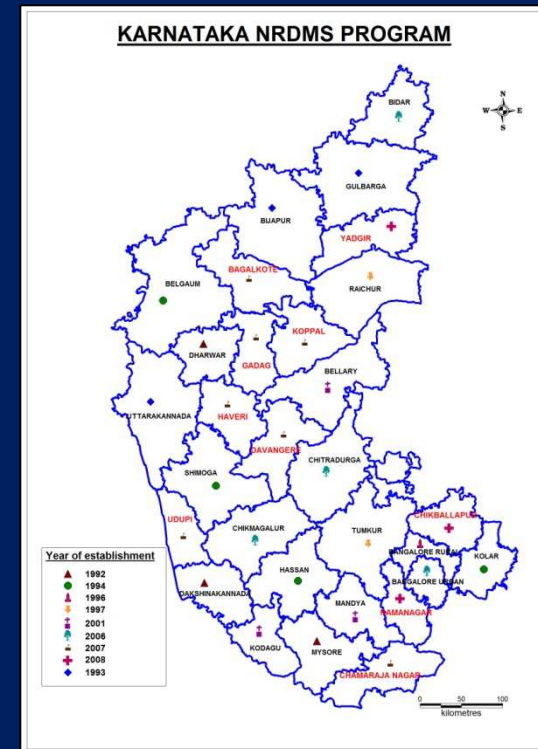
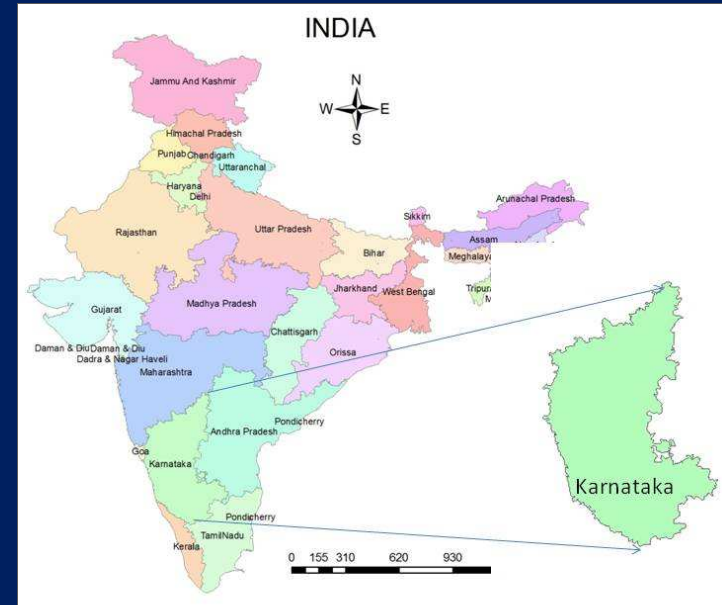


# **KARNATAKA STATE SDI – AN OVERVIEW**

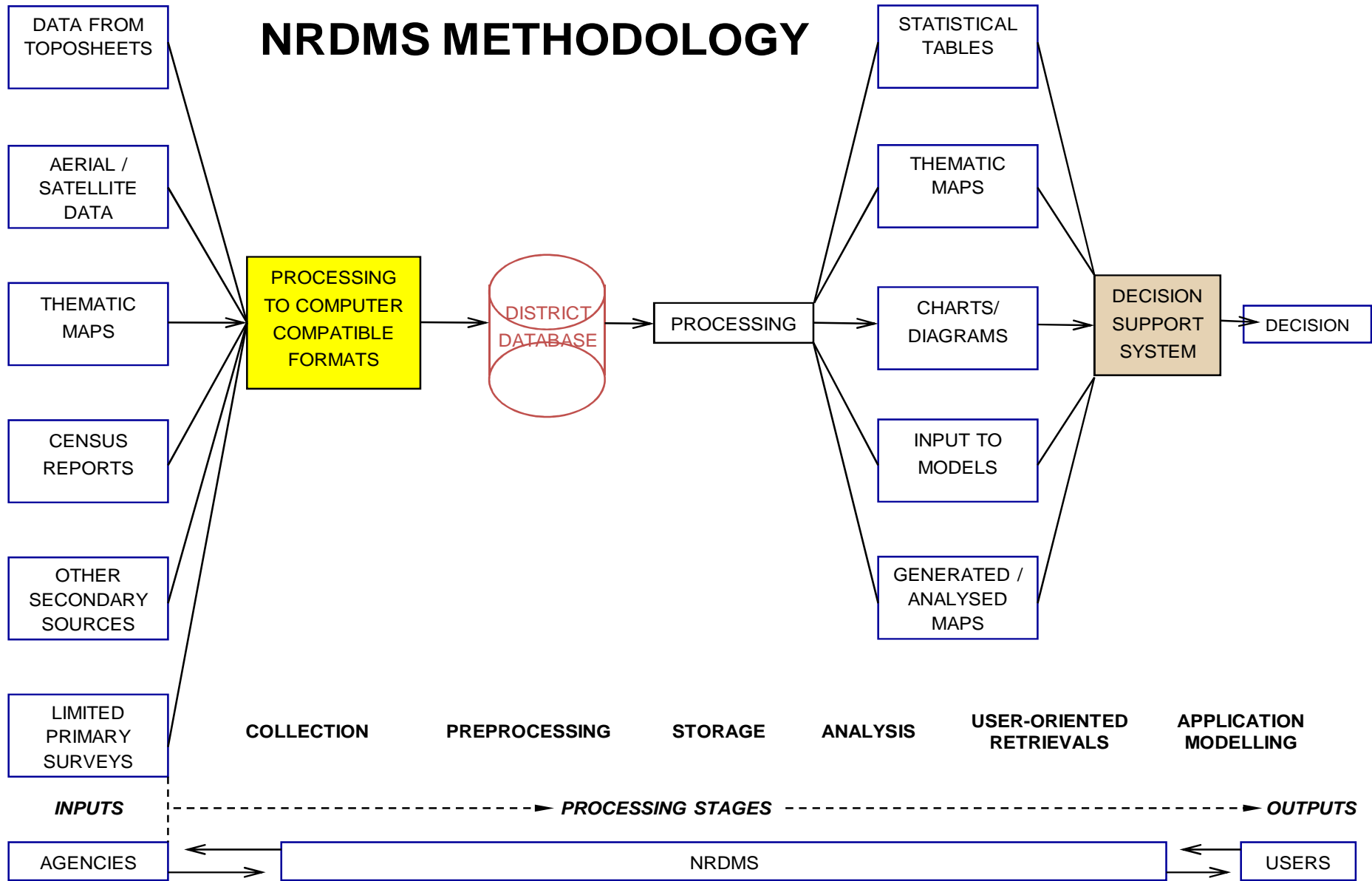
# Karnataka NRDMS program

- Initiated NRDMS program in 1992-93
- Joint initiative of Department of Science & Technology  
(Government of Karnataka and Government of India)

- Established district spatial data centers in all the districts to support development planning using GIS.
- Karnataka is the 1<sup>st</sup> state institutionalise spatial data for decision-making.

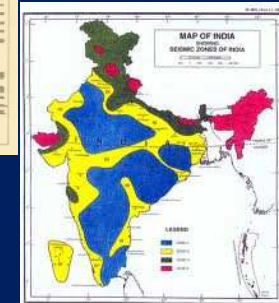
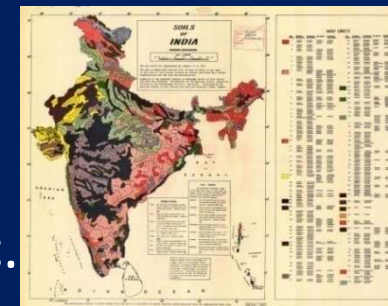
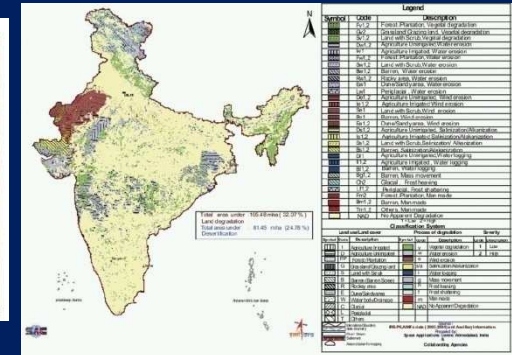
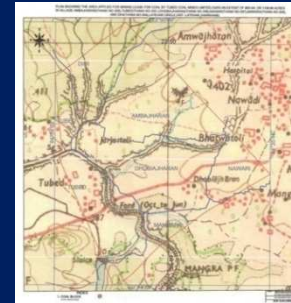


# NRDMS METHODOLOGY

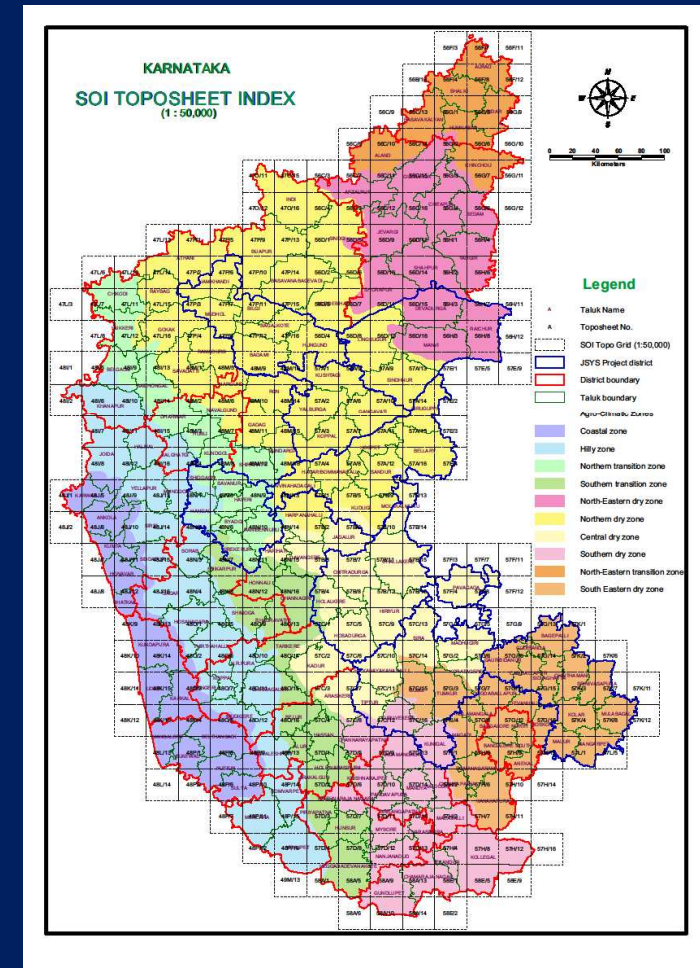
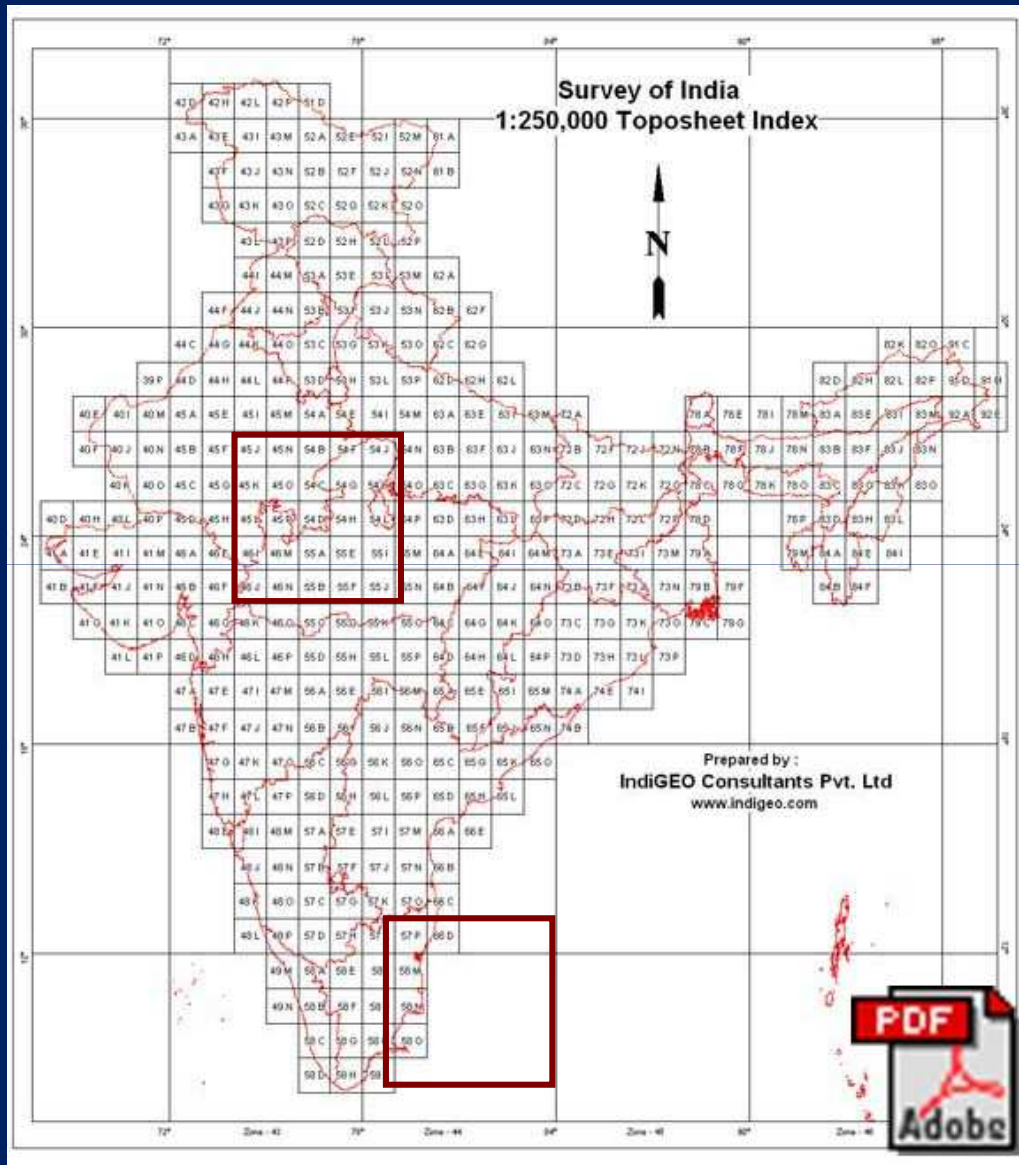


# National/State Survey and Mapping Organisations

- Survey of India
- Indian Meteorological Department
- Census of India
- Geological Survey of India
- National Bureau of Soil Sciences & Land-use Board
- Forest Survey of India
- National Remote Sensing Establishment
- Research Data – publications, reports etc.
- State Remote Sensing Centre's
- Survey Settlement and Land Records
- Google/GPS – being used for updation and data capture



# Spatial data is stored on Survey of India framework



## State/District Data

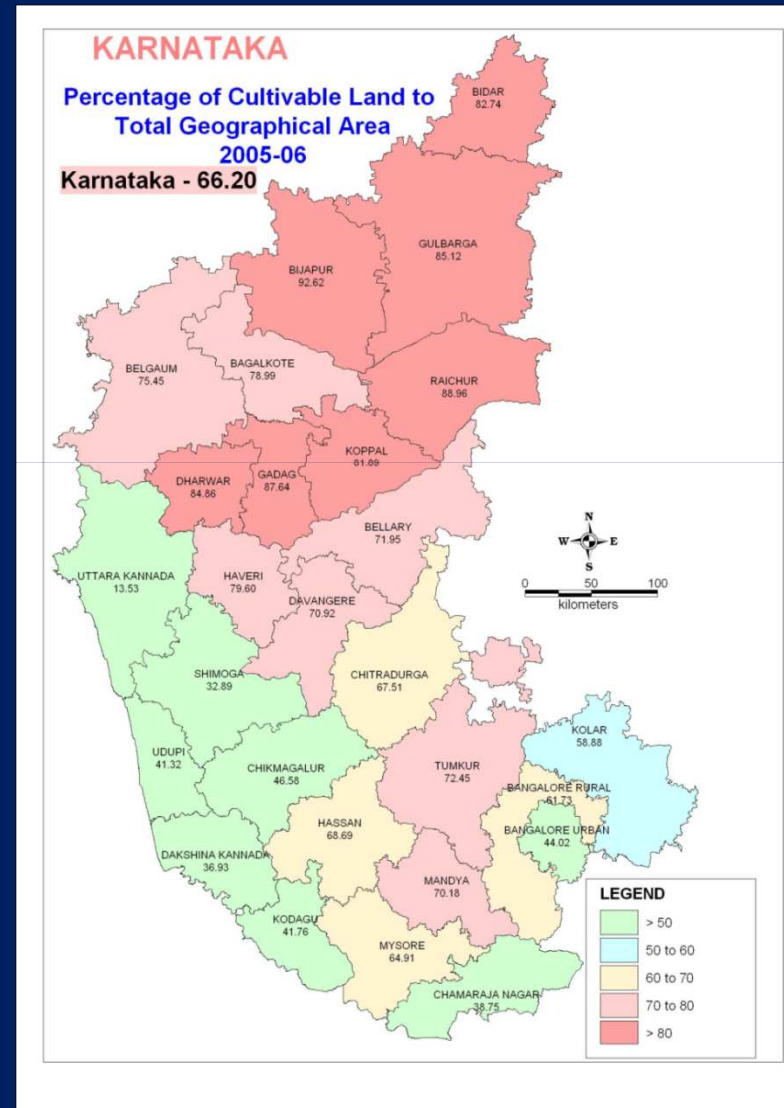
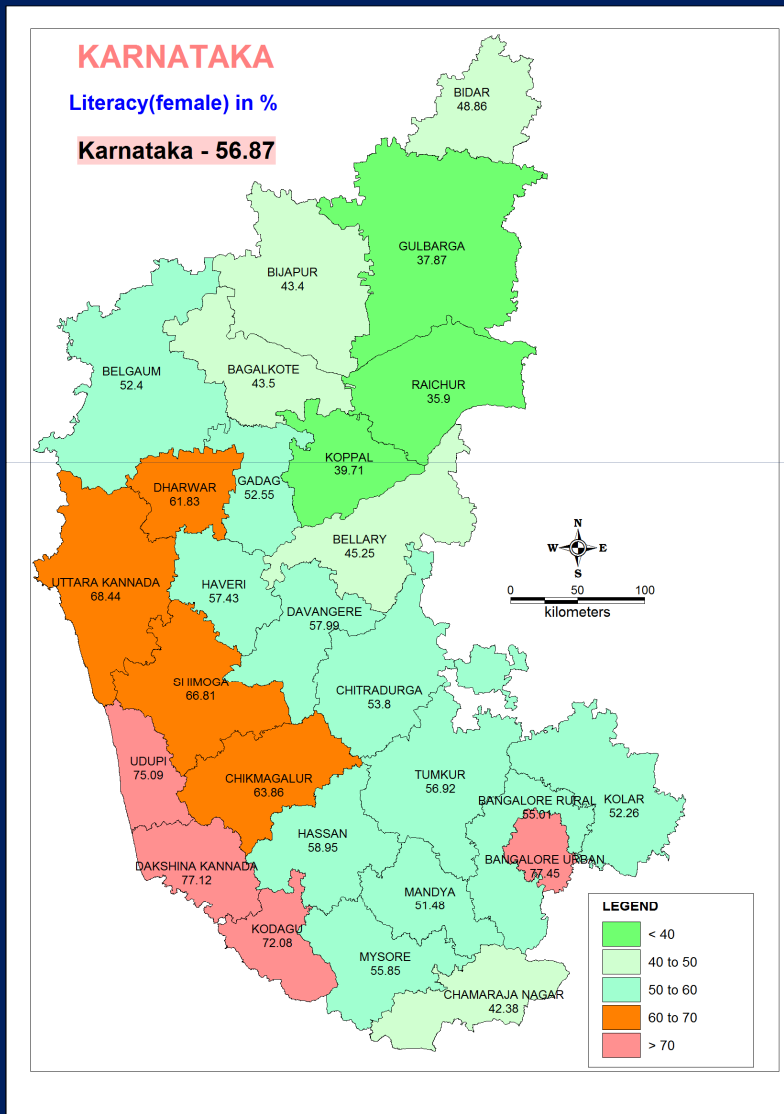
- Agro-Climatic Zones
- Taluk/District Boundary
- District Head Quarters
- Division Boundary
- Division Head Quarters
- Geology
- Meteorological Station
- Parliamentary Constituencies
- Legislative Assembly Constituencies
- Rail network
- Reservoir
- River
- Drainage
- Basin Boundary
- Catchment Boundary
- Sub catchment Boundary
- Subdivision Boundary
- Sub watershed Boundary
- Tanks
- National Highway
- State Highway
- Major district road
- Other District Roads
- Village roads

# Highlights:

- Value added services & customized applications based on user needs both at district/state level.
- Developed a standardized seamless spatial data for storing, sharing, access and discovery through Karnataka Geo-portal.
- Continuous updation of spatial data and allied information.
- Development of port let – GIS Decision Support System for RDPR to support informed decision-making.
- District level workshops in all the districts in the utilisation of Geospatial Technologies.
- Urban mapping for planning purpose.

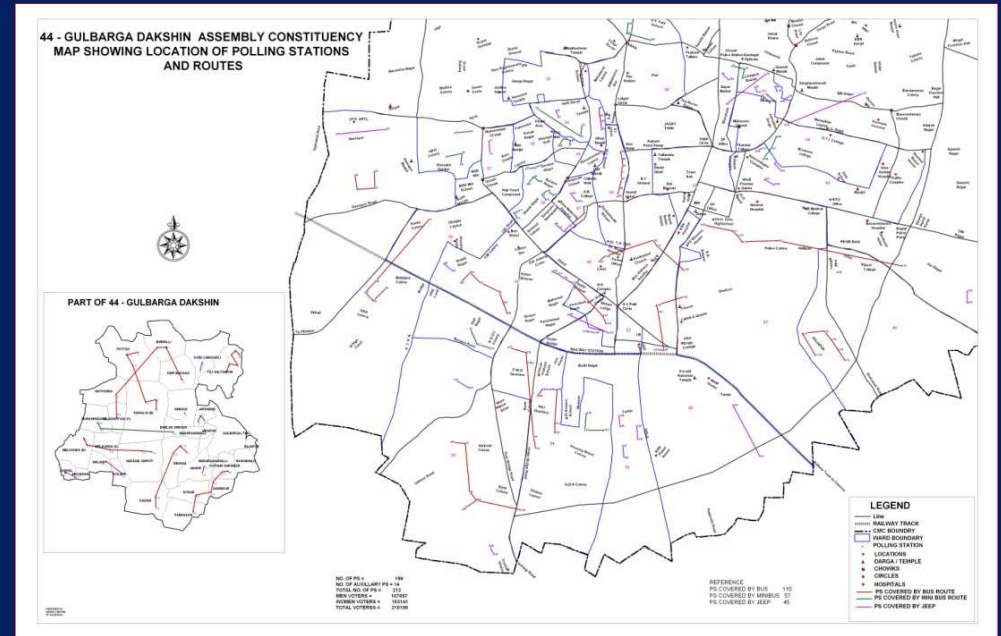
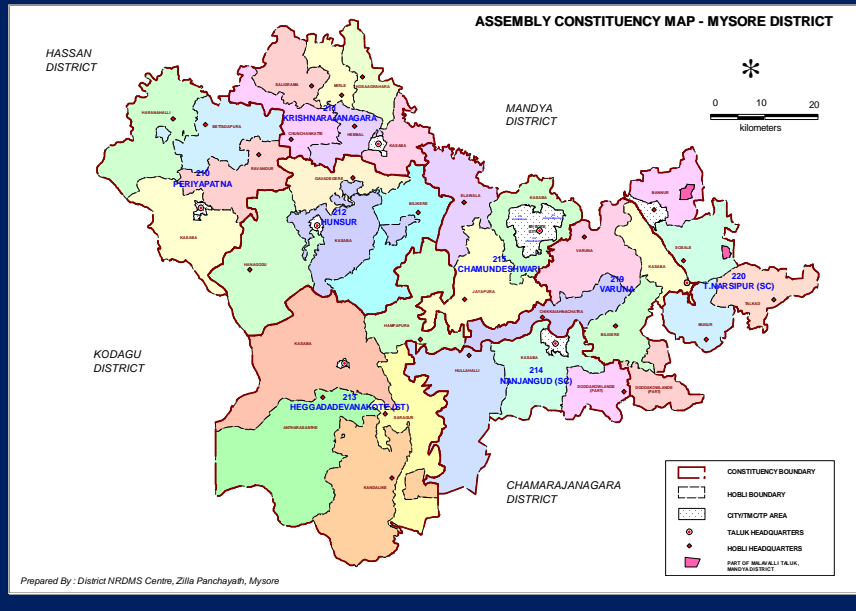
# Planning Atlas

(based on 60 socio-economic developmental indicators)

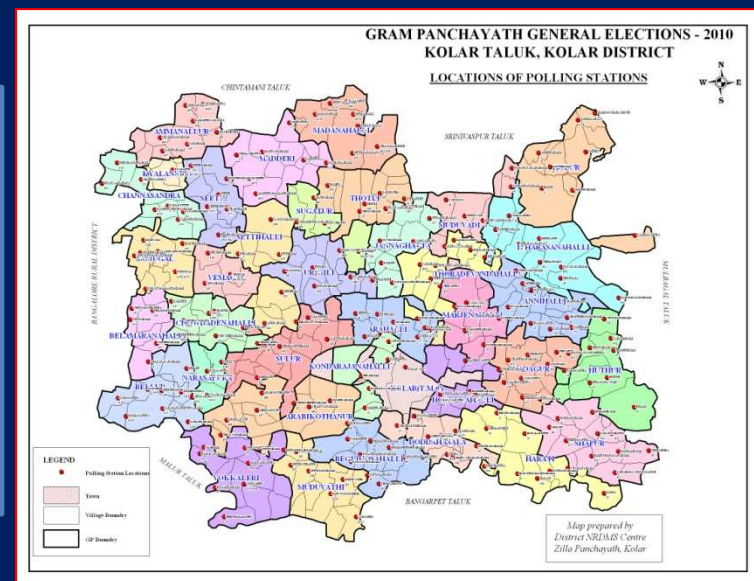




# Elections



- Information:**
1. Location & nature of polling booths (sensitive/hyper-sensitive)
  2. Parliamentary/Assembly/PRI
  3. Booth status with voters list
  4. Routing map for RO/ARO
  5. Mustering/demustering





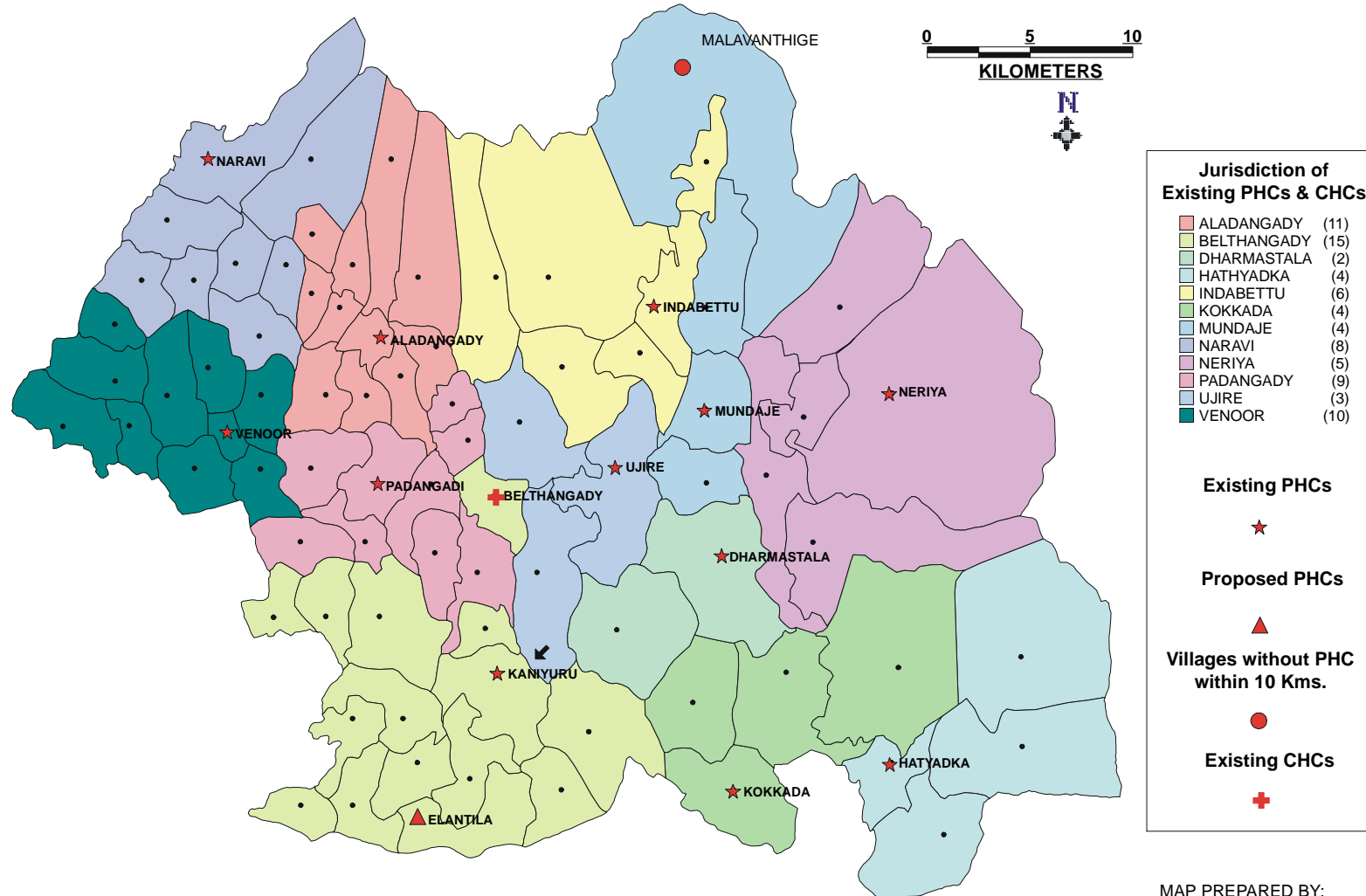
## Location/allocation of Health Facilities

- Locate new / upgrade existing health facilities
- Medical facilities considered : PHC / PHU, Subcentres and CHCs
- Government guidelines & additional norms employed for developing DSS.

Population in plain area	Population in hilly / tribal area	Type of health centre	Minimum distance between two centers
5000	3000	Sub centre	
30,000	20,000	PHC	8 Km.
200,000	100,000	CHC	

# Location/allocation of Health Facilities

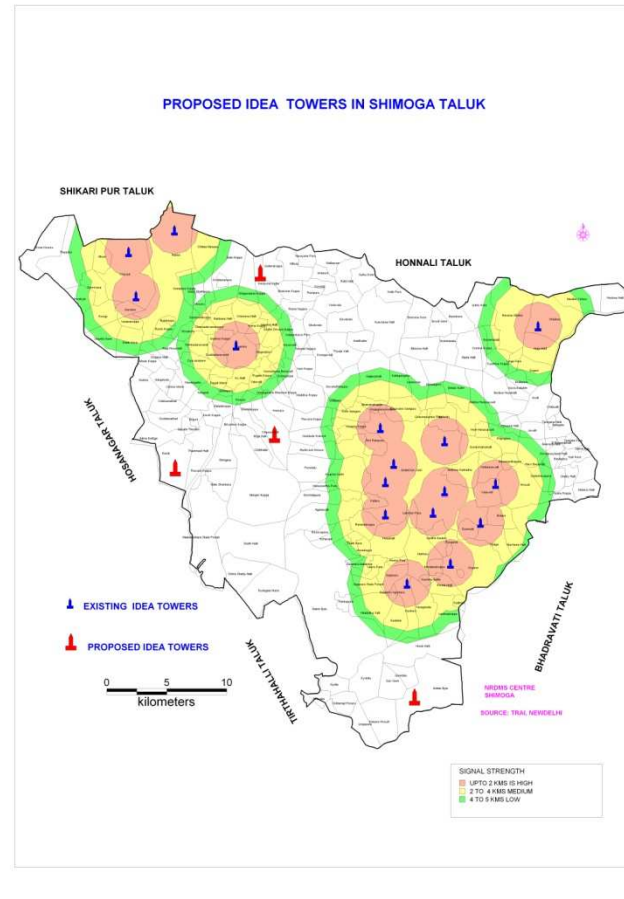
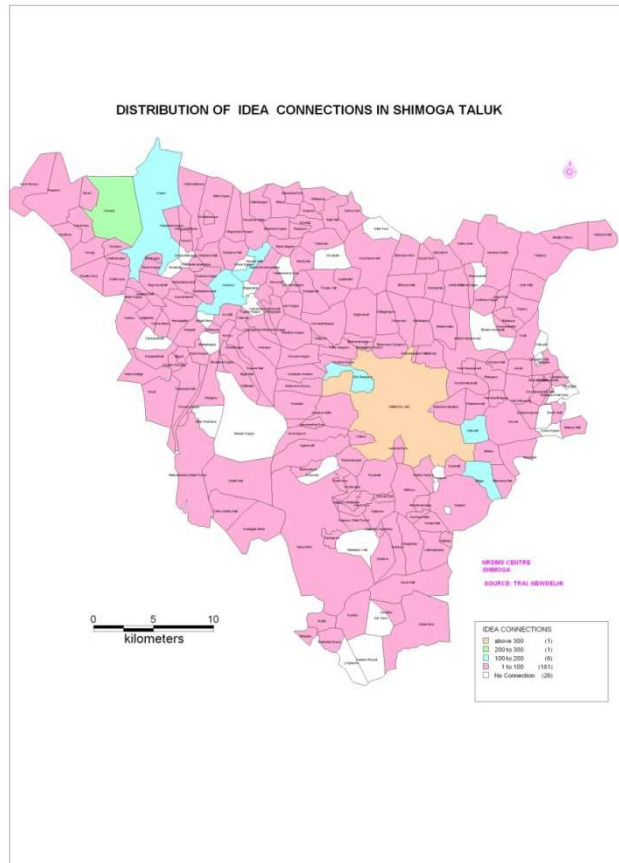
## EXISTING AND PROPOSED HEALTH FACILITIES ( PHC & CHC) IN BELTHANGADY TALUK WITH JURISDICTION OF EXISTING PHCS AND CHCS



NOTE: ✎ SHOWS PHC KANIYURU WHICH IS SANCTIONED BUT NOT STARTED. HENCE NO SEPERATE JURISDICTION IS GIVEN FOR THE SAME

MAP PREPARED BY:  
DK NRDMS  
MANGALORE

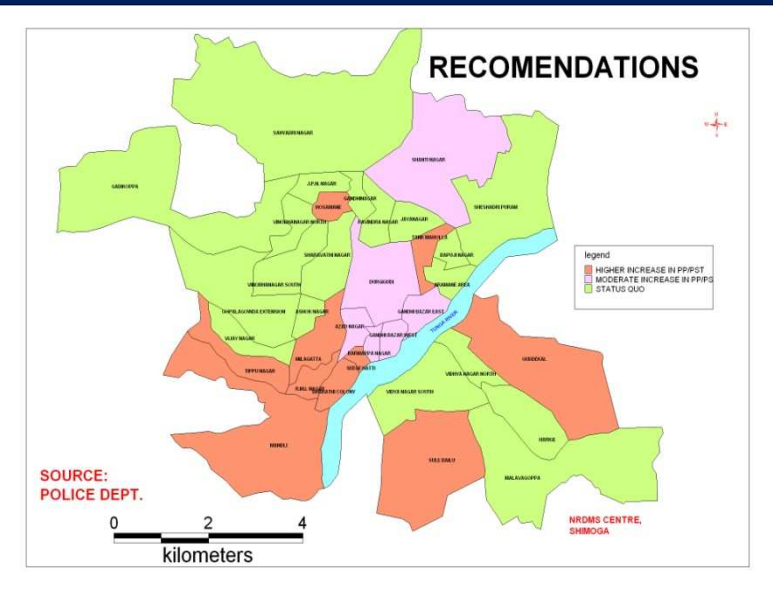
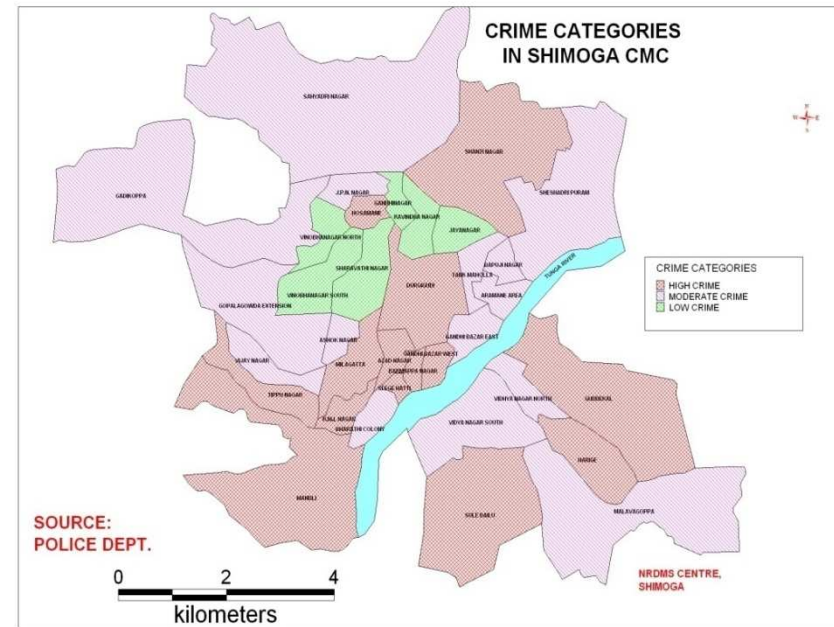
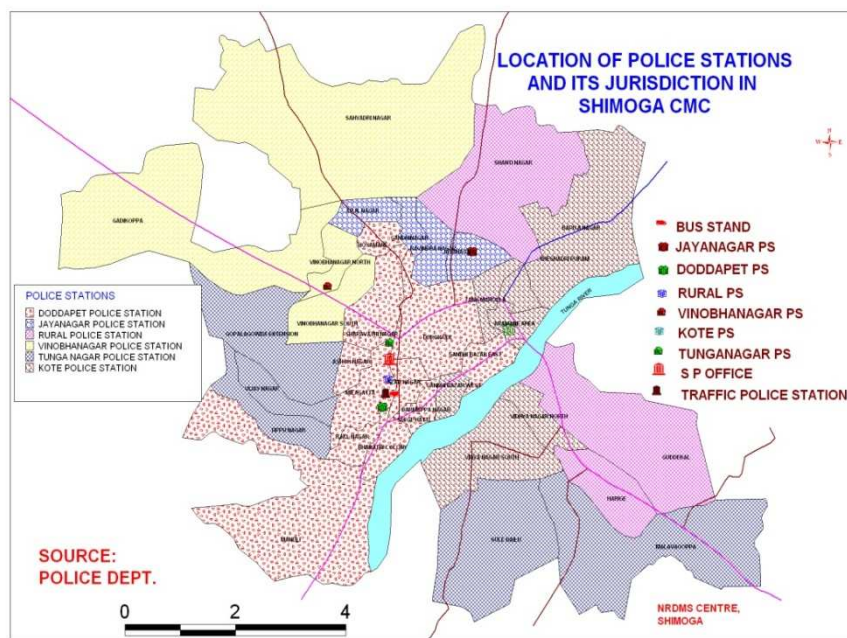
# Decision Support System - Telecommunications



Service provider	Existing towers	Proposed towers
<b>BSNL</b>	<b>110</b>	<b>0</b>
<b>AIRTEL</b>	<b>20</b>	<b>2</b>
<b>VODAPHONE</b>	<b>23</b>	<b>3</b>
<b>IDEA</b>	<b>16</b>	<b>5</b>
<b>TATA INDICOM/ DOCOMO</b>	<b>17</b>	<b>3</b>
<b>UNINOR</b>	<b>11</b>	<b>0</b>
<b>RELIANCE</b>	<b>10</b>	<b>0</b>
<b>MTS</b>	<b>9</b>	<b>2</b>
<b>AIRCEL</b>	<b>13</b>	<b>0</b>

Report provides information on the distribution of mobile connections, telecom service provider coverage area & present status

# Crime Mapping



Based on crime analysis, recommendations were made to improve better policing in certain areas/wards

# Environment – Relocation of Stone Crushers



Identification of safe zones for location & relocation of stone crushing units based on State/Centre guidelines.

This work was taken up on the request from District Administration in six districts.

**DR. M. T. REJU**, I.A.S.  
Deputy Commissioner & District Magistrate  
Udupi District



☎ : (0820) 2574925 (O), 2532700 (R)  
2574926 (F)  
Mobile : 94498 28637  
E-mail : deo.udupi@gmail.com  
rejuempy@rediffmail.com  
Rajatadri, Manipal  
UDUPI - 576 104, Karnataka.  
Date 05/07/2012

UDC PS 01/2012-13

To,

The Executive Secretary,  
Karnataka State Council for Science and Technology,  
Indian Institute of science Campus,  
Bangalore 560 012.

Dear Sir,

This is to acknowledge the efficient work done Sri Vikram R, Project Associate, District NRDMS Center in evaluating and assessing the number of stone crushers in Udupi District. This work was taken up as per the directions of the Hon'ble Supreme Court to identify safer zones for Stone Crusher units in the district. This work entailed, detailed GIS Positioning and identification of all existing stone crushers, both formal and informal in the district of Udupi and involved mapping of all roads, habitats, temples, Schools, Rivers, and other infrastructure facilities. GIS analysis involved buffering around existing facilities to identify safe stone crusher zones.

Sri Vikram R, Project Associate, NRDMS Center, Udupi has completed this work efficiently and submitted the report in time, as advised to him. We appreciate his effort and interest in successfully submitting the report.

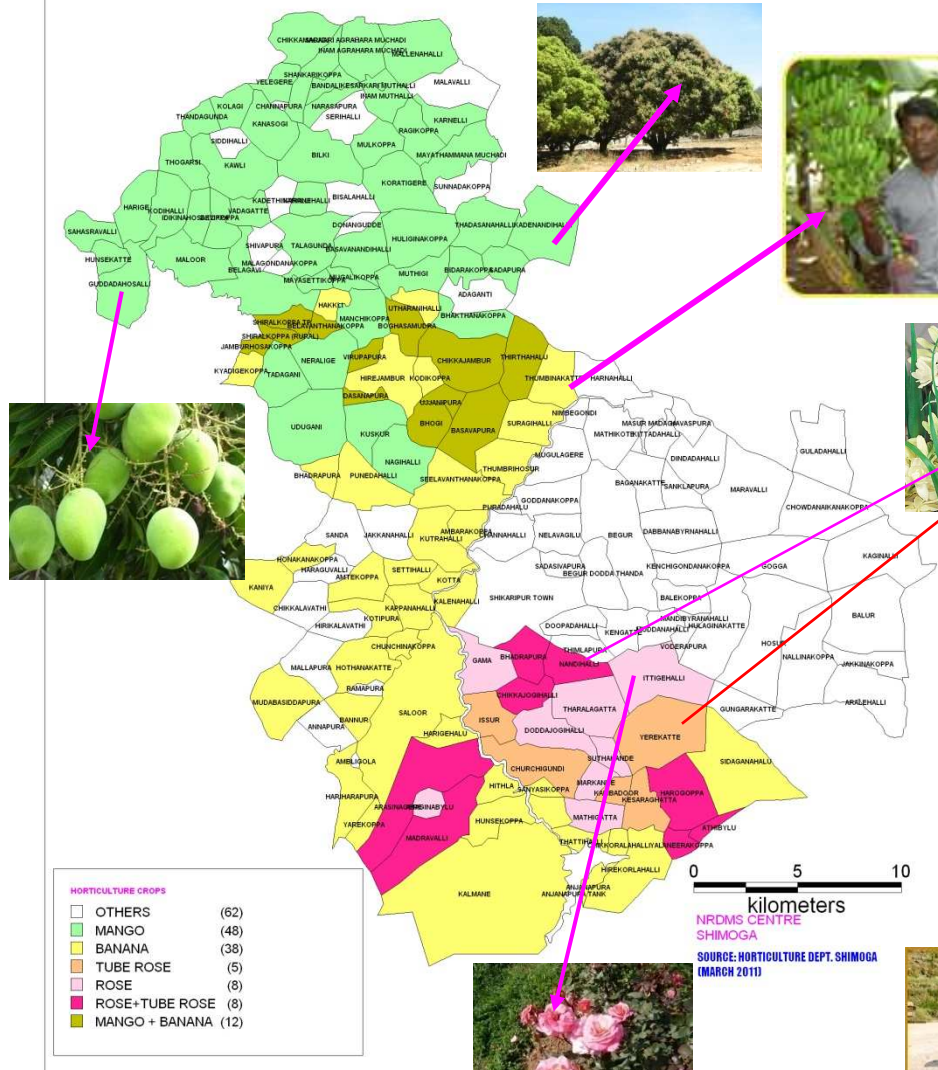
Thanking you,

Yours faithfully,

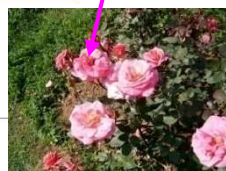
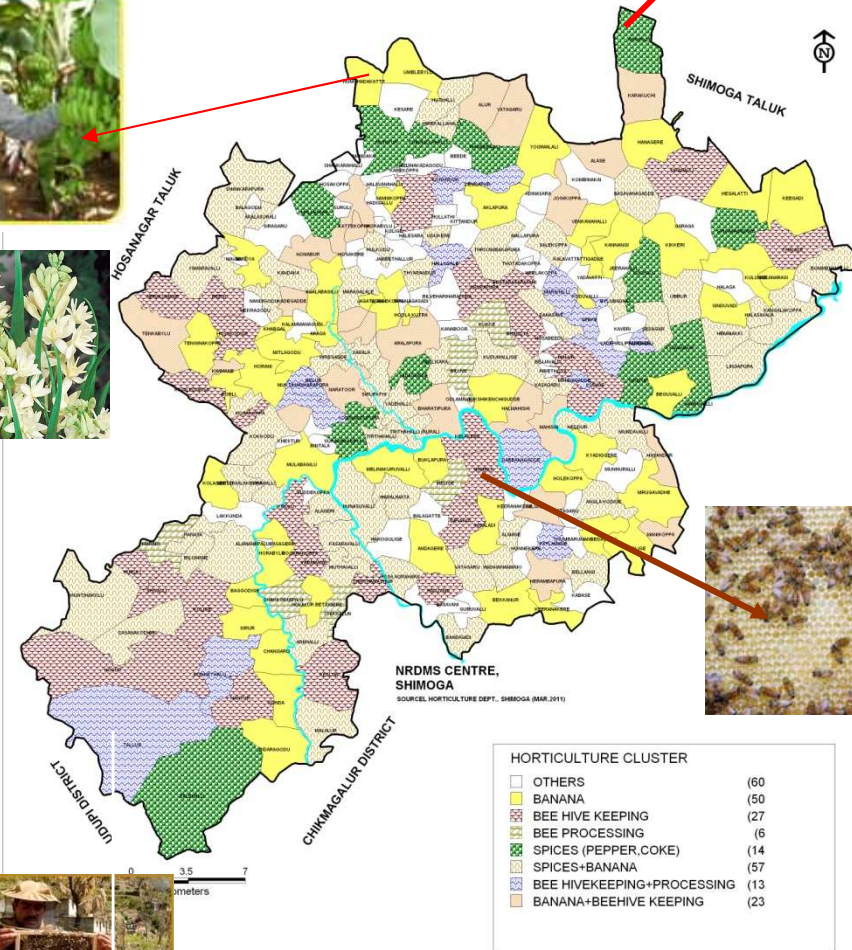
(Dr. M. T. Reju)  
Deputy Commissioner  
Udupi District, Udupi

# Information – Horticulture Department

## CLUSTERWISE HORTICULTURE CROPS IN SHIKARIPUR TALUK



## CLUSTERWISE HORTICULTURE CROPS IN BIRTHAHALLI TALUK







# DSS – Fisheries

## Department

PROPOSED OF TANKS FOR  
AQUACULTURE IN BHADRAVATI TALUK

INDEX

- PROPOSED TANKS FOR AQUACULTURE

DRAINAGE ORDERS

- 1 ORDER
- 2 ORDER
- 3 ORDER
- 4 ORDER
- 5 ORDER



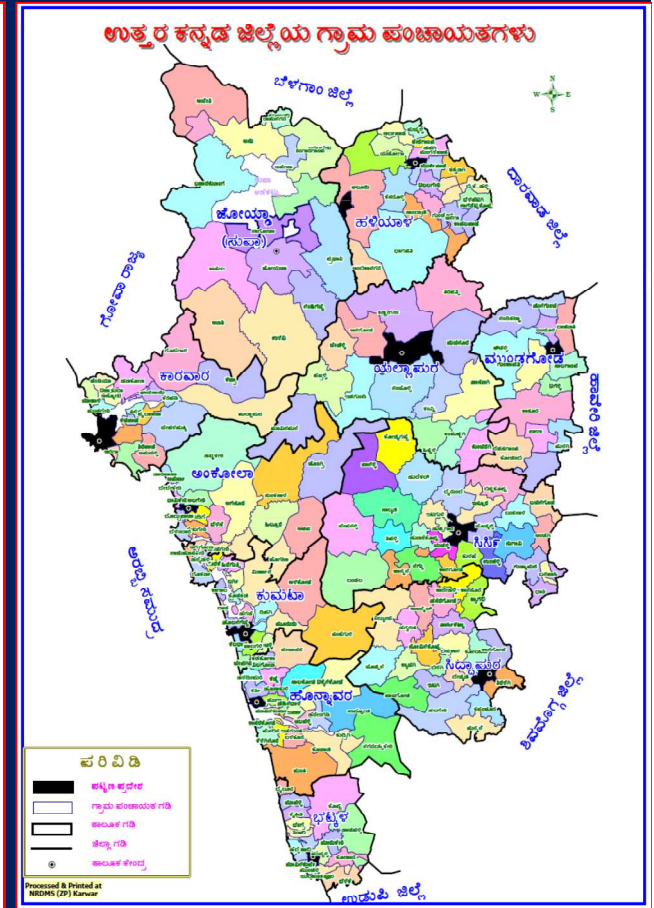
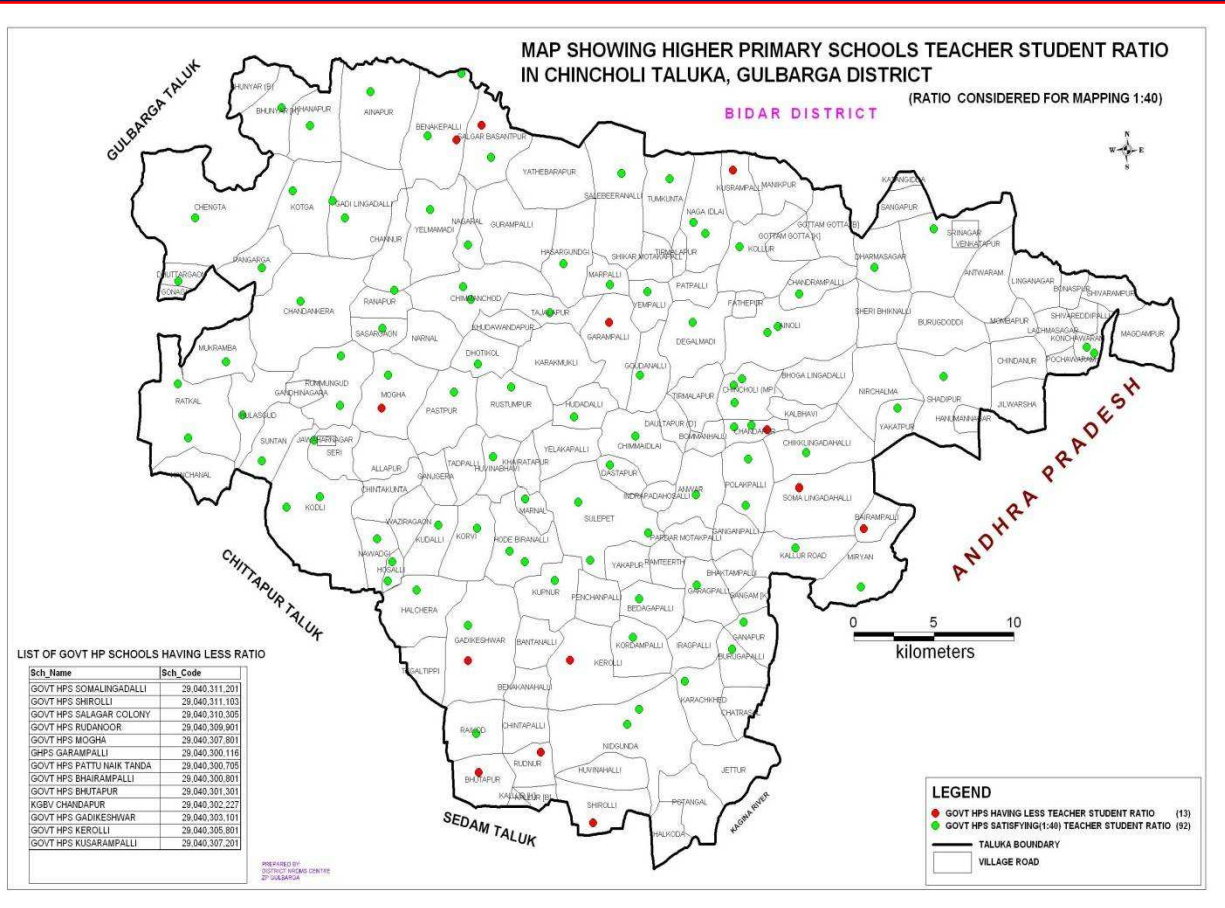
### Spatial Layers used:

1. Taluka & village boundaries
2. Water bodies
3. Land use / Land Cover.
3. Soil
4. Slope
5. Road Network
6. Hatcheries, Rural haath locations, Fish Training Institutions, Agriculture supply centres, Fish Markets locations Map .

### Water Harvesting Structures

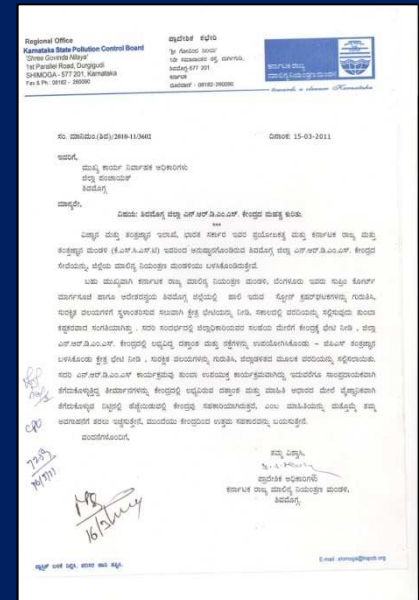
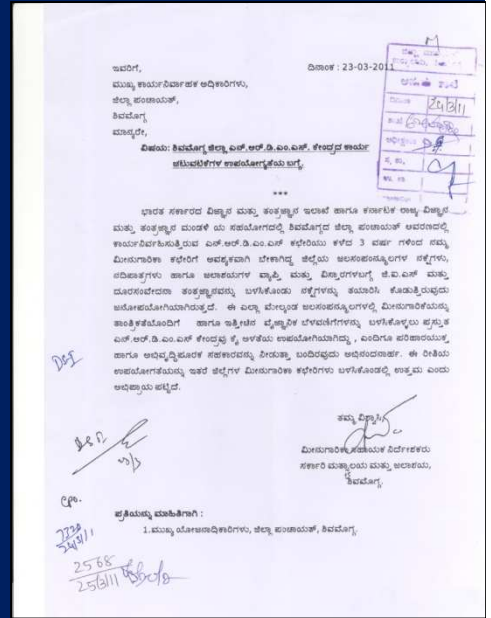
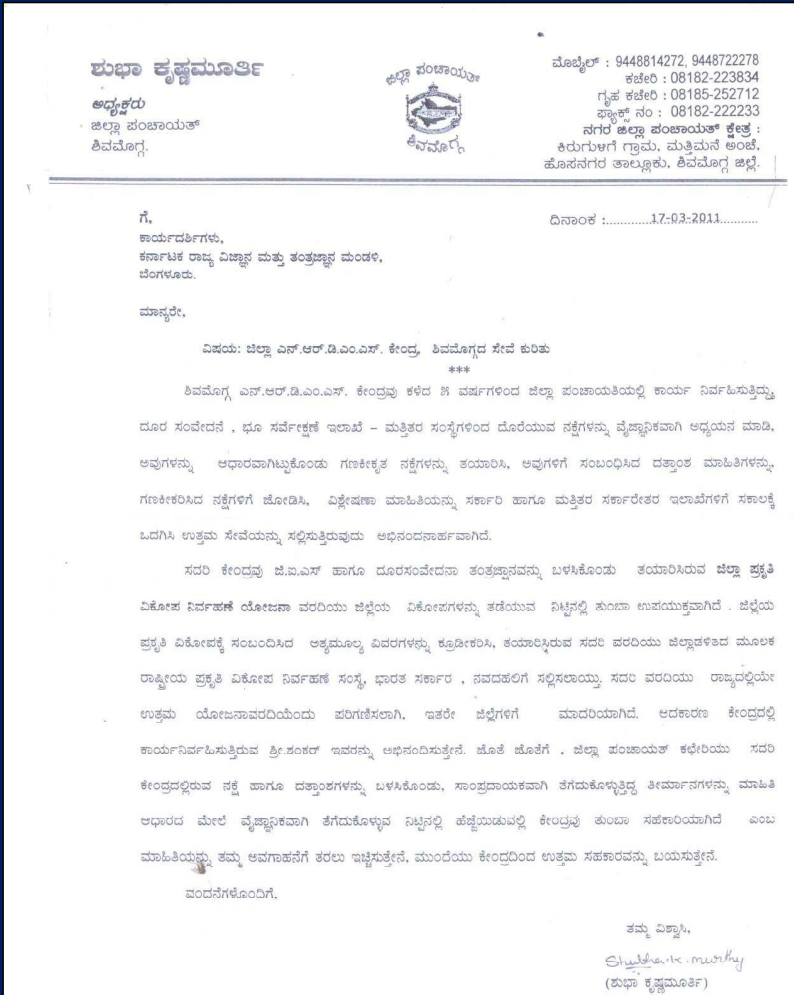
- ✓ Duration, size, depth.
- ✓ Soils type and PH
- ✓ Near to habitation

# Administration

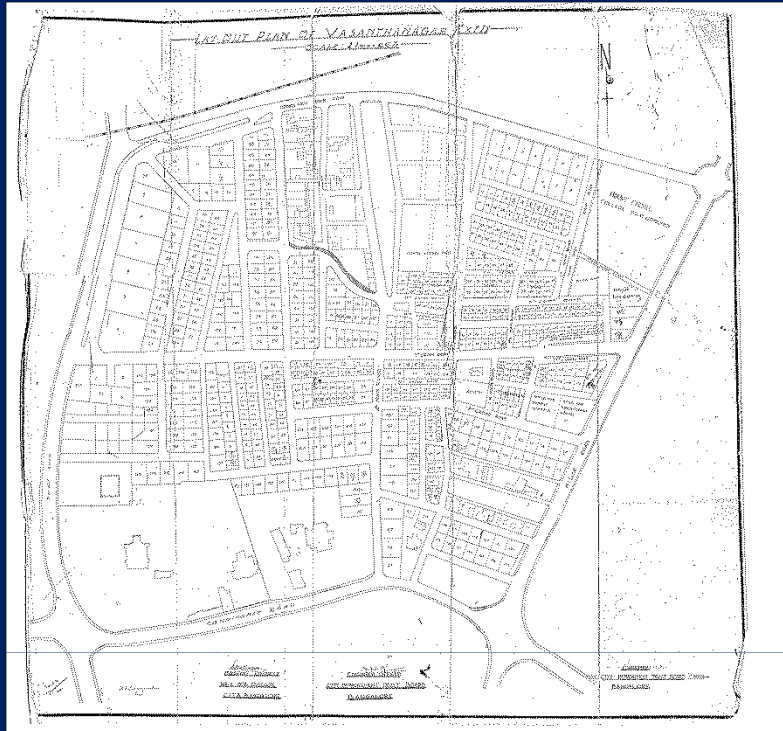


- Transfer of school teachers based on pupil-teacher ratio
- Information in local language
- Information to all the line departments for informed decision-making

# Appreciation from Policy makers and Administrators

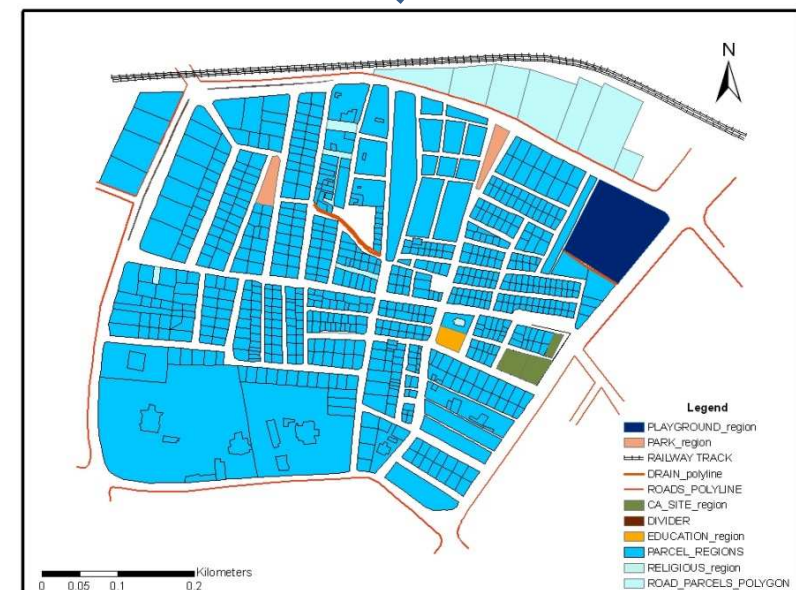


# Urban Mapping - Planning

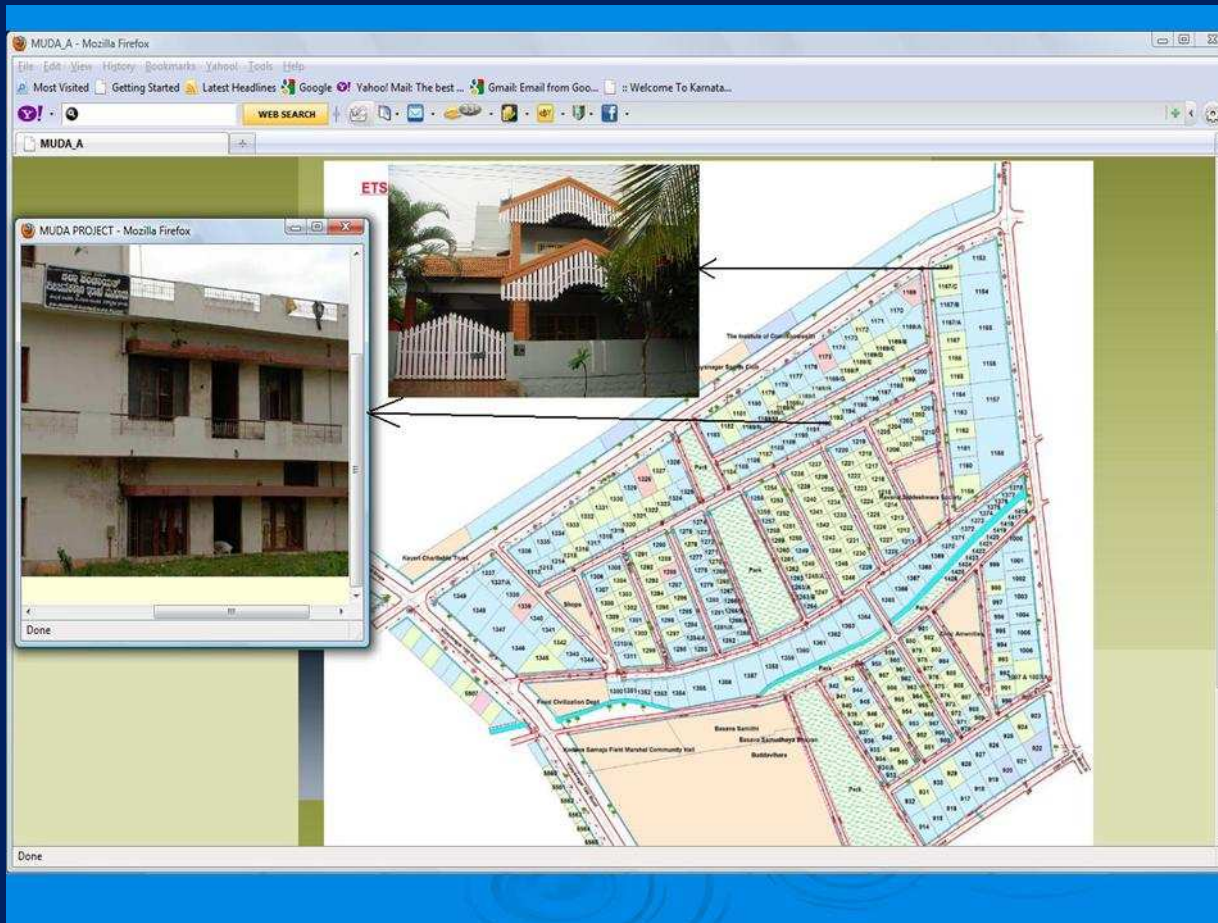


**Conversion of hard copy layout maps (BDA) into GIS ready digital layers. (PPP model)**

Conversion of hard copy maps into digital layers for access, search, discovery and updation of spatial data of urban local bodies by using latest geospatial techniques and high resolution satellite imageries.



# Web GIS for Urban Planning



Urban mapping project for MUDA at pilot level to setup a GIS based system to monitor, update and inspect various properties and plots including residential, common properties, CA, extra bit of land, amenities and urban infrastructure.

The solution intends to link site plan, photographs and other collateral information.

**User: Regional Commissioner, Mysore**

# Karnataka Geoportal

- Strength of Karnataka NRDMS program formed the basis for setting up of 1<sup>st</sup> State SDI of the country.
- **Funding : Central: State (75:25)**
- Developed a web based Geo Portal to acquire, process, store, distribute and improve the utilization of geo spatial data
- **Statewide, standardised, seamless GIS database for selected layers**
- Use of global standards making the data sets accessible from a variety of GIS packages at districts



**Release of Portal during NSDI-9 conference**



# Development Stages

- Requirement analysis
- Real world object catalogue
- Conceptual Data Model
- Centralized database
- Publishing metadata
- Creation of Geo-portal
- Customization of data/software for creation of geo-portal
- Security system to handle data, user identity and network
- Testing of the Geo-portal/ database/ services
- User acceptance testing
- Final deployment of the complete system
- Training of organisational staff
- System Maintenance

## The deliverables include

- Detailed SRS
- Design documents
- Source code with annotations wherever applicable
- Unit level test script
- Test cases for UAT and test report
- User manual
- Software executables with all the related library files



# Karnataka GeoPortal Services:

- Map viewer - Web Map Service (WMS),
- Product catalogue/metadata - Catalogue Service on Web (CS-W),
- Services specific service/ feature data sets - Web Feature Service (WFS),
- Simple Applications (Query based decision support)
- Coverage services/images - Web Coverage Service (WCS)
- Search and Discovery
- Help/support



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

Welcome to Karnataka GeoPortal !

### Main Menu

#### ▶ Karnataka GeoPortal

» Karnataka Geoortal

» 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 :

[Sign Up](#) | [Forgot password?](#)

### News and Events

» Karnataka GeoPortal has been

[Access BioGas Portal Here](#)

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

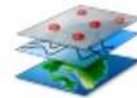
[Feedback](#) | [Disclaimer](#) | [Privacy](#)

Mapviewer



Click on Image to Navigate to Mapviewer

Product Catalogue



Click on Image to Navigate to Product Catalogue

Help



Click on Image to Navigate to Help

Administration



Click on Image to Navigate to Administration

Service Request



Click on Image to Navigate to Home

My Account



Click on Image to Navigate to My Account

Shopping Cart



Click on Image to Navigate to Shopping cart

EMIS



Click on Image to Navigate to EMIS Page

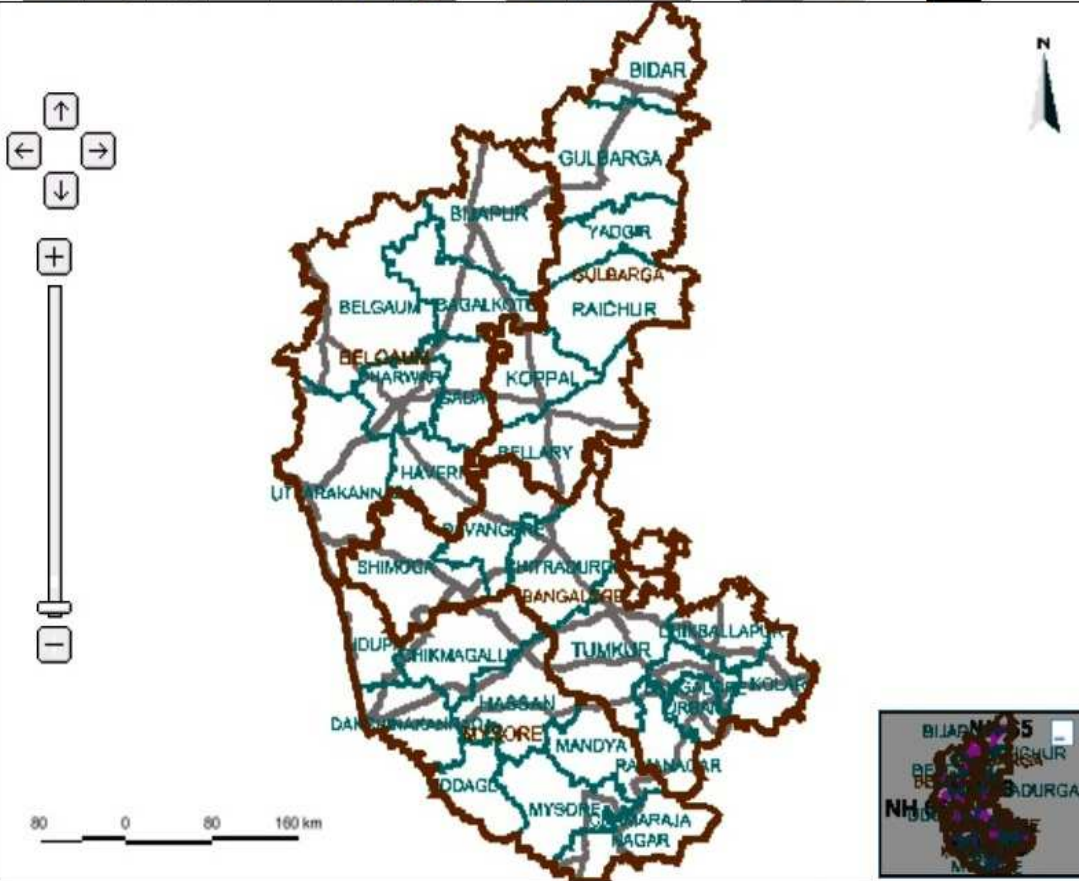
Data Manager



Click on Image to Navigate to Data Manager

Layers Add Layer Query Export Search Discover

- DIVISION
- DISTRICT
- BHUVAN MAP SERVICE
- SUB\_DIVISION
- TALUK
- PC
- LAC
- HOBLI
- ZILLA\_PANCHAYATH
- TALUK\_PANCHAYATH
- GRAM\_PANCHAYATH
- VILLAGE
- KARNATAKA\_GRID



Map navigation controls: Zoom in (+), Zoom out (-), Home, Full Screen, Print, Info, Layers, Back, Forward, Search (G).

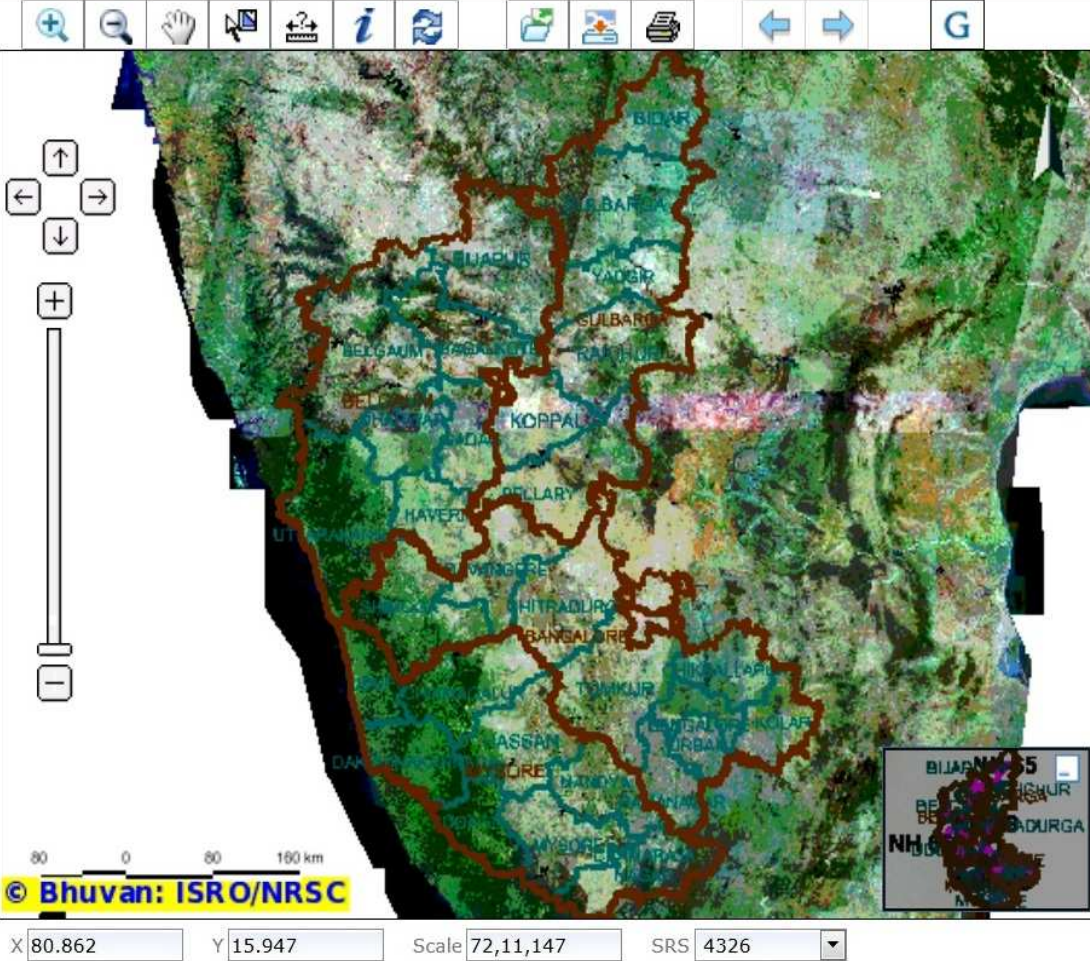
Scale: 80 0 80 160 km

Coordinates: X: 71.821, Y: 12.579, Scale: 72,11,147, SRS: 4326

## Karnataka GeoPortal – Map viewer module

Layers Add Layer Query Export Search Discover

- DIVISION
- DISTRICT
- BHUVAN MAP SERVICE
- SUB\_DIVISION
- TALUK
- PC
- LAC
- HOBLI
- ZILLA\_PANCHAYATH
- TALUK\_PANCHAYATH
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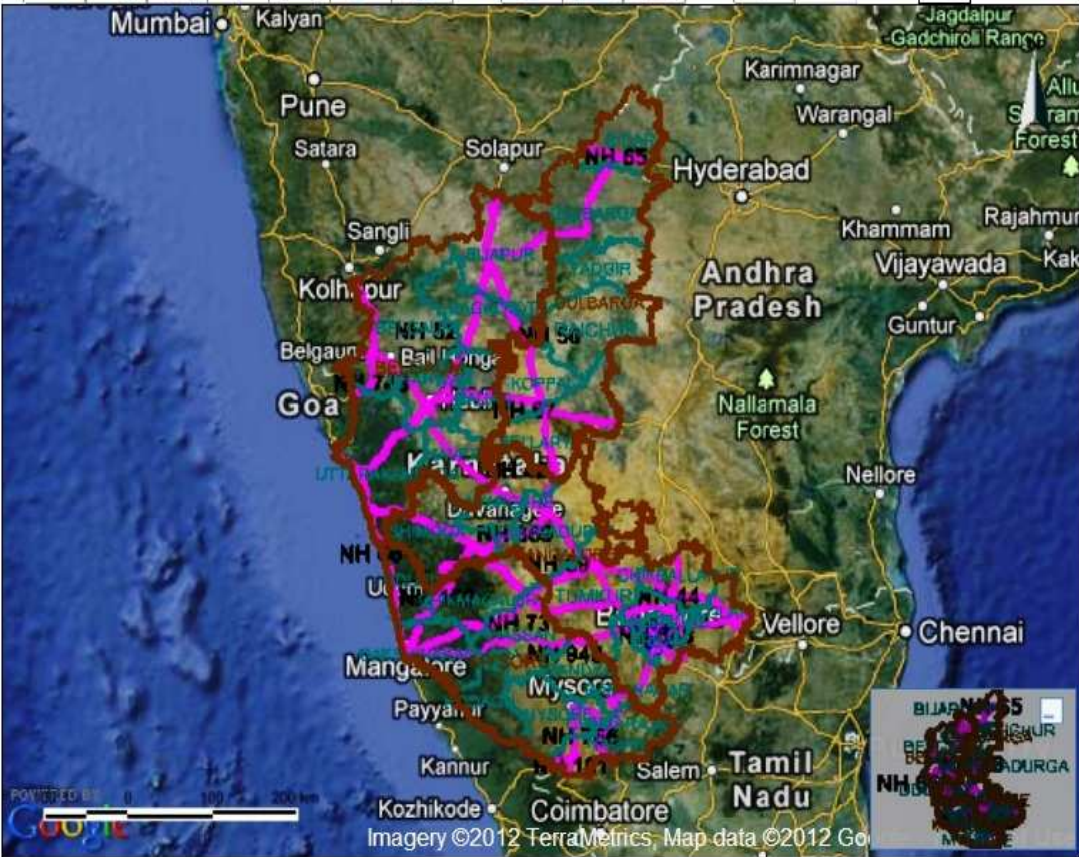


X:  Y:  Scale:  SRS:

## Overlaying of Bhuvan Map Service

Layers | Add Layer | Query | Export | Search | Discover

- DIVISION
- DISTRICT
- BHUVAN MAP SERVICE
- SUB\_DIVISION
- TALUK
- PC
- LAC
- HOBLI
- ZILLA\_PANCHAYATH
- TALUK\_PANCHAYATH
- GRAM\_PANCHAYATH
- VILLAGE
- KARNATAKA\_GRID



Map navigation tools: Zoom In, Zoom Out, Hand, Home, Full Screen, Print, Layers, Search, Back, Forward, Home (G)

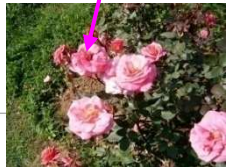
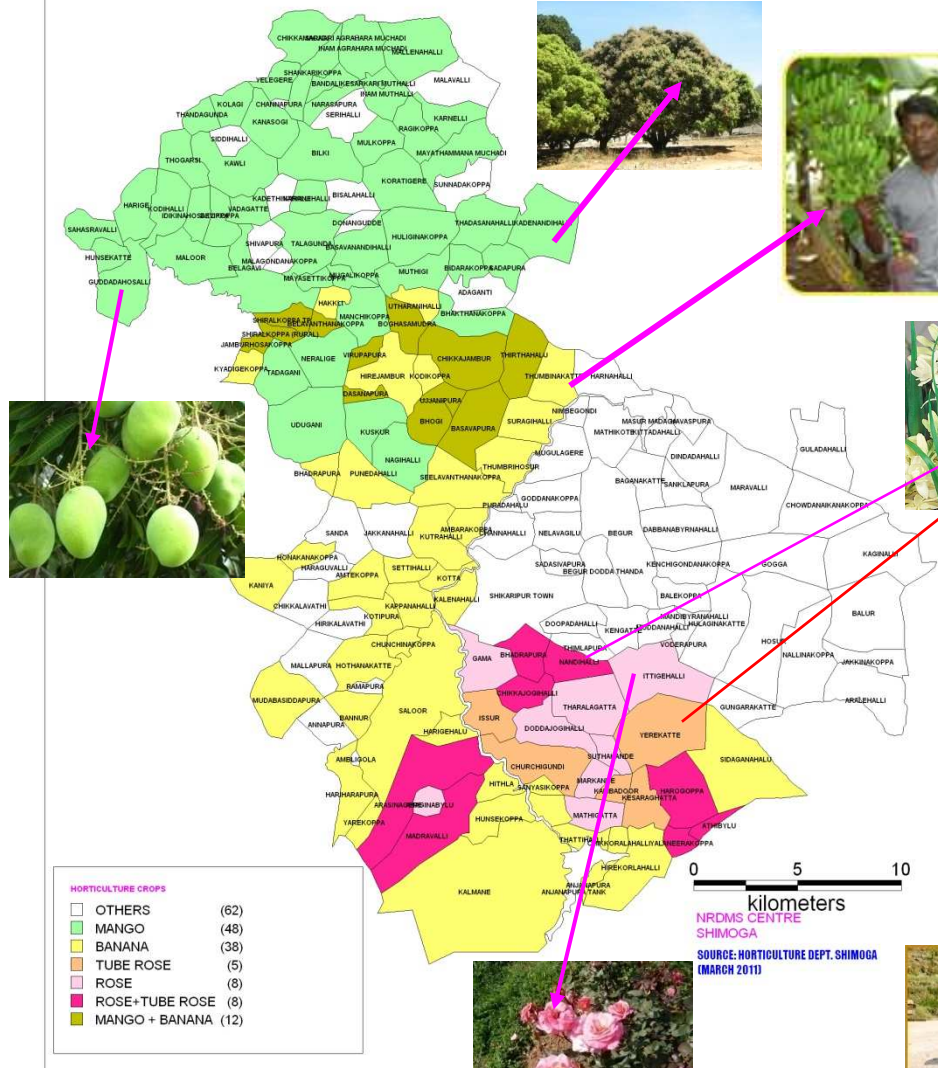
Map showing Karnataka state with overlaid administrative boundaries. Neighboring states: Maharashtra, Andhra Pradesh, Tamil Nadu, Goa. Major cities: Mumbai, Pune, Hyderabad, Bangalore, Chennai.

Scale: 87,10,589 | SRS: 900913 | Coordinates: X: 91,39,301.106 | Y: 21,19,215.256

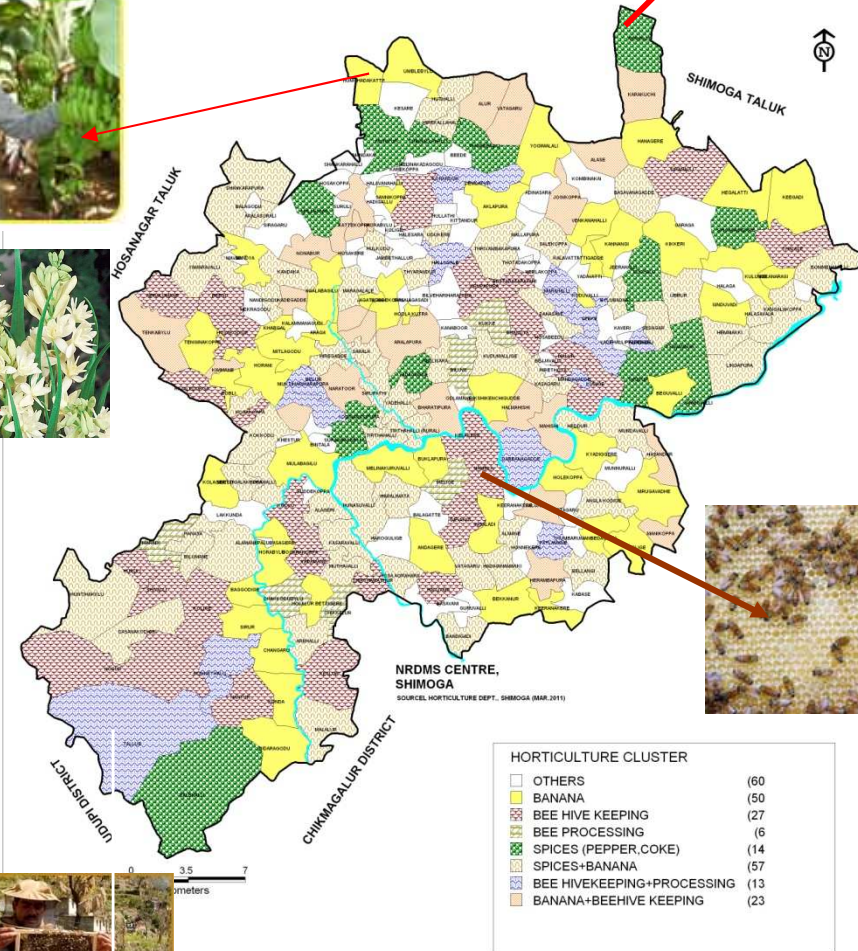
## Overlaying of Google earth imagery

# Information – Horticulture Department

## CLUSTERWISE HORTICULTURE CROPS IN SHIKARIPUR TALUK



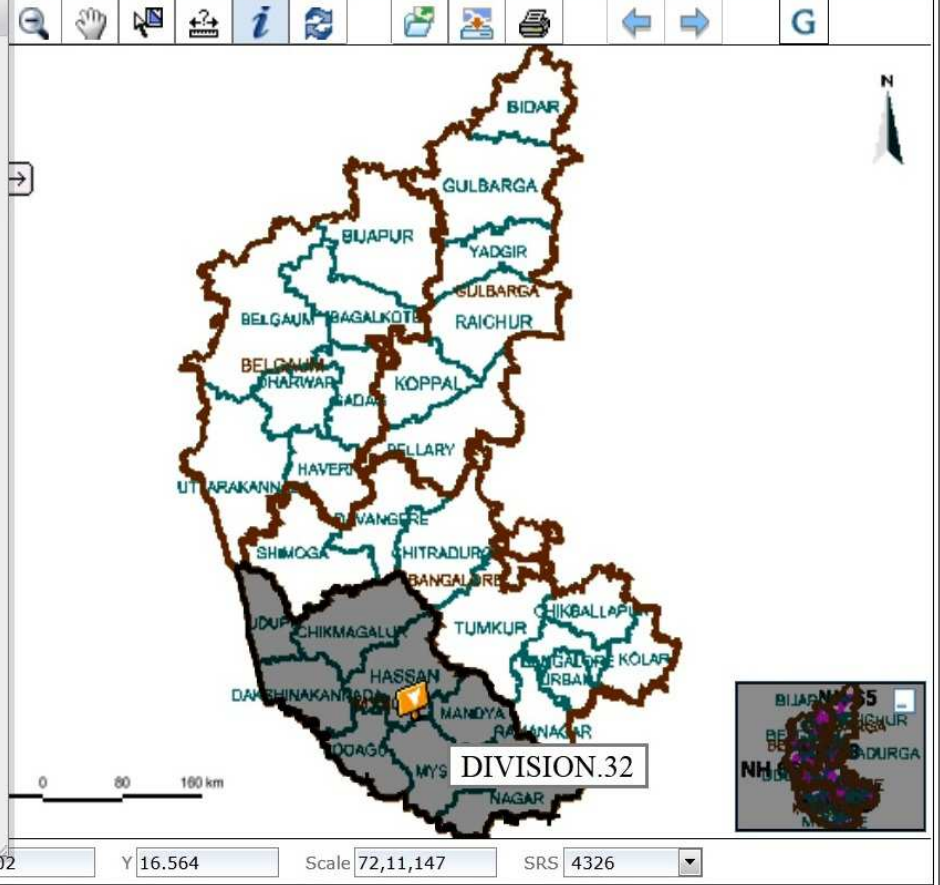
## CLUSTERWISE HORTICULTURE CROPS IN BIRTHAHALLI TALUK



Layer Information

DIVISION	DISTRICT	BHUVAN MAP SERVICE	SUB_DIVISION	TALUK
PC	LAC	HOBLI	ZILLA_PANCHAYATH	TALUK_PANCHAYATH
GRAM_PANCHAYATH	VILLAGE	KARNATAKA_GRID	NATIONAL-HIGHWAY	
BBMP				

Feature	GEOMETRY	ID	Description	Name	DIVISION_ID
<a href="#">View</a>	Fit	DIVISION.32			2



X: 80.502 Y: 16.564 Scale: 72,11,147 SRS: 4326

Geometry has fit to the selected division boundary





Home Map Viewer Product Catalogue Admin

### Layer Information

- DIVISION
- DISTRICT
- BHUVAN MAP SERVICE
- SUB\_DIVISION
- TALUK
- PC
- LAC
- HOBLI
- ZILLA\_PANCHAYATH
- TALUK\_PANCHAYATH
- GRAM\_PANCHAYATH
- VILLAGE
- KARNATAKA\_GRID
- NATIONAL-HIGHWAY
- BBMP

Feature	GEOMETRY	ID	Description	Name	DIVISION_ID
<a href="#">View</a>	Fit	DIVISION.32			2

### Edit Feature

DIVISION_C	29_02
DIVISION_N	MYSORE
STATE_CODE	29
STATE_NAME	KARNATAKA
NO_DISTRIC	8
NO_SUBDIVN	14
NO_TALUKS	44
NO_TOWNS	70
NO_PC	6
NO_HH	2437539
TOT_P	11791302
TOT_M	5892137
TOT_F	5899165
P_SC	1763608
M_SC	887357
F_SC	876251
P_ST	612789
M ST	307856



X 75.361 Y 18.381 Scale 72,11,147 SRS 4326

**Attribute information of the selected layer**

Layers Add Layer Query Export Search Discover

Search for Layers by Keyword and Spatial Extent

Enter Keyword :

Service Type :

Spatial Extent :

Layer Search Results

Title	Service Type	View On Map
Mysore District Settlements	OGC:WMS	<a href="#">view on map</a>
Mysore District Facilities	OGC:WMS	<a href="#">view on map</a>
MYSORE TALUK BOUNDARIES	OGC:WMS	<a href="#">view on map</a>
MYSORE_TALUK_FACILITIES	OGC:WMS	<a href="#">view on map</a>
MYSORE_TALUK_POINT	OGC:WMS	<a href="#">view on map</a>
MYSORE_TALUK_SETTLEMENTS	OGC:WMS	<a href="#">view on map</a>

**Karnataka GeoPortal – Add Layer Module, Adding the layer through Keyword Mysore district facility wms data gets added on the map**

Layers Add Layer Query Export Search Discover

Search for Layers by Keyword and Spatial Extent

Enter Keyword :  
 Service Type : Map Services(WMS)  
 Spatial Extent : 76.35465488622488, 13.8729922227079

Search Reset Clear Result

Layer Search Results

Title	Service Type	View On Map
CHALLAKERE_TALUK_HEADQUARTERS	OGC:WMS	<a href="#">view on map</a>
CHITRADURGA TALUK BOUNDARIES	OGC:WMS	<a href="#">view on map</a>
CHALLAKERE_TALUK_FACILITIES	OGC:WMS	<a href="#">view on map</a>
HIRIYUR TALUK SETTLEMENTS	OGC:WMS	<a href="#">view on map</a>
HOSDURGA TALUK BOUNDARIES	OGC:WMS	<a href="#">view on map</a>
BHUVAN-L4	OGC:WMS	<a href="#">view on map</a>
FRDAS - World		

Map viewer interface showing district boundaries of Karnataka. The map includes a search overlay for Mysore district facilities, with a red dot indicating the location. The map also features a scale bar (0 to 160 km), a north arrow, and a coordinate display (X: 71.847, Y: 13.427, Scale: 72,11,147, SRS: 4326).

**Karnataka GeoPortal – Add Layer Module, Adding the layer through spatial extent Mysore district facility WMS data gets added on the map**

Layers Add Layer Query Export Search Discover

Attribute Query Applications

Select Layer : Select

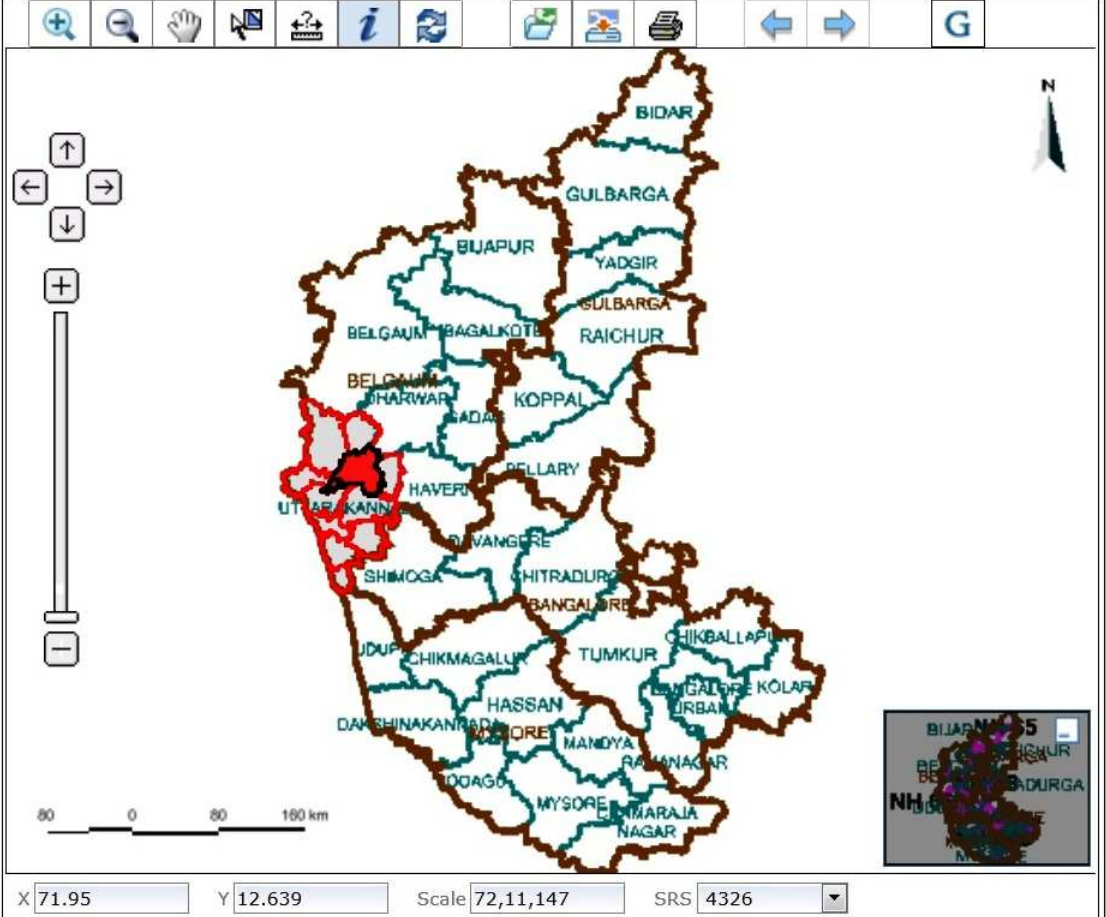
From Features : TALUK

Property	Operator	Value	Add	Remove
TALUK.DIS	=	10	<input type="checkbox"/>	<input type="checkbox"/>

Submit Reset Clear Map

Results

TALUK_ID	LAYER	TALUK_CODE	TALUK_NAME	DISTRICT_C	DISTRICT
1	Unknown Area Type	29_10_0001	KARWAR	10	KARWAR
2	Unknown Area Type	29_10_0003	HALIYAL	10	KARWAR
3	Unknown Area Type	29_10_0004	YELLAPUR	10	KARWAR
	Unknown				



**Karnataka GeoPortal – Query module, querying on the Taluk layer attribute.**

Layers Add Layer Query Export Search Discover

Attribute Query Applications

**Predefined Applications**

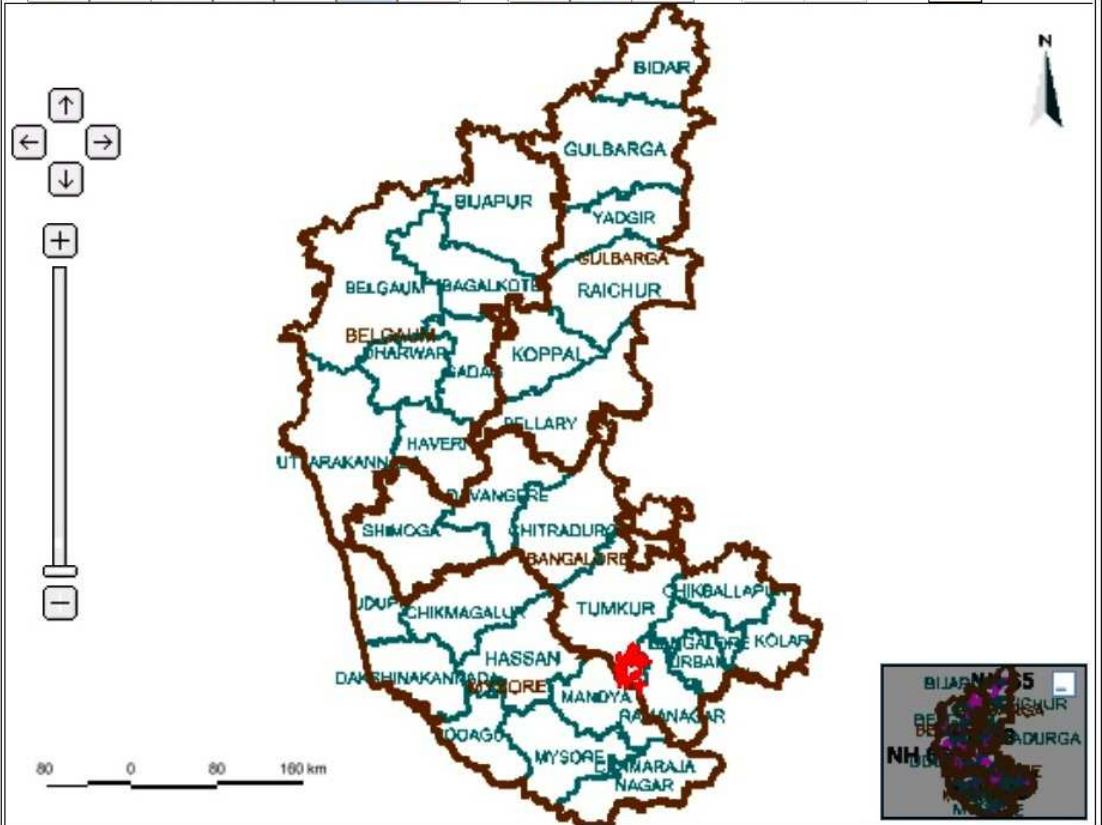
Search by District :  

Search by Taluk :  



**Resulted Predefined Queries**

Query Description	View On Map	View Attribute Data
Villages with Irrigation Area greater than 25%	<a href="#">view on map</a>	<a href="#">view attribute data</a>
Villages with population greater than 3000	<a href="#">view on map</a>	<a href="#">view attribute data</a>
Villages with population greater than 1000 and without a secondary school	<a href="#">view on map</a>	<a href="#">view attribute data</a>
Villages with college.	<a href="#">view on map</a>	<a href="#">view attribute data</a>
Villages without primary school	<a href="#">view on map</a>	<a href="#">view attribute data</a>



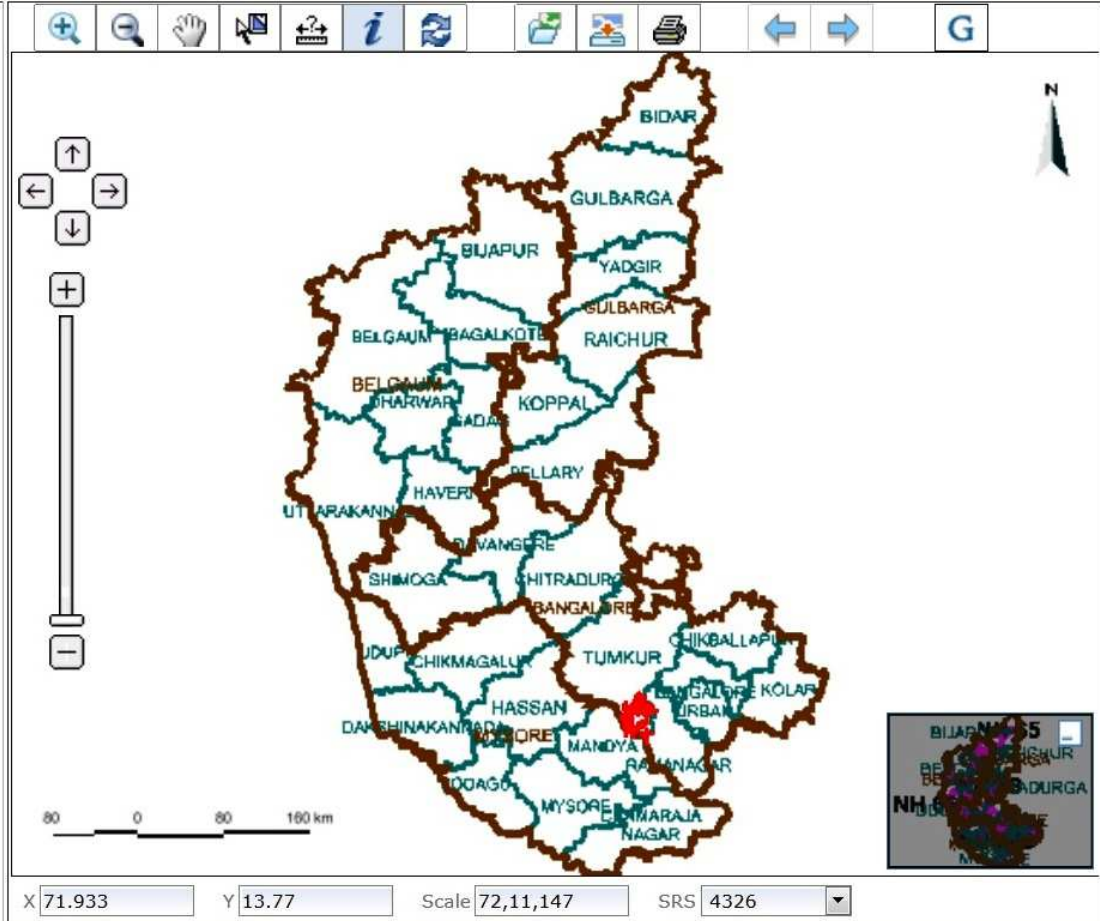
X 71.813 Y 15.21 Scale 72,11,147 SRS 4326

## Karnataka GeoPortal – Query module, Predefined query

Predefined Applications


Search by District : Tumkur

S.No	LEVEL_TYPE	GP_NAME	TOT_IRR
1	VILLAGE	NAGASANDRA	138.46
2	VILLAGE	KAGGERE	298.36
3	VILLAGE	BAGENAHALLI	23.89
4	VILLAGE	BHAKTARAHALLI	78.99
5	VILLAGE	BHAKTARAHALLI	72.34
6	VILLAGE	KOPPA	22.74
7	VILLAGE	MADIKEHALLI	77.41
8	VILLAGE	BHAKTARAHALLI	17.27
9	VILLAGE	BAGENAHALLI	124.32
10	VILLAGE	YALIYURU	33.2
11	VILLAGE	YALIYURU	80.21
12	VILLAGE	YALIYURU	127.55
13	VILLAGE	YALIYURU	28.37
14	VILLAGE	KEMPAHALLI	93.04
15	VILLAGE	KEMPAHALLI	152.98
16	VILLAGE	HUTRIDURGA	158.84



### Attribute Information of selected Layer

Layers Add Layer Query Export Search Discover



Vector Data Map Publish

DIVISION Select Layer to Filter

---

Configure Filter

Configure filter bounding box

	X		Y	
Lower Left	<input type="text"/>		<input type="text"/>	
Upper Right	<input type="text"/>		<input type="text"/>	

and  All of the following  Any of the following

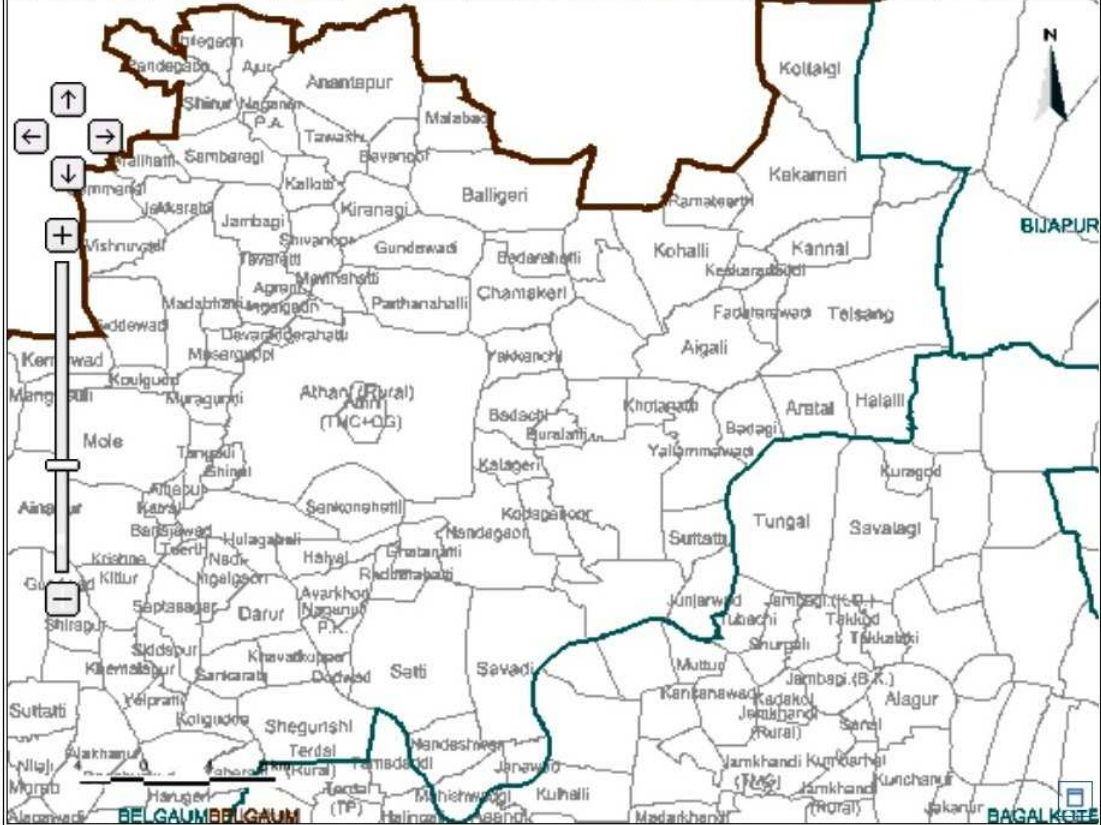
Attribute Operator Value

---

---

Shape File

- GML
- Shape File
- KML



X 75.46
Y 16.638
Scale 4,74,584
SRS 4326

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**Support the Selected layer in GML, Shape and KML format (Only for Super Administrator)**

Layers Add Layer Query Export Search Discover

**» Administrative Boundaries**

Division : MYSORE

District : MYSORE

Taluk : KRISHNARAJA NAG

Hobli : MIRLE

**» Panchayath Raj Institutions**

Zilla Panchayath : SALIGRAMA

Taluk Panchayath : MIRLE

Gram Panchayath : MIRLE



Village : Mirle

**» Electoral Boundaries**

Parliamentary Constituency : BELGAUM

Legislative Assembly Constituency : Athani

[Clear and Reset](#)

X 74.916 Y 16.572 Scale 4,74,584 SRS 4326

## Karnataka GeoPortal – Search module, selecting the Electoral Boundary



Search

Harvest

» Search by District or Taluk

District : Bangalore\_rural

Taluk : Devanahalli

» Search by Spatial Extent

» Search by Keyword

» Shopping Cart

Catalogue

**Title:** : DEVANAHALLI TALUK SETTLEMENTS  
**Keywords:** : DEVANAHALLI  
**Abstract:** : DEVANAHALLI\_TALUK\_SETTLEMENTS  
**Service Type :** OGC:WMS

[Click Here For Service Layers](#)

[Contact Details](#)



[view on map](#)

**Title:** : DEVANAHALLI TALUK HEADQUARTERS  
**Keywords:** : DEVANAHALLI  
**Abstract:** : DEVANAHALLI\_TALUK\_HEADQUARTERS  
**Service Type :** OGC:WMS

[Click Here For Service Layers](#)

[Contact Details](#)



[view on map](#)

**Title:** : DEVANAHALLI TALUK FACILITIES  
**Keywords:** : DEVANAHALLI  
**Abstract:** : DEVANAHALLI\_TALUK\_FACILITIES  
**Service Type :** OGC:WMS

[Click Here For Service Layers](#)

[Contact Details](#)



[view on map](#)

**Title:** : DEVANAHALLI\_TALUK\_BOUNDARIES  
**Keywords:** : DEVANAHALLI  
**Abstract:** : DEVANAHALLI\_TALUK\_BOUNDARIES  
**Service Type :** OGC:WMS

[Click Here For Service Layers](#)

Karnataka GeoPortal – Product Catalogue module, searching through District and Taluk

# Portlet on Karnataka Geoportal (Biogas plant information system)

Administration | About | Help | Log

Karnataka GeoPortal  
ಕರ್ನಾಟಕ ಜಿಯೋಪೋರ್ಟಲ್  
Biogas Plant Information system (BP-IS)

**Legend**

Legend >>

- KARNATAKA\_DIST\_BNDS
- STATE\_DIST\_BNDS
- STATE\_TALUK\_BNDS
- STATE\_GP\_BNDS
- STATE\_VILLAGE\_BNDS

**Overview Map >>**

Map Viewer showing the Legend, Overview Map and Map Navigation Tools

## What is a Spatial Data Infrastructure (SDI)?

“The SDI provides a basis for spatial data **discovery, evaluation, and application** for **users and providers** within all levels of **government**, the commercial sector, the non-profit sector, academia and by citizens in general.”

--The SDI Cookbook  
<http://www.gsdi.org>

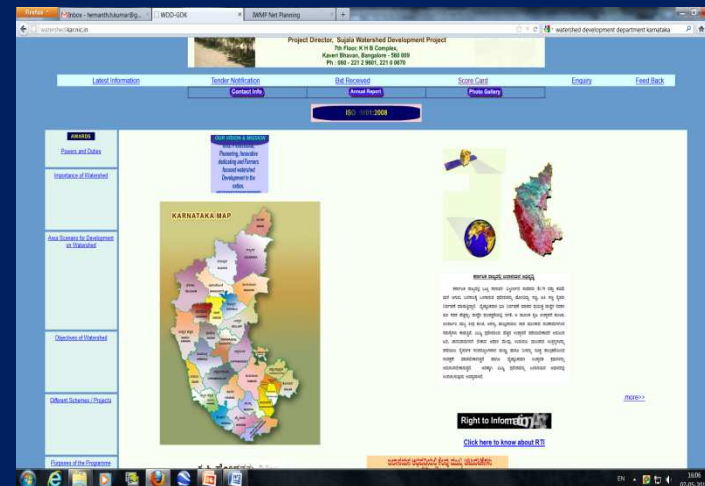
## Status of State SDI

- ✓ **Access, Discovery & Evaluation** – Realised
- **Expectation of State Governments** – Web GIS based services to support E-governance
- **Private Sector** – Involved only in development of SDI's and could we develop geospatial services on collaborative mode.
- **Citizens** – Largely not covered, need to partner with private sector to provide citizen centric services.
- **Academia/non-profit sector** – Planned.

## 2<sup>nd</sup> phase activities

### Geospatial services (GIS-DSS) for governance

- ✓ Watershed Development Department (GIS integrated with MIS)
- ✓ Directorate of Health and Family Welfare



# Crowd Sourcing of Geographic Information


## Karnataka Jnana Ayoga sanctioned project

Crowd sourcing of GI could be contributed both by authoritative i.e., government departments and nonauthoritative sources i.e., citizens.

- Map and document public assets created under various state funded programs using GPS enabled handheld devices
- Capacity building of field staff in the usage of mobile apps.

KSCST GeoInfo – Data Preview  
#26

Department/Institution	: Department of Education
District	: BANGALORE RURAL
Taluk	: DODDABALLAPURA
Gram Panchayath	: Doddabelavangala
Village	: Doddabelavangala
Habitation	: Doddabelavangala
Scheme	: Education
Asset Type	: School
Asset Name	: Govt. Higher Primary School
Location / Landmark	: Main Road
Survey No	: 36
Asset Status	: Working



Save  
Send  
Edit  
New

## Issues and challenges of SDI

- Departments need Geospatial services for G-governance and policies for the adopting in GIS in governance i.e., **move from optional to obligatory to mandatory.**
- Data Updation: Currency of data is crucial. Crowd sourcing of authoritative data through mobile apps is one of the solution.
- Sharing of value added data/services. Data acquired through multiple sources needs permission to share and MOU/Organizational agreements to share data.
- Citizen centric services in collaborative mode (location based services/POI/navigation)

## Issues and challenges of SDI –contd.

- Mobile services
- PPP/BOO/BOOT model for mapping, updating and providing services
- Move from optional to obligatory to mandatory.
- Free and Open Source Software for SDI?



**Thank you!**

**H Hemanth Kumar**

**KSCST, IISc, Bangalore – 12. Karnataka.**

**[hemanth@kscst.iisc.ernet.in](mailto:hemanth@kscst.iisc.ernet.in)**