



# Karnataka State Remote Sensing Applications Centre

DPAR (e-Governance), Government of Karnataka

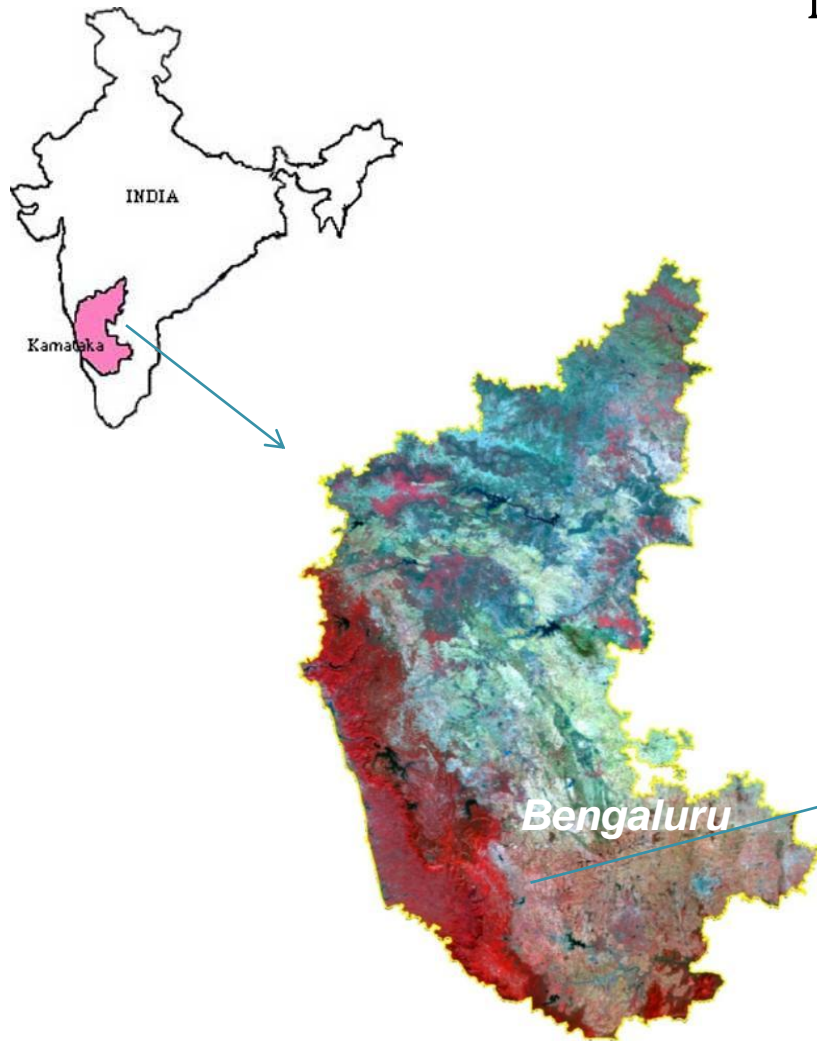
## Karnataka GIS

27<sup>th</sup> National Conference on e-Governance

3 - 4 September, 2024



Nodal Agency to plan and implement geospatial activities in the state



*Established in 1986*

- ❖ Repository of Information/ Data/ Maps
- ❖ Building Capacity in RS & GIS

**200+ Data Scientists/Software Developers/Information Managers/Administrators**



# Mandate



- To **co-ordinate the requirements of the state departments** for any remotely sensed data and applications
- To act as **repository (data bank) of remote sensing images and derived geospatial datasets** of the state with relevant attributes.
- To **develop GIS applications** for GoK departments
- To **assist user departments / organisations / academia** in the implementation, monitoring and evaluation of RS & GIS applications
- To **build capacity in RS & GIS** in the line departments
- To **Promote Research and Education** in the field of Geomatics : **MTech Geoinformatics**



# Karnataka GIS (K-GIS)



## Components of K-GIS

- **K-GIS Asset** - a seamless, state-wide GIS-Ready data layers that are standardised and updated and configured to meet the GIS data and application needs of government, citizens and enterprises.
- **K-GIS Portal** - a single gateway access to K-GIS data & K-GIS DSS applications with specialised metadata service, GIS applications service, data ingest service, data sharing service, publishing services etc.
- **K-GIS DSS Applications** - For decision and work-processes of different departments.
- **K-GIS Infrastructure**
  - Development and Staging at KSRISAC
  - Hosting and Servicing through KSDC
- **K-GIS Capacity Building** - Training and orientation for users/officers of GoK departments.



# Karnataka GIS (K-GIS)

## Towards G-Governance



### Seamless data on standardized spatial framework

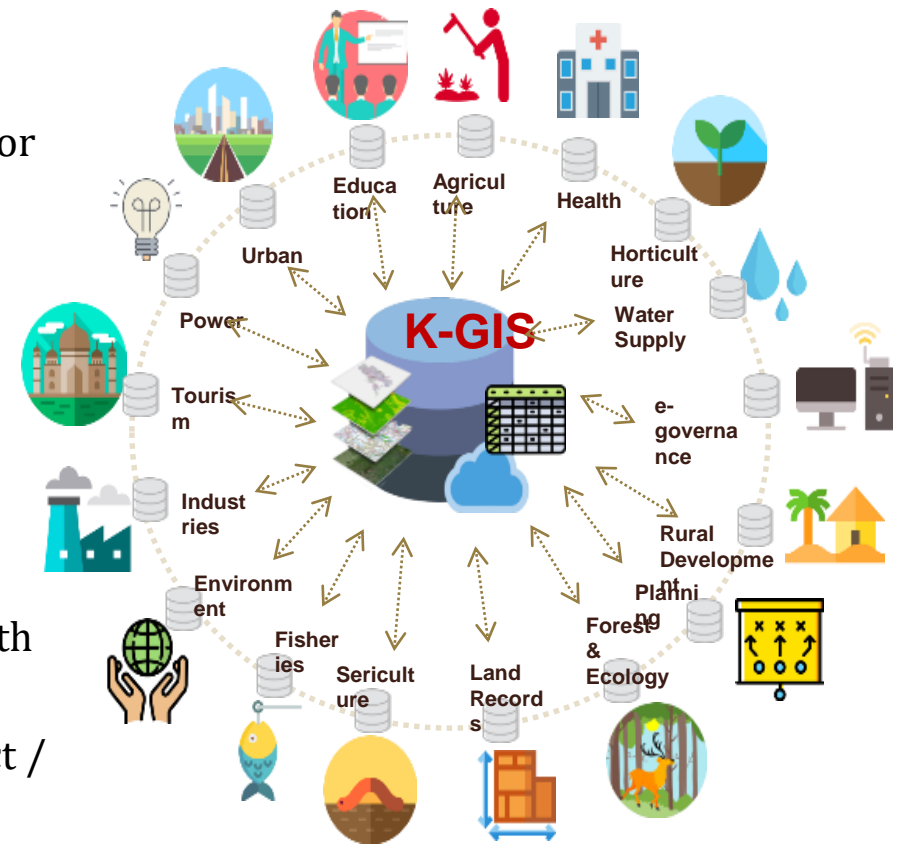
- Ground Control Points (GCPs)
- DEM – Digital Elevation Model layer
- Seamless satellite image - Ortho rectified Cartosat-1 image covering the state
- 0.5 m ortho corrected satellite image mosaic for the state arranged in the form of tiles.
- Various Thematic Maps (>600 layers)
- Govt. Assets (>20 lakh)
- Integrated departmental data – State view to individual land parcel view

A flagship Program of GoK, to Institutionalize the use of Geospatial Technology in the Governance

<https://kgis.ksrsac.in/kgis>

### Unified Platform- Single Gateway

- For spatial data visualization & Dashboard with Statistics
- GIS Applications (Web / Mobile) – Data Collect / Geotag / Update/Analysis
- Map / Web services for external application use





# Major K-GIS Applications



**Citizen Centric Mobile Application**

(Dishaank / Maulya / Chunavana / Nearby Assets, Facilities / Know your Jurisdiction )

**Forest Fire Alert & Management System**

Geo-portal for Forest cover, Forest boundary demarcation

**Industrial Information System – KIADB**

**Works Monitoring System (NGSK) - RDPR**

**Property Information System for RDPR, SSLR**

**Karnataka @ Glance - Planning**

**Soil Health Information System**

**Geospatial Portal for Covid Management**

**Election Information System**

**Crop Survey Analytics**

**Tree Census**

**Geo portal for various themes / sectors**  
(Health, Education, Forest, Social Welfare, Industry, Agriculture / Water Resources, Home etc)

**Mobile apps and its Web dashboard**  
Geotagging of assets / Project Location / events, Progress Monitoring, Data Approvals etc

**K-GIS Portal for Integrated Spatial visualisation and analysis**

Boundaries, assets, Land Parcel information, Terrain, Thematic map, Weather & Utilities



## • Geotagging of Trees

- Mobile application for geotagging of all trees within BBMP limits along with details viz., tree name, species, height, girth, canopy type, health, location, etc.
- Web application for monitoring the status, validation & analysis of information collected, updation & user management.

**Tree Details**

WardNumber	VolunteersName	TreeID	treecode	ScientificName	VernacularName	DateofCapture
160	9739108020	GN7025XD5AQHO...	RAJ-11	Fimbrana Colorata (Roxb.) R. Br.	Coloured Sterculia	2024-01-29T17:41:09.038
160	9945614169	GN7025XASRAN001	RAJ-2	Acacia Nilotica (L.) Del. Subsp. Indica (Benth.)	Kari Jali	2024-01-29T13:47:50.363
160	9945614169	GN7025XASRCF001	RAJ-4	Adenanthera Pavonina L.	Ane Gulaganji	2024-01-29T13:54:50.259

**Tap Location** V-1.2

35f9166e-eaad-363b-85a1-a5c651297164  
2024-03-07 12:20:53 13.09333,77.56179;

User : Praveen  
Ward : 9 - Vidyanarayapura  
Mobile No :

Current location should be within 30 meters

**Attribute Info** V-1.2

Tree Photo\*

Latitude :  
Longitude :  
Date/Time :

Photo of Tree number marked on Tree \*

Latitude :  
Longitude :  
Date/Time :

Tree ID : GN7545RI7TUG001  
Tree Code : VIP-75

**Details**

Vernacular Name \* :  
Select Vernacular Name

Scientific Name \* :  
Scientific Name

Girth DBH(at 1.37m from ground) in cm\* :  
Enter the DBH (in cms)

## • Mobile Application

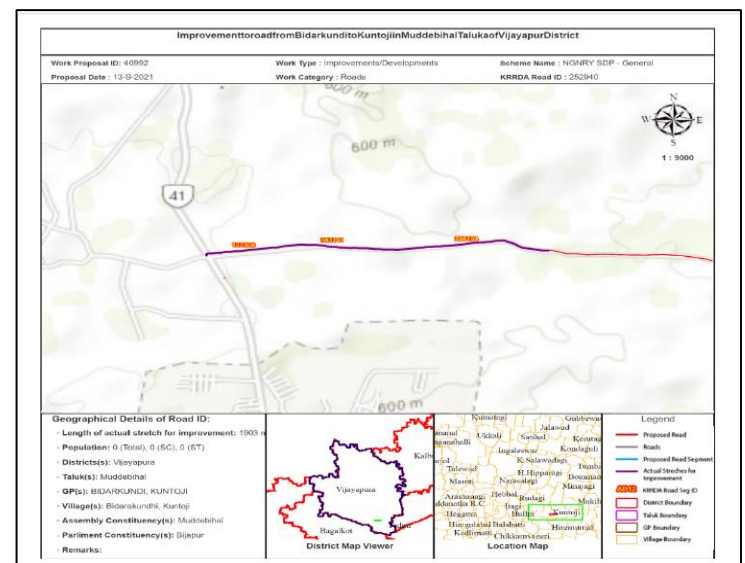
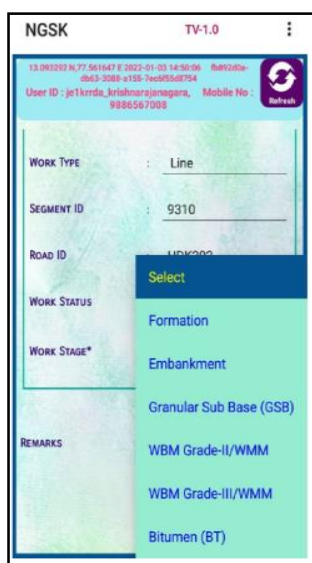
- To capture the geotagged photograph of the status/stages of works within the geo-fenced boundary.

## • Web Application

- To create & monitor the works / projects (road/segments, bridges, buildings, check dams, tanks, etc.) based on the geography / jurisdictional area, time & stages of project activities.

## • Users

- Karnataka Rural Road Development Agency,
- Panchayati Raj Eng Dept,
- Dept of Rural Drinking Water Supply & Sanitation
- Taluk Panchayat





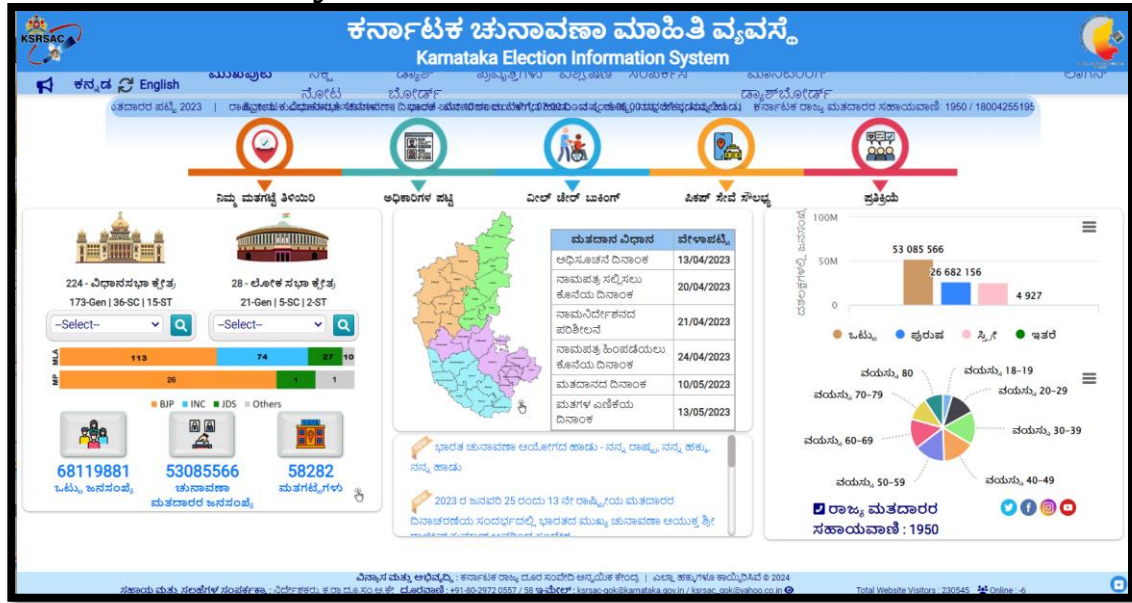


# Chunavana – Mobile & Web App

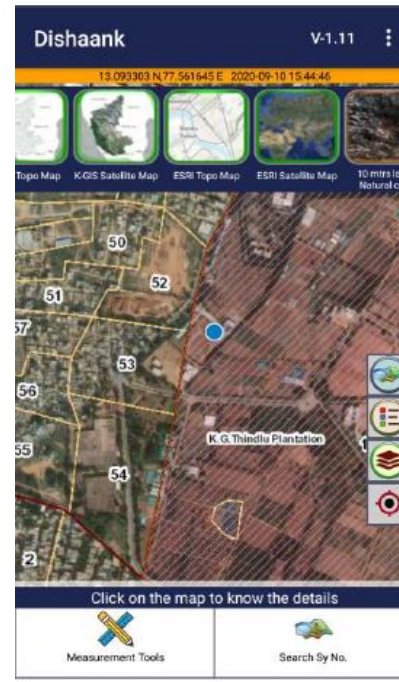
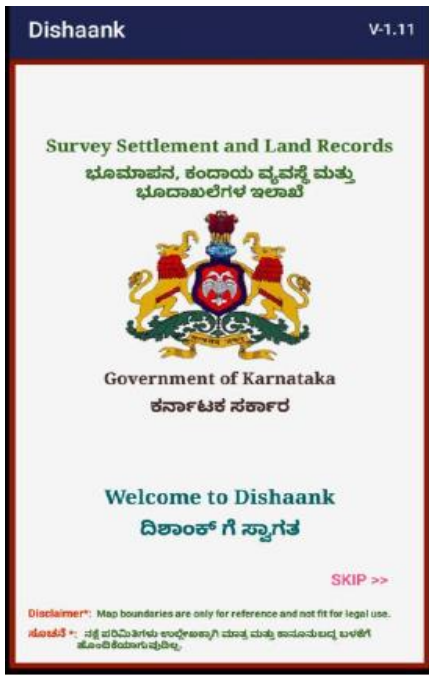


## • Karnataka Election Information System

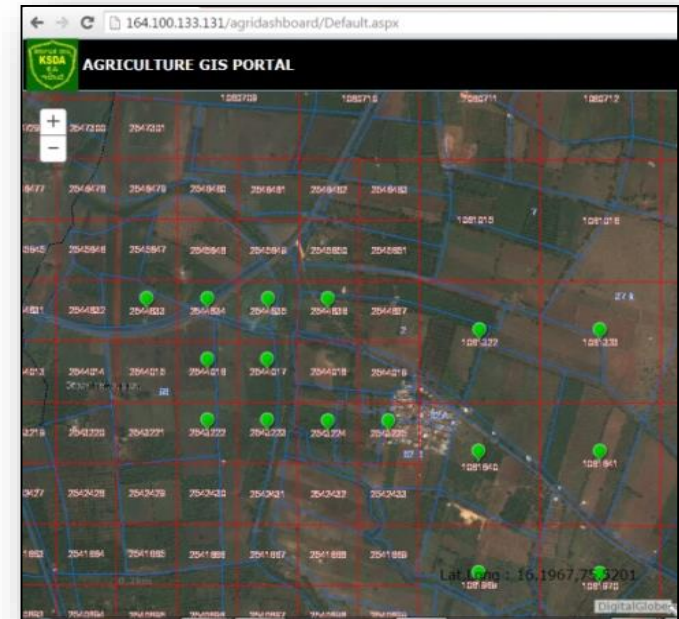
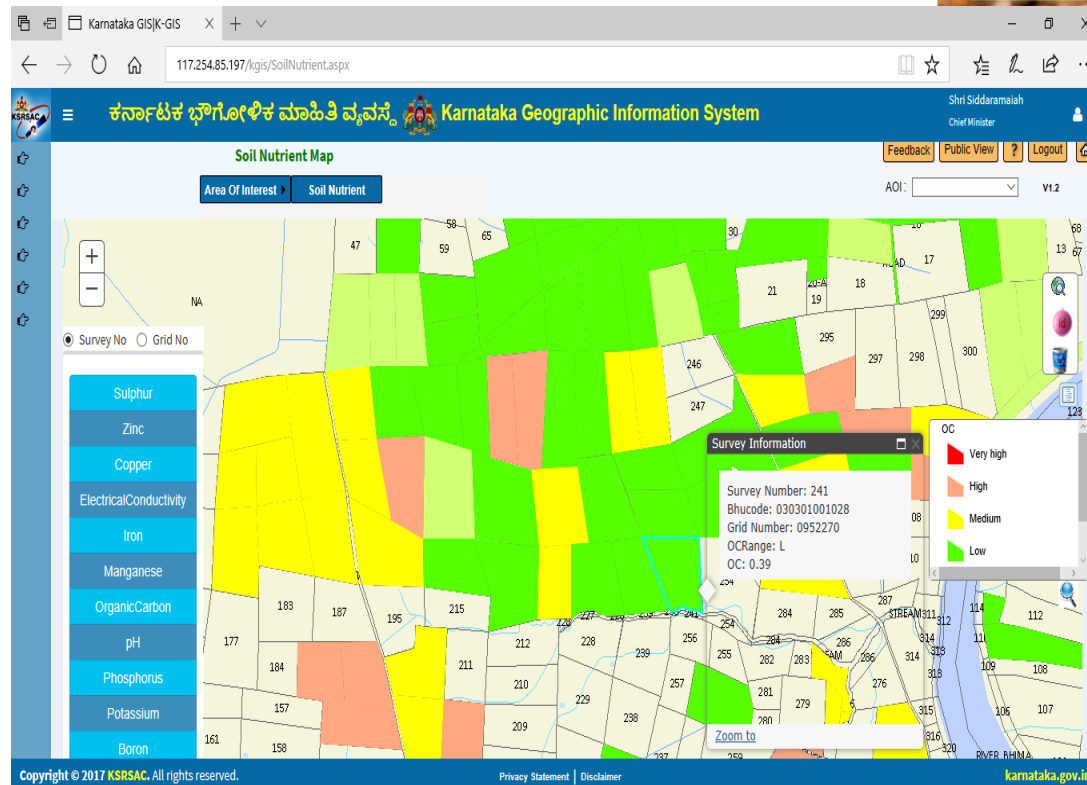
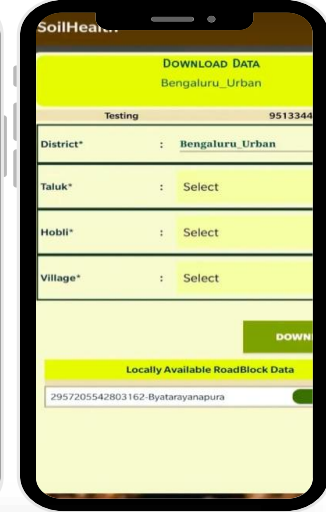
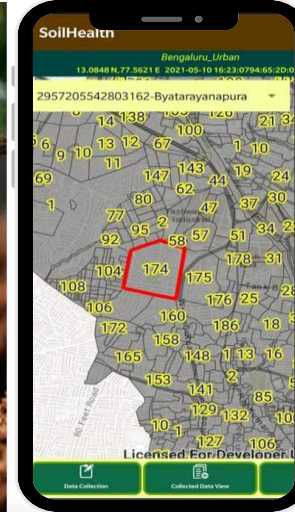
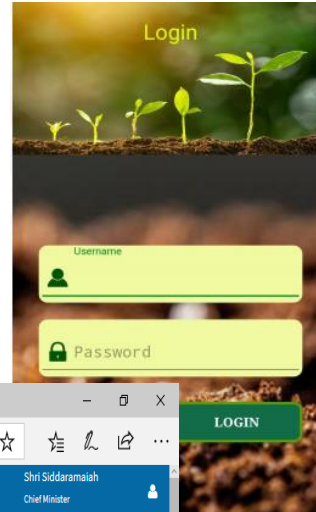
- On entering the user UHN ID the app provides the complete personal details, polling station place, name and its location,
- Facilities for citizens - wheel chair booking, pickup drop, parking information, que information & nearby emergency facilities
- The apps also lists all candidates for your constituency/ voter details / officers details and voting percentage & results information
- The app Chunavana was extensively used by the citizens of Karnataka as well as election officials during 2023 State assembly elections



- It enables users to identify the administrative boundaries and the survey number of the land as available in the village based on their current location.
- The app provides the information includes
  - the name of the owner
  - extent of property
  - ownership type
  - land type, restriction / litigations any on the land
  - category of the land and
  - any other active transactions being done on the land are displayed on a single click
- An option to download the village maps & the RTC information available for such land / owner



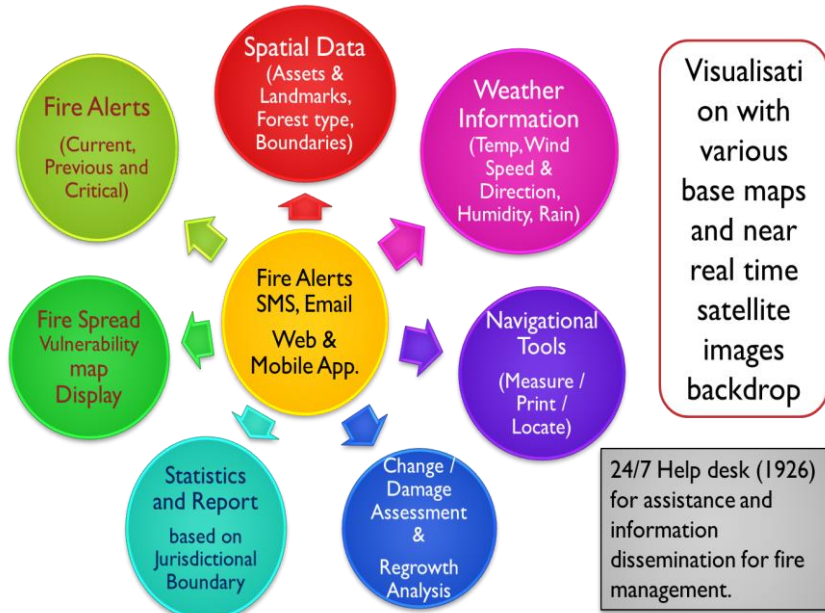
- Mobile App and Web Portal to support soil sample collection and lab results entry
- The lab results along with geo coordinates are sent to NIC through the FRUITS application for issue of soil health card
- The lab analysis data are received by KRSAC for the generation of soil fertility maps







# Karnataka Forest Fire Alert Monitoring System



Karnataka Forest Department

Fire Alert

Critical Today 07Mar2024 06 Mar 2024

55 Fire Incidences

- ✓ jps1\_VF375\_2024-03-06 02:43 PM
- ✓ Aqua\_modis\_2024-03-06 02:20 PM
- ✓ snpp\_VF375\_2024-03-06 01:53 PM
- ✓ jps1\_VF375\_2024-03-06 01:04 PM
- ✓ snpp\_VF375\_2024-03-06 01:04 AM
- ✓ jps1\_VF375\_2024-03-06 01:54 AM
- ✓ snpp\_VF375\_2024-03-06 01:03 AM

Clear Alert

CSV Excel PDF Print Filter

Search:

Action_Taken	ID	ACQDate	Latitude	Longitude	State	DistrictName	CircleName	DivisionName
	684534	2024-03-06T01:03:37.55	14.0018	75.7132	KARNATAKA	Shivamogga	Shimoga	Bhadravathi

Critical Today 03Sep2021 23 Mar 2021

71 Fire Incidences

- ✓ Terra\_modis\_2021-03-23 10:55 PM
- ✓ snpp\_VF375\_2021-03-23 02:24 PM
- ✓ jps1\_VF375\_2021-03-23 01:34 PM
- ✓ Aqua\_modis\_2021-03-23 01:32 PM
- ✓ snpp\_VF375\_2021-03-23 12:44 PM
- ✓ Terra\_modis\_2021-03-23 10:25 AM
- ✓ jps1\_VF375\_2021-03-23 02:24 AM
- ✓ snpp\_VF375\_2021-03-23 01:34 AM

Report

Fire In: Forest area

Action Taken: Doused

Type of Fire: **selective**

Remarks:

Submit

Alert Information

Division: Dharwad  
 Range: Dharwad  
 Section: Benchi  
 Beat: Aravatagi  
 Forest Name: Buffer\_Area  
 Longitude: 74.8234  
 Latitude: 15.4379  
 Sensor: snpp\_VF375\_2021-03-23 02:24 PM  
 Date: 2021-03-23T14:24:43.7  
 Cloudiness: 0  
 Humidity: 26.5 %  
 Rain: 0 mm  
 Temperature: 36.9 °C  
 WindDirection: 94 °  
 WindSpeed: 6 m/s  
 Landmarks: 1.Ambolli Kere(0.47 km) 78.4 Degree E  
 2.Arvatagi Kere(1.02 km) 177.8 Degree S  
 ID: 433702  
[Feedback/Report](#)

Fire Alert  
 Critical  
 Buffer area  
 Forest area  
 Doused

Fire alerts with value added information (SMS/Email through web and mobile application)





# Karnataka at A Glance (KAG)



- Karnataka at a glance (KAG) contains various departmental statistical information under 20 titles collected from 31 districts.
- KAG MIS to GIS, this information is available for preparing decentralized plans by planners, policymakers, researchers and public.
- The KAG application was revamped during 2022-23, with a new interface and additional parameters like NITI Aayog indicators for aspirational districts was included.

The screenshot displays the KAG web application interface. At the top, there is a header with the Government of Karnataka logo and the text 'ಕರ್ನಾಟಕರ ಅಂಕಿ ಅಂಶಗಳ ನೋಟ' (Karnataka Statistics at a Glance). Below the header, there is a navigation menu with 15 categories: 1. General Information, 2. Area & Population, 3. Rainfall, 4. Agriculture, Horticulture & Sericulture, 5. Animal Husbandry & Fisheries, 6. Industries, 7. Bank, 8. Co-operation & Agricultural Marketing, 9. Transport & Communication, 10. Education, 11. Health & Family Welfare Services, 12. Social Welfare, 13. Women & Child Development, 14. Rural Development & Panchayat Raj, and 15. Housing.

The main content area features a 'Dynamic Map Generation' tool. The map shows the state of Karnataka with various taluks highlighted in different colors. A tooltip for 'Taluk Name: Maski Chemical-Factories(400):5' is visible. Below the map, there is a table showing the number of Chemical-Factories(400) for different taluks. The table has columns for District Name, Taluk Name, and Chemical-Factories(400). The data shown is:

District Name	Taluk Name	Chemical-Factories(400)
Belagavi	Chikkodi	0

At the bottom of the interface, there is a footer with the text '© 2022 ಕೆ.ಎಸ್.ಆರ್.ಎಸ್ಸಿ | ಎಲ್ಲ ಹಕ್ಕುಗಳನ್ನು ಕಾಯ್ದಿರಿಸಲಾಗಿದೆ' (All rights reserved) and 'ನೀಡಿ ಹೇಳಿಕೆ | ಹಕ್ಕುಡಾಕ್ಯು | 76.631, 15.991 | ವೀಕ್ಷಕರ ಸಂಖ್ಯೆ: 80 | ಆನ್‌ಲೈನ್: Online - 80'.



# Thank You

**Karnataka State Remote Sensing Applications Centre**

**Dept. of Personnel and Administrative Reforms (e - Governance)**

**Government of Karnataka**

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