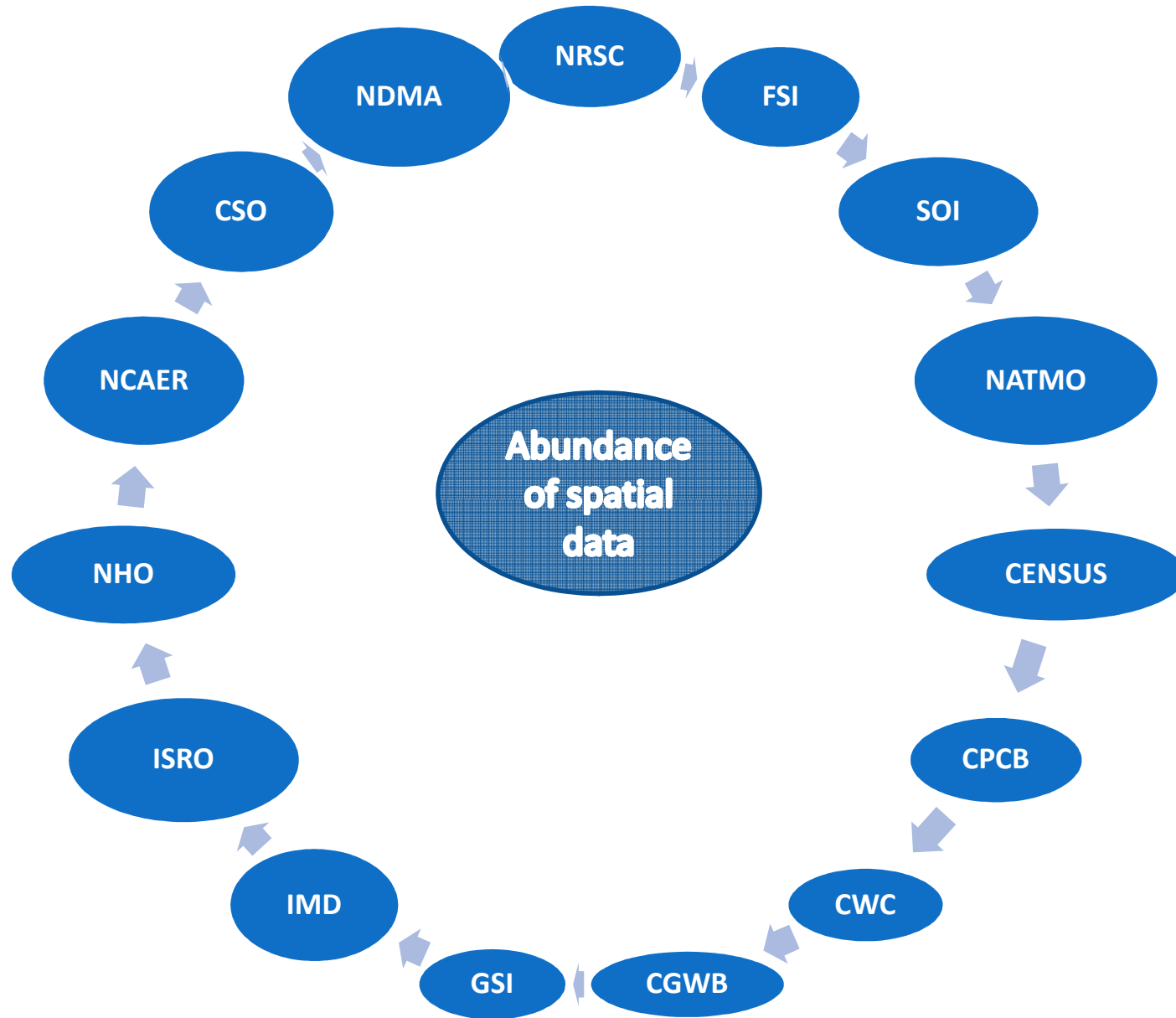
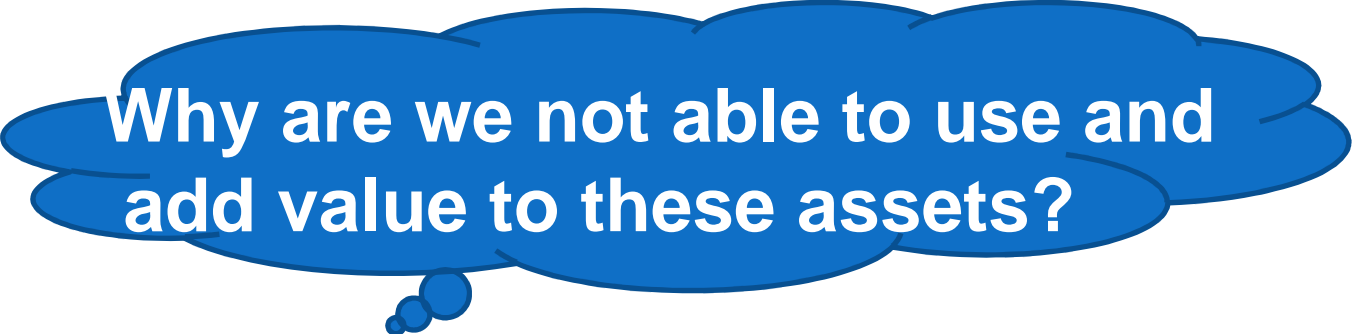




# Maps to Apps

**Maj Gen Dr R Siva Kumar**  
**CEO NSDI**  
**Department of Science & Technology**





**Why are we not able to use and add value to these assets?**

- **Lack of Metadata**
- **Data in analogue form**
- **Reluctance to share the data**
- **Not interoperable**
- **Policy**

# **National Spatial Data Infrastructure (NSDI)**

- **An information infrastructure**
- **Collection of Technologies, Policies and Institutional arrangements**
- **For acquiring, processing, storing, distributing and facilitating generation of standardised, interoperable value added spatial data**

# NSDI Vision and objective

## Vision

- **National infrastructure for the availability of and access to organized spatial data**
- **Use of the infrastructure at Community, Local, State, Regional and National levels for sustainable development**

## Objective

- **Develop and maintain standard digital collection of data**
- **Develop common solutions for Discovery, Access and Use of spatial data in response to the needs of diverse user groups**
- **Increase the awareness & understanding of the vision, concepts and benefits of the NSDI**

# **NSDI Evolution**

**Nov 2000 - DST constituted task force**

- **Working Groups established by Task Force finalized Metadata Standards, Data Exchange Standards**

**May 2006 – Cabinet approved NSDI**

**June 2006 – Government resolution notified**

- **National Spatial Data Committee (NSDC)**
- **Executive Committee (EC)**

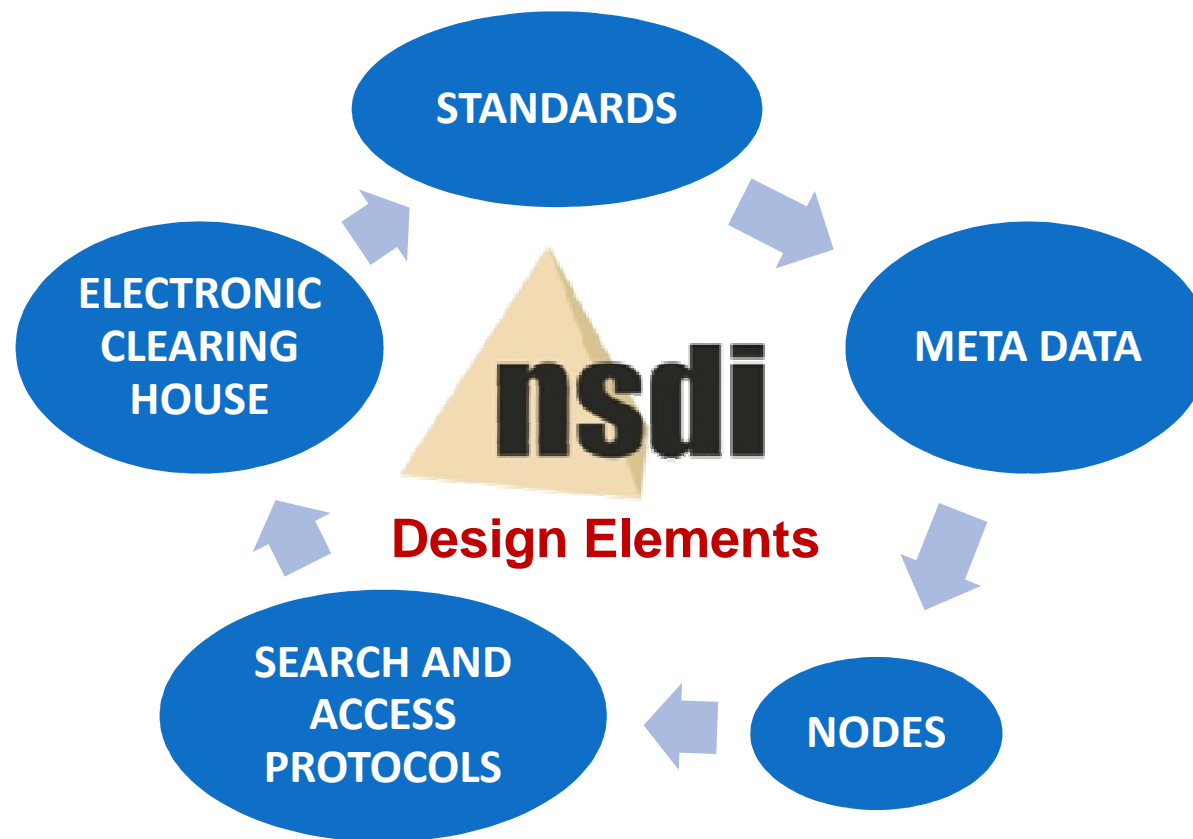
**December 2008 – India Geoportal**

**December 2009 – Karnataka Geoportal**

**December 2010 - Prakasam District Geoportal**

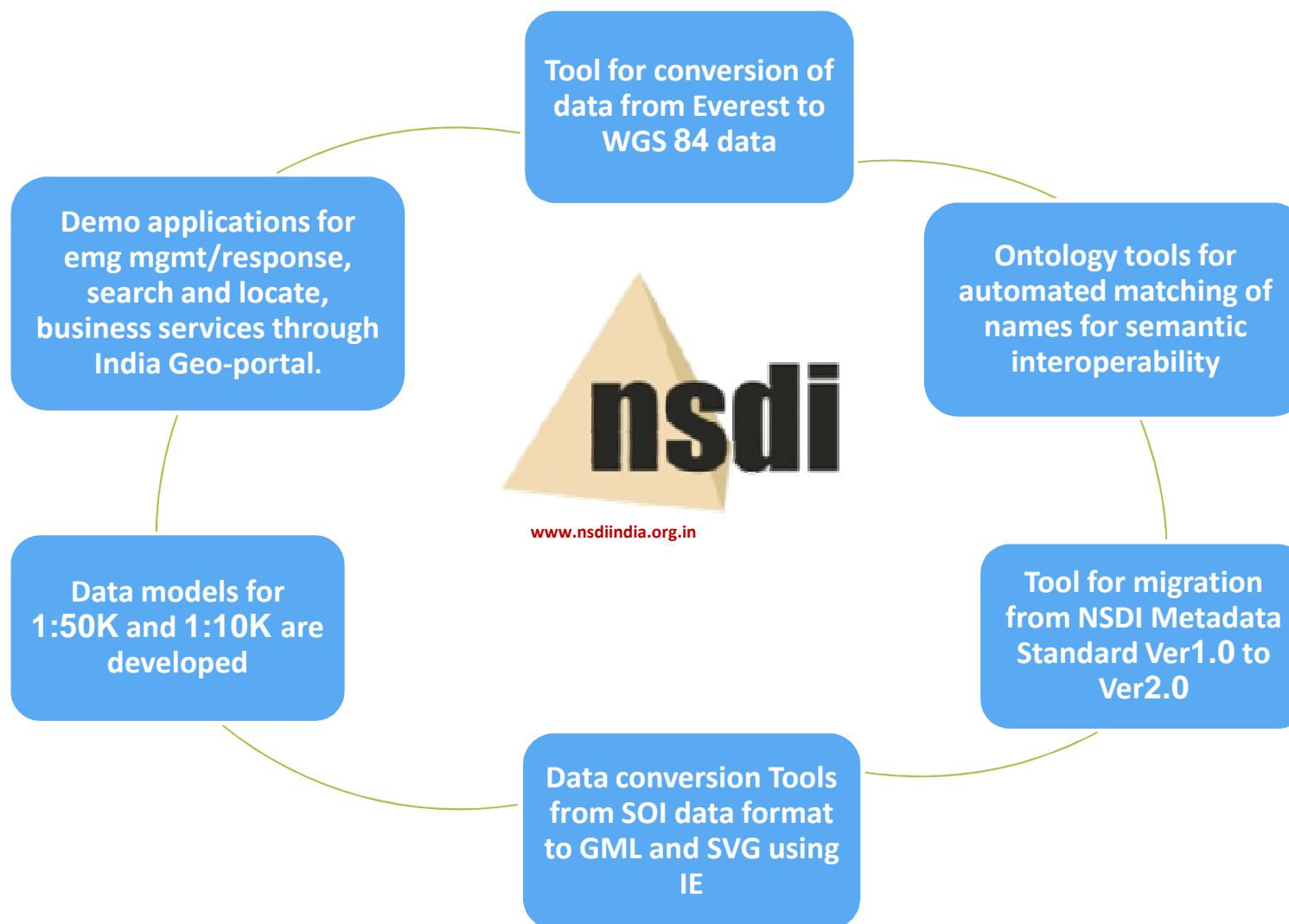
**October 2011 - Pilot Map on 1:10,000, WMS**

**October 2012 - National Data Portal [data.gov.in](http://data.gov.in)**





# Tools/Technologies developed





# Capacity Building

- An advance lab in GI, Science & Eng - IIT Bombay – to produce 50 M.Tech and 20 PhDs in five years
- A Centre of GI Science and Tech. at Kerala University, Trivandrum and a centre of excellence at University of Kumaon, Almora & Geospatial Chairs in IISC and UoH, Andhra, Marathwada, Calcutta and Anna Universities. Another Centre at IIT Hyderabad in 2013
- A Task Force on mapping on 1:10K scale under the Chairmanship of Secretary, MoES.
- Annual events since 2001, for exchange of ideas on SDI amongst the professionals, Govt. Org, Research and Academic communities.
- NSDI- 12 being held on 20-21 Jan 2012 at JNU Delhi by Census. The earlier events were organized by DST, DOS, SOI, GSI, FSI, IMD, NIC, AGI and Karnataka State.
- Supported a number of workshops, training programs including Indo-US and Indo-Canada workshops

# Linkages with International Organizations

- Active relationship with OGC, GSDI, UN agencies and other SDI's in various countries
- India is on the board of OGC, UN-PCGIAP, UN GGIM and founder member of GSDI.
- Collaborative Research Projects with
  - Natural Resources, Canada
  - International Centre for Geo-hazards, Norway
  - National Institute of Land and Infrastructure Management
  - & Public Work Research Institute of Japan

# **Major Achievement of NSDI**

- **Developing consensus amongst 17 mapping agencies to come together and commit for sharing geospatial data**

# Standards

- Data Exchange Standard
- Metadata Standard – Two versions
- Data Content Standard - Soils
  
- OGC
- ISO TC 211
- BIS Mirror Committee for ISO in India

# Policies

- **National Map Policy 2005**
- **Remote Sensing Data Policy 2011**
- **Amendments to National Map Policy 2005**
- **National Data Sharing Accessibility Policy (NDSAP) 2012**
- **Aerial Photography Policy 2011**
- **Evolving National Geospatial Policy**
- **National Geospatial Data Authority creation**
- **Encouragement Indian Geospatial Industry**

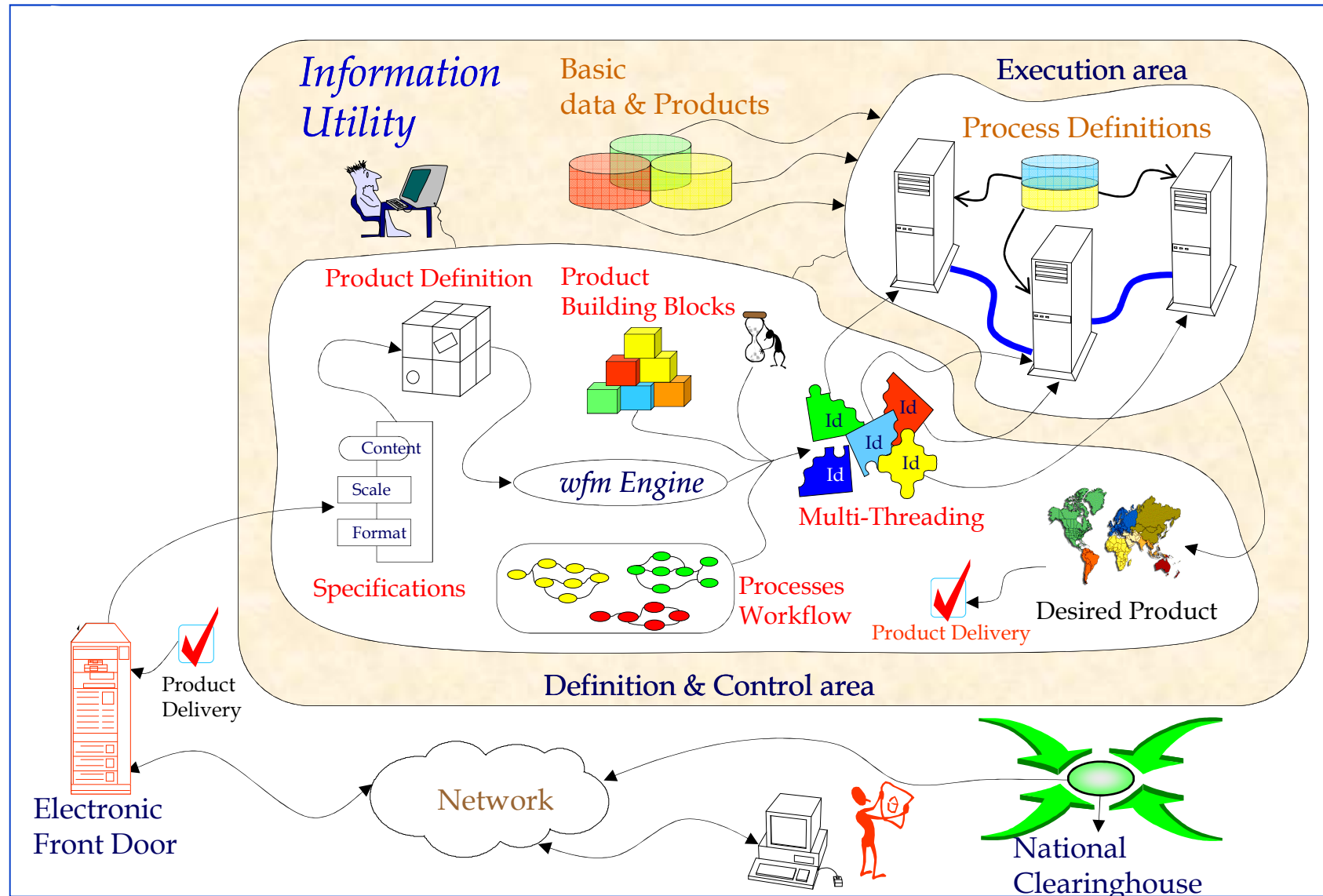
# Research Initiatives

- Bio Geo Data Bases
- Marine GIS
- 3D GIS
- Sensor Web Enablement
- ALTM
- Geo ICT – Digital Heritage – Hampi
- Hyperspectral Remote Sensing
- Village Geospatial Information Systems
- Geospatial Data for Disaster Management – Urban Flooding, Landslides
- Tools Development – Data conversion, Ontology
- 8 Expert Committees and one steering committee

# NSDI Vision 2020

- A global leader in geo-spatial Technology based services
- Solutions for real life problems from India geo-portal on cell phone/web
- Facilitate / enable a national LIS/GIS
- Capacity building, bringing the Spatial Literacy at the School/ ITI/ community Level
- Inculcate temperament of SD as strategic capital and public good
- Development of matrix to measure progress towards realizing NSDI vision
- Facilitate SDI at State, District, and Village levels
- Creation of metadata for all the existing geospatial data and a prerequisite of any new geospatial data collection

# Example of use of process models





# **Web Map Service From SOI OSM Maps**



NSDI-11 Annual Event to be held at Bengaluru from 21st Dec to 23rd Dec 2011 has been postponed.



#### » Welcome to NSDI

India is fast moving into being an information and knowledge society - especially with the emphasis on Information Technology and 'transparent' e-governance. [Know More..](#)

#### » NSDI VISION

1. National Infrastructure for the availability and access to organised spatial data.
2. Use of the infrastructure at Community, Local, State, Regional and National Levels for sustained economic growth.

Username

Password

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[Nodal Officers' Contact L](#)

[NSDI Aspiration docume](#)

[6th NSDI-EC meeting](#)

[A Report on Agriculture](#)

[Can you Innovate NSDI ?](#)

[NSDI A Passionate Saga](#)

[Open Source GIS](#)

[OGC Delhi Pilot Links](#)

[Kendriya Vidyalya Locati](#)

((Metadata Search ))



**NDRE**  
(National Disaster  
Response Force)  
(Click below for  
NDRE ZONES across  
India)

**Prakasam District  
Geoportal**  
(Best Viewed in Mozilla  
Firefox browser)

**Know  
Tsunami**

**NSDI GUIDE**

NSDI Client - Mozilla Firefox

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NSDI Client

nsdiindia.gov.in/nsdi-portal/index.jsp

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Yahoo! Search

Nodal | About | Help | Logout

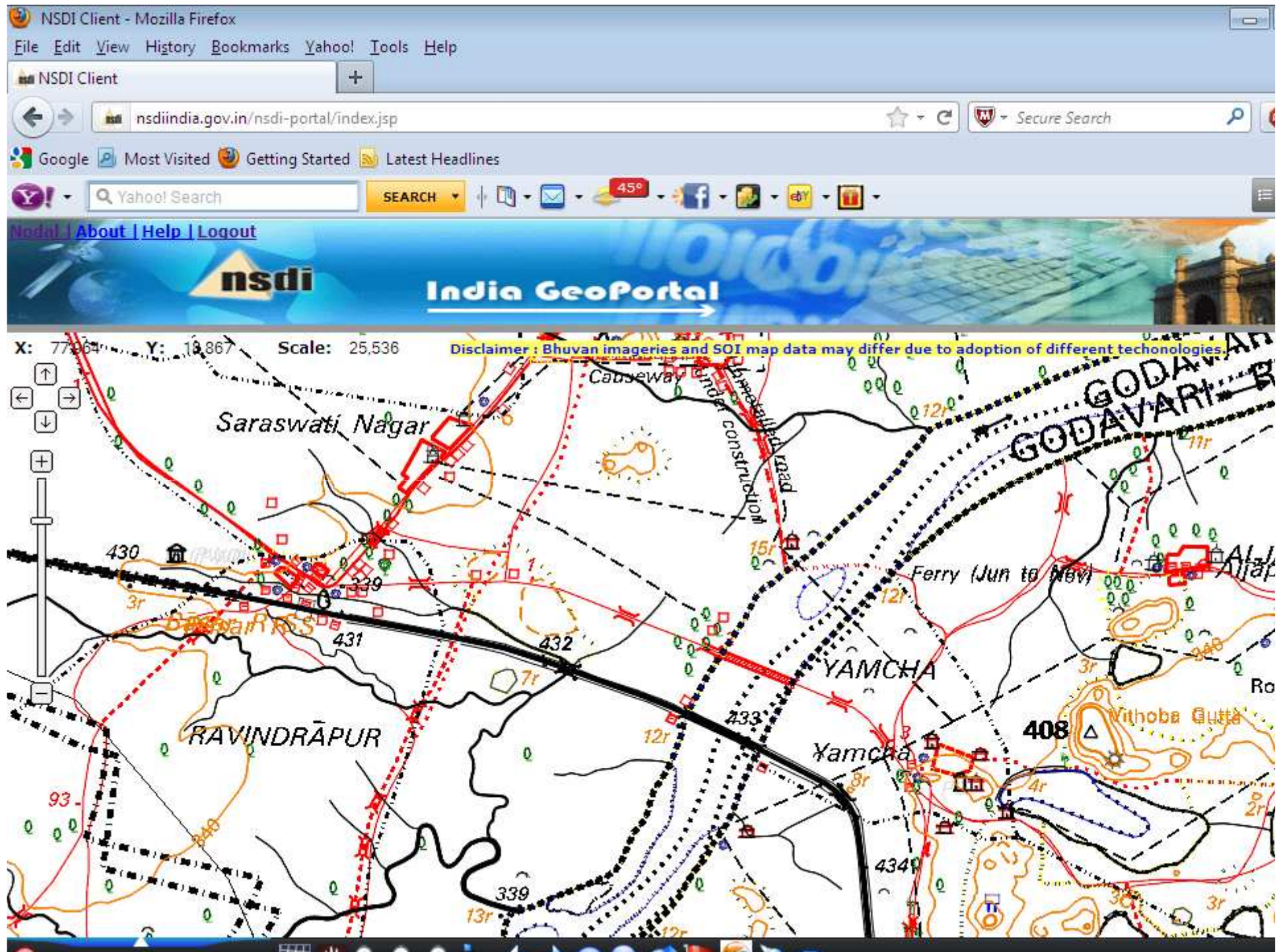
**nsdi** India GeoPortal

X: 93.158 Y: 11.333 Scale: 29,913,495 Disclaimer : Bhuvan imageries and SOI map data may differ due to adoption of different technologies.

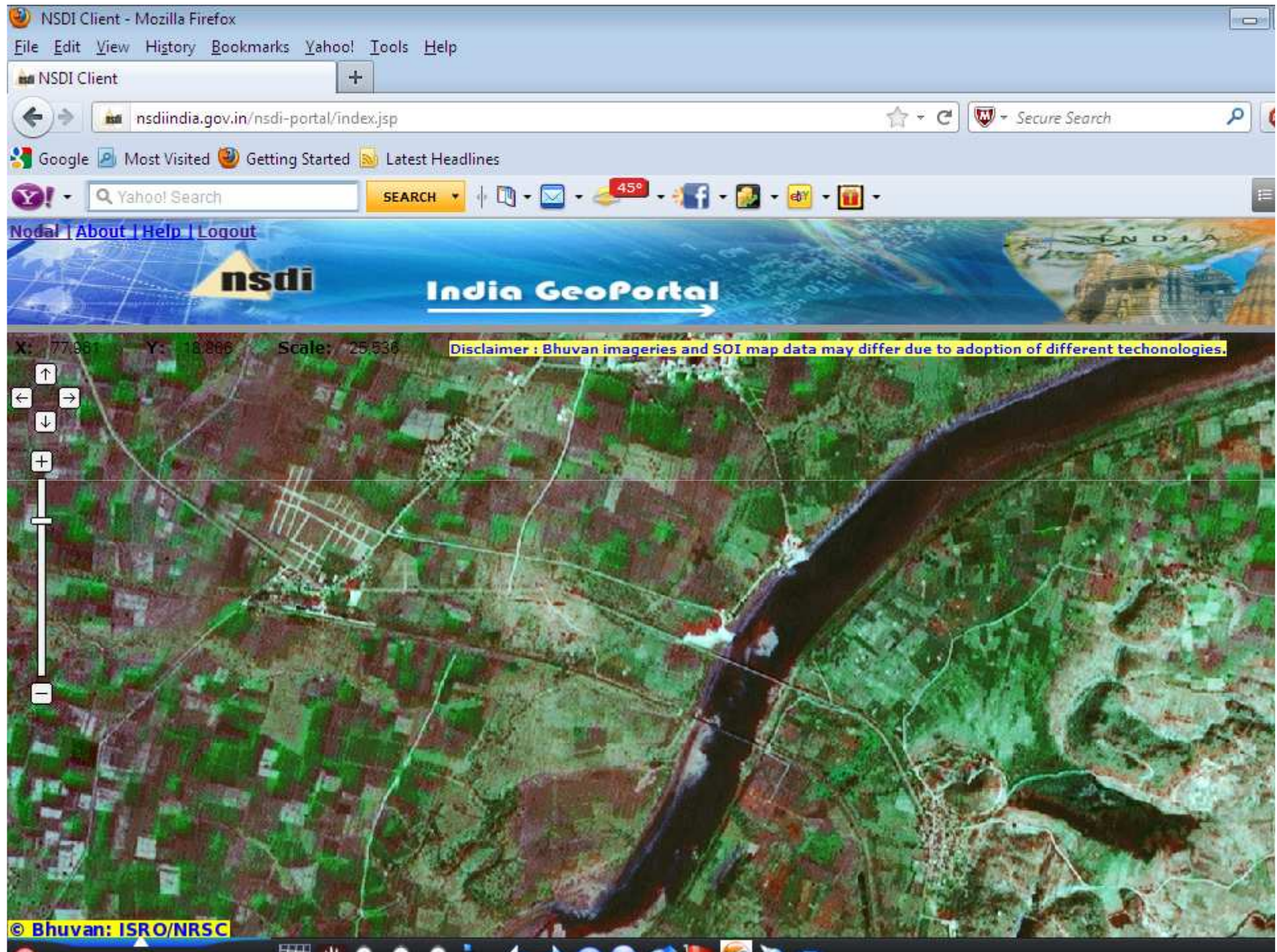
Map of India showing a cluster of orange and blue dots in the southern region.

Navigation controls: Up, Down, Left, Right arrows, Zoom in (+), Zoom out (-), and a vertical slider.

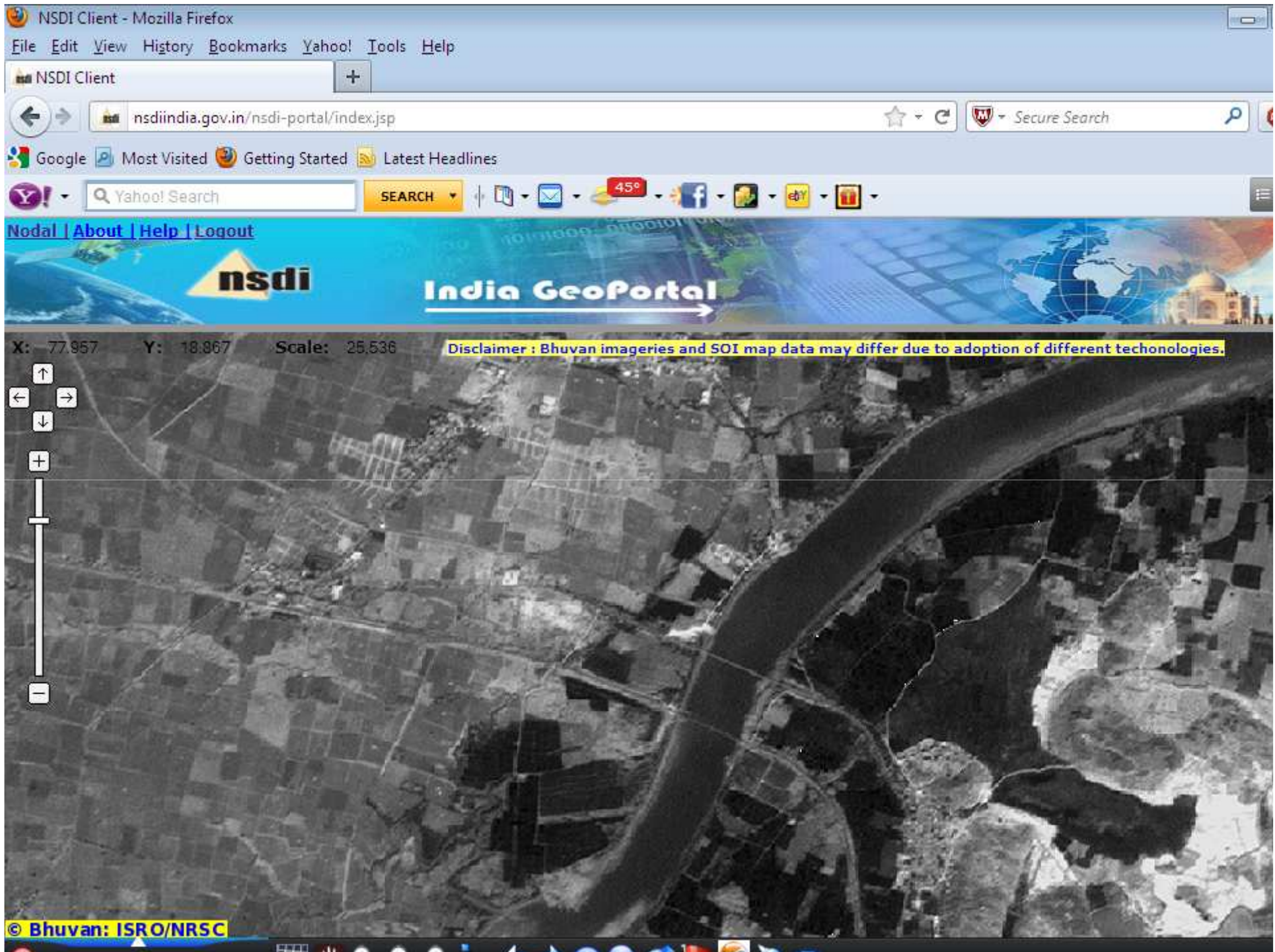




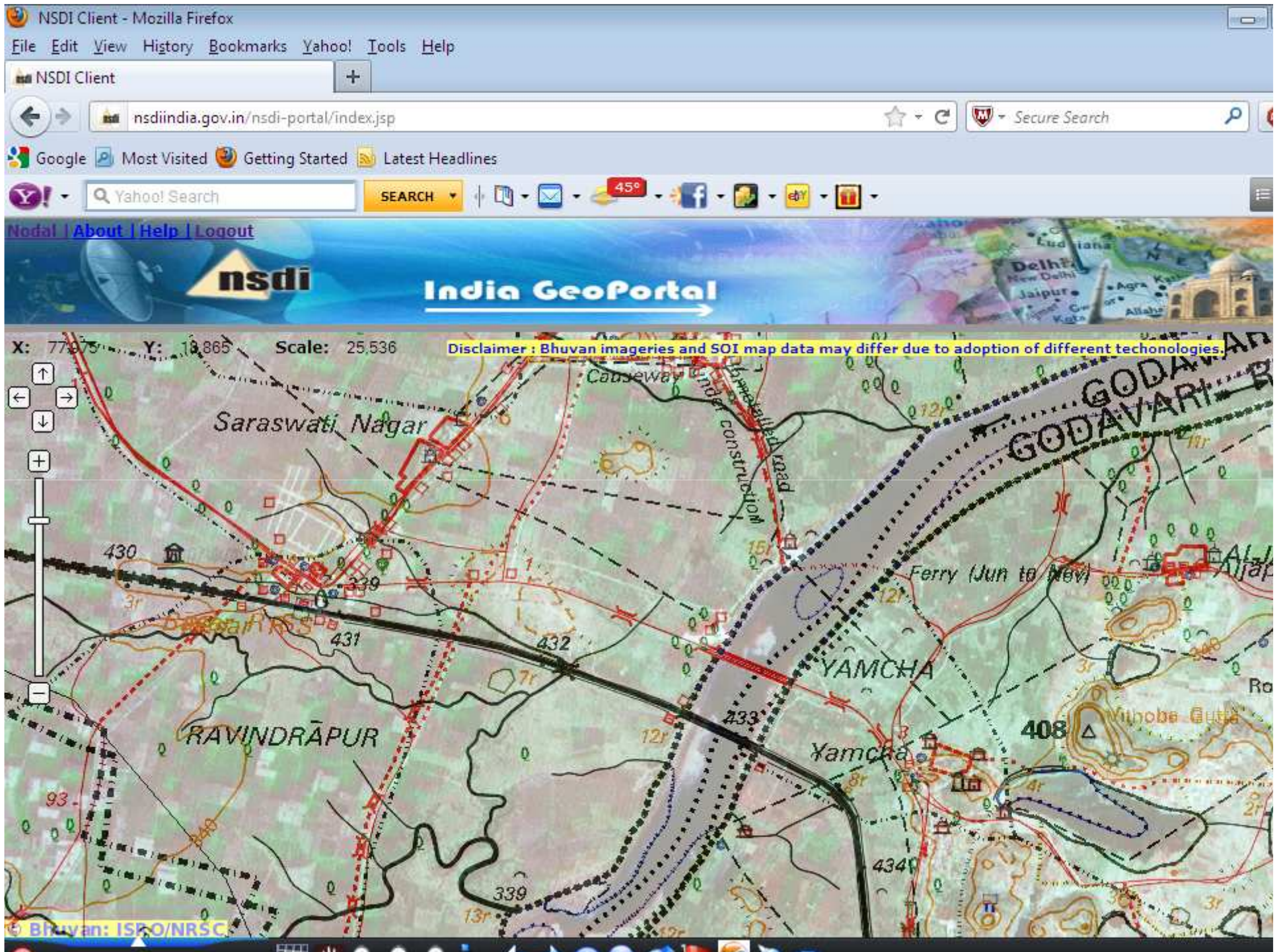














NSDI Client - Mozilla Firefox

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NSDI Client

nsdiindia.gov.in/nsdi-portal/index.jsp

Google Most Visited Getting Started Latest Headlines

Yahoo! Search

SEARCH

45°

India GeoPortal

X: 77.967 Y: 18.866 Scale: 25,536

Disclaimer : Bhuvan imageries and SOI map data may differ due to adoption of different technologies.

Saraswati Nagar

CAUSEWAY

RAVINDRĀPUR

YAMCHA

GODAVARI

Ferry (Jun to Nov)

430

431

432

433

434

408

339

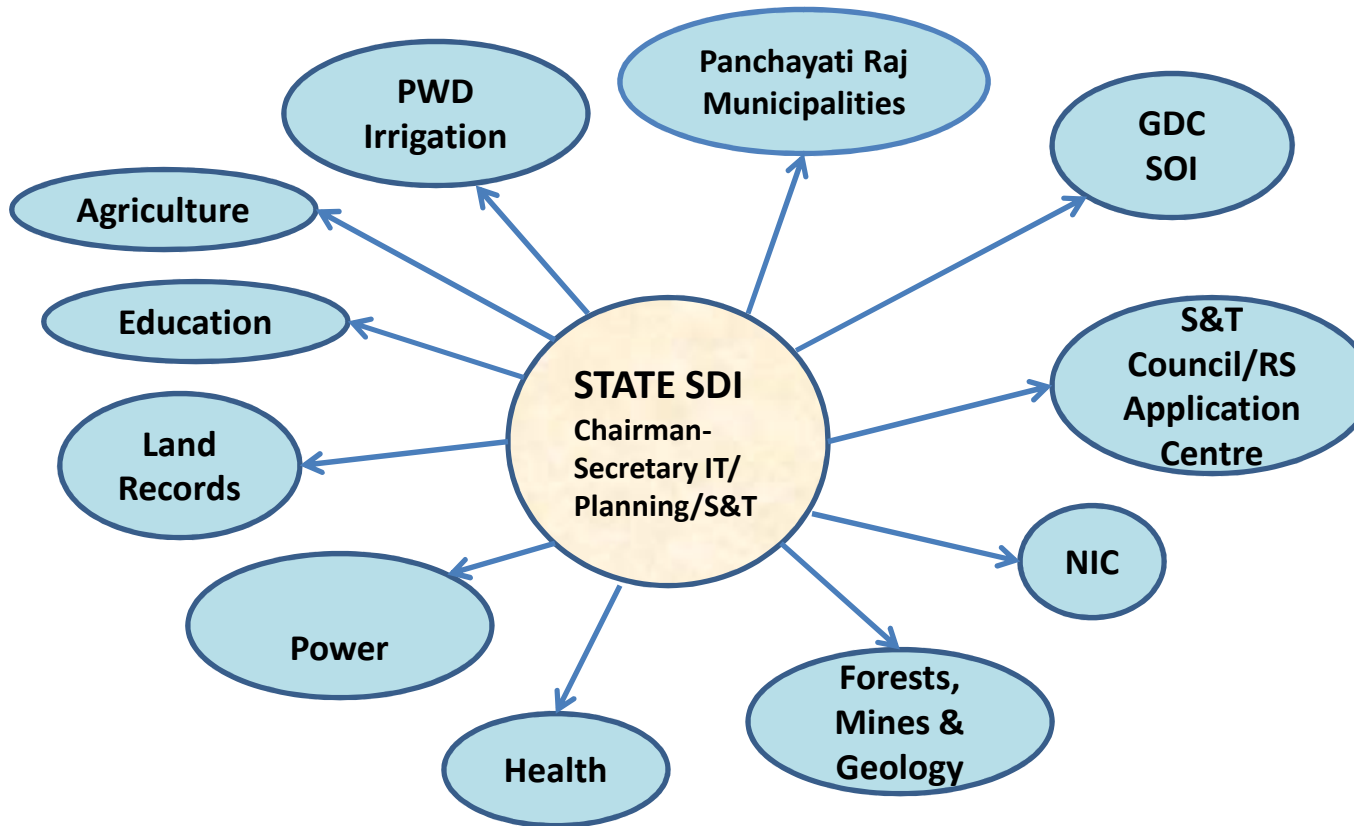
93

© Bhuvan: ISRO/NRSC

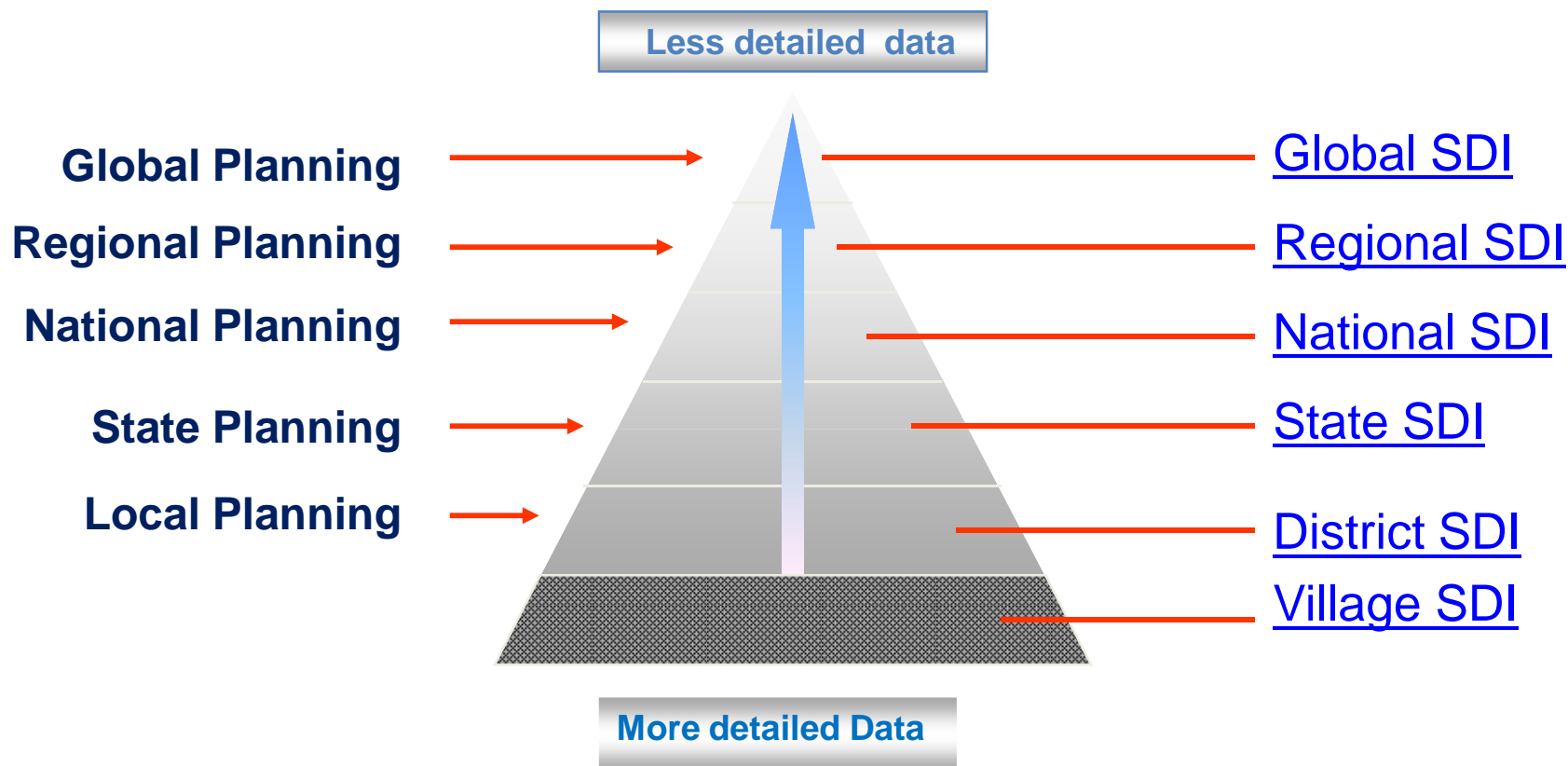


# **STATES SPATIAL DATA INFRASTRUCTURE (SSSI)**

# State SDI Nodal agencies



# Hierarchy of SDI



**The success in the development of any type of SDIs, heavily depends to on individuals/institutions realizing the need to co-operate with each other.**

GLOBAL SPATIAL DATA INFRASTRUCTURE ASSOCIATION | GSDI - Mozilla Firefox

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http://www.gsdi.org/

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Prakasam District Geo Portal - Village In... Welcome to NSDI GeoPortal GLOBAL SPATIAL DATA INFRAS...



# GSDI

Global Spatial Data  
Infrastructure Association



## GSDI

- Association Information
- Join GSDI Association
- Newsletters
- News List Archive
- Discussion Lists
- Electronic Gateways
- Upcoming Conferences
- Past GSDI Conferences
- Publications
- Committees
- Projects & Programs
- Members & Sponsors
- Founding Members
- Geospatial Society
- GKNetwork
- Contacts

## GLOBAL SPATIAL DATA INFRASTRUCTURE ASSOCIATION

The GSDI Association is an inclusive organization of organizations, agencies, firms, and individuals from around the world. The purpose of the organization is to promote international cooperation and collaboration in support of local, national and international spatial data infrastructure developments that will allow nations to better address social, economic, and environmental issues of pressing importance.

### GSDI News

**SDI Regional Newsletters for April 2010**  
**Posted 04/02/2010:** The SDI Regional Newsletters for April 2010 are now posted on the GSDI home page at <http://www.gsdi.org> You may also download them directly as follows: SDI-Latin America and Caribbean Newsletter <http://p...>  
[Read More...](#)

**Submission Deadlines for GSDI 12 Approaching**  
**Posted 03/10/2010:** GSDI 12 World Conference Singapore 19-22 October

### President's Corner

**Posted 2010/04/01**  
**XXIV FIG International Congress 2010**

### Upcoming Events

**GSDI 12 Global Conference**  
**10/19/2010**  
**Singapore**  
[...more](#)

[Click here for additional listings](#)

### Recent Newsletter

**GSDI Newsletter**

### Regional Newsletters

[SDI-Africa Newsletter](#)  
[SDI-Latin America &](#)

Done

Start | NSDI-Feb10.ppt [Co... | NSDI03032010.ppt [ | GLOBAL SPATIAL D... | nero SEARCH | 11:04 AM

Statute

Member Nations

Working Group

Meeting Calendar

Community



Permanent Committee  
on GIS Infrastructure  
for Asia & the Pacific



SEARCH

MEMBER NATIONS

- ▶ Committee List
- ▶ Member Country
- ▶ Geodetic Information



AFGHANIS

AZERBAIJ

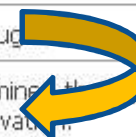
CAMBODIA

FRENCH PO

INDONESIA

INDIA

Horizontal Datum	Indian
Ellipsoid	Everest Semi major axis (a) = 6377301.243m Flattening (1/f) = 300.80
Vertical Datum	Mean sea level at nine tide gaug
Geoid	Geoidal undulations are determining the gravity and astronomical observat
Permanent Geodetic Facilities	
Tectonic Movement Problems	Yes. Particularly in Himalayan region,





Operational since December 2008. Metadata, product catalogues and topographical data of resolution 1:1m are available now through India Geo-portal in 24x7 mode

The screenshot shows the NSDI GeoPortal website in a web browser. The browser's address bar displays the URL <http://www.nsdiindia.gov.in/nsdi/nsdiportal/index.jsp>. The website's header features the NSDI logo and the text "India GeoPortal" with a large arrow pointing right. Navigation links for Home, Sitemap, FAQ, and Contact Us are located in the top right. A left sidebar contains a menu with links to NSDI, Downloads, Organization, RTI, Photo Gallery, GSDI/State SDIs, and NSDI Annual Events. Below this is a "Metadata Search" section. The main content area includes a "Welcome to NSDI" message, a "NSDI VISION" section with two points, and a "NSDI Agencies/Partners:" section displaying logos for various organizations such as DST, Sol, ISRO, CGWB, nrsc, MoES, GSI, FSI, MoEF, Col, IMD, NBSSLUP, NATMO, NRDMs, NIC, Planning Commission, CWC, and DoR. A "NSDI Portal Login" box on the right contains fields for Username and Password, a Login button, and links for New User and Forgot Password. A "News & Events" section lists links to NSDI-9 Pune Communique, NSDI EC Minutes, 4th Nodal Officers meet minutes, OGC Delhi Pilot Links, and Global Mapping Newsletter. A "NEW!" banner at the bottom right highlights "NSDI A Passionate Saga" and "System Requirements for". The browser's taskbar at the bottom shows the Start button and several open files, including "NSDI-Feb10.ppt" and "NSDI03032010.ppt". The system clock indicates 11:06 AM.

File Edit View History Bookmarks Tools Help

[http://www.nsdiindia.gov.in/nsdi/nsdiportal/index.jsp](#) Google

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Prakasam District Geo Portal - Village In... Welcome to NSDI GeoPortal

**nsdi** India GeoPortal

Home Sitemap FAQ Contact Us

**NSDI**  
Downloads  
Organization  
RTI  
Photo Gallery  
GSDI/State SDIs  
NSDI Annual Events

**Metadata Search**

**» Welcome to NSDI**

India is fast moving into being an information and knowledge society - especially with the emphasis on Information Technology and 'transparent' e-governance. [Know More..](#)

**» NSDI VISION**

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2. Use of the infrastructure at Community, Local, State, Regional and National Levels for sustained economic growth.

**» NSDI Agencies/Partners:**

DST Sol ISRO CGWB nrsc MoES

GSI FSI MoEF Col IMD NBSSLUP

NATMO NRDMs NIC Planning Commission CWC DoR

**NSDI Portal Login**

**» Username:**

**» Password:**

Login

New User? Forgot Password?

**News & Events**

[NSDI-9 Pune Communique](#)  
[NSDI EC Minutes](#)  
[4th Nodal Officers meet minutes](#)  
[OGC Delhi Pilot Links](#)  
[Global Mapping Newsletter](#)

**NEW!**

**NSDI A Passionate Saga**  
System Requirements for

Done

Start NSDI-Feb10.ppt [Co... NSDI03032010.ppt [... Welcome to NSDI G...

nero SEARCH 11:06 AM





## Delhi State Spatial Data Infrastructure - Components

- » [GPR survey for Utility \(underground\) Mapping](#)
- » [Application for Common Wealth Games](#)
- » [Applications for 26 Delhi State - Line Departments](#)
- » [Property Survey of Entire Delhi](#)

## » Login

» Username

» Password

Log In

[Forgot Password !!](#) | [Change Password](#)

## !!! 2D & 3D Mapping !!!



3D city model would be generated using the

## !!! GPS Network Monumentation !!!



Monumentation of all GPS points will be done

## !!! Land Information System !!!



Land Information System to comprise the

## !!! Metadata Search Engine



Search Engine that supports user

**Unveiled in December 2009. Geo-spatial Data for all Districts of Karnatka are accessible through this Geo-portal in a seamless interoperable manner**

Dec 14, 2009 6:18:41 pm

Home | Contact Us | Sitemap



Karnataka GeoPortal ಕರ್ನಾಟಕ ಜಿಯೋಪೋರ್ಟಲ್

Joint programme of Department of Science and Technology, Government of India and Government of Karnataka.

Karnataka GeoPortal !

>>> Main Menu

▶ Karnataka GeoPortal

Karnataka GeoPortal Background

▶ KSCST

▶ NRDMs

▶ Services

▶ Other Links

▶ Photo Gallery

▶ FAQs

▶ RTI

Welcome to Karnataka GeoPortal

KSSDI is an Internet based Geo Spatial Data Directory for the state that allow the users of the system to share and explore the information related to political and administrative boundaries, state geography, demography, agro and socio economy, resources, infrastructure facilities with attributes. In the future the site can also be extended to cater to sale and purchase of data online.

Spatial datasets generated, maintained and provided by various concerned Departments of the State Government, academia, private or civil society organizations of Karnataka are proposed to be made accessible through the project data clearinghouse mechanism.

The Portal will essentially be used for the following objectives:

- ▶ Bringing together geo spatial knowledge and information under a common platform, which till date has existed as a disparate system and unknown to quite a wider section of the society, institutions, scientific community and government departments.
- ▶ Gateway for various data generating agencies to share the information across various government departments, NGOs, academies, industries and scientific organisation.
- ▶ Provides spatial data dictionary and map directory for the state
- ▶ Analysing the needs of various government programmes
- ▶ Facilitate decision support system and helps in local level planning
- ▶ Eventually can be used for the data sale and purchase, which can be part of the state revenue generation

Portal Login

Username :

Password :

Login

Sign Up | Forgot password?

News and Events

» Karnataka GeoPortal(Beta) Version has been released.

» Karnataka GeoPortal's Photo Gallery has been updated.

DOWNLOAD

KSCST Brochure

Best Viewed in Firefox 3.5 and IE 7: 1024 X 768 Resolution



Prakasam District Geo Portal - Village Information System - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://prakasamdtgeoportal.com/

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Welcome to NSDI GeoPortal

Prakasam District Geo Portal - Vil...

# PRAKASAM DISTRICT GEO PORTAL

Supported by: NRDMS/DST, Government of India

Developed By:  
**Dr. M. Anji Reddy**  
Professor & Director  
JNTUH, Kukatpally, Hyderabad

Home About this project District Profile Socio-economic Data Thematic Maps Help/FAQs Contact us

## How the VIS works?

Use the menu system to view Socio-economic or Thematic Information. Choosing an option will display the map of Prakasam where mandals are displayed. Clicking on a mandal displays the mandal map showing the village boundaries. Selecting a village displays the requested information from the socio-economic or thematic option selected.

## Brief on Prakasam

Ongole (Prakasam)  
District came into  
existence on 02-02-1970



**Beta version launched in March 2010. Village level data collected and aggregated at Mandal level for all 56 Mandals of this District in AP.**

Start Microsoft PowerPoi... Prakasam District ...

10:25 AM



Village Information System - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://www.villageinformationsystem.org/

Welcome to NSDI GeoPortal

Village Information System

Home About us Latest Maps Meteorological Data Contact VIS

**Village Information System (VIS)** is a Geographical Information System (GIS) based application, which provides detailed information pertaining to demography, infrastructure and natural resources for every village, district and state. It displays geo-referenced maps of virtually any political boundary in India – from village to a district, a state or the entire country with data of about 175 parameters from census of 1991 and 2001.

Users can create, query and print their own maps through interactive maps. They can also download readymade thematic maps. The system is currently designed for the state of Uttarakhand. PSI is developing it for the entire country.

**Rollover a State name to see basic information.**

Click on **Uttarakhand, Haryana, Himachal Pradesh and Bihar** and follow links to pages where detailed information can be seen and maps can be generated and downloaded.

**Village Query Tool**

—Select State—  
—Select District—  
—Select Map Type—  
Reset


Download Button

For accessing interactive GIS m please run ACGM utility from downl button

An integrated Village Geospatial Information Systems (VGIS) was developed and established in 20 villages in Andhra Pradesh. The kiosks established contain High Resolution Spatial Data pertaining to the particular village, Rural Automatic Weather Station and provide scenarios in local language for situations such as cyclones

Start Microsoft PowerPoi... Village Information... 10:23 AM



Bhuvan



Bhuvan

Beta

INDIAN EARTH OBSERVATION VISUALISATION



Welcome

Draw

Measure

Photos

Navigation Map

Shadow

News

Snapshot

Land Services

Weather Services

Ocean Services

Disaster Services

Images

GPS

Find places

Enter search term

(e.g. Delhi or 28 36 0.0 , 77 13 12.0 / 28.67, 77.22)

+ Add Layer

+ My Layers

BHUVAN Layers

Base Layers

☒ Towns

Administrative Layers

☐ Country

☐ State

☐ District

☐ Taluk

☐ None

Village

☐ Andhra Pradesh

☐ Assam

☐ Chattisgarh

☐ Gujarat

☐ Haryana


☐ Jharkhand


☐ Karnataka


☐ kerala

☐ Madhya Pradesh

☐ Maharastra







Indian Remote Sensing Satellites

Indian Space Research Organisation

Department of Space, Government of India

start

Inbox - Mic...

Indian Eart...

Downloads

NSDC2

Final Agen...

Microsoft P...

Bhuvan

5:17 PM





DATASETS

APPS

METRICS

COMMUNITIES

WW DATA SITES

SEARCH

## Workshop for Data Controllers



## DATASETS

35 Datasets

1 Departments participating

## APPS

3 Apps

0 Mobile Apps

2 Departments participating

## ANNOUNCEMENTS

- ▶ Glimpses of the Workshop Con...
- for Data Controllers by NIC
- ▶ 65 Data Controllers Nominated

## RECENT SUGGESTIONS

Please provide database of all current political leaders at all levels of government - Local, State and Central along with their responsibility in the...

Data set required mapping for district block

SUGGEST  
A DATASET OR ENDORSE  
from Received Suggestions  
Ideas

## USEFUL LINKS

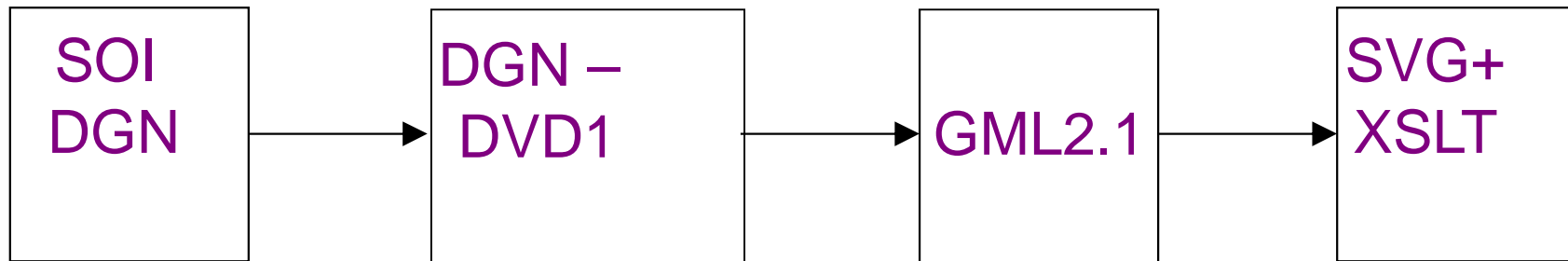
- ▶ NDSAP Notification
- ▶ Contribute Datasets/Apps
- ▶ NDSAP Implementation Guidelines

## COMMUNITY

Come explore, discuss, meet others in the same...  
Develop Apps, create visualization on datasets...  
community. We welcome you to the Community...  
and share your passion and views with others.

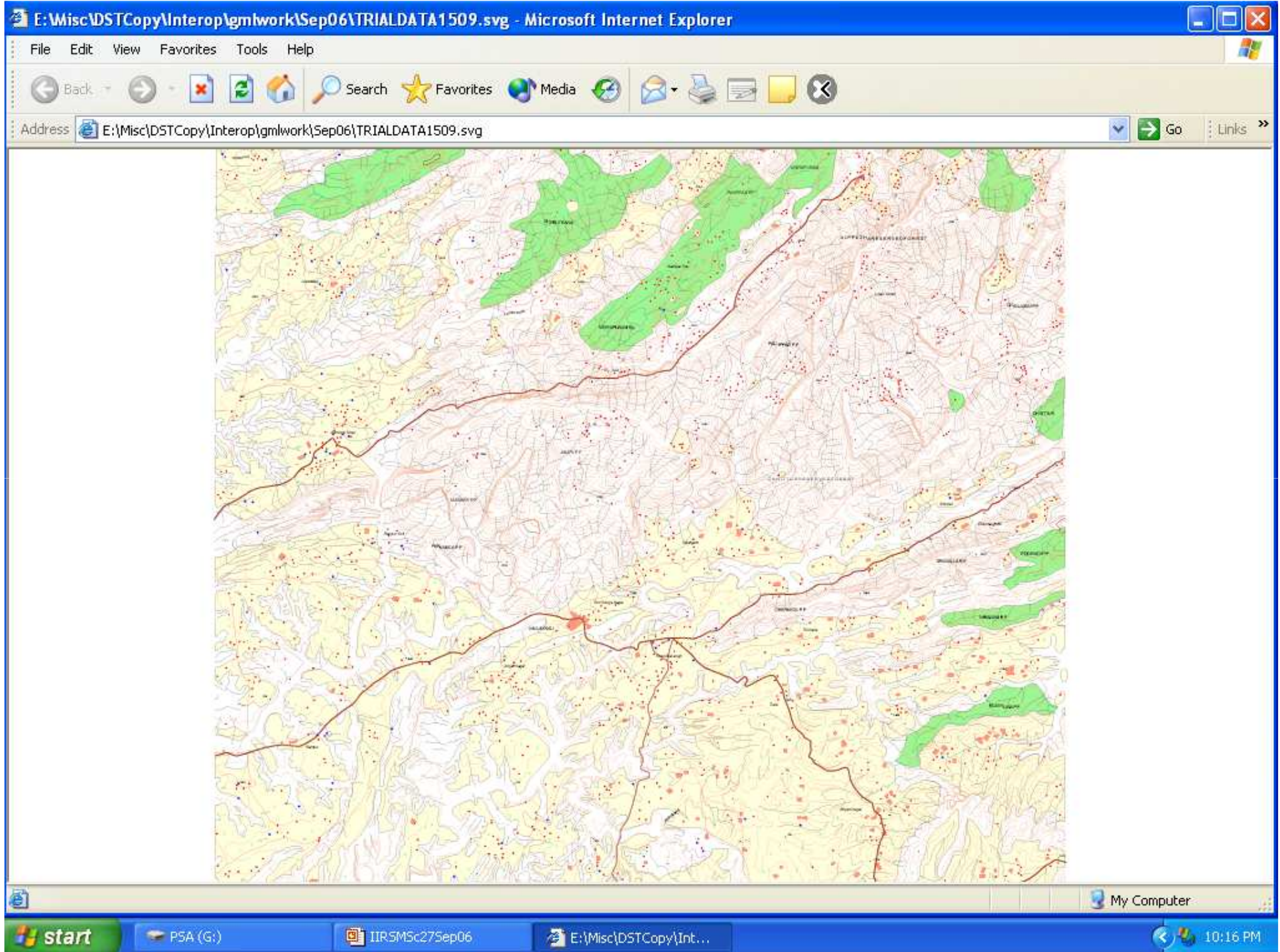
# **Data Visualisation without Software**

# Geography Markup Language (GML)

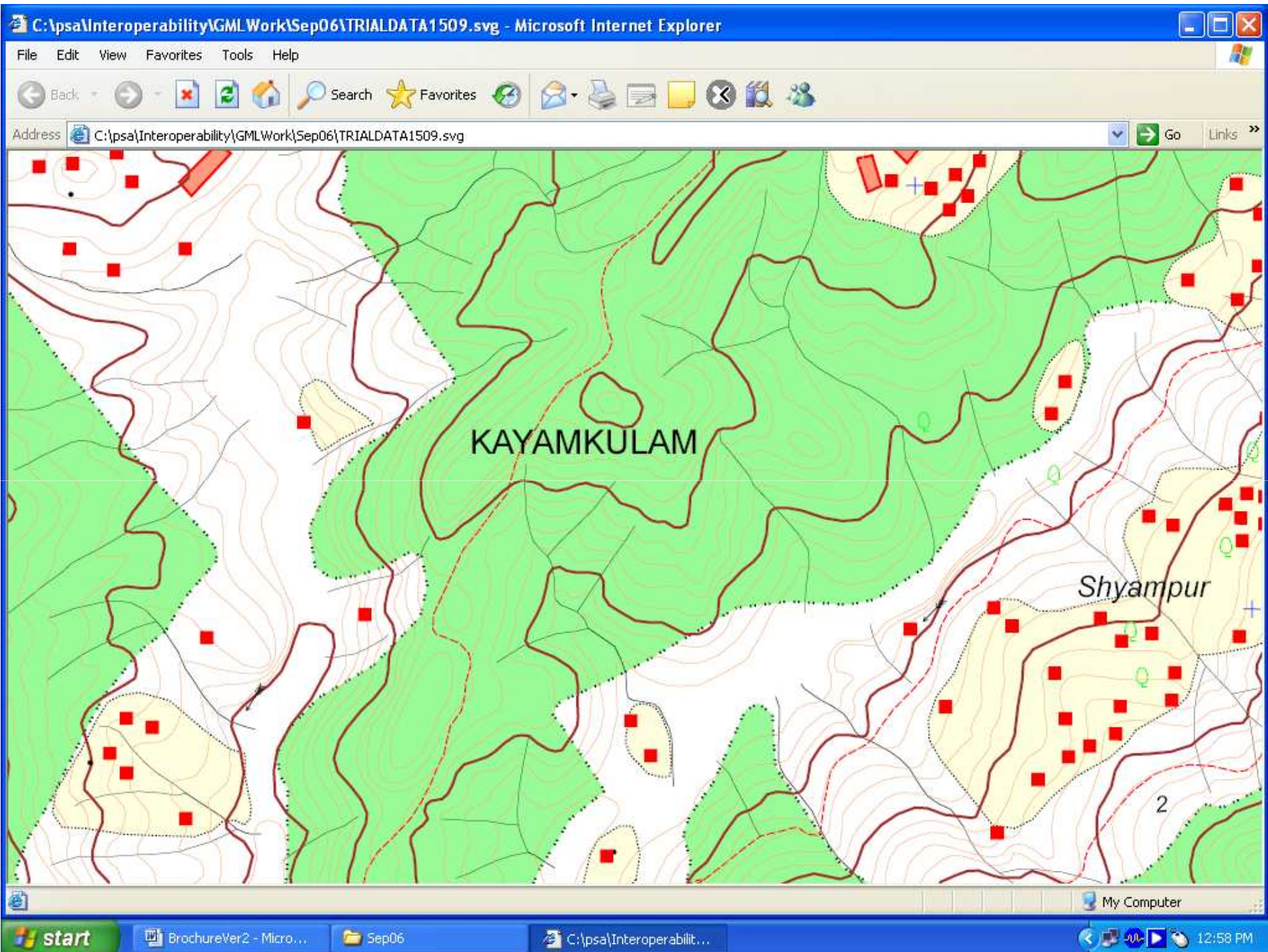


**Visualisation and simple  
query through Internet  
Explorer**











# Visualization



# గ్రామీణ సమాచార కేంద్రం VILLAGE INFORMATION SYSTEM



## పరిచయం

ప్రారంభించుటకు దేశ పటం లో ఆంధ్ర ప్రదేశ్ పై తా

గ్రామ సమాచార వ్యవస్థ కు

- ఈ సమాచార పద్ధతి ఉపయోగించుట ద్వారా మీరు ప్రత్యేకంగా మీ గ్రామము యొక్క , మీ చుట్టు ప్రక్కల గ్రామాల యొక్క సహజ సంపదలు వ్యవస్థాపక సౌకర్యాలు, సామాజిక, ఆర్థిక పరిస్థితి, ఇంకా వేరే ఉపయోగ కరమైన సమాచారం తెలుసుకొని ఎన్నో విధాలుగా సహాయం పొందగలరు
- ఈ పద్ధతిని ఉపయోగించుటలో మీకు సహాయం అవసరమైతే దయచేసి స్వయంసేవకులను సంప్రదించండి
- నైన్సు మరియు టెక్నాలజీ విభాగం (భారత ప్రభుత్వము) వారు ఈ వ్యవస్థ ను అందరికీ ఉపయోగకరంగా మార్చుటకు ప్రయత్నించుచున్నారు. దయచేసి ఈ వ్యవస్థకు సంబంధించిన మీ అమూల్యమైన అభిప్రాయాలు వ్యాఖ్యానాలను సూచనలను స్వయంసేవకులకు అందజేయండి.



## DISSEMINATION OF VILLAGE INFORMATION TO COMMON MAN THROUGH TOUCH SCREEN KIOSKS IN LOCAL LANGUAGE



# ESTABLISHING A NATIONAL GIS



# GIS Is Very Valuable to Government

*Extensive Capability of GIS in Many Integrated Applications*

Open Government



Accountability

Citizen Reporting



Democracy

Employment

Pollution

Social Security

Conservation

Earth Science

Land Records

Congestion

Defense/Security

Water

Agriculture

Business Efficiency

Disaster Management

Land Use

Climate Change

Biodiversity

Human Health

Education

Energy

Population

Development

Infrastructure

Urban Planning

Logistics

National Security

Environment

Natural Resources

Energy/Power

Field Data Collection



## NATIONAL GIS – IN SUMMARY, ....

- ENHANCE AND ADOPT GIS FOR :
  - STRENGTHEN/AUGMENT SCIENTIFIC GOVERNANCE/DECISION-MAKING:
    - “FILLING” PRESENT GAPS OF GIS-READY DATA AND GIS DSS APPLICATIONS AVAILABILITY
    - REMOVING HIGH-LEVEL OF EFFORTS-DUPLICATION
    - MAKING A COMMON, NATIONAL “GIS BASE” FOR ONE AND ALL
  - BUILDING AN ADVANCED GI KNOWLEDGE-BASE IN INDIA:
    - INCREASE SCIENCE AND RESEARCH IN GIS
    - ENHANCE GIS EDUCATION AT UNIVERSITY LEVEL – BETTER/MORE GIS PROFESSIONALS
    - INCULCATE “SPATIAL CULTURE” IN SCHOOL EDUCATION
  - POSITION INDIA IN FORE-FRONT OF GIS TECHNOLOGY IN THE WORLD:
    - GLOBAL ISSUES WHERE GIS WILL PLAY A DOMINANT ROLE WILL DOMINATE
    - INTERNATIONAL, DEFENCE, SECURITY AND MULTI-LATERAL FRAMEWORKS

## NATIONAL GIS – IN SUMMARY, ....

- ESTABLISH A NATIONAL GIS AGENCY – INGO: RESPONSIBLE FOR GIS ACTIVITIES IN INDIA
  - AGILE, FLEXIBLE AND AUTONOMOUS
- SOME OTHER IMPORTANT ASPECTS:
  - WITH INGO ESTABLISHED, SOME EXISTING NATIONAL COMMITTEES - NSDI OF DST (2005) AND NNRMS OF DOS (1981+) COULD BE HARMONISED WITH NATIONAL GIS STRUCTURE
  - THE “MODERNITY” AND “PERFORMANCE-DRIVE” OF INGO IS CRUCIAL – MAKE IT “BEST OF BOTH WORLDS” AND EMPOWER TO PERFORM AND BE ACCOUNTABLE
  - HIGHLY DEPENDENCY ON POSITIONING MERITORIOUS AND PERFORMING PEOPLE FOR INGO

## EST. DEMAND FOR GEOSPATIAL KNOWLEDGE-FORCE.....

<b>Geospatial Activity</b>	<b>Survey/ Mapping/ Trained skill-workforce</b>	<b>Trained workforce for Survey/Mappin, Geo-database and GIS Apps</b>	<b>Educated professionals for Survey/Mappin, Geo-database and GIS Apps</b>	<b>Trained users development who would be users</b>	<b>School-level awareness</b>
Present Availability Estimate	~15000-20,000	~6000-10000	~800-1200	~25000-50000	NA
Estimated Additional need by end of 2015	~20000 @4000-5000 per year	~15000 @~2000-3000 per year	~5000-8000 @ ~1000-1500 per year	~500,000 @ ~50-100K per year	Estimated in phased manner thru NCERT/State School Boards
<b>Knowledge/ Skill-interventions required</b>	<b>Industrial Training in specific Geospatial Operations (2-4 weeks)</b>	<b>In-depth specialised training in operations/ managing (3-12 months)</b>	<b>4-Year Graduate/ 2-Post-Graduate/PhD in Geospatial Technology thru University</b>	<b>User Training on specific GIS apps operations (1-2 week orientation)</b>	<b>Basic chapters in 9-12 science curriculum; Additional GIS Kit knowledge exercises</b>
Min Qual for knowledge/ skill interventions	10 <sup>th</sup> OR 12 <sup>th</sup> Grade school	Graduate in Science/Arts Or Diploma in Comp Apps	12 <sup>th</sup> Grade leading to BTech/ BTech leading to MTech/PhD	Basically a Geospatial technology user in Central/State governments	School at 6-8 AND 9-12 Grade
Knowledge Credits	Professional Certificate	PG Diploma	BTech OR MTech OR PhD	Applied Certificates	Proficiency Certificate



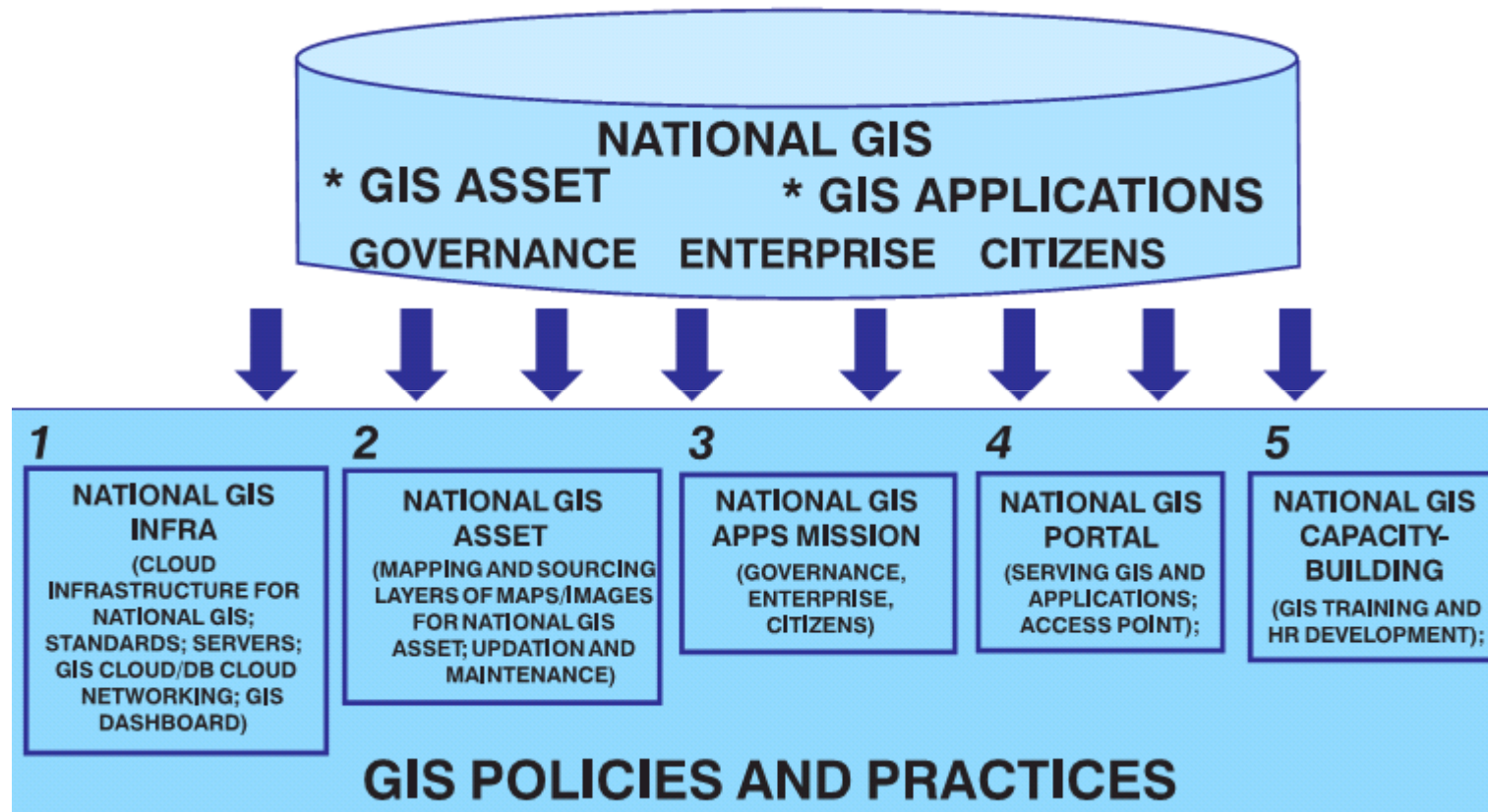


[www.nsdi.gov.in](http://www.nsdi.gov.in)

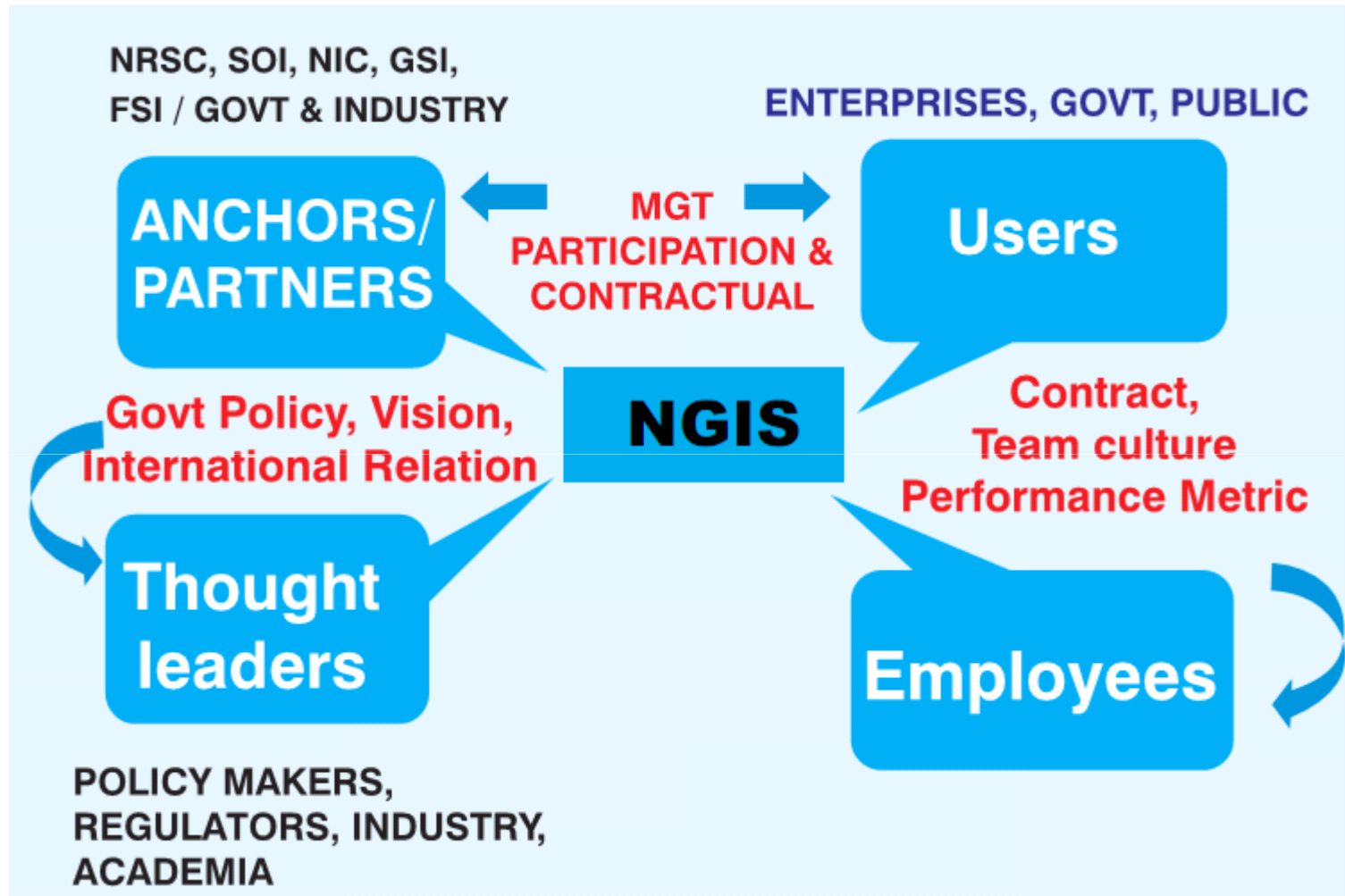
# NGIS – An Information Regime



# NGIS – Components

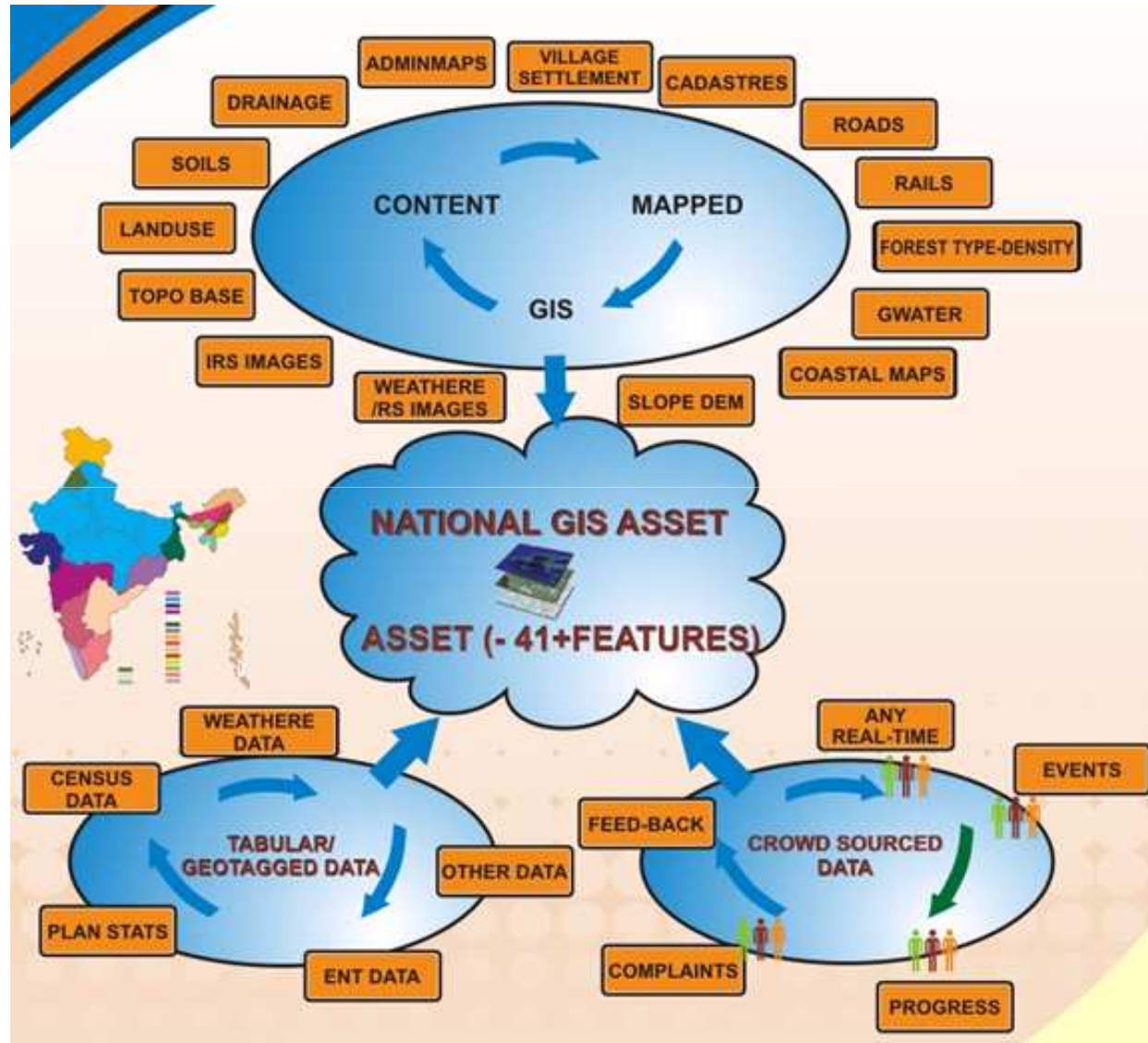


# NGIS - Constituents

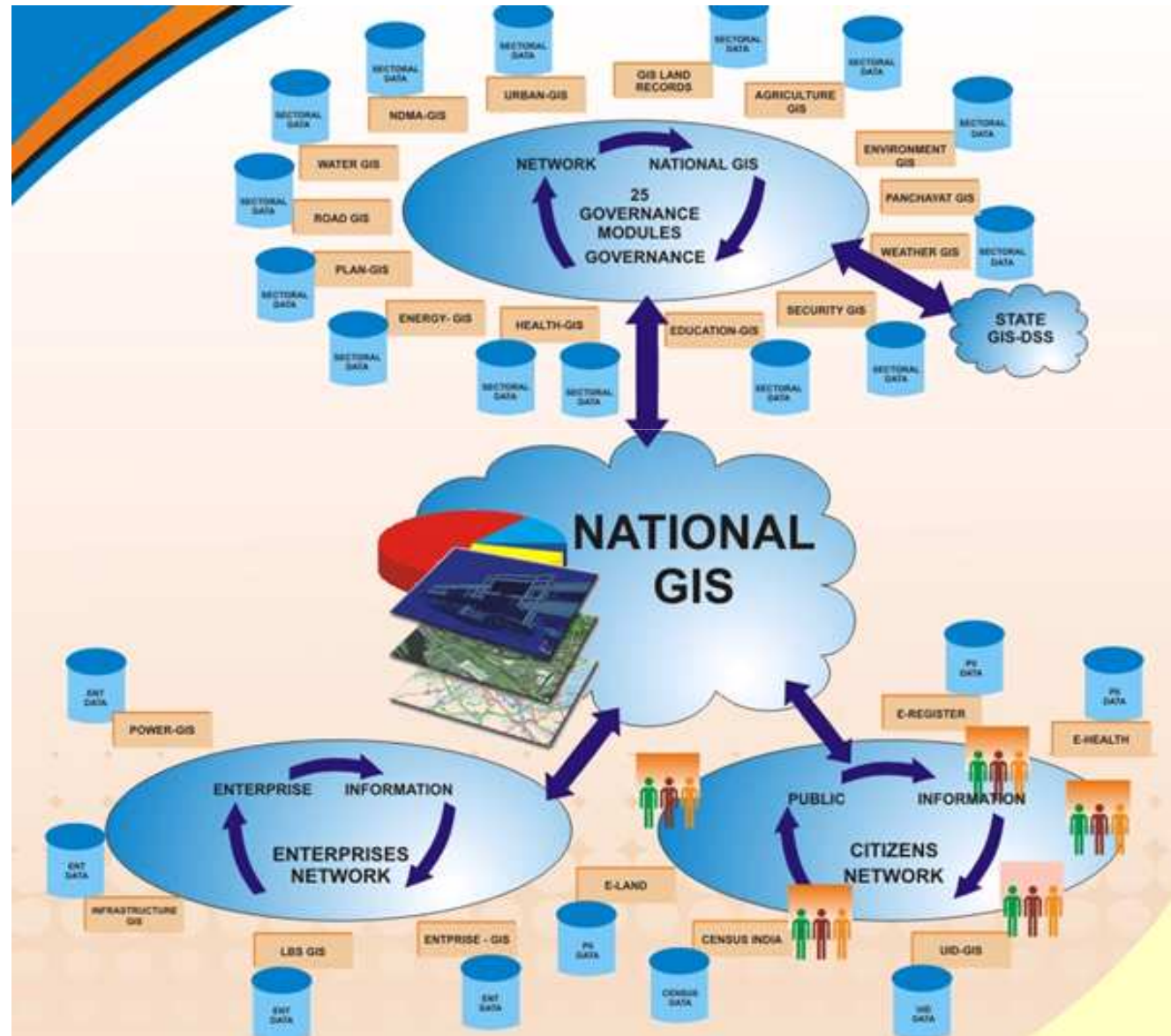




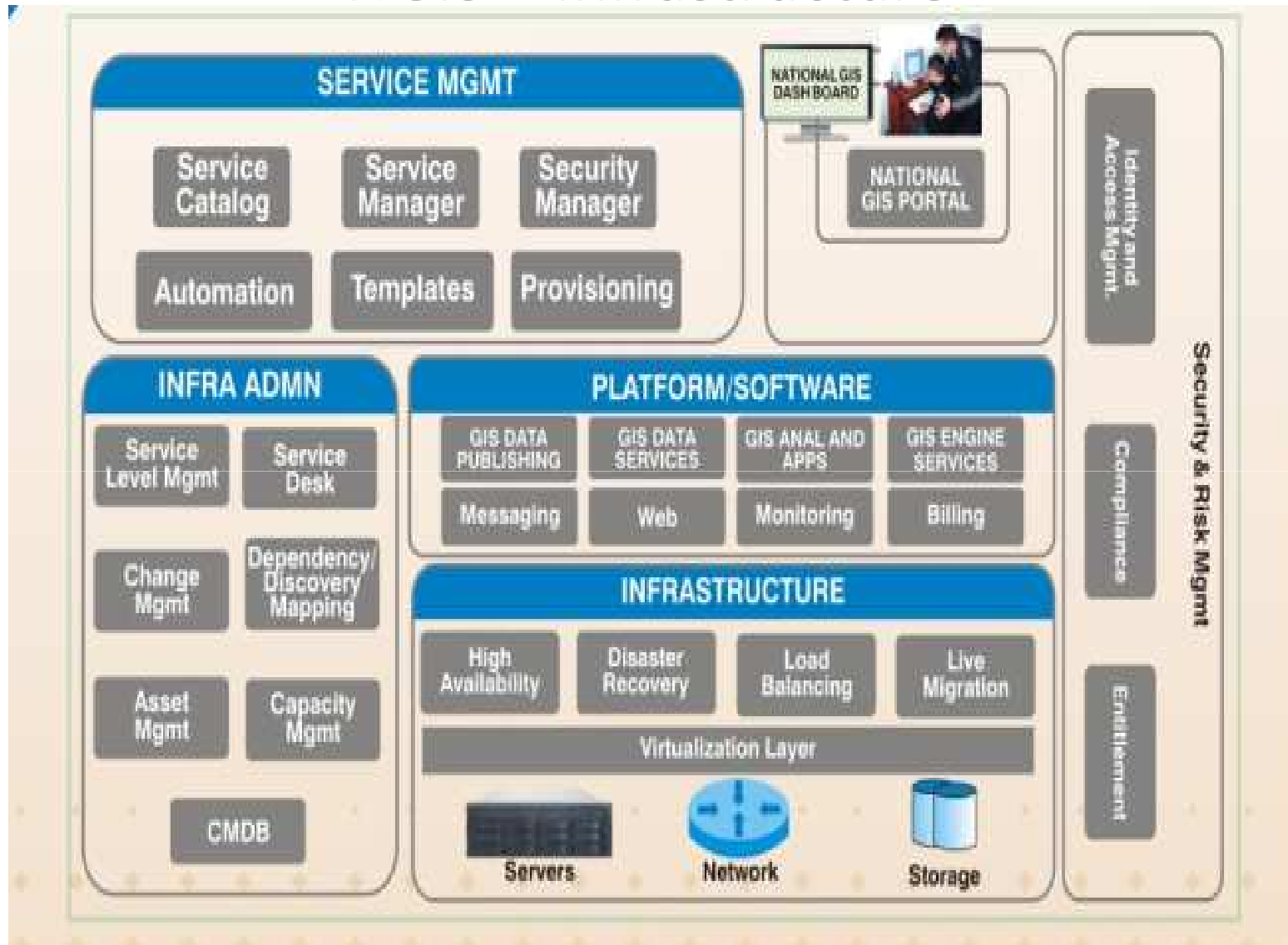
# NGIS – National Data Registry



# NGIS – Product Development Application Mission



# NGIS – Infrastructure





# NGIS – Organizational Structure

