

NATURAL RESOURCES DATA MANAGEMENT SYSTEM (NRDMS)

MONTHLY ACTIVITY REPORT April - July 2025

Submitted by

**District NRDMS Centre
Zilla Panchayat, Raichur**



Submitted to

**Karnataka State Council of
Science and Technology (KSCST)**

**Indian Institute of Science Campus,
Bengaluru - 560012**

Contents

Sl.No	Description	Page Nos.
1.	Basic Information of the District	3-09
2.	District Health & Family Welfare Department	09-13
3.	Department – Education Department	14-15
4.	Department – Tourism Department	16-17
5.	Department – Zilla Panchayat, NREGA Section	18-19
6.	Department – University of Agriculture Science, Raichur	20-20
7.	Department – Agriculture Department	21-21
8.	Department – Zilla Panchayat, Raichur	22-22
9.	Department – Superintendent of Police, Raichur	23-23

1. Basic Information of the District

- District Name – Raichur District
- Division – Kalaburagi
- District Establishment Year – 1873
- Headquarters – Raichur
- Current Chief Planning Officer – Dr. T Roni, CPO
- Current Chief Executive Officer – Eshwar Kumar Kandoo, IAS, CEO

2. NRDMS Background of the District

- **Establishment Year** – 1985-86
- **Brief Overview** - The Natural Resources Data Management System (NRDMS) is a national programme of the Department of Science & Technology (DST), Government of India, launched in 1982 to promote GIS-based local-level planning. The Raichur District NRDMS Centre was established in 1985-86 as part of the Karnataka State initiative. Being a drought-prone and socio-economically backward district, Raichur was selected to use scientific data-driven planning for resource management and development.
- **Key Activities in Raichur**
 - Creation of a digital geo-database of natural resources, infrastructure, and socio-economic indicators.
 - Preparation of thematic maps for agriculture, water resources, education, health, and infrastructure.
 - Decision support for district administration, Zilla Panchayat, and line departments.
 - Support to Aspirational District Programme, MGNREGA planning, irrigation, and literacy interventions.
 - Capacity building by training government staff and local youth in GIS applications.

3. Geographical Features

- **Location and Boundaries**

Raichur District is located in the northern part of Karnataka, India, forming part of the Hyderabad-Karnataka region. It lies on the Deccan Plateau.
- **Neighboring Districts**
 - North: Kalaburagi and Yadgir districts (Karnataka)
 - West: Koppal district (Karnataka)
 - Southwest: Bellary district (Karnataka)
 - East & Northeast: Telangana state
- Number of Talukas - 08
- Number of Hoblis - 37
- Number of Villages - 994

- [illegible]

- **Geographical Coordinates**
 - Latitude - 16.20477778
 - Longitude - 76.18816667
 -
- **Topography**
- **General Terrain**
 - Raichur is part of the Deccan Plateau, with mostly flat to undulating terrain.
 - Elevation ranges from 350 to 450 meters above sea level.
 - The district has broad plains, interspersed with low hills and rocky outcrops.
- **Soil Types**
 - Red sandy loam
 - Black cotton soil (Regur soil)
 - Alluvial soil
- **Rivers & Water Bodies**
 - Major rivers: Krishna and Tungabhadra
 - Streams & Tanks
- **Vegetation**
 - Predominantly dry deciduous forests, scrublands, and agricultural fields.
 - Natural vegetation mostly along riverbanks and reserved forest areas.
- **Land Use**
 - Agriculture landscape, with paddy, pulses, cotton, and oilseeds as major crops.
 - Rocky areas and wastelands in the northern and western parts of the district.
- **Climate**
 - **Average Rainfall**
 - Average annual rainfall: 600–750 mm
 - Mostly received during the southwest monsoon (June–September)
 - Rainfall is unevenly distributed, making some areas prone to drought
 - **Temperature Range**
 - Summer – March-May (Hot and dry)
 - Daytime Temperature - 35°C – 42°C
 - Night time Temperature - 22°C – 26°C
 - Winter December – February (Mild and pleasant)
 - Daytime Temperature - 25°C – 28°C
 - Night time Temperature - 15°C – 20°C
 - **Climatic Zones**
 - Primary Climate – Semi arid
 - Secondary Localized Zones - Irrigated river basins and undulating rocky areas.
 - Climate influences - Agriculture, water management, and developmental planning in the district.

- **Natural Resources**

- **Forests**

- Mostly dry deciduous forests and scrublands.
 - Reserved forests in some taluks support biodiversity and minor forest produce.

- **Minerals**

- Limestone, granite, clay, and building stones are abundant.
 - Small-scale mining activities exist, mainly for granite and limestone.

- **Water Bodies**

- Rivers Krishna and Tungabhadra are the main rivers.
 - Irrigation Major Irrigation projects like Tungabhadra Left Bank Canal support agriculture.
 - Groundwater Limited in dry areas; many farmers depend on borewells and tanks.
 - Seasonal lakes and tanks supplement water supply for agriculture and drinking

- **Soil Types**

- Red Sandy Loam Soil
 - Black Cotton Soil (Regur Soil)
 - Alluvial Soil
 - Lateritic Soil (Limited Areas)

- **Major Rivers / Water Resources**

- **Krishna River**

- One of the largest rivers in southern India, flowing through northern Raichur.
 - Provides irrigation, drinking water, and hydroelectric potential
 - Supports fertile alluvial plains for paddy cultivation.

- **Tungabhadra River**

- Forms the southern boundary of Raichur in some areas.
 - Major source for Irrigation canals, agriculture, and water storage tanks.
 - Tungabhadra Left Bank Canal is a key irrigation project in the district.

- **Minor River / Streams**

- Seasonal streams and rivulets supplement agriculture and local water needs.
 - Many small tanks and reservoirs have been constructed historically for rainwater harvesting and irrigation.

4. NRDMs Spatial and Non-spatial Data available in District NRDMs Centre

DATABASE STATUS FOR THE YEAR 2025-26

Status Code : Meaning

CC	:	Computerised.
ND	:	Not Digitized
NA	:	Not Procured
NR	:	Not Relevant
NF	:	Not Finalised

Name	:	Mohammed Farooq
Name of the District Centre	:	Raichur
Database status as on date	:	23/07/2025
Year of Establishment	:	2003-04

SPATIAL DATABASE

Sector / Subsector	Scale	Source	Survey / Publn. Year	Area covered	Status Code	File Format
1. Natural Resources						
Land						
1. Topography						
Contour Map	30 Mtr	ASTER DEM		District	CC	.Shp
Slope Map	1:50,000	KRSAC		District	CC	.Shp
2. Geology – A						
Rock features	1:50,000	KRSAC		District	CC	.Shp
Structural features	1:50,000	KRSAC		District	CC	.Shp
3. Geology – B						
Rock features		NA				
Structural features		NA				
4. Mineral Resources						
5. Geomorphology						
6. Land use	1:50,000	KRSAC		District	CC	.Shp
7. Waste Lands		NA				
8. Soils	1:25,000	NBSS & LUP		District	CC	.Shp
9. Forest & Wildlife						
Forest type	1:50,000	KFD		District	CC	.Shp
Crown Density		NA				
Forest Category		NA				
Forest admn.	1:50,000	KFD		District	CC	.Shp
Wild Life		NA				
Water						
1. Ground water						
Hydro Geology		NA				
Hydro chemistry		NA				

Ground water budget		NA				
2.Surface water						
Drainage	1:50,000	BBBIKE&KSRS AC		District	CC	.Shp
Surface water bodies	1:50,000	BBBIKE&KSRS AC		District	CC	.Shp
3.Climate		NA				

Sector / Subsector	Scale	Source	Survey / Publn. Year	Area covered	Status Code	File Format
2.Demography						
Population						
Tehsil boundary	1:50,000	SOI		District	CC	.Shp
District boundary	1:50,000	SOI		District	CC	.Shp
Current popln. distbn.	1:50,000	SOI		District	CC	.Shp
Literacy						
Levels of education		NA				
Occupation						
Village boundary	1:50,000	SOI&KSR SAC		District	CC	.Shp
Employment						
District scenario		NA				
Employment exchange		NA				
Assets & Expenditure		NA				
Migration		NA				
Destitutes		NA				

3.Socio Economy						File For mat
Industry		NA				
Developmental activity		NA				
4.Agro Economy						
Land Utilisation						
Private Land		NA				
Common property		NA				
Land Ownership pattern						
General scenario		NA				
Farmer's holdings		NA				

Principal crops		NA				
Irrigation						
<i>Minor irrigation</i>						
Canals	1:50,000	KSRSAC	District	CC	.Shp	
Tube wells		NA				
Dug wells		NA				
Tanks	1:50,000	KSRSAC	District	CC	.Shp	
Lift irrigation		NA				
<i>Major irrigation</i>						
Reservoirs	1:50,000	KSRSAC	District	CC	.Shp	
Anicuts		NA				
Agricultural implements						
Animal husbandry	1:50,000	AHVS	District	CC	.Shp	
Pisciculture		NA				
Plantation		NA				

Sector / Subsector	Scale	Source	Survey / Publn. Year	Area covered	Status Code	File Format
5.Infrastructure						
Communications						
Post offices	1:50,000	Dept of Posts	District	CC	.Shp	
Telecommunication		NA				
Drinking water	1:50,000	RDWSD	District	CC	.Shp	
Educational facilities	1:50,000	DDPI	District	CC	.Shp	
Electricity		NA				
Financial institutions		NA				
Markets		NA				
Health	1:50,000	DHO	District	CC	.Shp	
NGO's		NA				
Tourism	1:50,000	Tourism	District	CC	.Shp	
Transport	1:50,000	PWD & SOI	District	CC	.Shp	
6.Miscellaneous						
District map with taluks	1:50,000	SOI&KSRSAC	District	CC	.Shp	
District & taluk boundaries	1:50,000	SOI&KSRSAC	District	CC	.Shp	
District map with hoblies	1:50,000	DLR & SS	District	CC	.Shp	
Village boundary with settlement	1:50,000	SOI/KSRAC	District	CC	.Shp	
Police station details	1:50,000	SP	District	CC	.Shp	

Details on Assembly constituencies	1:50,000	DC	District	CC	.Shp	
Gram Panchayths & Zilla Panchayaths, its jurisdiction for all taluks	1:50,000	DC	District	CC	.Shp	

Non-Spatial Database

Sector / Subsector	Source	Survey / Publn. Year	Area covered	Status Code	File Format
1. Natural Resources					
Land					
1. Topography					
Contour				NR	
Slope				NR	
2. Geology – A					
Rock Features	MGD			NR	
Structural features				NR	
3. Geology – B					
Rock features				NR	
Structural features				NR	
4. Mineral Resources	MGD			NR	
5. Geomorphology				NR	
6. Land use				NR	
7. Waste Lands				NR	
8. Soils	NBSS & LUP			NR	
9. Forest & Wildlife					
Forest type				NR	
Crown Density				NR	
Forest Category				NR	
Forest admn.				NR	
Wild Life				NR	
Water					
Ground water					
Hydro Geology	MGD			NR	
Hydro chemistry	CGWB			NR	
Ground water budget	MGD			NR	
Surface water					
Drainage				NR	
Surface water bodies				NR	
Climate	IMD			NR	

2. Demography					File Format
Population					
Tehsil boundary	DLR & SS			CC	XLS
District boundary	SOI			CC	XLS
Current Popln. Distbn.	DES			CC	XLS
Literacy					File Format
Levels of education				NA	
Occupation					
Village boundary	DES			NA	
Employment					
District scenario	EO			NA	
Employment exchange	EO			NA	
Assets & Expenditure					
Migration					
Destitutes					

3. Socio Economy					File Format
Industry	DIC			NA	
Developmental activity	DIC			NA	

4. Agro Economy					File Format
Land Utilisation					
Private Land	DSO		VILLAGE	NA	
Common property	DSO			NA	
Land Ownership pattern					
General scenario	DSO			NA	
Farmer's holdings	Rev. Dept			NA	
Principal crops	JDA		Taluk	NA	
Irrigation					
<i>Minor irrigation</i>					
Canals	CADA			NA	
Tube wells	DSO			NA	
Dug wells	DSO			NA	
Tanks	MIC/ ZPE			NA	
Lift irrigation	MID			NA	

<i>Major irrigation</i>					
Reservoirs	CE (N)			NA	
Anicuts	CE (N)			NA	
Agricultural implements	Ag Census			NA	
Animal husbandry	AH&VS			CC	XLS
Pisciculture	Fisheries			NA	
Plantation				NA	
Horticulture	HD			NA	
Sericulture	SD			NA	

Sector / Subsector	Source	Survey / Publ. Year	Area covered	Status Code	File Format
5. Infrastructure					
Communications					
Post offices	SSPO/ DES		Village	NA	
Telecommunication	TDM / DES			NA	
Drinking water	ZPE			NA	
Educational facilities	DDPI			NA	
Electricity	GESCOM			NA	
Financial institutions	LEAD bank			NA	
Markets	FACS			NA	
Health	DHO			CC	XLS
NGO's	DRS			NA	
Tourism	KSTDC			CC	XLS
Transport					
Roads	PWD			NA	
Rail network	ZPED			NA	
Air transport/HELIPAD	PWD			NA	
Vehicle census	RTO			NA	
Inland & coastal waterways				NA	
Veterinary services					
Veterinary facilities	AHVS			CC	XLS
Other veterinary serv.	AHVS				
Incidence of diseases	AHVS				
Anganwadi	D W&C			CC	XLS

Sector / Subsector	Source	Survey / Publ. Year	Area covered	Status Code	File Format
6. Miscellaneous					
Administration	DC office				
Dt. & Sub Division.	DC office			NA	
Dt., with tehsils	ZP			NA	
Dt., with panchayat	DC			NA	
Tq., with census vil.	DC			NA	
Prices & wages				NA	
Environment				NA	

5. NRDMs Centre Activities (April 2025 - July 2025)

1. PHC wise Cardiac Deaths (April 2025)

- **Objectives**
 - To collect, analyze, and map cardiac deaths across all PHCs in Raichur district.
 - To enable data-driven health planning, preventive interventions, and emergency response improvements.
- **Data Collection**
 - PHC Locations Latitude and longitude of all PHCs in Raichur district
 - Accessibility Maps Roads and transportation to PHCs for emergency services.
- **Analysis**
 - Identify patterns and trends in cardiac deaths across PHCs.
 - Determine high-risk areas and vulnerable population groups.
 - Support health planning, resource allocation, and preventive measures.

2. Geographical Demarcation of Focused Tourism Destinations (May 2025)

- **Objectives**
 - The objectives focus on sustainable, data-driven tourism development that balances heritage preservation, eco-tourism, community benefits, and regional connectivity in Raichur District
- **Data Collection**
 - Tourism Site Locations Latitude & longitude of forts, temples, riverfronts, hills, and eco-tourism sites.

- Accessibility Data Roads, highways, railway lines, and public transport connections to each site.
- Administrative Boundaries Taluk, Hobli, village boundaries for site demarcation.
- **Analysis**
 - To identify high-potential tourism sites for development.
 - To assess Infrastructure gaps, accessibility issues, and visitor patterns.
 - To support data-driven planning for sustainable tourism development.

3. Jurisdiction of Police Stations (June 2025)

- **Objectives**
 - The objectives focus on spatially mapping police jurisdictions, improving law enforcement efficiency, enabling data-driven policing, and supporting urban management in Raichur City.
- **Data Collection**
 - Police Station Locations Latitude and longitude of all police stations.
 - Jurisdiction Boundaries, wards, localities, streets, and villages under each police station.
 - Accessibility Maps Major roads, highways, and public transport routes for emergency response.
 - Landmarks & Critical Points Hospitals, schools, government offices, markets, and industrial areas within jurisdiction.

4. Locations of Raitha Samparka Kendra's (July 2025)

- **Objectives**
 - The objectives focus on spatial mapping, service optimization, monitoring, and improving farmer access to Raitha Samparka Kendras, enabling better agricultural extension services and planning in Raichur District.
- **Data Collection**
 - RSK Locations Latitude and longitude of each center.
 - Connectivity Roads, pathways, and transport facilities leading to RSKs.
 - Administrative Boundaries Taluk, Hobli, and village boundaries for mapping service areas.
- **Analysis**
 - Location mapping use GIS to visualize RSK locations and their catchment areas.
 - Accessibility Analysis Identify villages and farms far from RSKs, assess road connectivity.
 - Cluster Analysis Detect areas with high farmer density but few RSKs, for planning new centers.

6. Training Programmes Attended

1. Online Programme (Webinar)

- Topic - Intellectual Property Rights
- Venue - Online
- Organized by – Golden Jubilee celebration of KSCST.
- Date – 26-04-2025

2. Training Programme (One day Workshop)

- Topic - Geographic Information System (GIS) Technologies
- Venue - J. N. Tata Auditorium, IISc. Campus, Bengaluru.
- Organized by – KSCST
- Date – 28-04-2025

3. Online Programme (Webinar)

- Topic - Climate Change and Sustainable development
- Venue - Online
- Organized by – Golden Jubilee celebration of KSCST.
- Date – 16-07-2025

4. Training Programme (One day Workshop)

- 5. Topic – Yuktadhara Portal Training
- 6. Venue – Zilla Panchayat, Vijayanagara.
- 7. Organized by – RDPR
- 8. Date - 20-09-2025

7. Trainings Imparted to Line Departments

1. Training Programme (GIS Orientation)

- 2. Topic – GIS Orientation Programme (2 Days)
- 3. Attended by – Newly Appointed Village Accountants
- 4. Venue – NRDMs Centre, Zilla Panchayat, Raichur.
- 5. Participants – 04
- 6. Date – 20 & 21 August 2025

2. Training Programme (Talukawise)

- Topic – Yuktadhara Portal Training (GIS related)
- Attended by – PDO's & Taluka Officers.
- Venue – Zilla Panchayat, Meeting Hall, Raichur.
- Participants – 123
- Date – 23-09-2025

8. Science Outreach Activities

- Celebrated Science day program on 23rd December 2024 with KSCST support.
- Celebrated Mathematics day program on 28th March 2025 with KSCST support.

9. Conclusion

- **Summary of Activities and Key Findings**
 - **Data Collection & Database Management**
Updated spatial and non-spatial datasets from line departments
 - **GIS & Thematic Mapping**

Updated administrative boundaries at GP, Ward, and Village levels
Literacy mapping, water resources, health facility access, and
infrastructure distribution

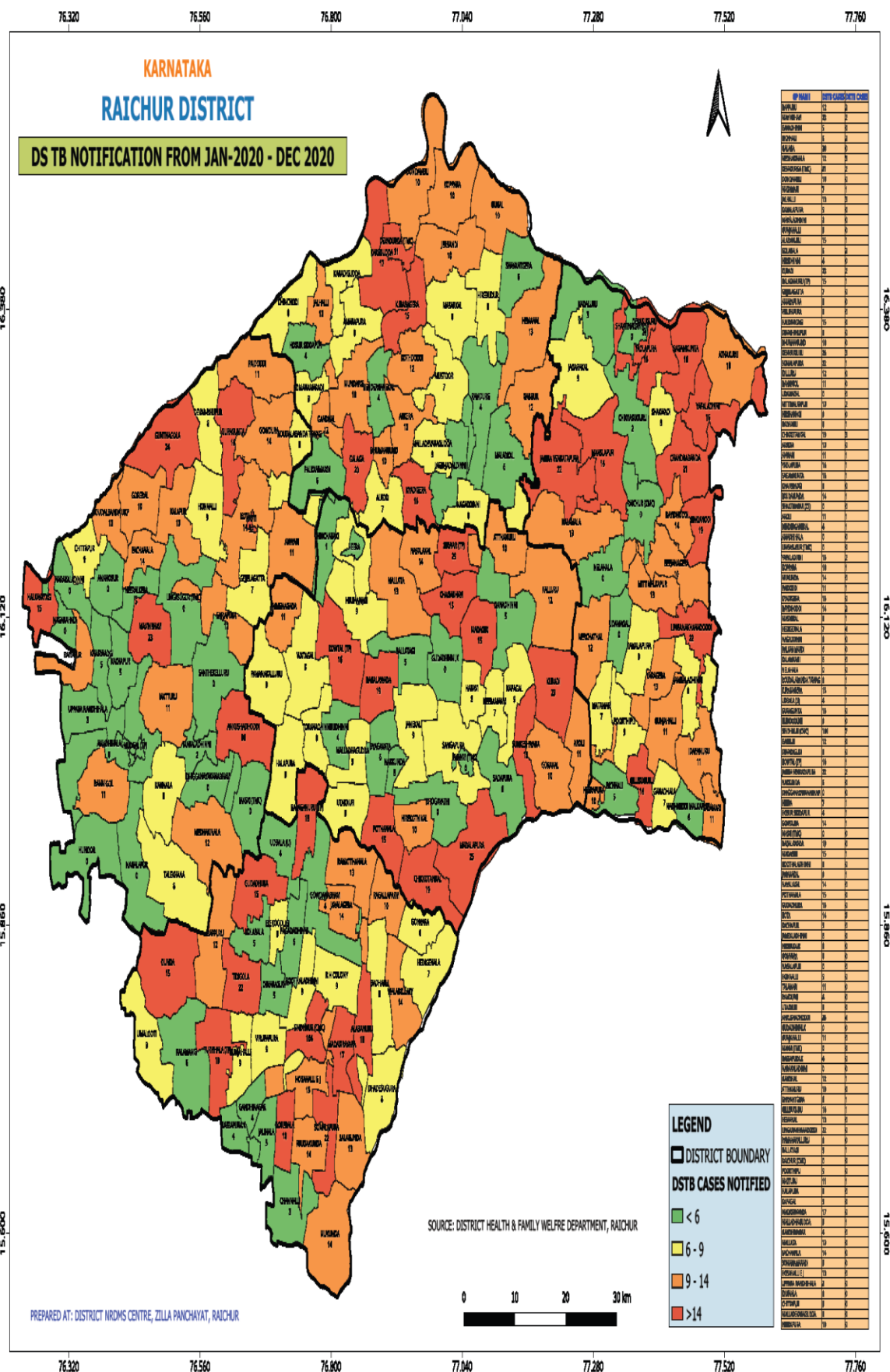
- **Capacity Building / Training**
Conducted GIS orientation training to newly appointed Village Accountant @ Zilla Panchayat, Raichur
Conducted GIS related Yuktadhara portal training to Talukawise PDO's, EO's @ Zilla Panchayat, Meeting Hall, Raichur.
- **Departmental Support & Decision Making**
Provided GIS inputs for GPDP planning, Amrut Sarovar Mission, and Aspirational District monitoring.
Supported line all departments
- **Commitment to Improve NRDMS Activities**
 - The NRDMS Centre will focus on enhancing data quality, GIS applications, capacity building, and research innovation to support evidence-based planning and sustainable development.
 - Regular updating of spatial and non-spatial datasets from line departments, field surveys, and satellite imagery.
 - Ensuring accurate data for all sectors, including water resources, agriculture, health, education, and infrastructure.
 - Providing actionable GIS inputs for GPDP, Aspirational District Programme
 - Conducting training programs and workshops for district officials, GP staff, and field personnel.
 - Promoting awareness of NRDMS activities to ensure effective utilization in decision-making.
- **Areas for Improvement**
 - Strengthen collaboration with line departments for data sharing & planning etc.
 - Enhance hardware, software for high resolution mapping.
 - Monitoring & Evaluation.
 - GIS outputs to involve local communities in planning and development initiatives.

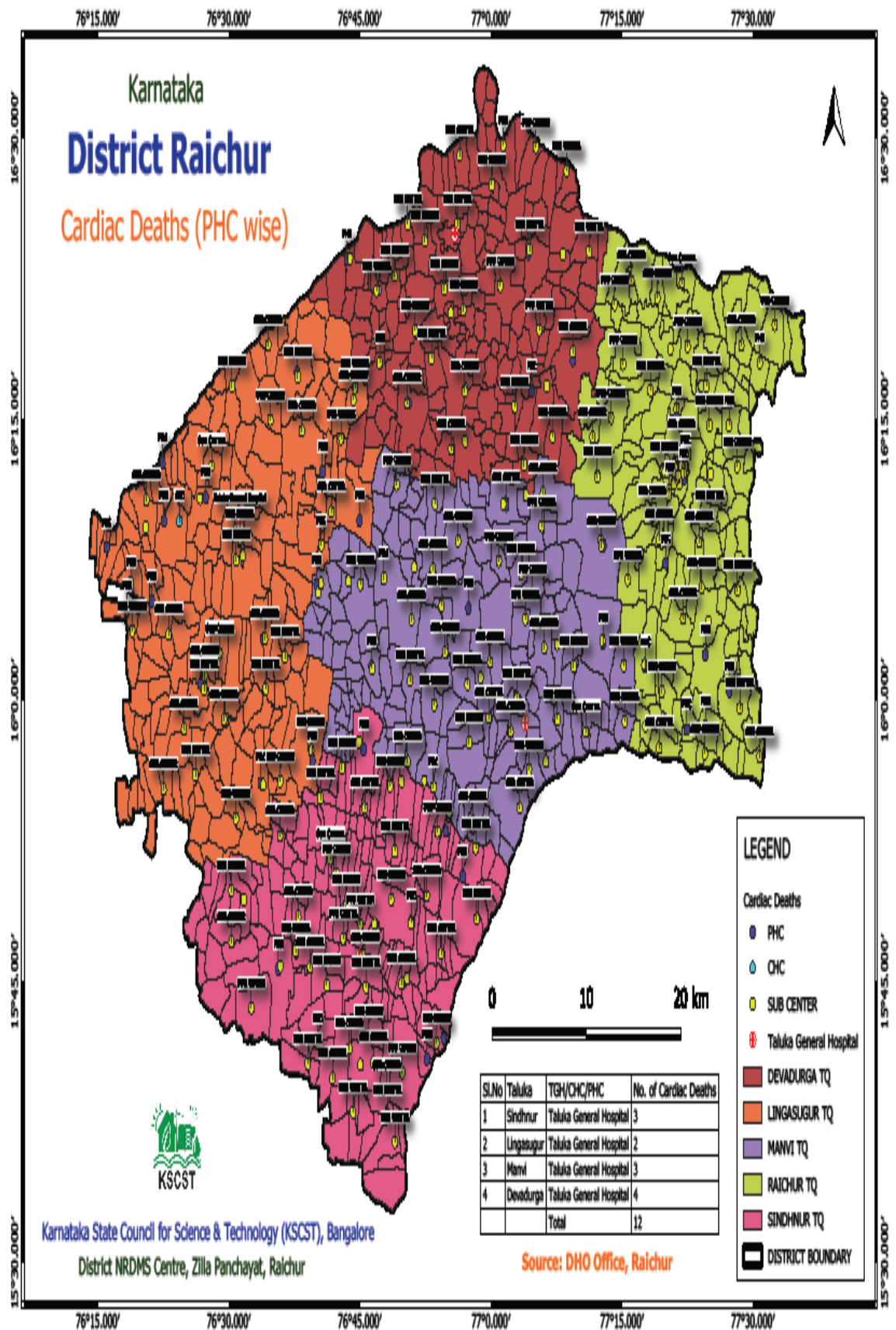
10. Annexures

1. Department – District Health & Family Welfare Department

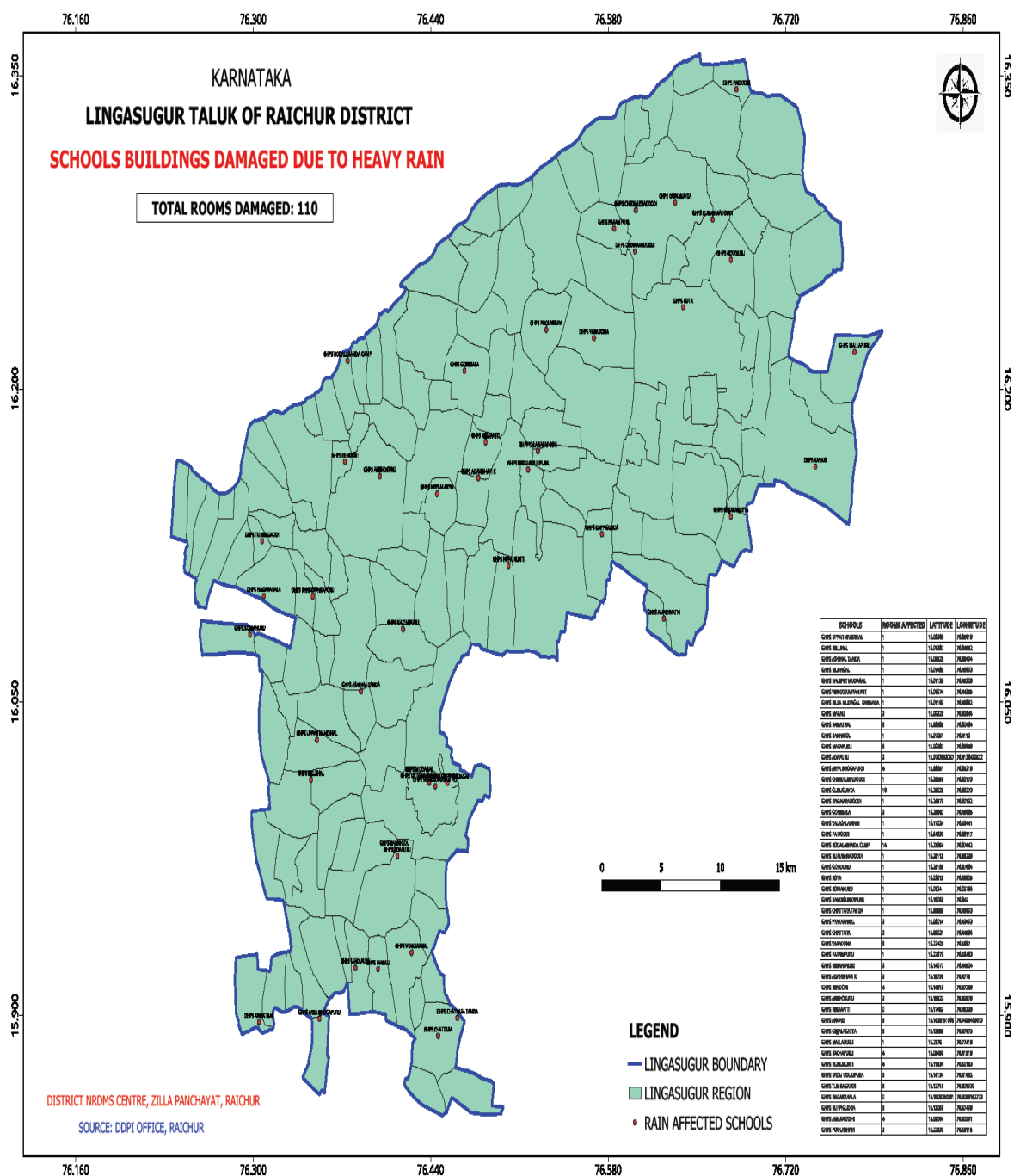
- **Title – Drug-Sensitive Tuberculosis & Drug-Resistant Tuberculosis (DRTB)**
- **Map Purpose:**
 - To provide decision support for district health authorities through spatial analysis.
 - To enable targeted resource allocation (diagnostics, drugs, health workers) to high-burden areas.

- [illegible]



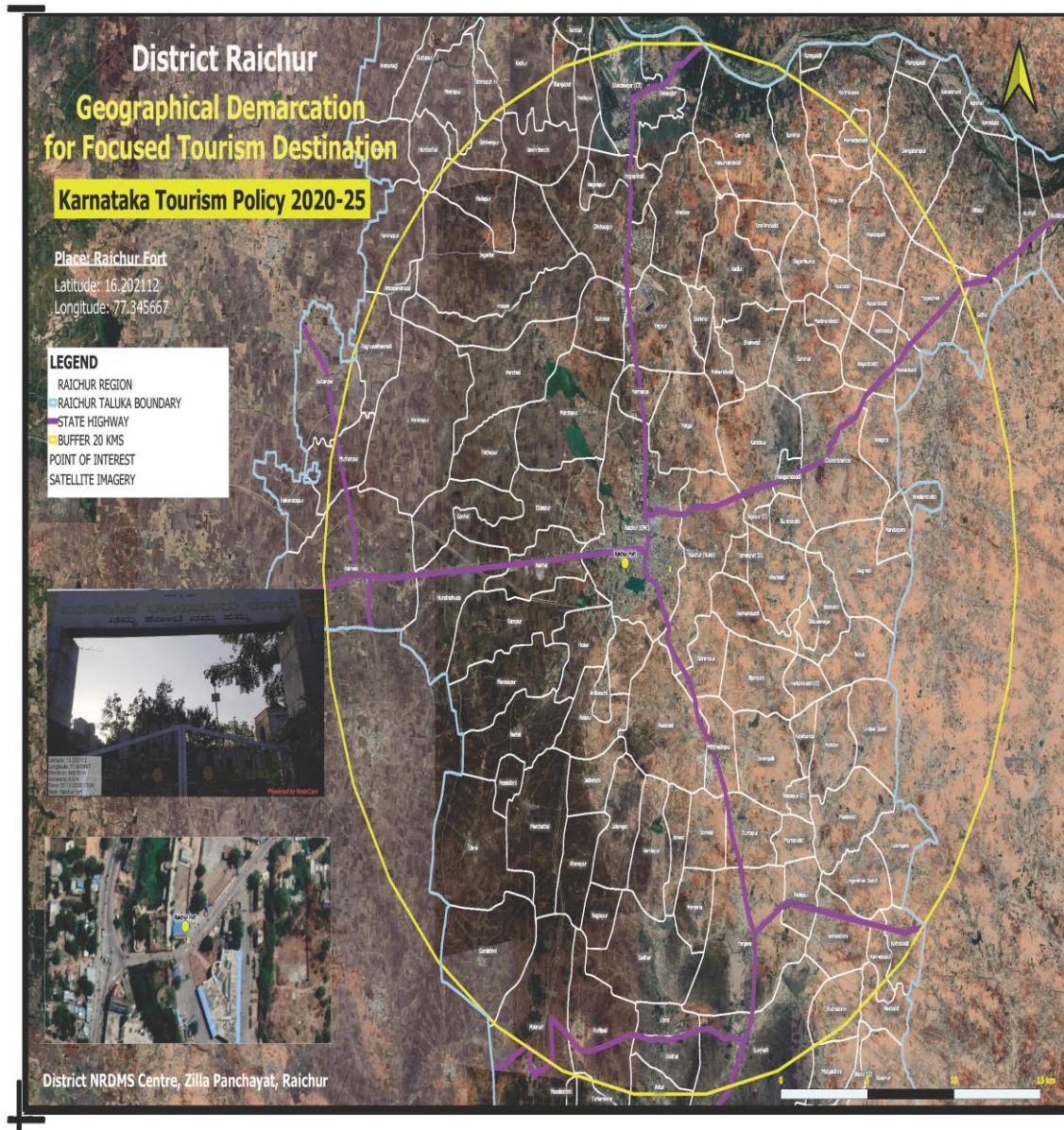


- To prioritize repair and reconstruction based on severity, student strength, and accessibility.
- To plan for temporary learning spaces in highly affected areas.
- To guide resource allocation by overlaying damage data with population density and student enrolment.
- To support disaster preparedness planning by highlighting vulnerable school infrastructures.



3. Department – Tourism Department

- **Title – Geographical Demarcation of Identified-Proposed Tourism Destination**
- **Map Purpose:**
 - To locate and visualize existing and proposed tourism destinations such as forts, temples, eco-tourism sites, and cultural landmarks.
 - To establish geographical boundaries and buffer zones around tourist sites for infrastructure planning.
 - To identify connectivity and accessibility by overlaying road, rail, and river transport networks.
 - To prioritize infrastructure investment (accommodation, parking, sanitation, wayfinding facilities).

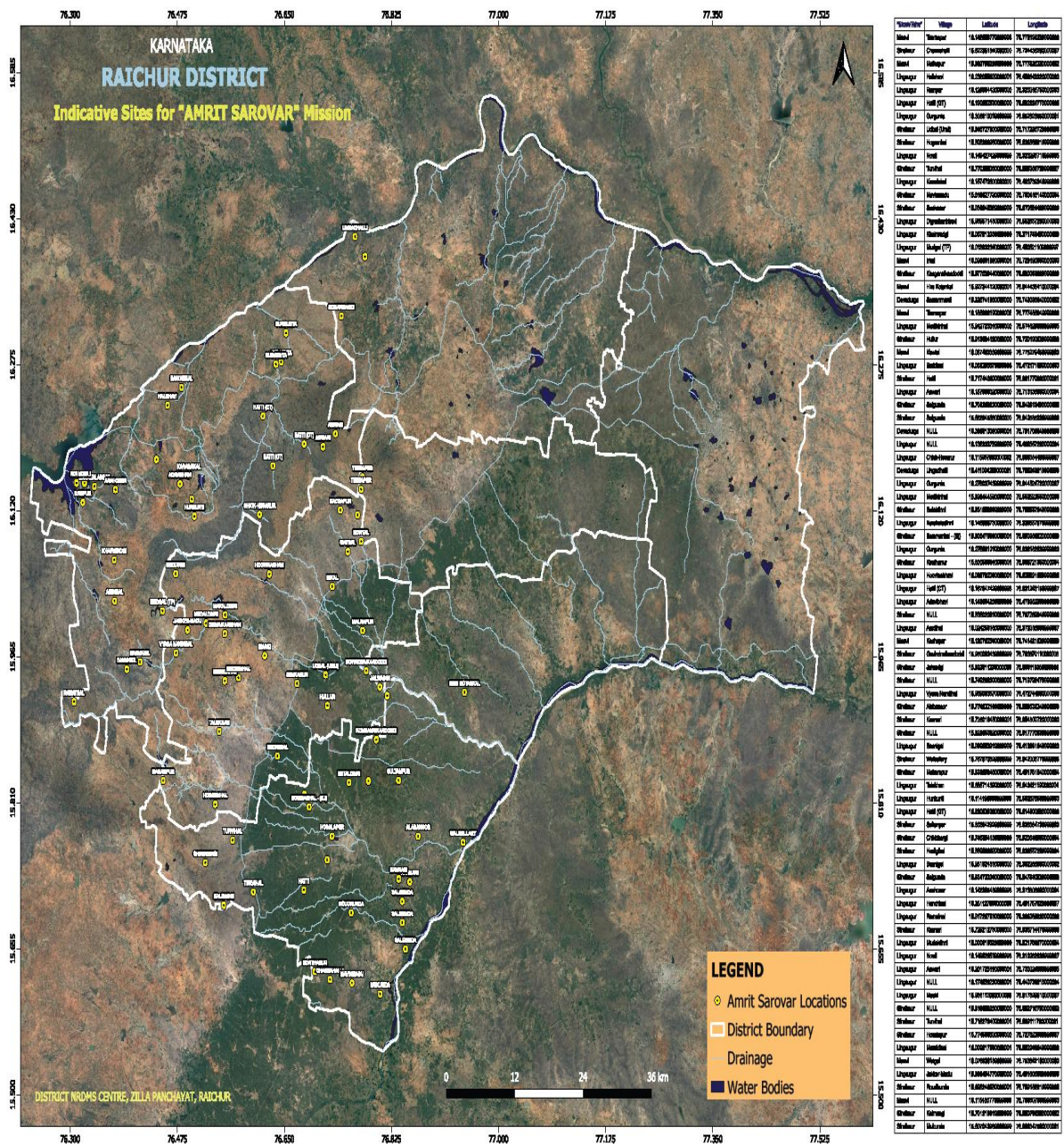


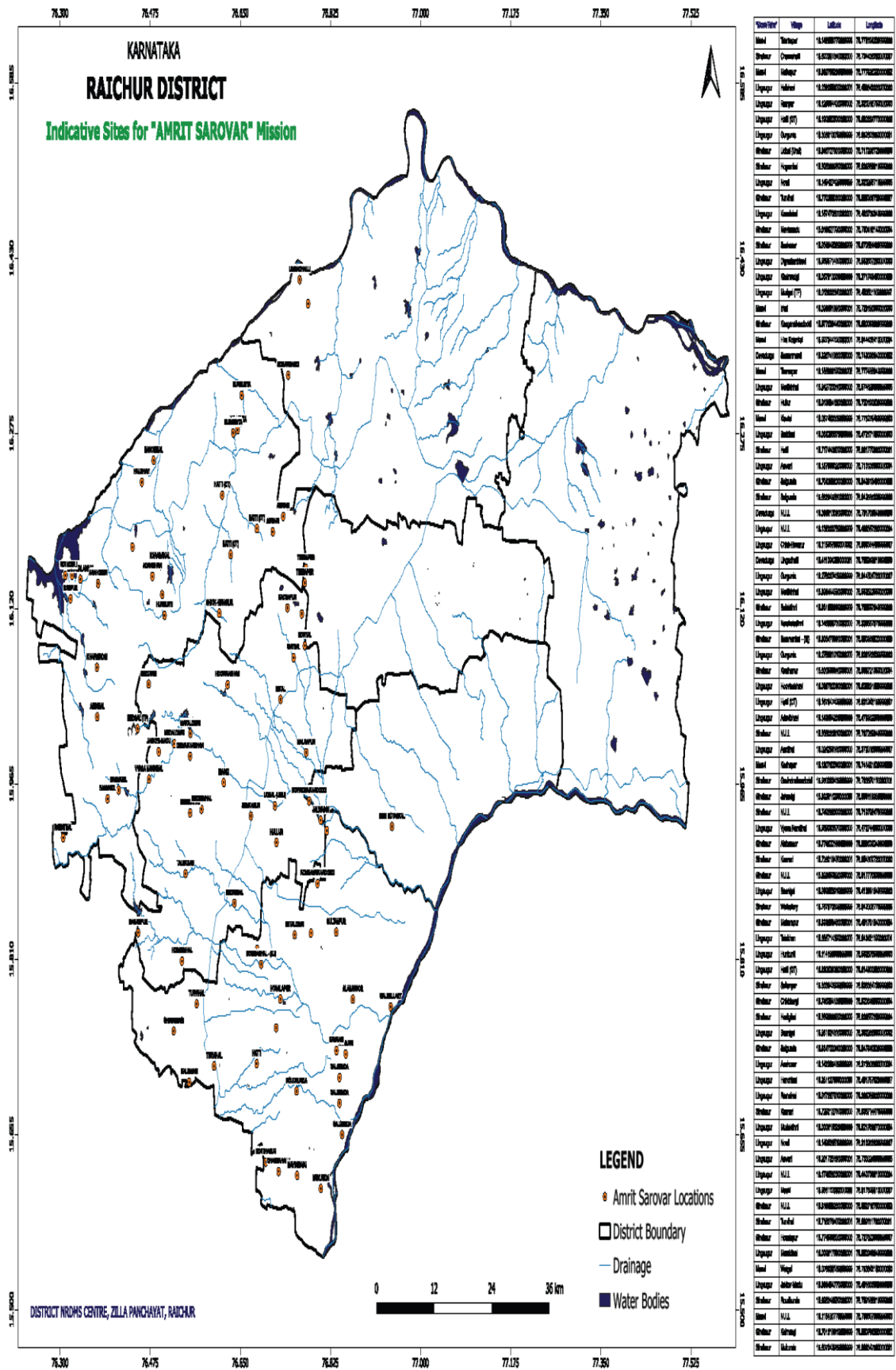
4. Department – Zilla Panchayat, NREGA Section

- **Title – Indicative sites for Amrit Sarovar Mission**

- **Map Purpose:**

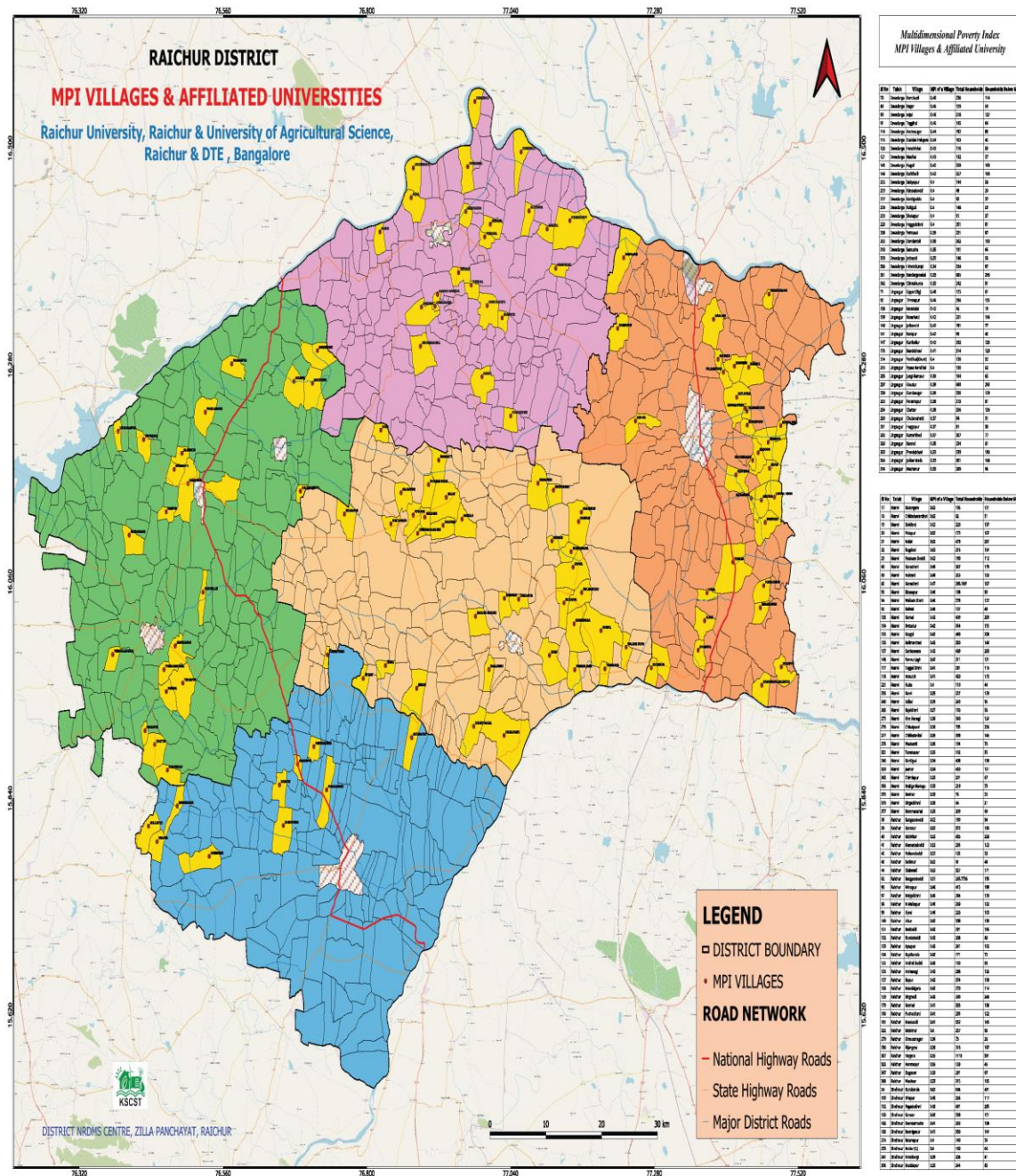
- To locate and demarcate all selected and proposed Amrit Sarovar sites at the district, taluk, and village level.
- To provide spatial clarity on the size, boundary, and catchment area of each water body.
- To overlay existing land use and settlement patterns around the water bodies.
- To provide a visual decision-support for district administration, Gram Panchayats, and line departments.





5. Department – University of Agriculture Science, Raichur

- **Title – Multidimensional Poverty Index (MPI) villages.**
- **Map Purpose:**
 - To pinpoint villages with the highest MPI scores and greatest deprivation.
 - To visualize spatial clusters of poverty for targeted interventions.
 - To integrate MPI maps with other GIS layers such as schools, health centers, water sources, roads, and land use.
 - To assist district authorities and planners in making evidence-based policy decisions.

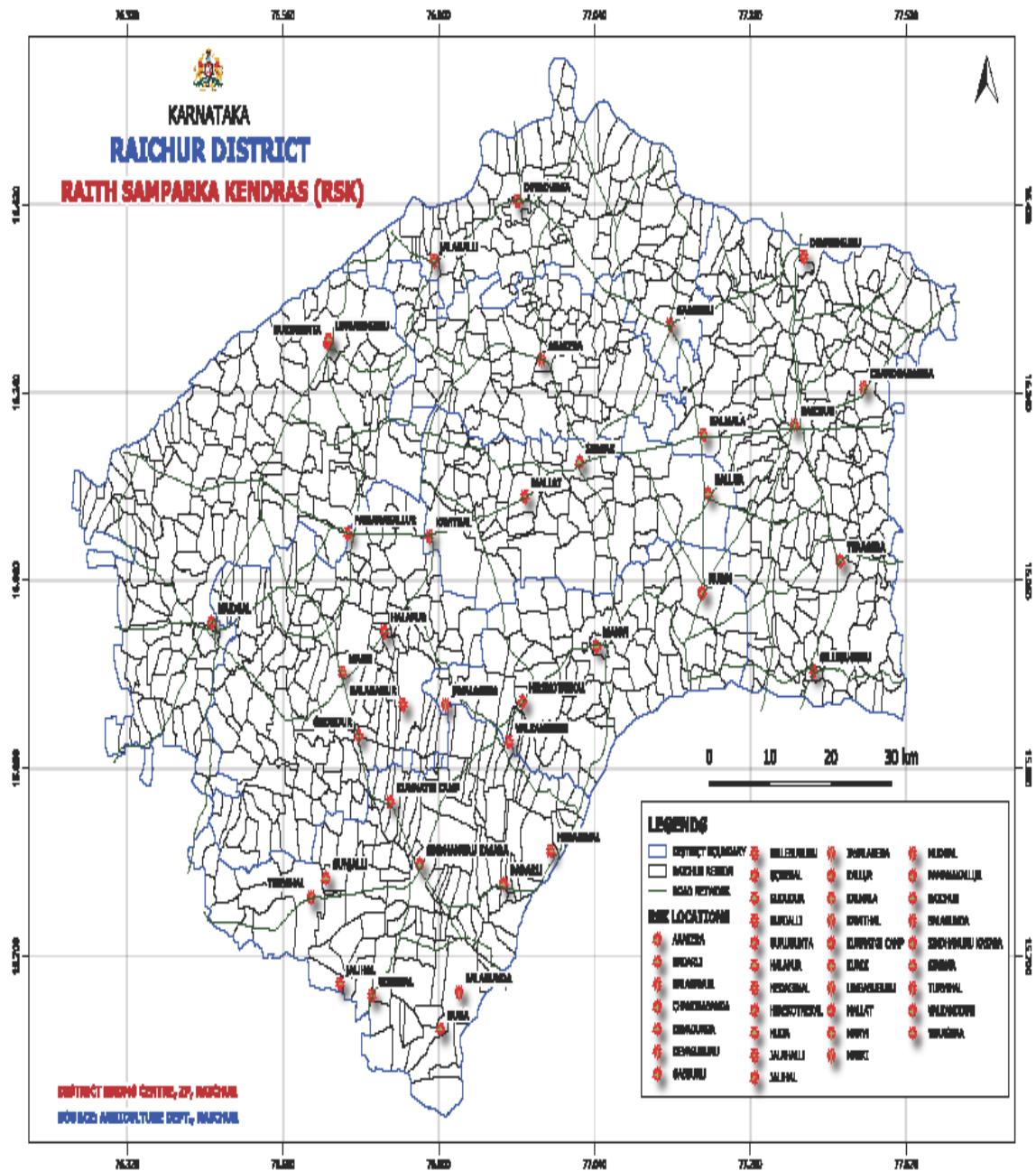


6. Department – Agriculture Department

- **Title – Locations of Raitha Samparka Kendra's**

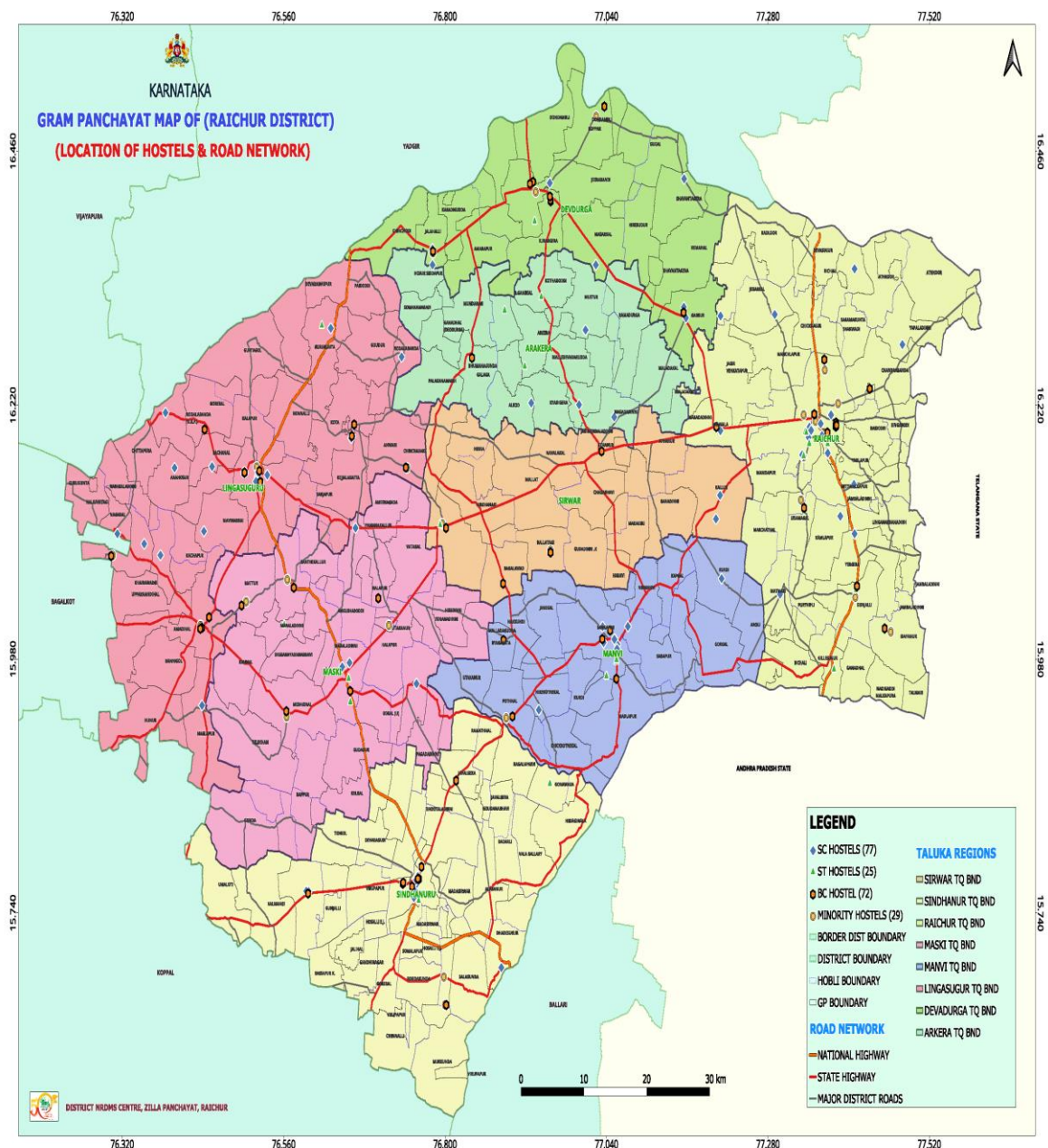
- **Map Purpose:**

- To locate all RSKs and centers at Taluk, Hobli, and Gram Panchayat levels.
- To visualize spatial distribution and coverage of farmer service centers across Raichur District.
- To highlight underserved villages or areas lacking easy access to RSK services.
- To support district-level planning for establishing new RSKs or satellite centers.



7. Department – Zilla Panchayat, Raichur

- **Title – Gram Panchayat Map showing hostel locations**
- **Map Purpose:**
 - To locate and visualize all hostels (BC, SC, ST, Minority, Girls/Boys) within each Gram Panchayat.
 - To highlight areas underserved by hostel facilities for targeted interventions.
 - To integrate hostel locations with schools, colleges, and other educational infrastructure.
 - To support prioritization of new hostel construction or expansion based on spatial gaps.



8. Department – Superintendent of Police, Raichur

- **Title – Jurisdiction of beat boundary & locations**
- **Map Purpose:**
 - To support efficient deployment of personnel and resources across beats.
 - To aid in scheduling inspections, field visits, and service delivery.
 - To prevent overlapping responsibilities and ensure accountability.
 - To track field activities, service coverage, and incident response geographically.

