

***NATURAL RESOURCES DATA
MANAGEMENT SYSTEM
(NRDMS)***

***MONTHLY ACTIVITY REPORT
(August – November 2025)***

***Submitted by
District NRDMS Centre
Zilla Panchayat, Bagalkot***



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

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NRDMS Centre Activities (August-November 2025)

- As per the order from Karnataka Govt. conducted training to newly recruited Village Administrative Officer (VAOs) of Bagalkote District Dated : 1,2 Aug 2025



- As per the order from Karnataka Govt. conducted training to newly recruited Village Administrative Officer (VAOs) of Vijayapur District Dated : 11,12,13 & 14 Aug 2025



conducted training to newly recruited Village Administrative Officer (VAOs)

NRDMS (National Resources Data Management System) – Scope of Work

NRDMS is an initiative of the **Department of Science & Technology (DST), Government of India**, aimed at strengthening **scientific management of natural resources using geospatial and information technologies**. Its scope broadly covers:

1. Natural Resource Inventory & Mapping

- Collection, compilation, and updating of data on **land, water, forests, minerals, soil, agriculture, and environment**
- Use of **GIS, remote sensing, GPS**, and spatial databases
- Creation of thematic and integrated resource maps

2. Database Development & Management

- Development of **standardized, digital, spatial and non-spatial databases**
- Integration of multi-sectoral data from different departments
- Ensuring **data quality, interoperability, and accessibility**

3. Decision Support Systems (DSS)

- Development of **GIS-based DSS** for planners and administrators
- Support for **district, state, and regional-level planning**
- Scenario analysis and resource optimization

4. Decentralized Planning Support

- Strengthening **District NRDMS Centres**
- Providing data and analytical support for:
 - District Planning Committees (DPCs)
 - Local governance and development programs
- Focus on **area-specific and people-centric planning**

5. Capacity Building & Training

- Training government officials, scientists, and planners in:
 - GIS and spatial analysis
 - Data management and decision support tools
- Promoting awareness of geospatial technologies in development planning

6. Research & Technology Development

- Applied research in **geospatial data integration and modeling**
- Development of **custom tools and methodologies** for resource assessment
- Collaboration with academic and research institutions

7. E-Governance & Policy Support

- Supporting **e-governance initiatives** with spatial data infrastructure
- Providing inputs for **policy formulation**, environmental management, and sustainable development

8. Disaster Management & Environmental Monitoring

- Resource data support for:
 - Disaster preparedness and mitigation
 - Climate change impact studies
 - Environmental monitoring and conservation

In essence:

NRDMS acts as a **geospatial backbone for informed decision-making**, enabling sustainable management of natural resources and supporting decentralized, science-based development planning in India.

Yuktdhara – Geospatial Planning Support System

Yuktdhara is a **web-based geospatial planning portal** developed by the **Ministry of Rural Development (MoRD), Government of India**, in collaboration with the **Department of Science & Technology (DST)** under the **NRDMS programme**. The platform integrates **spatial data with rural development programme data** to support **evidence-based and decentralized planning**.

Objectives

- To facilitate **scientific planning** for rural development works using **geospatial technologies**
- To improve **convergence, transparency, and effectiveness** of flagship rural development schemes
- To support **Gram Panchayat and district-level planning** through spatial decision support

Scope of Yuktdhara

1. Geospatial Planning Support

- Integration of **GIS-based thematic layers** such as land use/land cover, water bodies, drainage, terrain, and infrastructure
- Visualization of existing and proposed development works on maps
- Identification of **optimal locations** for new assets and interventions

2. Convergence of Rural Development Schemes

- Support for planning and monitoring of works under:
 - **MGNREGS**
 - **PMKSY**
 - **Swachh Bharat Mission (Gramin)**
 - **NRLM** and other rural development programmes
- Facilitation of **inter-sectoral convergence** through a common geospatial platform

3. Support to Decentralized Planning

- Assistance in preparation of:
 - **Gram Panchayat Development Plans (GPDPs)**
 - Block and District-level plans
- Strengthening of **bottom-up planning** by providing spatial insights to local bodies

4. Asset Mapping & Monitoring

- Geotagging and visualization of **created assets**
- Monitoring spatial distribution and coverage of development works
- Identification of gaps, redundancies, and underserved areas

5. Decision Support System (DSS)

- GIS-based analytical tools for:
 - Resource prioritization
 - Area suitability analysis
 - Impact assessment of development interventions
- Evidence-based inputs for administrators and planners

6. Capacity Building & Institutional Support

- Training of officials at **Gram Panchayat, Block, District, and State levels**
- Promotion of geospatial literacy among rural development functionaries
- Strengthening institutional mechanisms for geospatial planning

Significance

Yuktdhara acts as a **spatial decision-support backbone** for rural development planning by combining **NRDMS geospatial data infrastructure** with **MoRD programme databases**,

thereby enhancing the quality, sustainability, and accountability of rural development initiatives.

Bhima (Bheema) River Flow in Vijayapura District — Overview

1. General Course & Hydrology

- The **Bhima River** (also spelled *Bheema*), also known locally in some reaches as *Chandrabhaga*, is a **major tributary of the Krishna River**. It **originates in the Bhimashankar hills of the Western Ghats in Maharashtra** and flows **southeastward through Maharashtra, passes through northern Karnataka (including Vijayapura and Yadgir districts)** and subsequently enters Telangana before joining the Krishna River.
- In **Vijayapura district**, the river flows in the **northern part of the district for approximately ~20 miles (about 32 km)**, running west to east, influencing local topography and agricultural land.

2. Seasonal Flow Characteristics

- The Bhima's flow is **strongly monsoon-dependent**:
 - **Monsoon (June–October)**: Heavy southwest monsoon rainfall in the upper catchment contributes to **high and often seasonal flood flows** downstream in Vijayapura district. During these months the river can **overflow its banks and inundate low-lying areas**.
 - **Post–Monsoon & Winter (November–February)**: Flow gradually decreases; water in the channel primarily depends on regulated releases from upstream dams and catchment inflows.
 - **Summer (March–May)**: The river commonly experiences **very low flow** or near-dry conditions, especially without dam releases.

3. Influence of Upstream Reservoirs and Releases

- The river's flow regime in Vijayapura is significantly influenced by **releases from upstream reservoirs, particularly the Ujani Dam and other structures in Maharashtra**. These controlled releases, especially during heavy rainfall periods, can lead to **abrupt increases in discharge downstream**, sometimes causing flood conditions.
- Conversely, in years when upstream releases are reduced or delayed, **flows can drop sharply**, leaving stretches of the river dry and affecting water availability for irrigation and local uses.

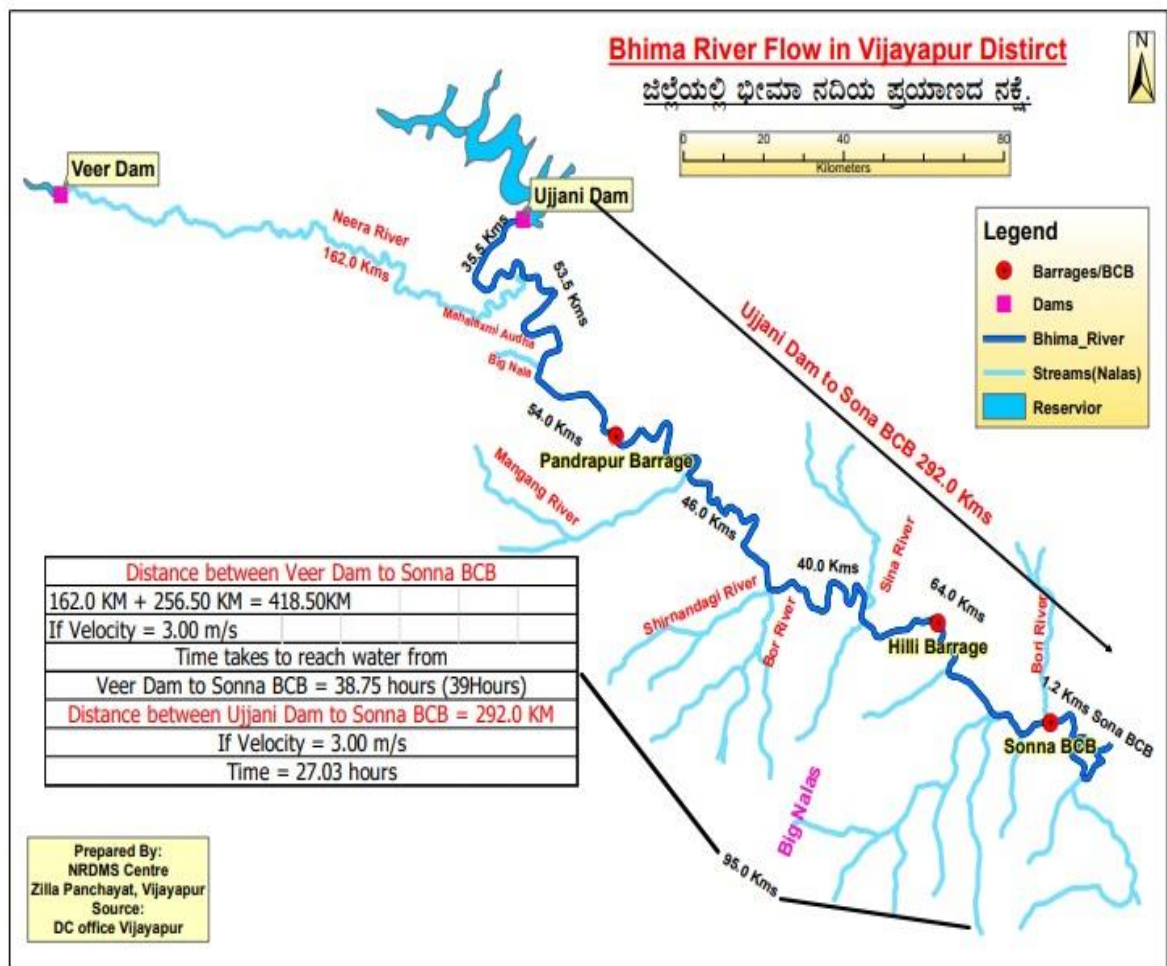
4. Flood Events & Impacts

- **Flooding incidents** have occurred periodically in Vijayapura district when monsoon rains and reservoir releases coincide, leading the river to **overflow and inundate nearby villages and agricultural lands**.

- For example, heavy rains in Maharashtra and coordinated releases from upstream storage can cause the river to **rise rapidly and submerge low-lying settlements along its banks**.
- Infrastructure, roads, and bridges have occasionally been affected by high flows; local administrations issue alerts and execute precautionary measures during such high-flow periods.

5. Land, Agriculture & Local Water Use

- In Vijayapura district, the **floodplain of the Bhima contributes to local soil fertility and seasonal agricultural activities** when flows are moderate.
- However, in **dry months without controlled releases**, both river flows and connected surface water bodies can diminish, impacting irrigation supply and groundwater recharge



Geo-Spatial Maps for Action Plan (Budget 2026-27)

Geo-spatial maps (GIS maps) are spatial representations of data tied to **geographic coordinates** — these maps visually show where activities,

resources, infrastructure, population centres, natural resources, and planned budget allocations are located.

They help departments plan, prioritise spending, monitor progress, and justify budget allocations with **spatial evidence**.

For **Action Plans for Budget 2026-27**, geo-spatial maps can show:

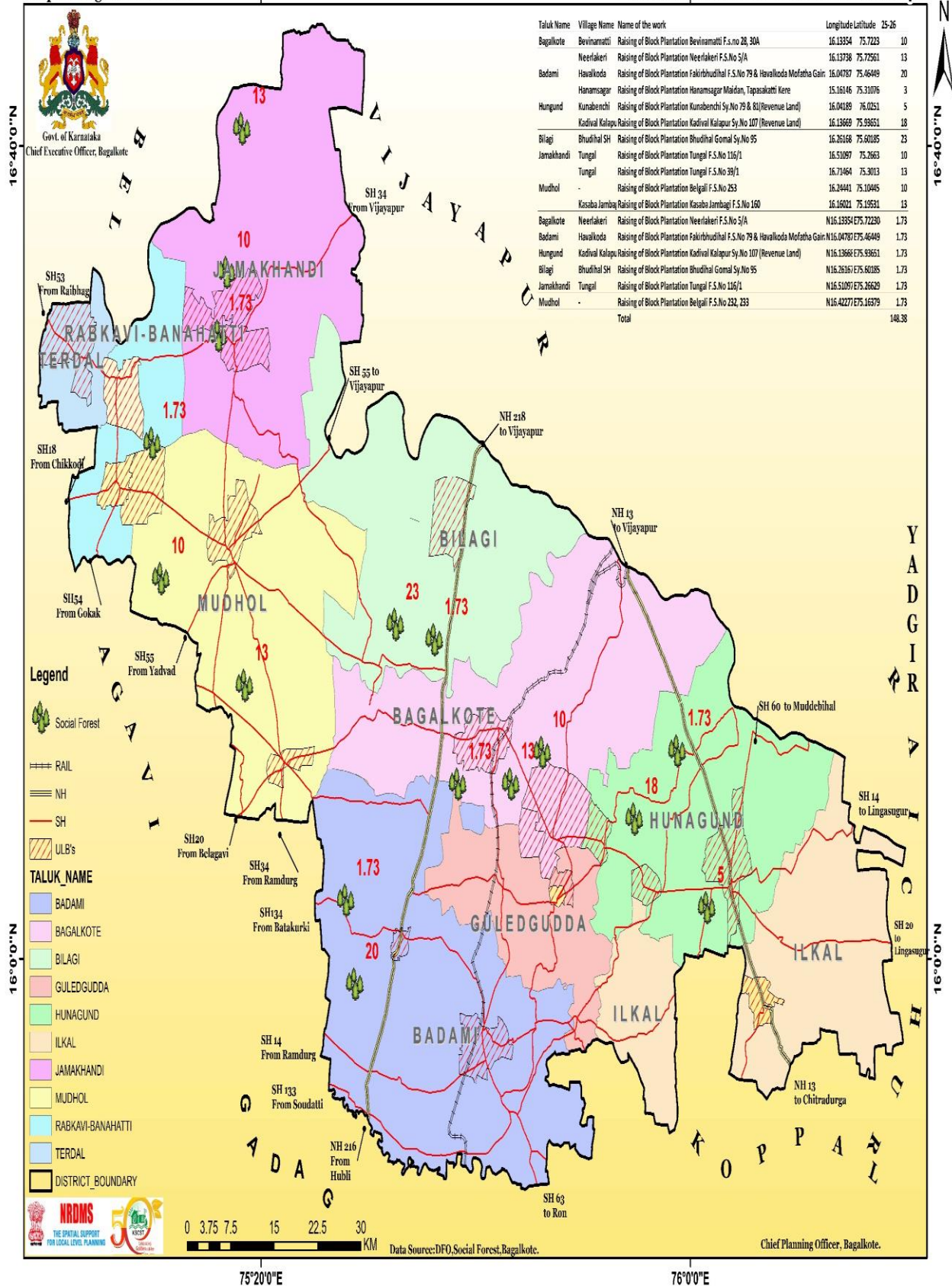
- 📍 Project sites & locations
- 📍 Infrastructure coverage (roads, water, health, schools)
- 📍 Resource distribution (forest, agriculture, water bodies)
- 📍 Social & economic indicators (poverty, access to services)
- 📍 GIS-based prioritisation heatmaps
- 📍 Scheme monitoring dashboards and asset mapping

Map of Bagalkot District

75°20'0"E

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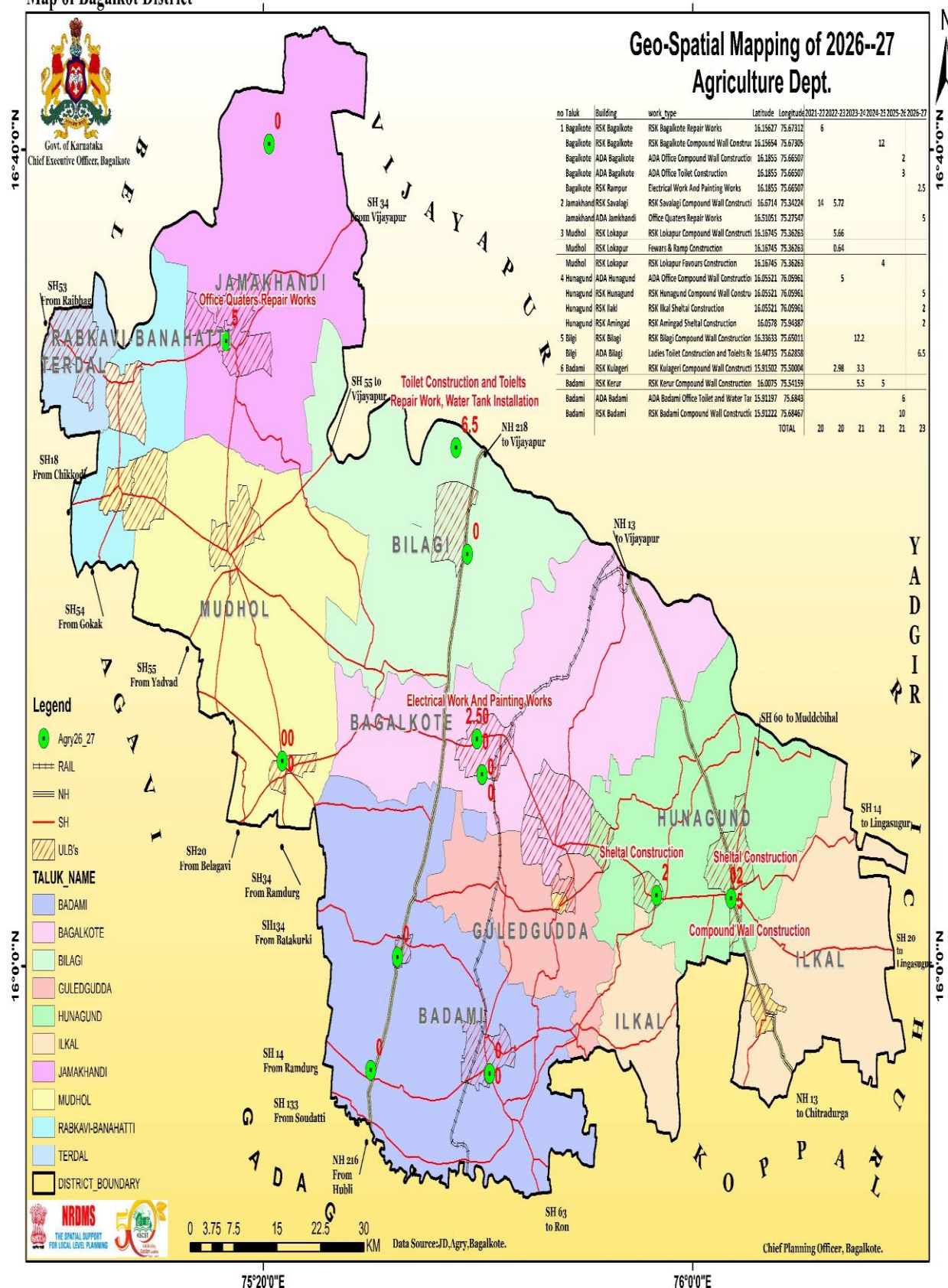
Geo-Spatial Mapping of 2025-26 Plantation Work of Social Forest Dept.



Map of Bagalkot District

75°20'0"E

76°0'0"E

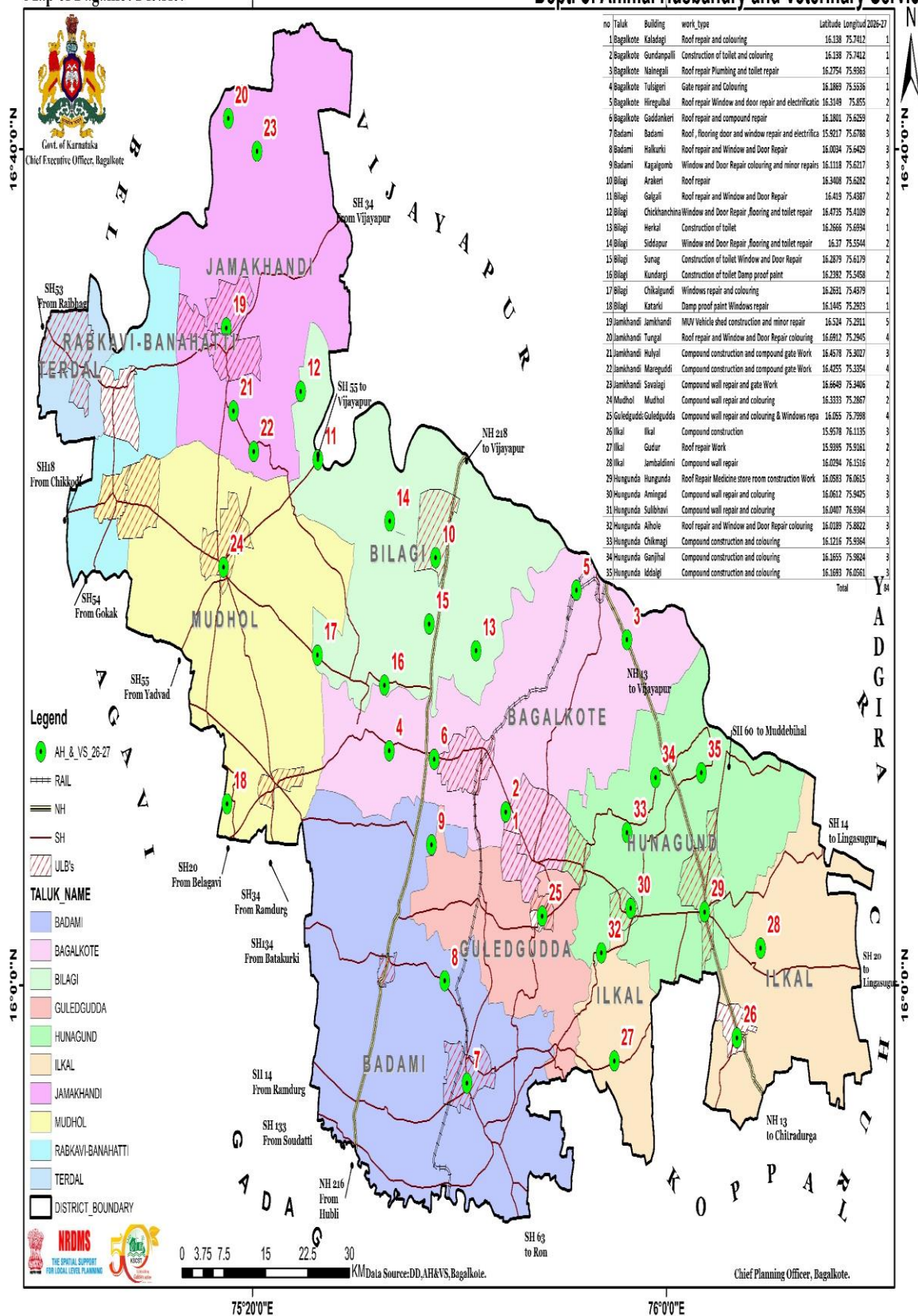


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Geo-Spatial Mapping of 2026-27

Map of Bagalkot District

Dept. of Animal Husbandry and Veterinary Services



6) Training Programmes Attended &

- Yukthdharma – Geospatial Planning Support System
- Bhima (Bheema) River Flow in Vijayapura District — Overview
- GP wise maps & Taluka Maps
- Road Map of Vijayapur District
- Disaster Maps
- Geo-Tagged Action Plan maps

7) Training Imparted to Line Departments

- As per the order from Karnataka Govt. conducted training to newly recruited Village Administrative Officer (VAOs) of Bagalkote District Dated : 1,2 Aug 2025
- Participated as a Hon'ble Guest Lecturer at INDIA SPACE WEEK webinar dated: 08/08/2025
- As per the order from Karnataka Govt. conducted training to newly recruited Village Administrative Officer (VAOs) of Vijayapur District Dated : 11,12,13 & 14 Aug 2025
- Attended Yukthdharma State level meeting at ZOOM link dated: 18/08/2025
- Given K-GIS portal details to Vijayapur district PD sec.
- Attended and hosted KDP meeting headed by Ministers on 17/09/2025
- Attended Yukthdharma Training at ANSSIRD, Dharwad on 25,26 Sept. 2025
- Given training to newly recruited Project Associate, NRDMS, Vijayapur
- Hand overed NRDMS charge to newly recruited Project Associate, NRDMS, Vijayapur
- Shifted NRDMS to newly allotted room at Bagalkote District
- Reported & Joined as Incharge to Vijayapur NRDMS

8) Conclusion

In the Quadrimester period from August to November 2025, the NRDMS Centre prepared all necessary maps for the Planning Department, Admin. Department, KSNDMC, NWKSRTC, DC office etc, conducted various Training Programmes at local level, attended & hosted meetings & webinars
