

Karnataka Geographic Information System Portal (K-GIS PORTAL)

User Manual: Version-1.3



KARNATAKA STATE REMOTE SENSING APPLICATIONS CENTRE

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USER'S MANUAL

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1 VIEWER EXPLORE KARNATAKA

Viewer user is able to click to K-GIS portal by entering the URL <http://stg1.krsac.in/kgisportal> address in browser. The KGIS portal application screen will be displayed.



Fig1. K-GIS URL

- Viewer Explore Karnataka is a public, common people can view the portal by clicking on Viewer tab



Fig2. Viewer tab

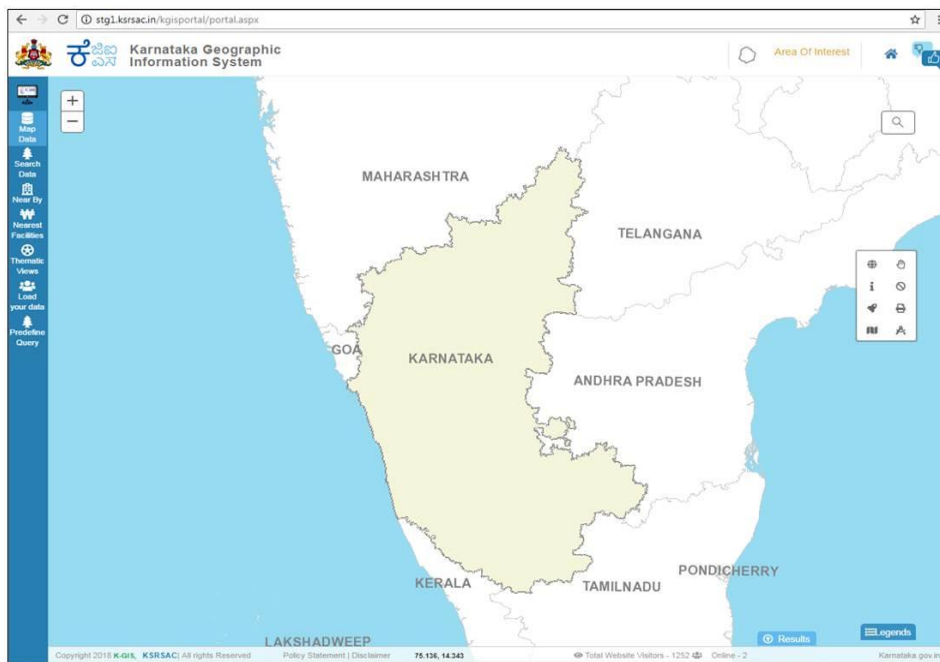


Fig3. Base Map page



1.2 Specific Features in Viewer Explore Karnataka

1.2.1 Table of content (TOC)/Side bar menu

User can switch on/off the layers. Some of the query part is also included in TOC.

- User can find various available K-GIS datasets (maps) Categorized according to K-GIS standards through Map Data.
- Information regarding Satellite data availability, its resolution and timestamp information can be queried (Selection by free hand drawing) in Search Data Section.
- Ready –to –use theme based maps and Display of heat maps (Point density map) for District Hospitals, Taluk Hospitals Primary Health Centers & Community Health Centers Engineering Colleges is available in Heat map Exploration are available in Thematic Views.
- Load your data allows user to add the REST service and KML services URL and view in the portal. Add Shape file will allow the user to upload shape file in zip format.

1.2.2 Standard Toolbox

- Full Extent – Zooms to Karnataka state extent.
- Identifier– Gives attribute (MIS) information of the entire layer at a particular point.
- Measurement – Shows the measurement of Area and distance between two points and Latitude, Longitude information at a particular point.
- Clear Graphics– Clears all the graphics rendered.
- Print– This tool is used for printing the maps
- Go to Location by Latitude/longitude- Zooms to user specified latitude & longitude with a marker.
- Search – Searches results from Administrative layer and Asset layers.
- Theme Analysis –We can overlay the two themes on map by using Slider. The opacity will be displayed on map.

1.3 Common Features in General User

- Help - User guide to use the portal is available.
- Area of Interest – This tool restricts the view to only user selected/ interested area, Selection option happens through boundaries. All the query and other operations happen on user preferred area.

2 NAVIGATION TOOLS

The Map Display Tools contains the control through which user can access the information easily and productively. The portal contains the Search, Zoom to Full Extent, Identifier, Measurement tool, Clear Graphics, Base map Gallery, and Print.

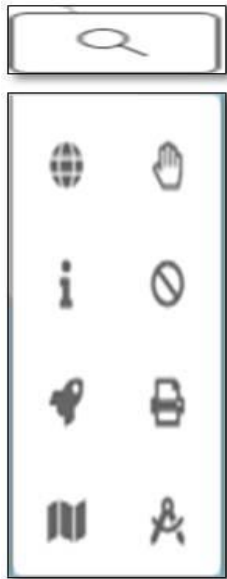


Fig4. Navigation Tools

2.1 Search

User can Search results from Administrative layer and Asset layers on the Map.

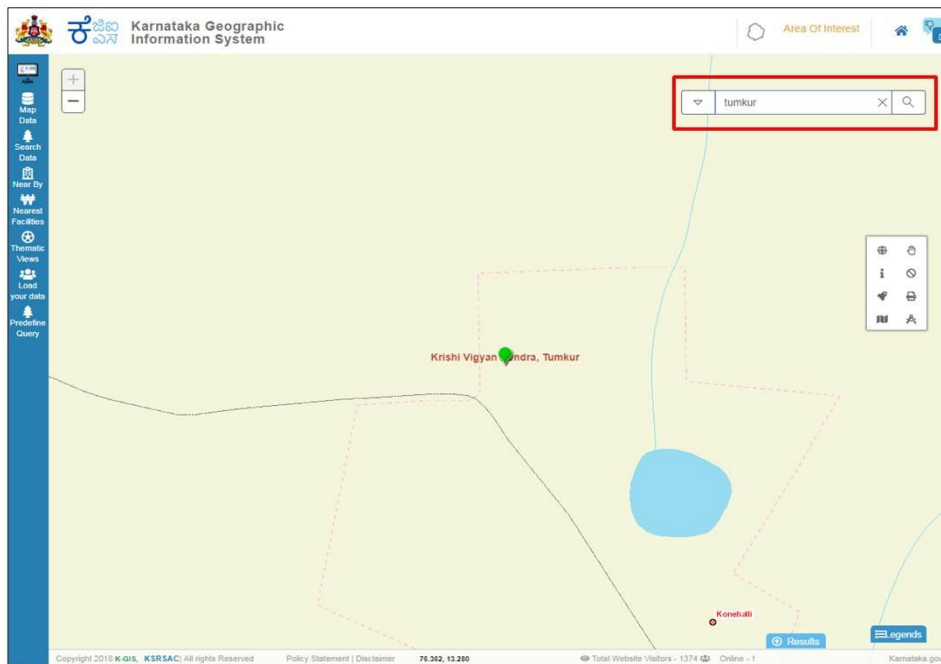


Fig5.Search with Marker display on map

2.2 Zoom Full Extent

User can control for zooming to the entire extent of Karnataka state on the Map.

User has to Select the tool and click on the map window.

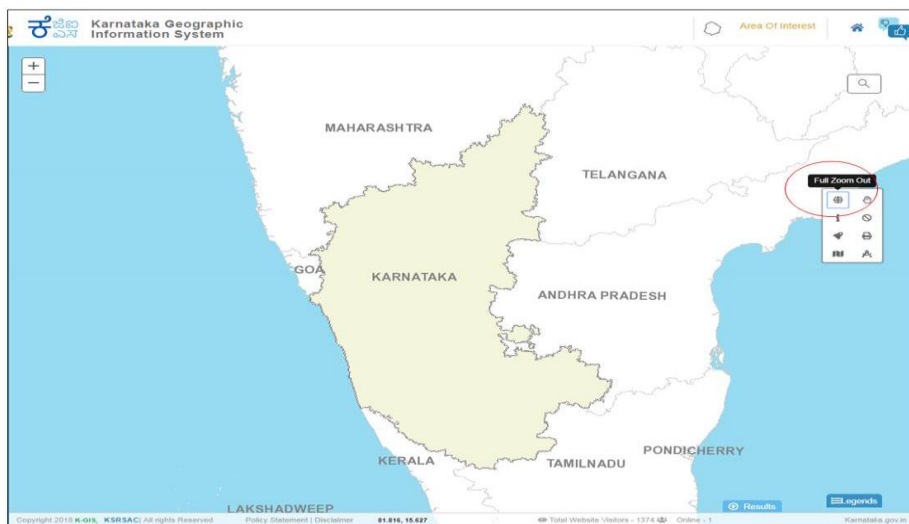


Fig6.Zoom Full Extent

2.3 Identify

User can use this tool for identifying or getting information on a single feature of an active layer on Map.

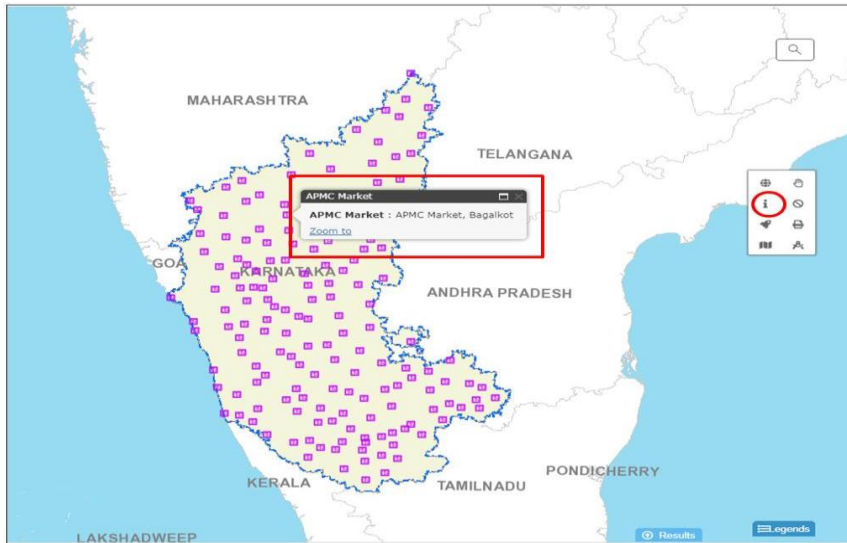


Fig7.Info template

2.4 Go to Location by Latitude/Longitude

User can use this tool by giving Latitude & Longitude & Click on Go there the map will Zoom to that latitude & longitude Location.

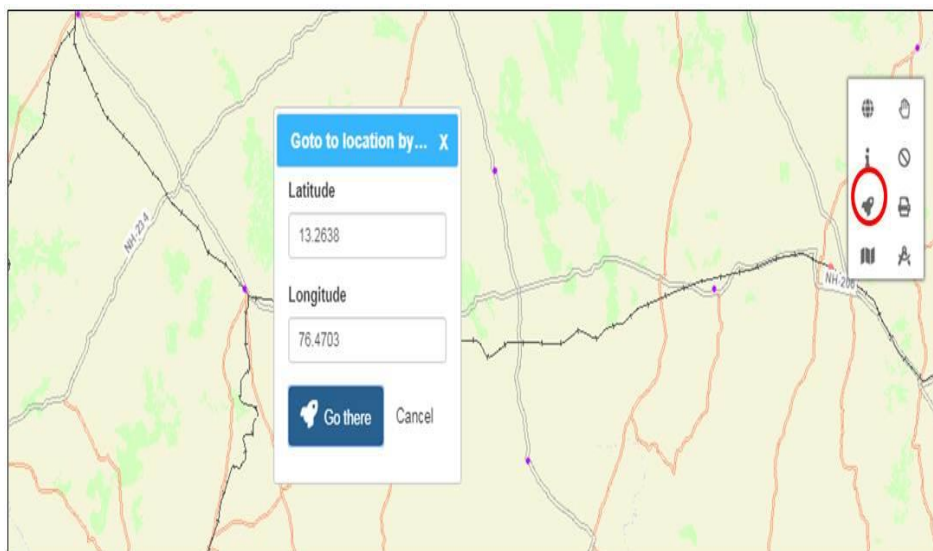


Fig8.Info template

2.5 Measurement Tool

User can select the tool which allows user to measure the length and area in different measuring units.

User can Measure it by 'Area', 'Distance' & 'Location'.

2.5.1 Area

User has to draw the Area (free hands) on the Map & has to select the Measuring Unit.

Then the Result will be displayed as how much area is covered.

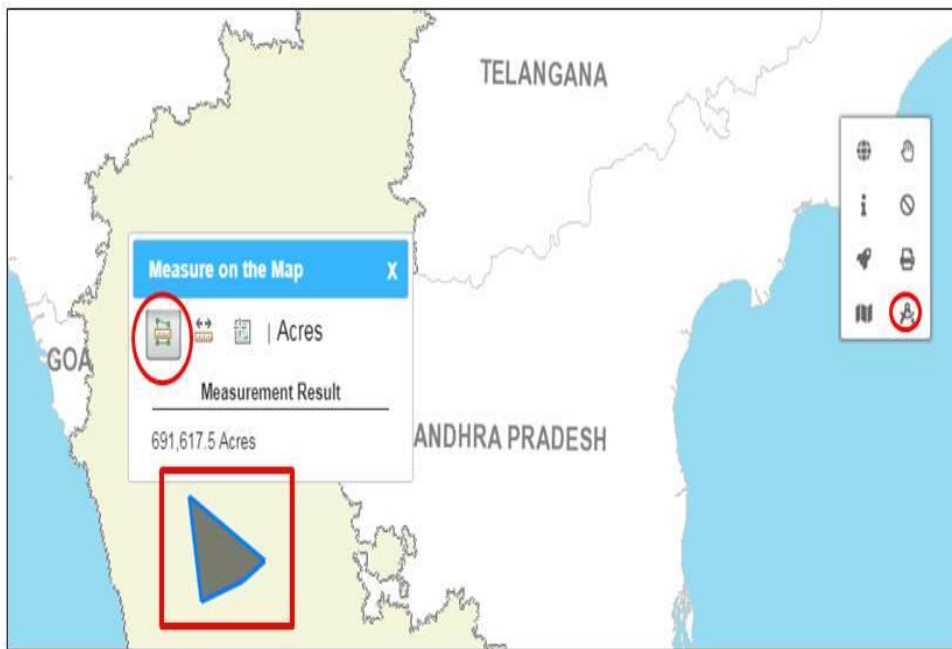


Fig9.Area measure

2.5.2 Distance

This tool will be used to measure the distance between two locations on the map.

The distance can be measured in kilo meter, meter etc.

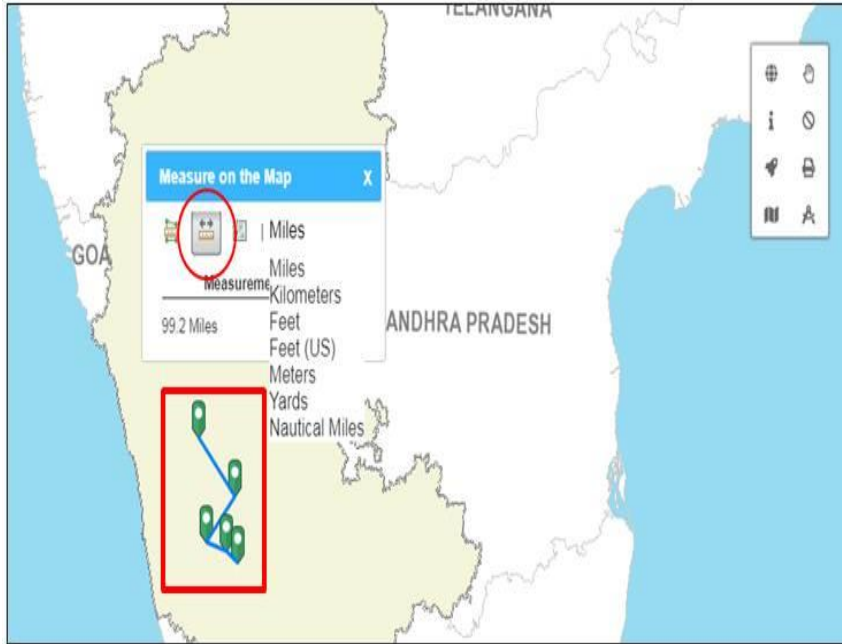


Fig10.Distance Covered

2.5.3 Location

This tool will be used to measure the exact location's Latitude & 'Longitude'.

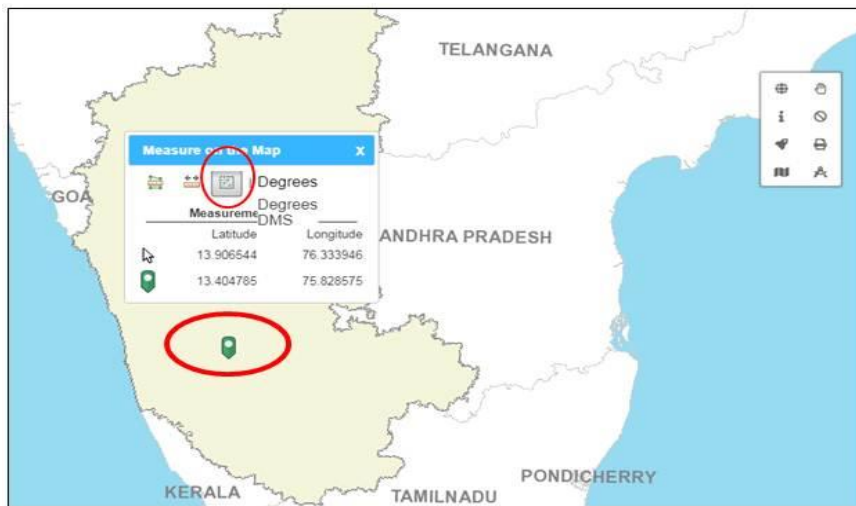


Fig11.Location point & its latitude & longitude

2.5.4 Clear Graphics

This tool will be used to clear the graphics created by user.

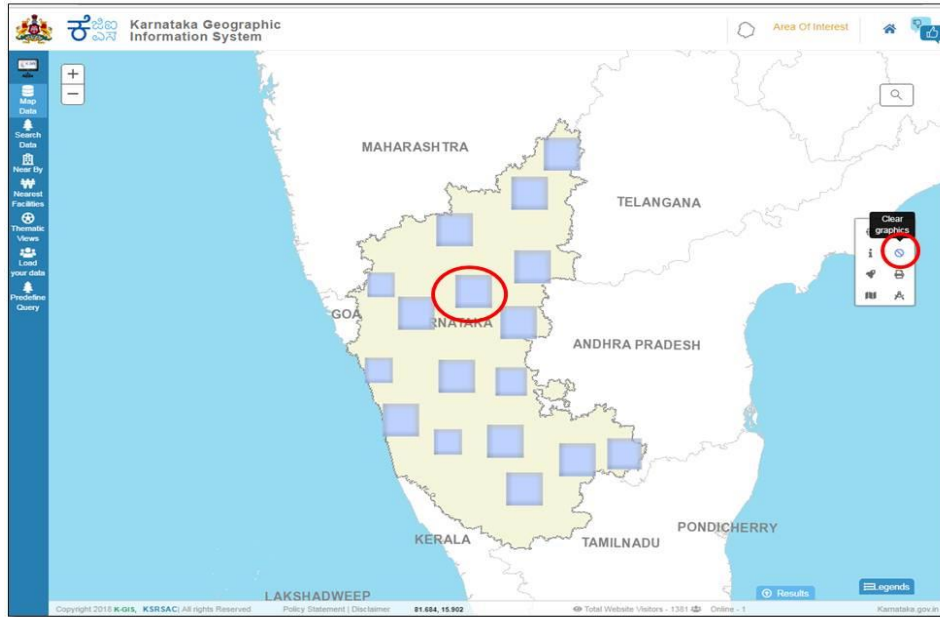


Fig12.Clear graphics on map

2.5.5 Base map Gallery

This tool allows user to select the desired base maps like Satellite, Road map and Topo Map. User can toggle the map view from Base map & Satellite Image by clicking on this.

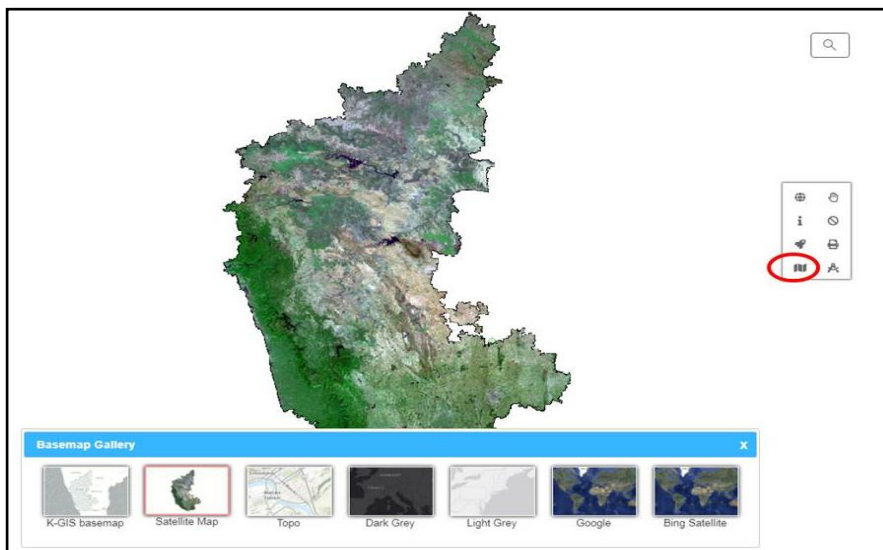


Fig13.Base Map Gallery

2.5.6 Pan



Fig14.Pan

2.5.7 Print

Prints the map according to map scale and map extent in different formats (EPS, GIF, JPEG, PDF, PNG32, PNG8, SVG and SVGZ) and layout options (A3 Landscape/Portrait, A4 Landscape/Portrait, Letter ANSI a Landscape/Portrait, Tabloid ANSI B Landscape/Portrait, Map only).

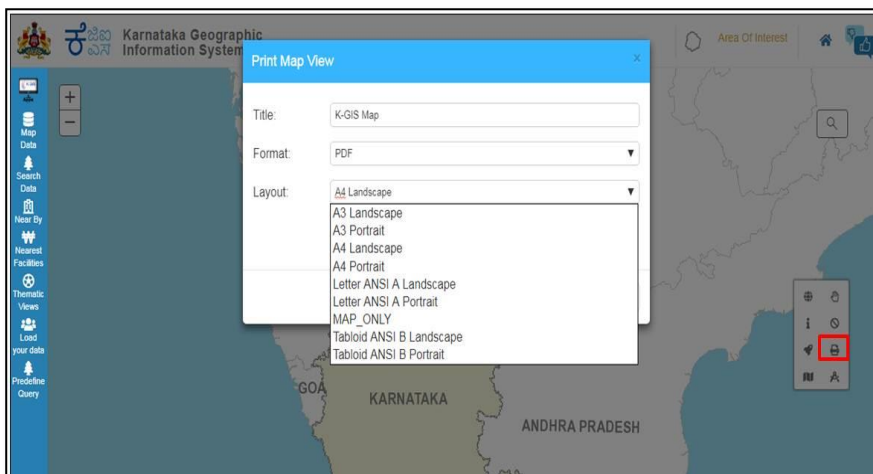


Fig15.Print Button

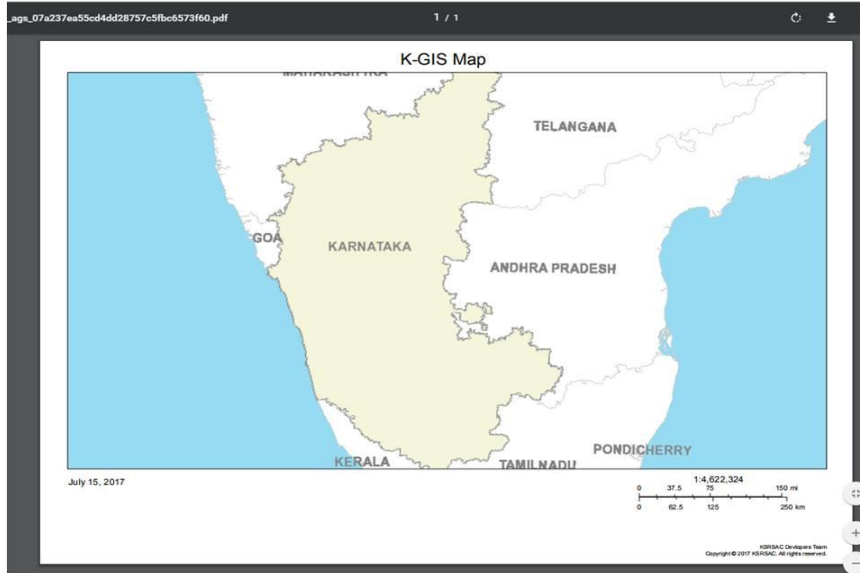


Fig16.Print Map

2.5.8 Home Button

When user clicks on Home Button” It will navigate to front page.



Fig17. Home Button

3 AREA OF INTREST

This tool restricts the view to only user selected/ interested area, Selection option happens through Category. All the queries and other operations happen on user preferred area.



Fig18. AOI Tool Bar

In, Category User can select District, Taluks, Hobli, and Village



Fig19. AOI Category Dropdowns

When user clicks on 'District', in the right hand corner of the page the Option to select the list of Districts names will be displayed.

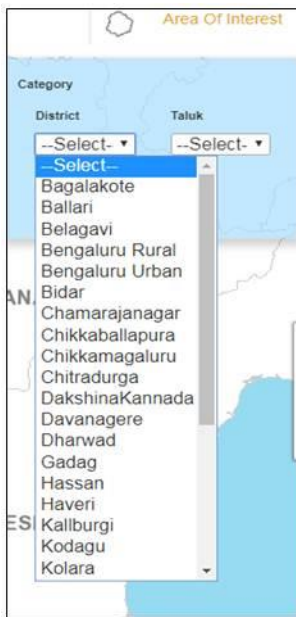


Fig20. District Selected Dropdown

4 K-GIS VISULIZATION

4.1 Map Data

4.1.1 Layers

The citizens can Map Data, which contains the rich state of art administrative boundaries like State, District, Taluk, Hobli, and Village. It also facilitates the Agriculture, AHVS, Cooperative Audit, Health, Forest environment and ecology, Geology, Home & Security, Industries & Commerce, Infrastructure, Revenue, Social Welfare, Tourism, Utilities and Natural Resource.

- Table of Content (TOC)/ Side bar menu User can switch on\off the layers.

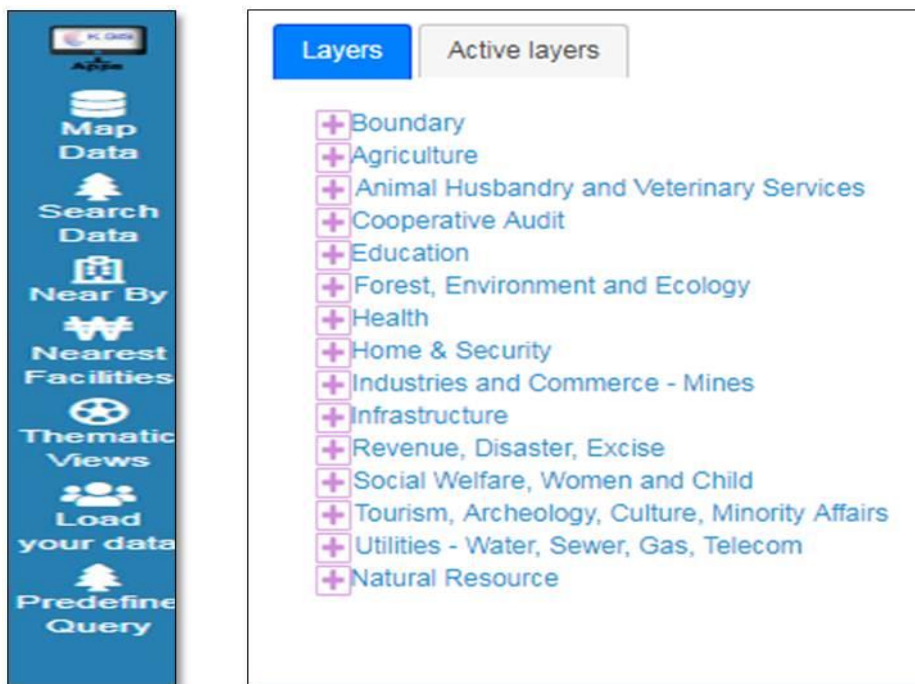



Fig21. Side Menu Bar of TOC and administrative layers

- User can find various available K-GIS datasets (maps) Categorized according to K-GIS standards through Map Data - Layers

- The User can select required Groups of Administrative layers by checking on checkbox & required dropdown option displayed.
- When user clicks on ‘Map Data -Layers’ 15 Groups of layers Checkboxes will be displayed.
- User has to select the required checkbox or user can click on + to select different attributes which are related to the same Group.



Fig22. Plus of Map Karnataka-Layers

For Example: When the user clicked on ‘+Education’ 

The dropdown of Attributes like ‘Higher Education’ & ‘Public instruction’ will be displayed.

User can get a sub categorized layers by selecting ‘University’, State Colleges’ or ‘Other Colleges’ options.

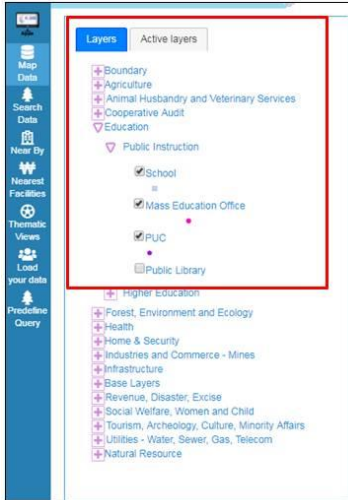


Fig23. Different types of Education Layers

The User can see the Layers which are selected by checking on the TOC/Side bar menu will be displayed as Layers on the Map and symbology of layers will be displayed on legend.

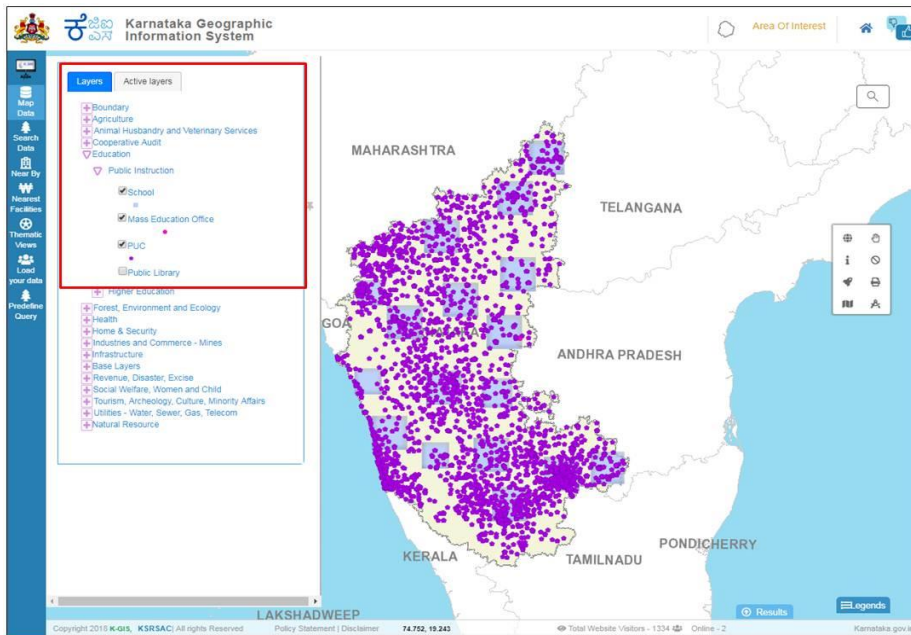


Fig24. Symbology of layers display on map

4.1.2 Active Layers

The User can see the Active Layers which are selected by checking on the Layers will be displayed as Layers on the Map and symbology of layers will be displayed.

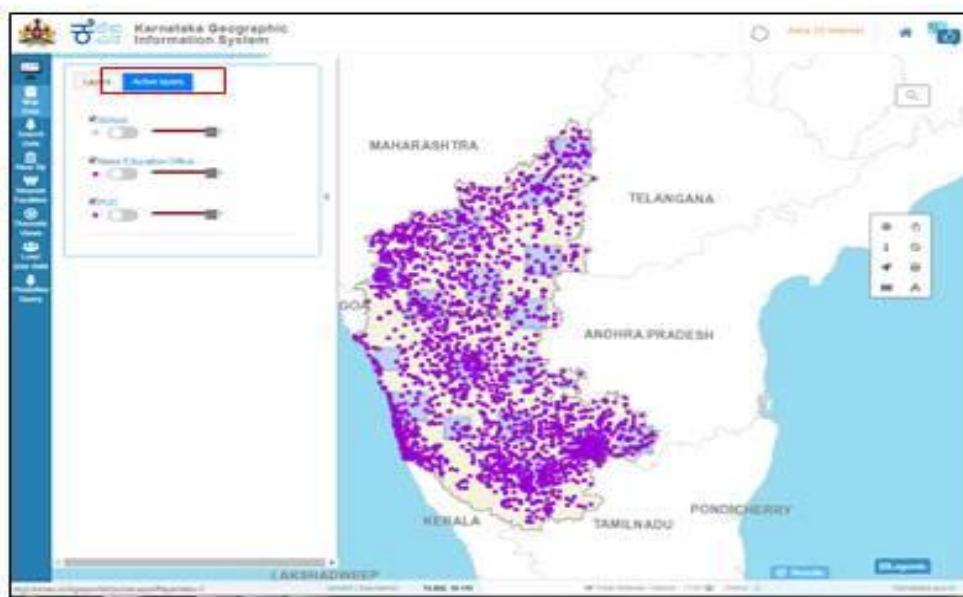


Fig25. Symbology of active layers display on map

4.2 Search Data

4.2.1 Data

After selecting desired Sector, Layer, Fields, Operator & Values user can search Simple and Complex queries by selecting 'Data' Tab.

The dialogue box of 'Search Queries' will be displayed. With the checkbox of different departments like 'Education' 'Health', 'Agriculture' & 'IDD'

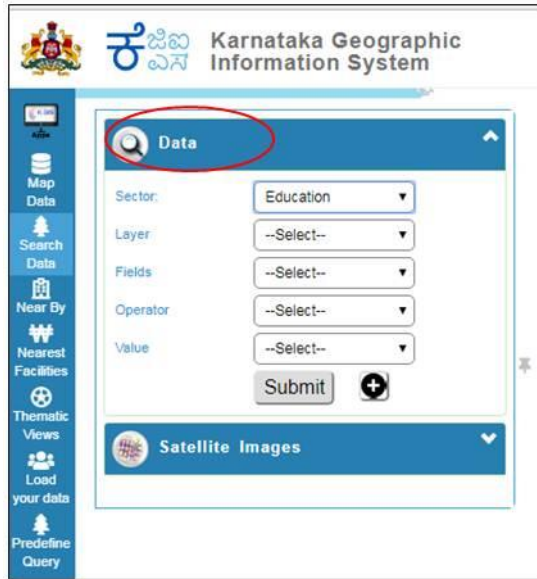


Fig26. Data tab and its dropdown

In search queries Dialogue box, after checking the specific department's checkbox, the dropdown of sub-departments will be displayed.

For example:

When user checked on "Education" checkbox, the checkbox of 'Engineering colleges' has to be checked.

Then the checkbox of 'College type' has to be checked.

Then user can select the 'Query' like weather they can Select 'Affiliated colleges' or 'University college' or 'PG center/off campus center or Any of the above or All of the Above.

After selecting the Query, user has to click on "Submit".



Fig27. Education Query & submit button

After clicking on ‘Submit’ the Marker of the same will be displayed on the Map Screenshot.

The info-template will be displayed when user clicked on Marker on the Map Screenshot.

Below the Map, Information Table of the Selected Query will be displayed.

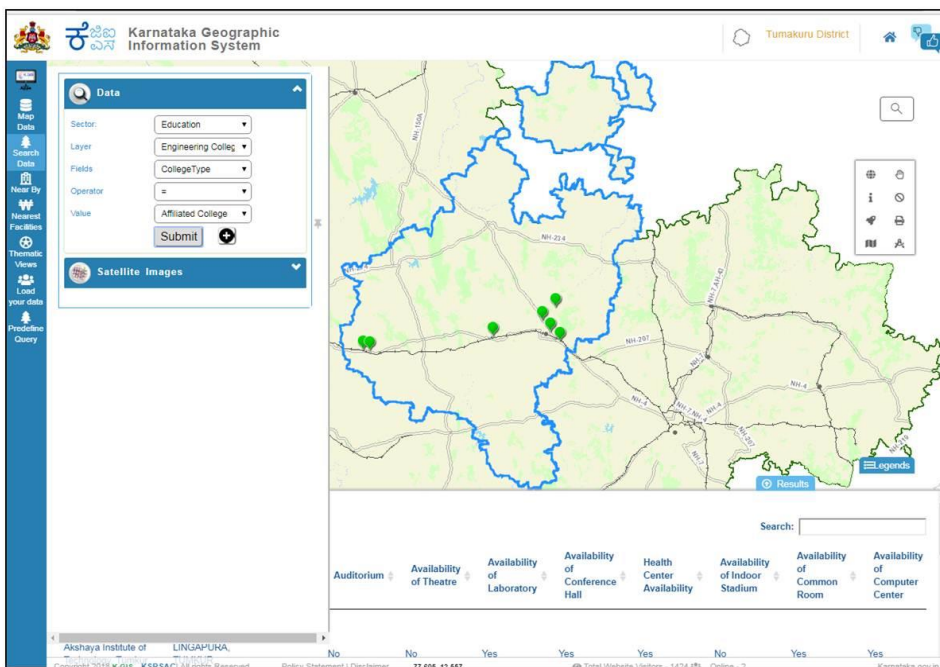


Fig28. Result of the selected Query with Markers and table

4.2.2 Satellite Images

Information regarding Satellite data availability, its resolution and timestamp information can be queried (Selection by free hand drawing using draw) in Satellite Data Availability Section.

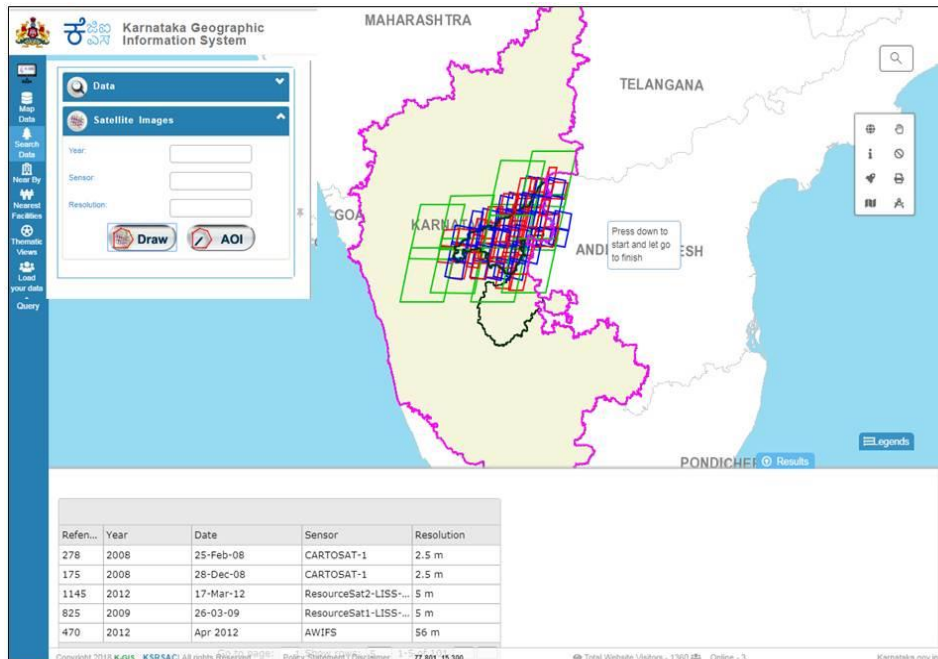


Fig29. Satellite information in grids

4.3 Near By

Nearby Is having Buffer based query, When the user selected ‘Nearby’, the Dialogue box will be displayed which contains different Select layers On click, Near to, AOI & User AOI query.



Fig30.Location tab Dropdowns

4.3.1 On Click Buffer

User can get result from 1 or more layer by giving buffer distance. When the user clicks on map the results will be displayed in the selected Radius as a Buffer & the Markers & table will be displayed within the Buffer.

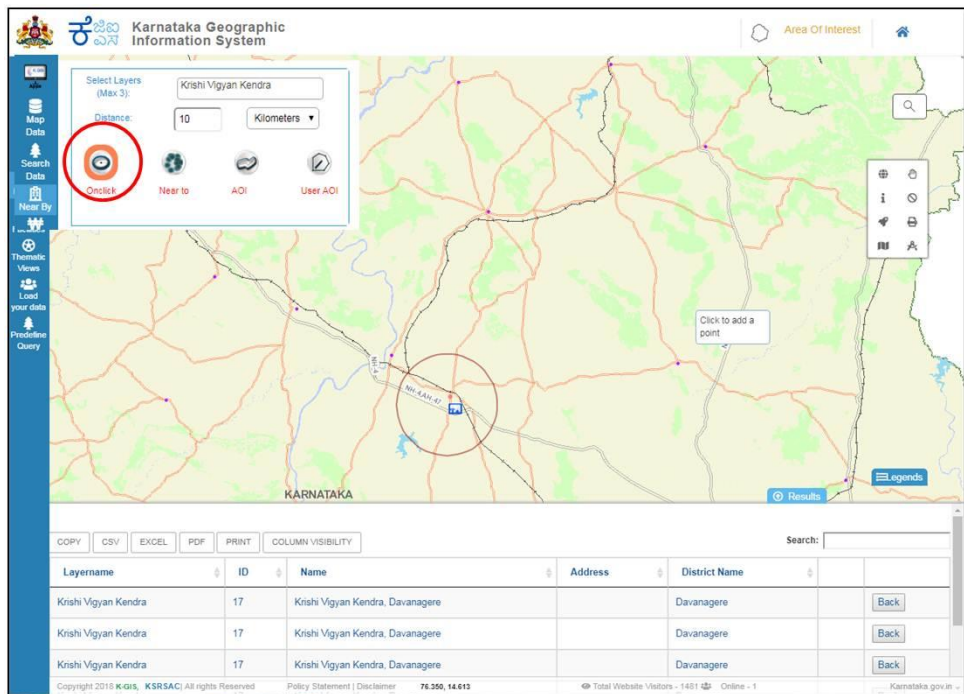


Fig31.Onclick Buffer

4.3.2 AOI Buffer

User can select required 1 or more Layer fields simultaneously along with the Radius to get the Information by selecting AOI.

When the user clicks on map the results will be displayed in the selected Radius as a Buffer & the Markers will be displayed within the Buffer.

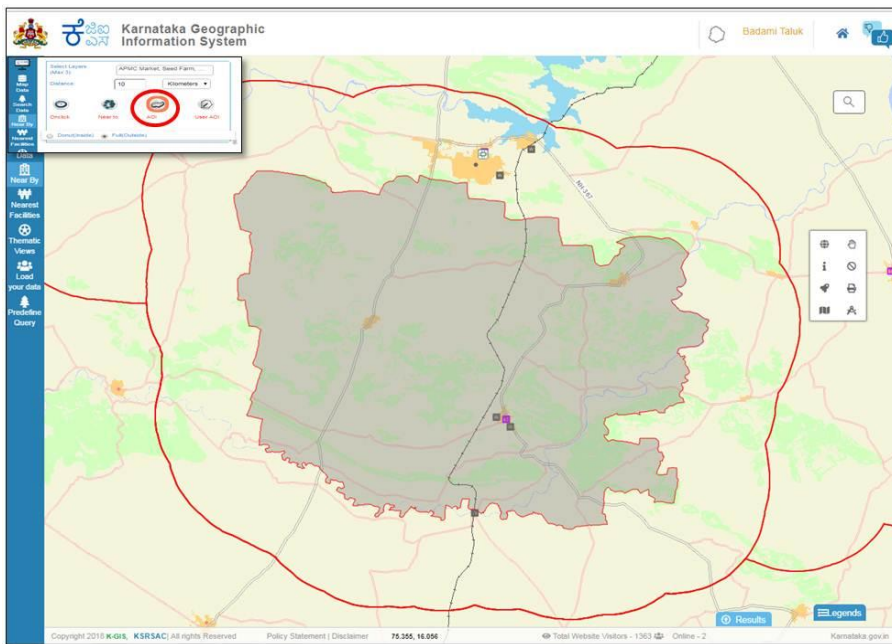


Fig32. Result of the selected layers with buffer and table

4.3.3 User AOI Buffer

User can get result from 1 or more layer by giving buffer distance and by free hand drawing using draw.

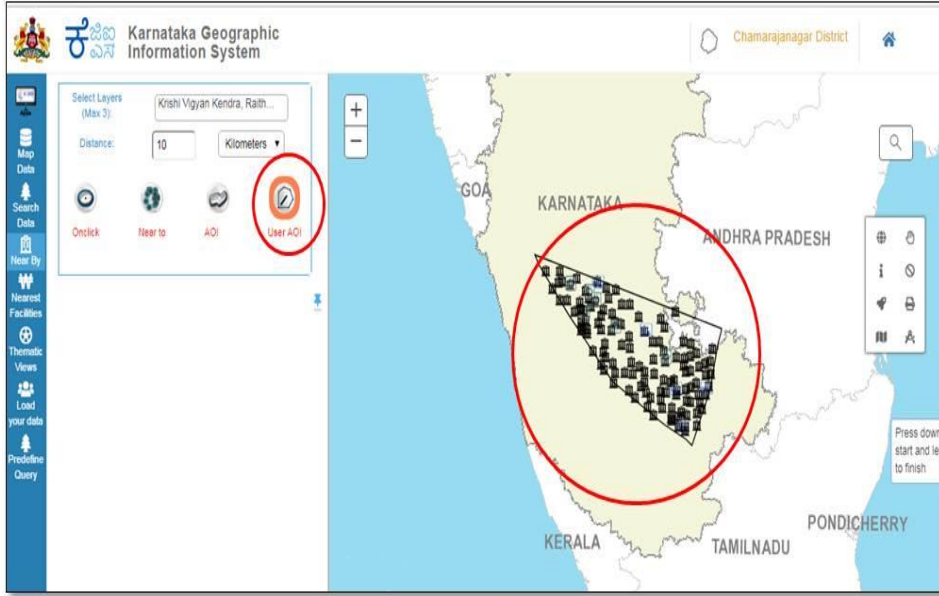


Fig33. User AOI Buffer

4.4 Nearest Facilities

User can select Layers required one or more Layer fields Simultaneously by Click on Map to get Result, the results will be displayed on selected layers Markers & table will be displayed on map.

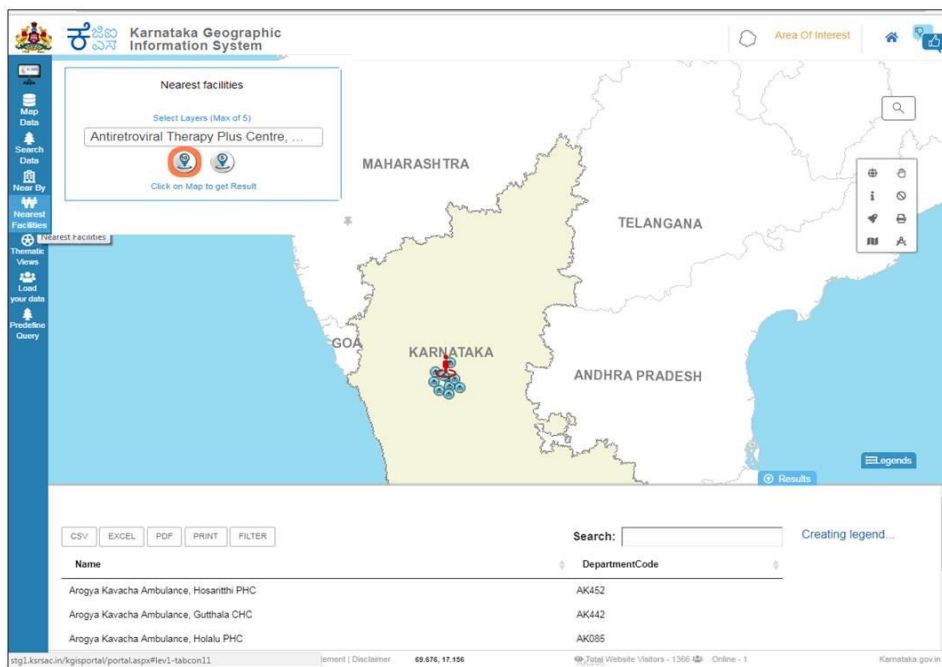


Fig34. Nearest Facilities Result of the selected dropdown with Markers and Table

4.5 Thematic Views

4.5.1 Demography

User can explore District wise with Statistics on Base maps by clicking on “Demography” & by selecting the Available Demography Icons user can able to view the Statistics in table

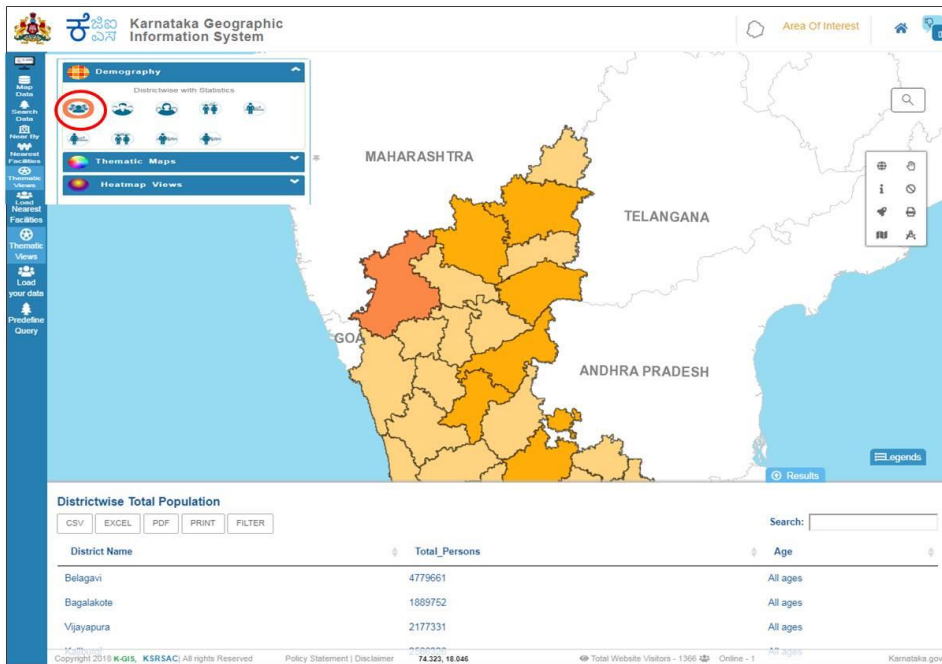


Fig35. Selected demography is displaying on map

4.5.2 Thematic Maps

User can explore the ready to available Themes on Base maps, by clicking on “Thematic Maps” & by selecting the Available Themes.

The Legends & selected themes will be displayed on base map.

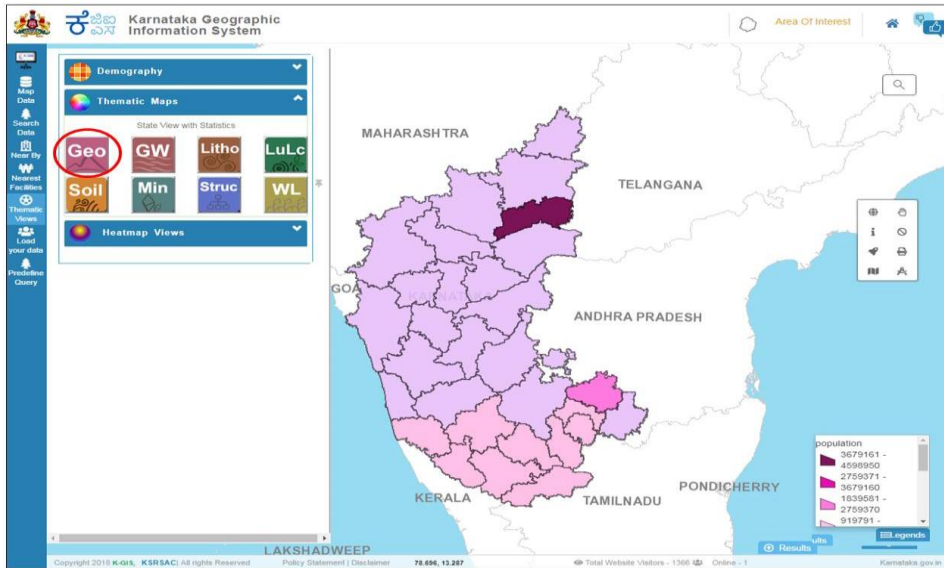


Fig36. Themes with legends

4.5.3 Heat Map Views

When user clicks on “heat map Exploration”, the Display of heat maps (Point density map) for District Hospitals, Taluk Hospital, Community health Center & Primary Health center will be displayed on Map.

User can Reduce/Increase the Point Density on Map with the Use of Slider.

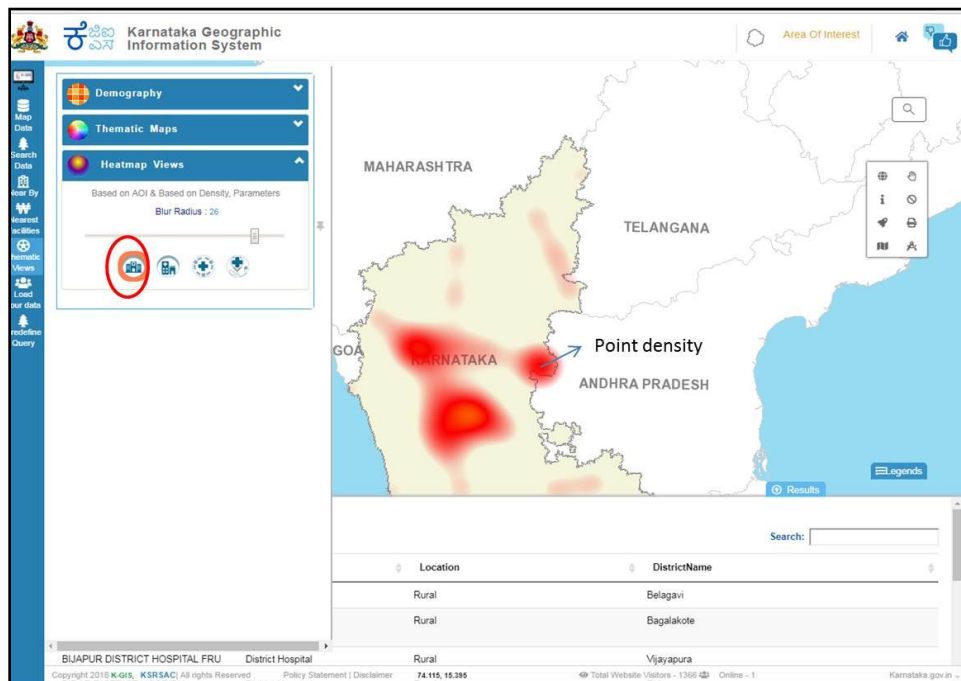


Fig37. Heat map Exploration with Point Density display on map

4.5.4 Daily Rainfall from DMC

When user clicks on “Daily Rainfall from DMC”, the Display of layers for selected date will be displayed on Map.

User can Reduce/Increase the Point Density on Map with the Use of Slider Opacity.

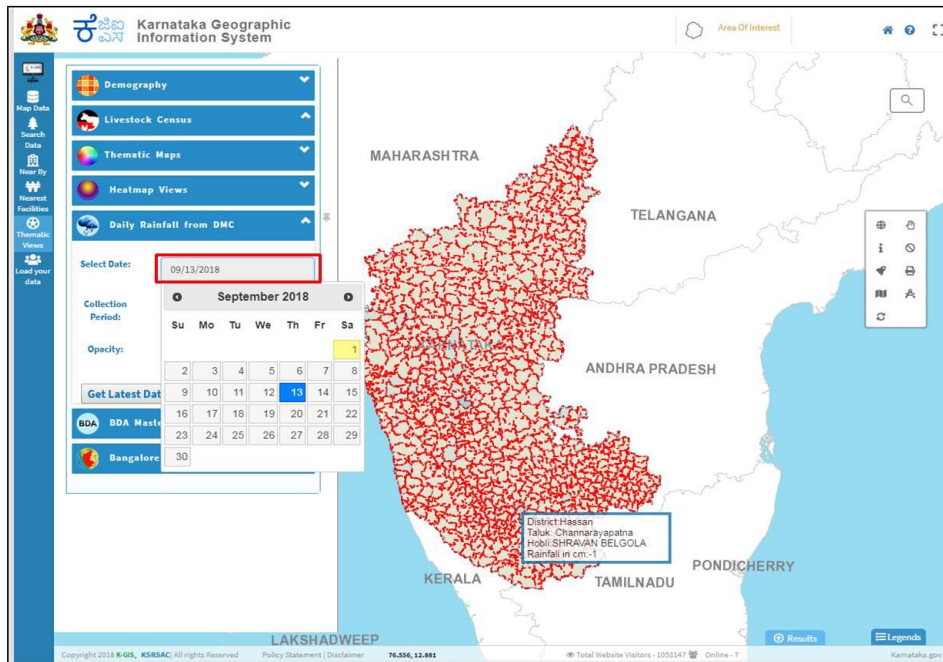


Fig38. Daily Rainfall from display on map

When user clicks on “View Live Data”, the real time weather Information will be displayed on Map and District Names, Rainfall, Rainfall Range, Temperature, RH Range, Wind speed range & Wind Direction will displayed in the table w.r.t district .

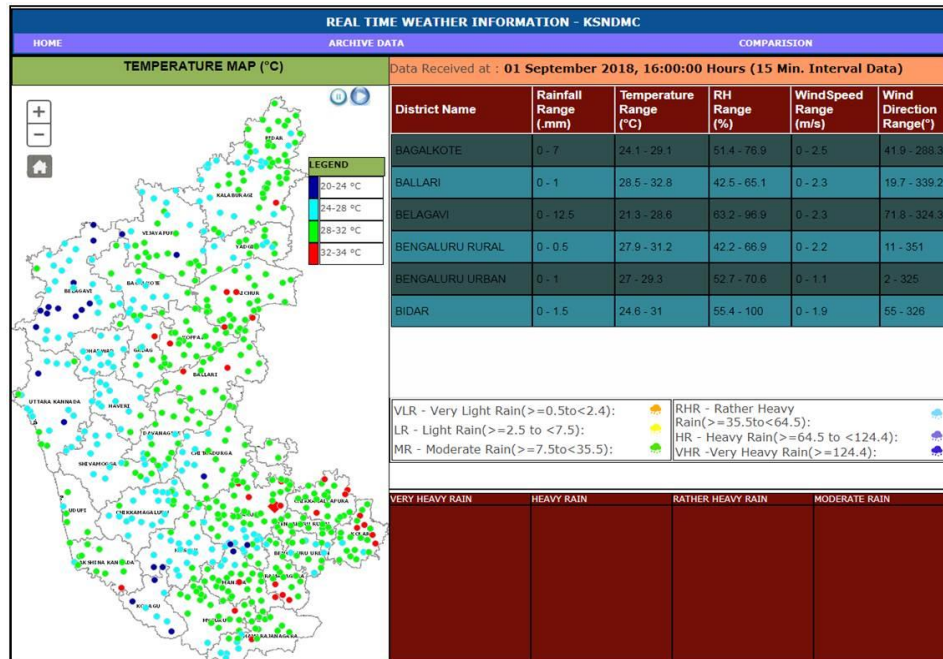


Fig39. View Live Data on Map

4.5.5 BDA Master Plan

When user clicks on “BDA Master Plan”, it will be displayed on Map with Information.

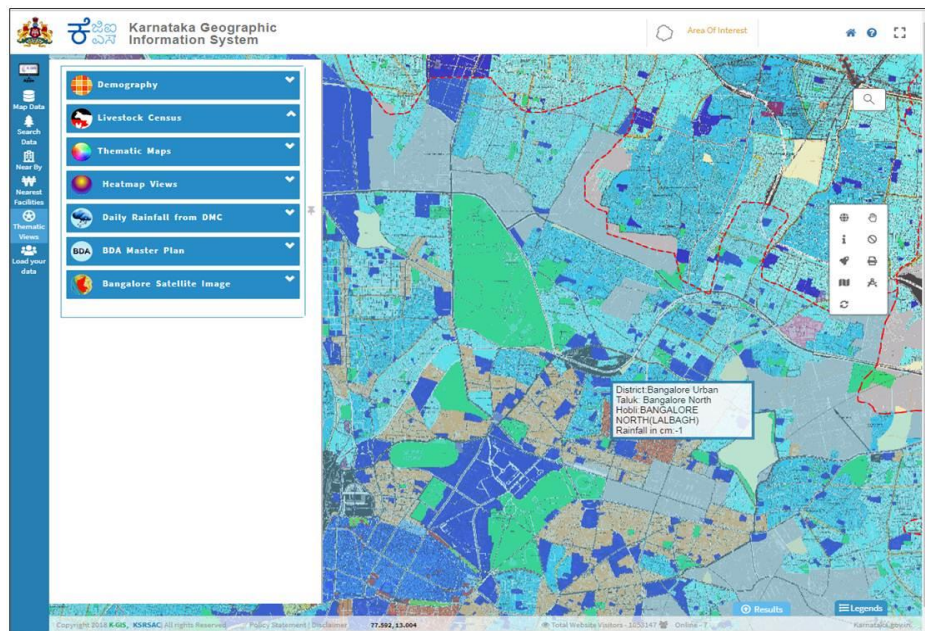


Fig40. BDA Master Plan on Map

4.5.6 Bangalore Satellite Image

When user clicks on “Bangalore Satellite Image”, it will be displayed Satellite Image on Map with Information.



Fig41. Bangalore Satellite Image on Map

4.6 Load Your Data

Load your data allows user to add the REST Service, KML Layer URL, Add Shapfile & Add CSV file and view in the portal (MAP).

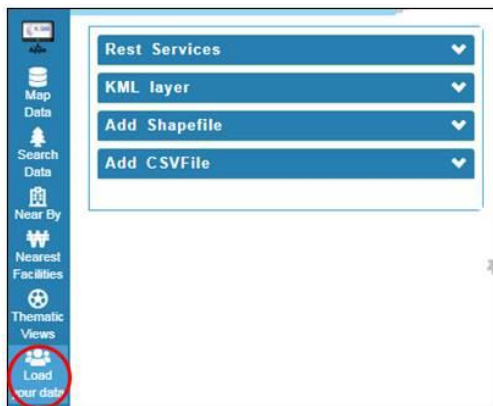


Fig42. Load Your Data

4.6.1 Rest Services

User has to Copy the URL of Boundary Layers & Paste it in REST Service Box & has to click on Upload, the Boundary Layer Map will be displayed.

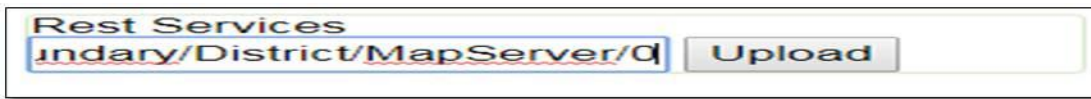
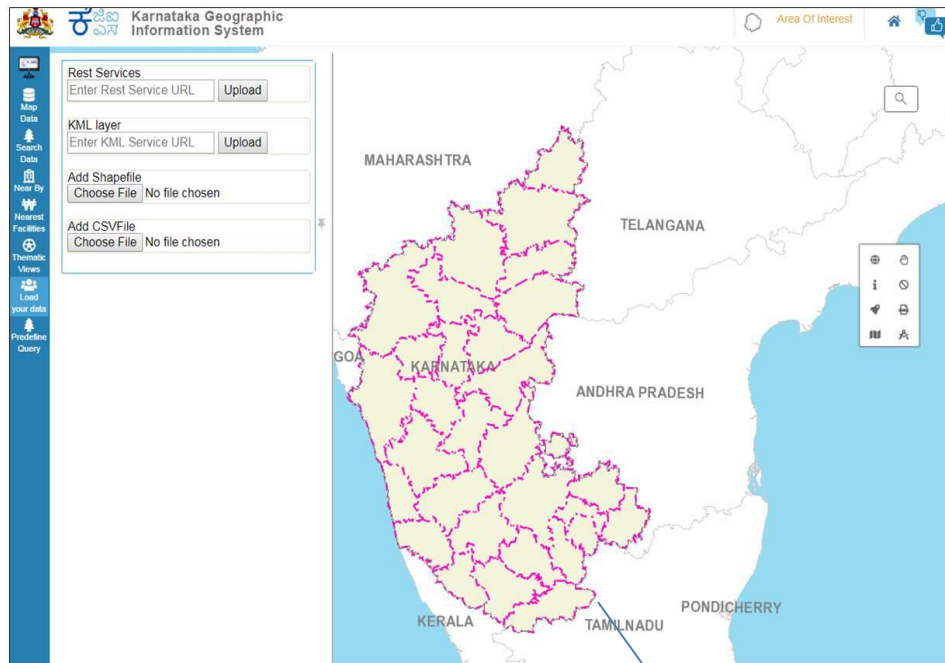


Fig43. Rest Services



District Layer

Fig44. District layer on map

4.6.2 KML Services

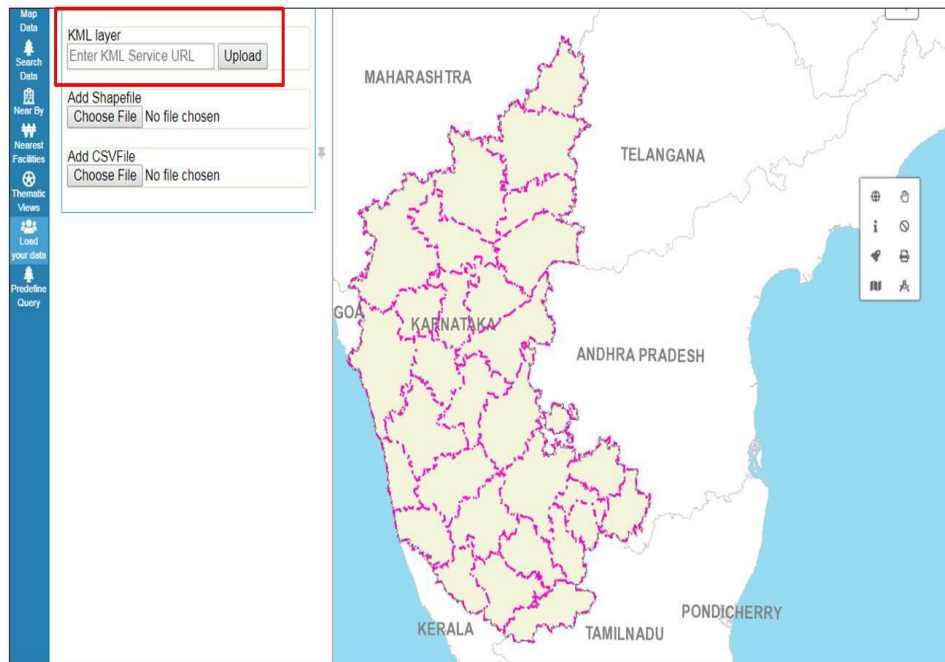


Fig45. KML Services

4.6.3 Add Shape File

User can upload Shape file/CSV Files in zip format. The Markers will be displayed on Map Regarding the Shape file Uploaded.

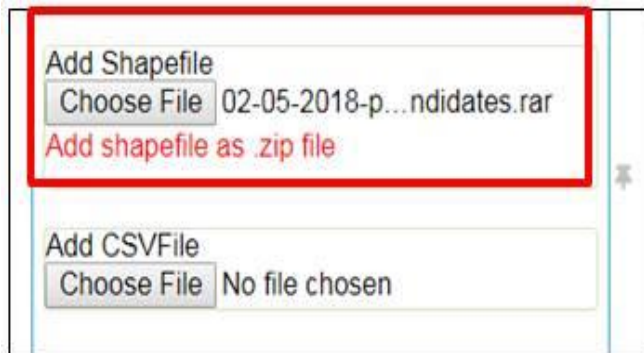


Fig42. Add Shape File Zip Format & CSV file

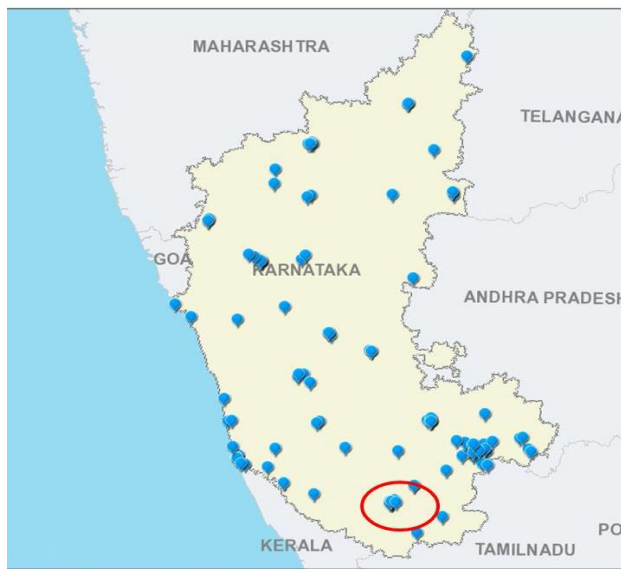


Fig46. Marker display on map

5 APPLICATION

The KRSAC has developed web GIS applications for policy making & planning, execution and monitoring of departmental activities and providing geospatial services at grass root level under the KGIS project for the use of GoK departments. . The user can access to the Applications by clicking on Apps.

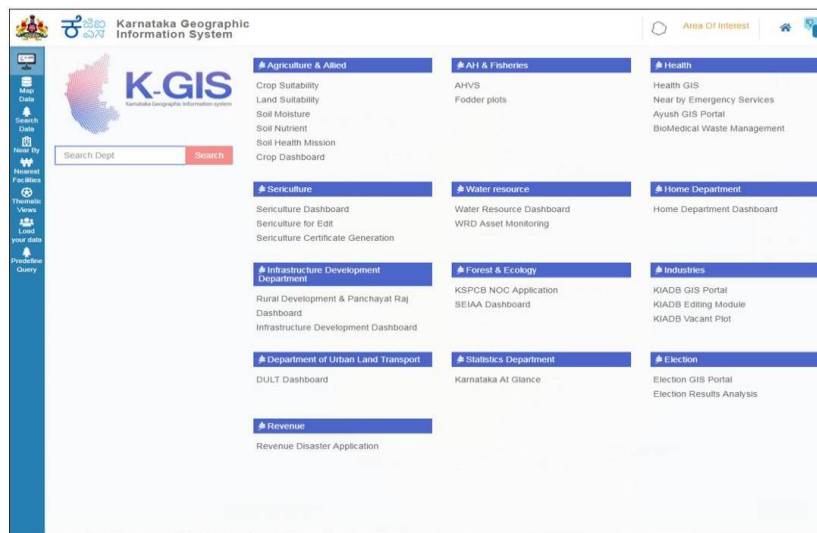


Fig47. Application Page