to make their career in web designing such as websites, webpages and others, should visit the Geoportal of national level which will definitely useful for designing the websites specially for libraries as well as for future library portals.

References

Department of Science and Technology, Government of India, National Spatial Data Infrastructure .Retrieved 24 May 2020 from https://nsdiindia.gov.in

Eid,N.(2008,December 15). What is a web portal and what types of portals. Retrieved 24 May 2020 from http://community.telecentre.org.

ICAR. (2015,June 10)KRISHI-Homepage .Retrieved http://krishi.icar.gov.in/

Web portal. Retrieved 25 May 2020 from http://en.wikipedia.org/wiki/portal

Geo portal Retrieved 25 May 2020 from http://en.wikipedia.org/wiki/Geoportal

MRSAC Geo-portal. Maharashtra, Retrieved 24/May 2020
mrsac.maharashtra.government.in

