

NATURAL RESOURCES DATA MANAGEMENT SYSTEM (NRDMS)

MONTHLY ACTIVITY REPORT
April - July 2025

Submitted by

District NRDMS Centre
Zilla Panchayat, Vijayanagara



Submitted to

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

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

Contents

SI No	Details	Pages
1	Basic Information of District	4
2	NRDMS Background of the District	5-6
3	Geographical Features	7-8
4	NRDMS Spatial and Non-spatial Data available in District NRDMS Centre	9-10
5	NRDMS Centre Activities (April - July month)2025-26	11-27
6	Training Programmes & Training Imparted to Line Departments	28
7	Commitment to Improve NRDMS Activities	28
8	Administrative &Thematic Maps related to NRDMS activities	29-33
9	Photographs of events/field visits & VAO training Photos	34-39
10	Conclusion	40

Basic Information of District

District Name: Vijayanagara

Division: Kalaburgi

District establishment of Year:2021-22

Headquarters :Hospet, Vijayanagara

Current CPO (Chief Planning Officer): J M Annadanaswamy

Current CEO :Shri Nongjai Mohd Ali Akram Shah

(Chief Executive Officer, Vijayanagara Zilla Panchayath)

NRDMS Background of the District

Introduction

The Council initiated the Karnataka Natural Resources Data Management System (NRDMS) program in 1992 and since then established District NRDMS Centers in all the State with active support and funding from Department of Science & Technology (DST) Government of India and Government of Karnataka. NRDMS program is a multi-disciplinary and multi-institutional program of the Council aimed at developing methodologies for building and promoting the use of spatial data management and analysis technologies in local area planning. The initial approach of planning based on macro level assessment of resources did not yield the desired results. The introduction of the concept of spatial planning to micro-levels by the Planning commission paved the way for evolution of NRDMS program. The vision of the NRDMS program during its inception was to provide S&T inputs for operationalising the concept of decentralized planning of the country by developing computer compatible spatial databases on natural resources, socio and agro-economic parameters to further the concept of area specific decentralized planning.

Resource knowledge and resource inventory is crucial to spatial planning. At the core of this concept lies an integrated approach to planning in contrast to the sectoral method. This requires a detailed knowledge of the interrelations and interdependencies between various sectors to resolve often-conflicting demands. This leads to a requirement for appropriate data management and analyzing tools and techniques and a large matrix of sectoral data, in digital format, on natural resources, demography, socio-economy etc. and integrating them to generate appropriate information/applications required for plan preparation.

The district NRDMS centers since inception have created an exhaustive database of natural resources, socio-economic parameters, infrastructure etc. The NRDMS centres are

providing analyzed/value added information to planners and administrators besides developing applications using geo-spatial technologies suitable for local level planning. The NRDMS centers are providing need-based information to users such as elected bodies, district administration and planners through maps, charts, tables, and reports etc., on spatial and non-spatial data.

Vision

Enabling people, communities and institutions of local-self governance with requisite databases and S & T tools for informed participation in local self-governance.

The corresponding goals of the Programme to realize the above vision could be the following:

To strengthen the S&T inputs in developing tools and techniques for integrated resource and infrastructure capacity building at various levels for planning and implementation in a spatio-temporal context in a multi-level framework below the district.

Genesis of NRDMS

The balanced regional development and effective implementation of the basic needs of our society depends on the planning process which was initially the sectoral approach confined to the central level. This accentuated the inter and intra-regional disparities in the development and hence there was necessity to decentralize the planning process to smaller area units. During the VIII five-year plan a special emphasis was rightly given to the concept of decentralized planning. While adopting the seventy third and seventy fourth constitutional amendment acts (1992), a set of specific items covering various sectors viz., land, water, agro-economy etc., were identified. Concerned agencies were required to prepare and implement integrated development schemes. This growing urge for decentralizing the process and practice of planning prompted to take a fresh look at methods of data management.

In line with the above policy, the Natural Resources Data Management System (NRDMS) project was launched by the Department of Science and Technology, Government of India.

The basic imperative behind evolving NRDMS are:

1. Large diversity of spatial data.
2. Many types of data are used for more than one purpose by more than one user.
3. Utility of data set may be greatly enhanced by merging or linking it with other data sets.
4. Reliability / consistency can be enhanced by correlating different parameters.
5. Many organisations are involved in data collection and updating.
6. Need for standardisation / compatibility of procedures of data collection and adoption.
7. Need to improve the utilisation of data for decision making.

The overall objective of the NRDMS is to increase the efficiency of utilization of resources through the application of scientific management principles and Geographical Information System [GIS] technology.

Need of NRDMS

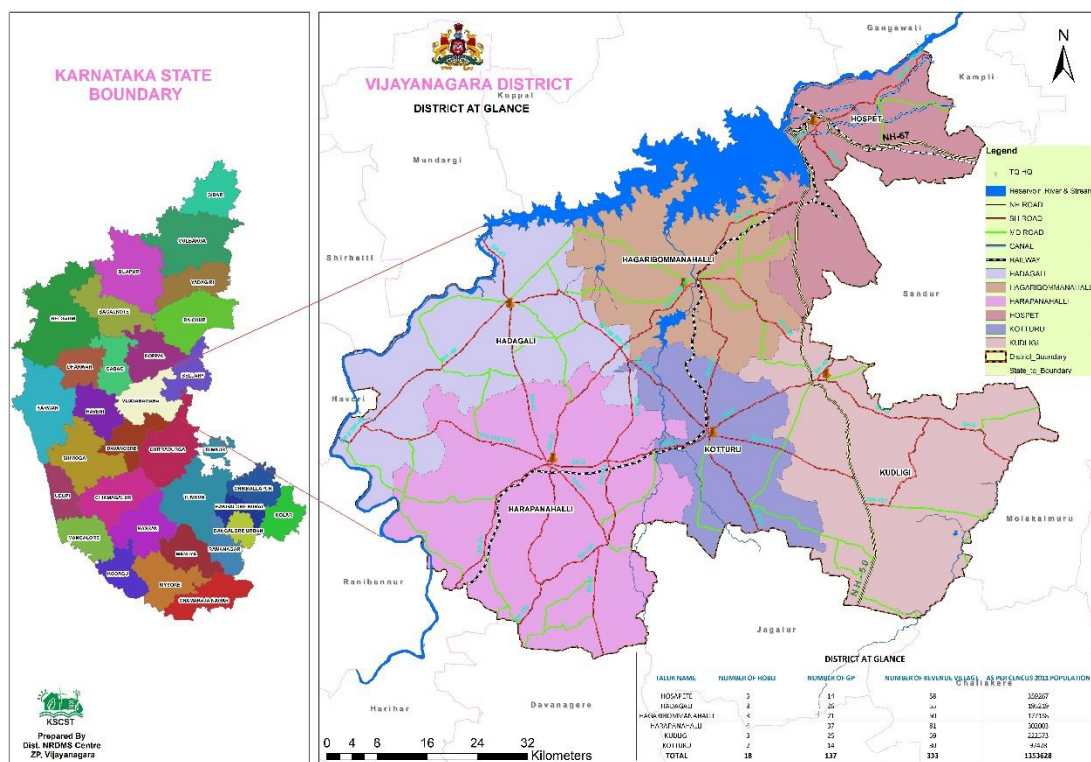
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Geographical Features

Vijayanagara District is located in the Hyderabad Karnataka region of the eastern part of Karnataka State. Vijayanagara district is 307 km from the state capital of Bangaluru. Vijayanagara district takes its name from the word Hampi in Hospet, Vijayanagara district has several historical places including Hampi, a world heritage site which was ruled by Vijayanagar kingdom. The Vijayanagara rulers built the " City of Victory " on the bank of Tungabhadra river at Hampi in Hospet taluk. Historical sites, farm land and rich minerals characterize Vijayanagara district. It is also the home of the former capital of the famous Vijayanagara Empire, Vijaynagara, a UNESCO World Heritage Site. Recently making headlines with mining industry, Vijaynagara, the district's capital, is known as Steel City and Gani Nadu (City of Mining). The district is having an areal extent of 4252 sq.km and is geographically located between the North latitude 14° 33' 28" and 15° 50' 9" and East longitude 77° 10' 15" and 75° 40 '43". The district borders Koppal/Ballari district in the north, Gadag/Davanagere district on west, Chitradurga district on the south. The district is divided into Six taluks namely Hosapete, Hadagali, Hagaribommanahalli, Kudligi, kotturu and Harapanahalli Taluks. There are 18 hoblies, 336 villages, 137 Gram panchayaths in the district. As per the 2011 census, total population of the district is 1,353,628 with population density of 14 inhabitants per sq.km. The sex ratio is 983 female among thousand males and the literacy rate of the district has increased from 83.91% on 2001 to 87.47 % in 2011.

Soil

Soils are the major ingredients of the agricultural production system. The soils of the district can be broadly grouped into 13 major categories out of which Clayey, Red loamy soil and Lateritic soil are major categories in the district. Red loamy and sandy soils generally occur on hilly areas to undulating land slope on granite and gneissic terrain. The soils are light textured and are highly leached in nature with good infiltration rate. Most of the structures are located in Clayey, Red loamy soil and Lateritic soils.



Land use/Land cover and Irrigation

Information on existing Land use/Land cover and pattern of their spatial distribution forms the basis for any developmental planning. The current land use has been assessed for its suitability in the light of land potential for suggesting alternate land use practices. There are 5 major categories of Land use/Land cover in the district among which Agriculture land is the major category contributing 65-75% of total geographical area and 8-10% is covered with forests

Surface hydrology

The major river of Vijayanagara district is Tungabhadra and its tributaries are Hagari and Chikka-Hagari which flows through Siraguppa and Bellary taluks of the district. Chikka-

Hagari river which lies 96 kms away on the western side of the Sandur hills traverses through Hadagali and Kudligi taluks of the district.

Geological formation

Physiologically, the district can be divided into rocky upland, plateau & flat topped hills located at an elevation of about 493.71m above MSL. Geologically the district has 16 major types of geological rock formations among which Amphibolite is the dominant rock formation followed by Migmatites and Granodioritic.

Hydro-Geomorphology

Geomorphologically the Hills form the majority of the district underlain by granites and gneisses with the highest elevation of 495 m amsl. There are 4 major types of geomorphological units found in the district in which Pediplain is the major unit. Most of the water harvesting structures are located in pediplain geomorphological unit where the ground water prospect is moderate

NRDMS Spatial and Non-spatial Data available in District NRDMS Centre

Spatial Data

Administrative boundaries

- District, Taluk, Hobli, Gram Panchayath, Village Boundaries & settlements
- MP, MLA, ZP, TP Constituency
- Natural Resources
- Topography – contour, spot heights, slope
- Land use/Land cover
- Soil & Related maps
- Wasteland
- Forest, wild life
- Geology, Geomorphology, Lineaments & Mineral
- Geo hydrology with OBW, RG stns.
- Surface Water bodies – Rivers, Reservoirs, Anicuts, Drains, MI Tanks
- Basin, catchment, watershed, command area boundaries

- **Infrastructure Facilities**

- Roads, Rail, Helipads, Airports
- Industries location, Tourism
- Post & Telegraph, Hospitals, Anganwadies, Schools, Drinking water facilities, AHVS, Hostels, Libraries, Banks, Settlements, Temples, Petrol bunks
- Police stations, etc.,

Non-spatial Data

Natural Resources – Lithology, Rock Features, Land, Geology, Mineral, Wasteland, Soil, Forest, Water, Rainfall, O.B.Wells, Watershed, Command Area Details, Drainage, Climate, Wasteland

Demography : 2011, 2001, 1991 Census details, Employment, Disable person details.

Agro-economy : Land utilization, LOP, Crop & Irrigation Data

Socio Economy - Industries, Labors, Employment details

Infrastructure - Roads, Helipad, Rail, Electricity, Fisheries, Hostels, Co-operative Societies, NGO, Banks, Drinking Water, Health, Veterinary, Education, Library, Tourism, Electricity, Vehicle Census, Anganwadies. Ayurveda_Dispensary, Bank_location, Bcm_Hostel, Colleges, Community_Health_Center, Generic_Medical_Shop, Licensed_Medical_Shop, Mining-Stone_quary, Mobile_veterinary_clinic, OHT, PHC_Location, Polytechnic_Institute, PRED_Borewell_Location, Primary_Veterinary_Centre, Sand_Lease, PHC, School_Location, SWD-Bhavana, Veterinary_Hospital, PUC Colleges.

Miscellaneous : Administration, MP, MLA, GP, TP, ZP, VA, HOBLI Constituency Details, Police station Details, Muzarai details, etc.

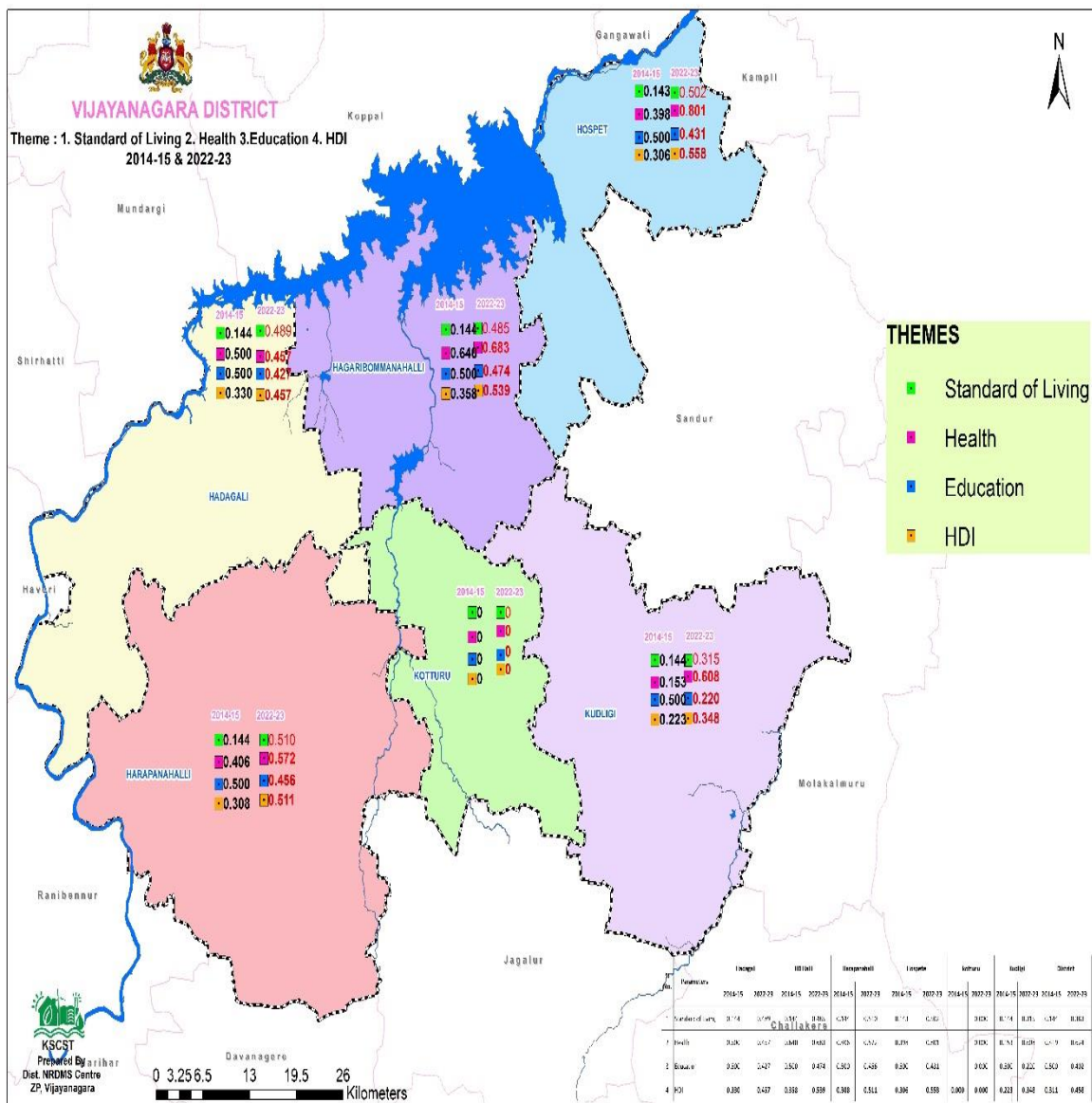
NRDMS Centre Activities (April - July month)2025-26

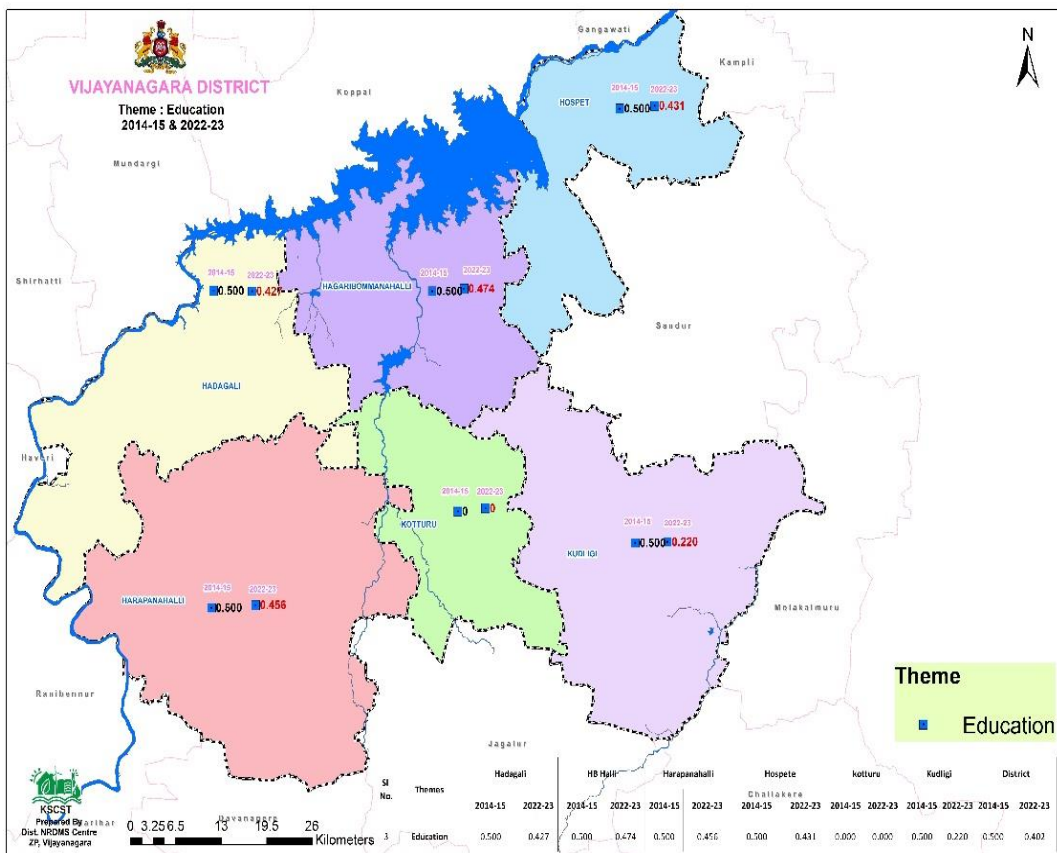
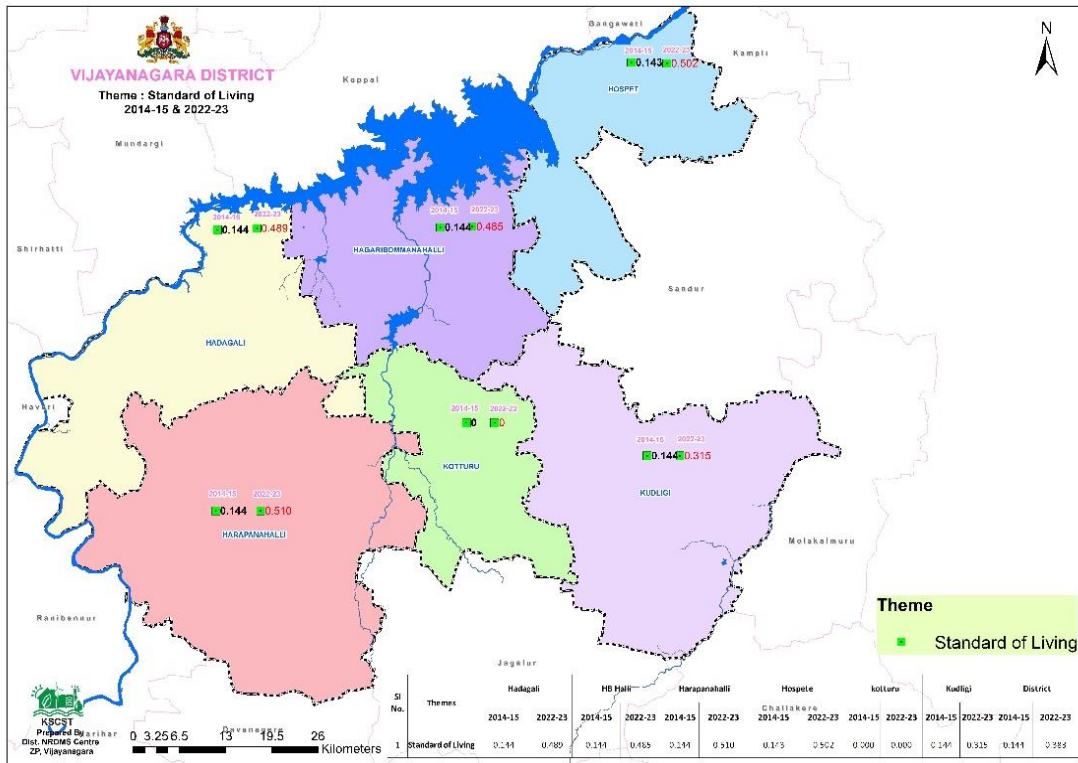
SI No	Departments and other organizations	Details of Work done.
1	District Collector Office Vijayanagara	➤ Prepared Tourism location map

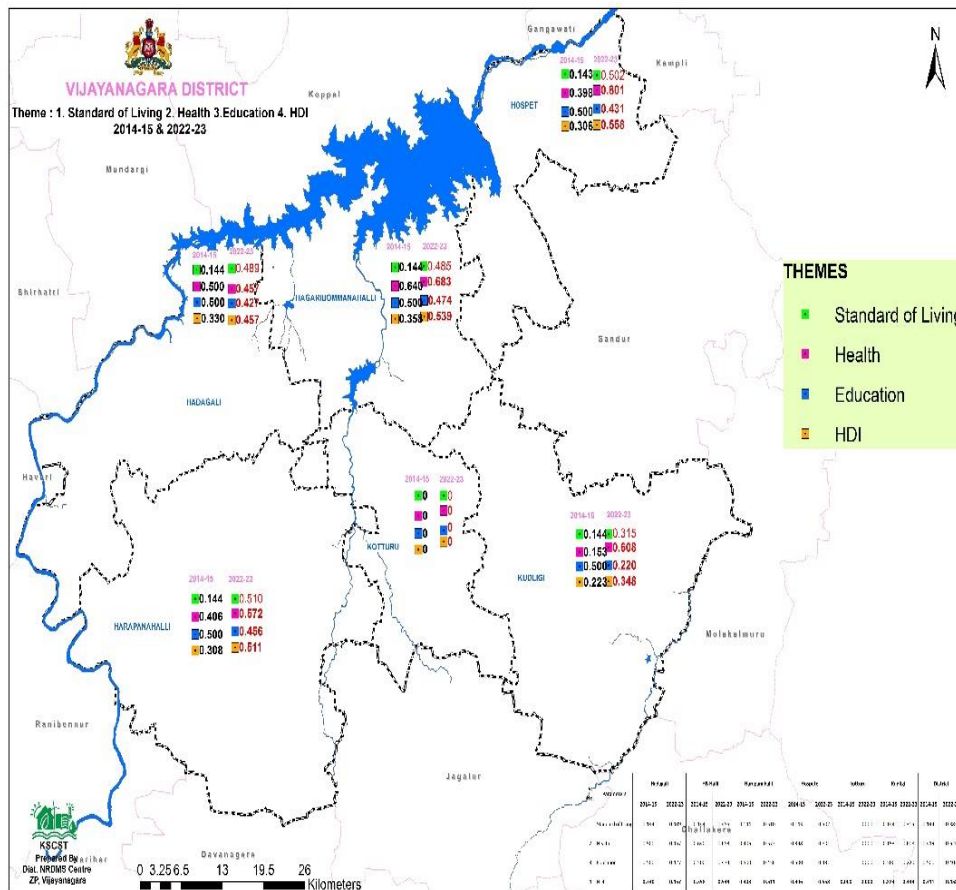
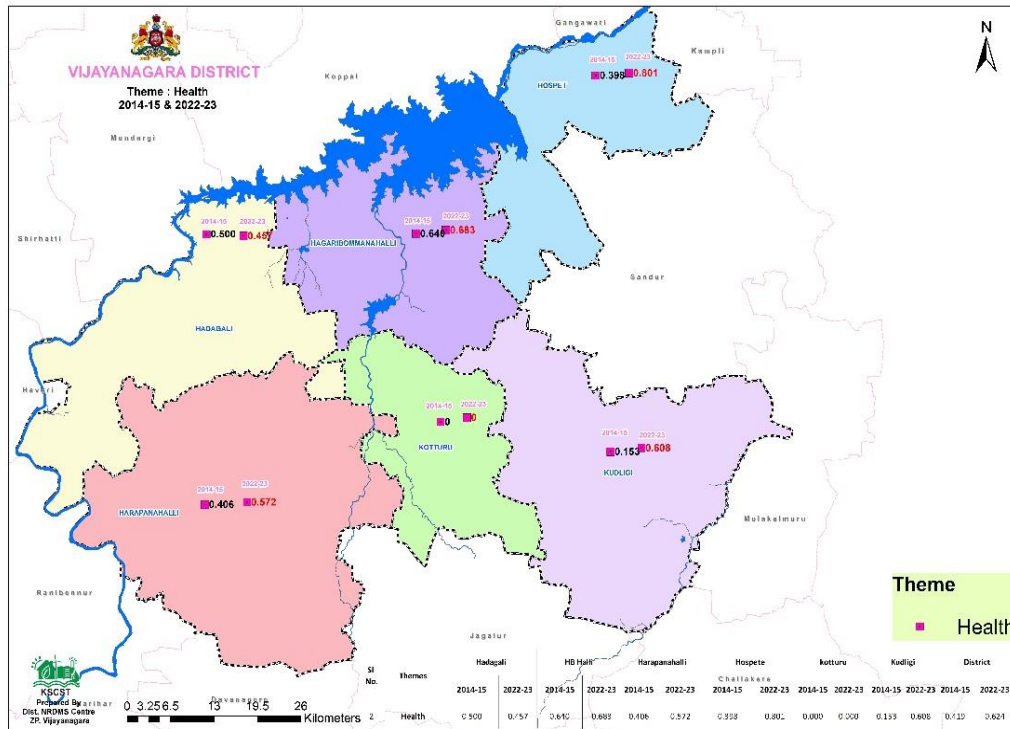
2	CEO Section ZP, Vijayanagara	➤ Prepared theme wise (standard of living , Education ,Health & HDDI) maps for Human development Indicators. ➤ Asset Mapping of Malapanagudi Grama panchayath
3	Planning Section ZP, Vijayanagara	➤ Prepared theme wise (standard of living , Education , Health & HDDI) maps for Human development Indicators.
4	Health Department	➤ Pictoral maps and public health facility maps related to the health department were prepared for the district.
5	Forest Department	➤ Technical assistance is being provided to the technical team to update roadside plantation in KGIS PORTAL.
6	Police Department	➤ Prepared police sub-Division, Circle and Police Station jurisdiction map . ➤ SP OFFICE: Prepared Heat Map (Accident zone)
7	Excise Department	Excise Department: Prepared excise jurisdiction map of Hospet excise Division
8	PRED Department	Prepared pred & pwd proposed road on google earth.
	MGNREGA Section	MGNREGA SECTION: Identifying & checking Tank Suitability for new tanks and existing tanks .

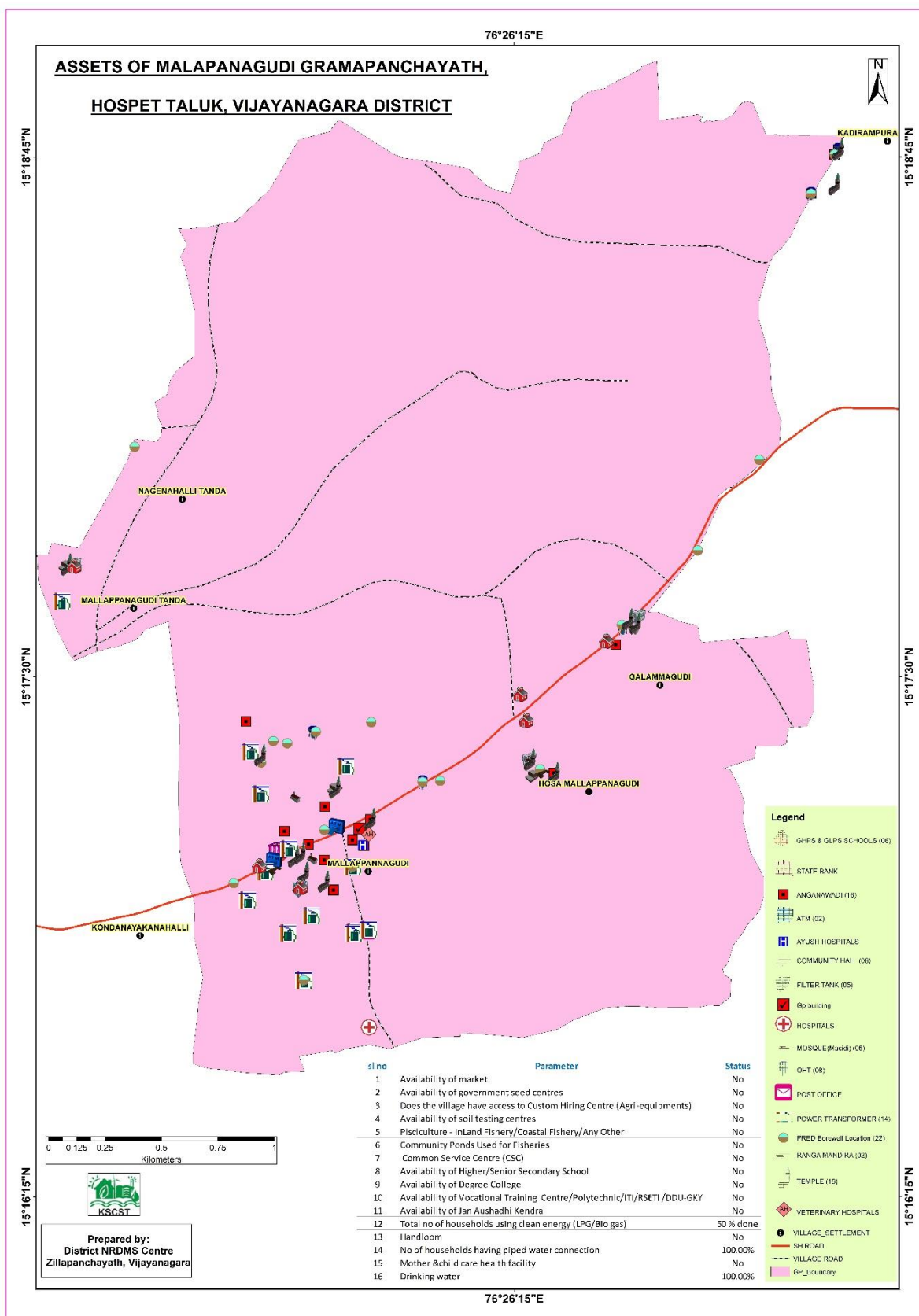
Prepared Tourism location map

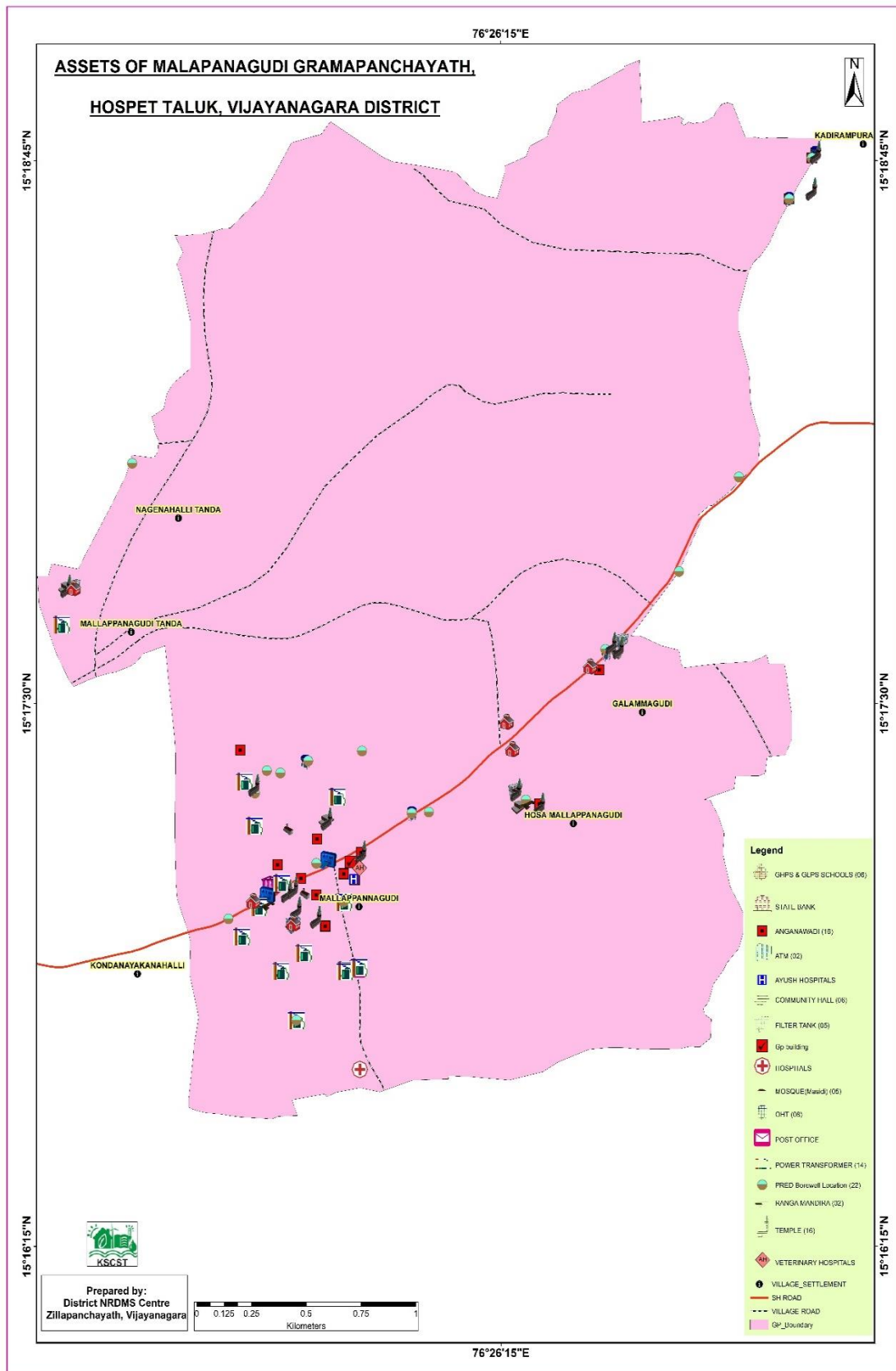
DC Office, Respected DC sir given the direction to NRDMS to Prepare Maps regarding Tourism location map of Vijayanagar District, Therefore, we collected the data from DEO in DC Office vijayanagara & consolidated the data using Arc GIS & prepared map as shown below:

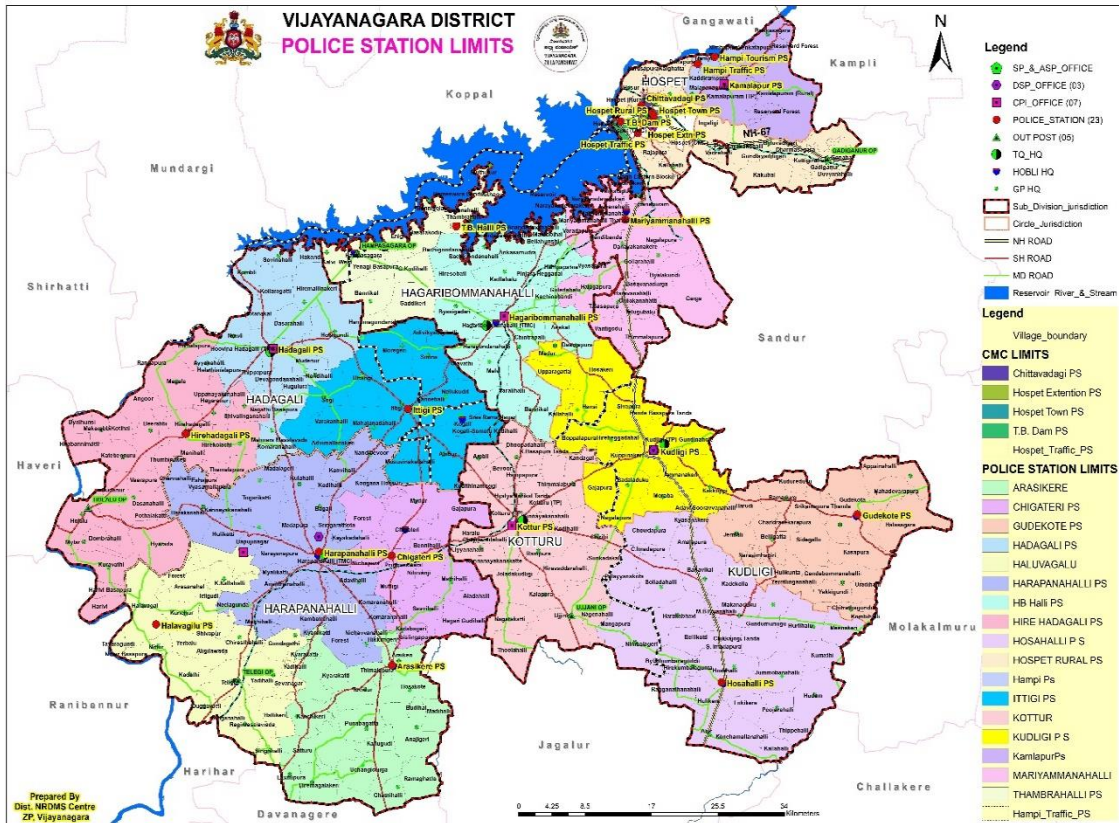






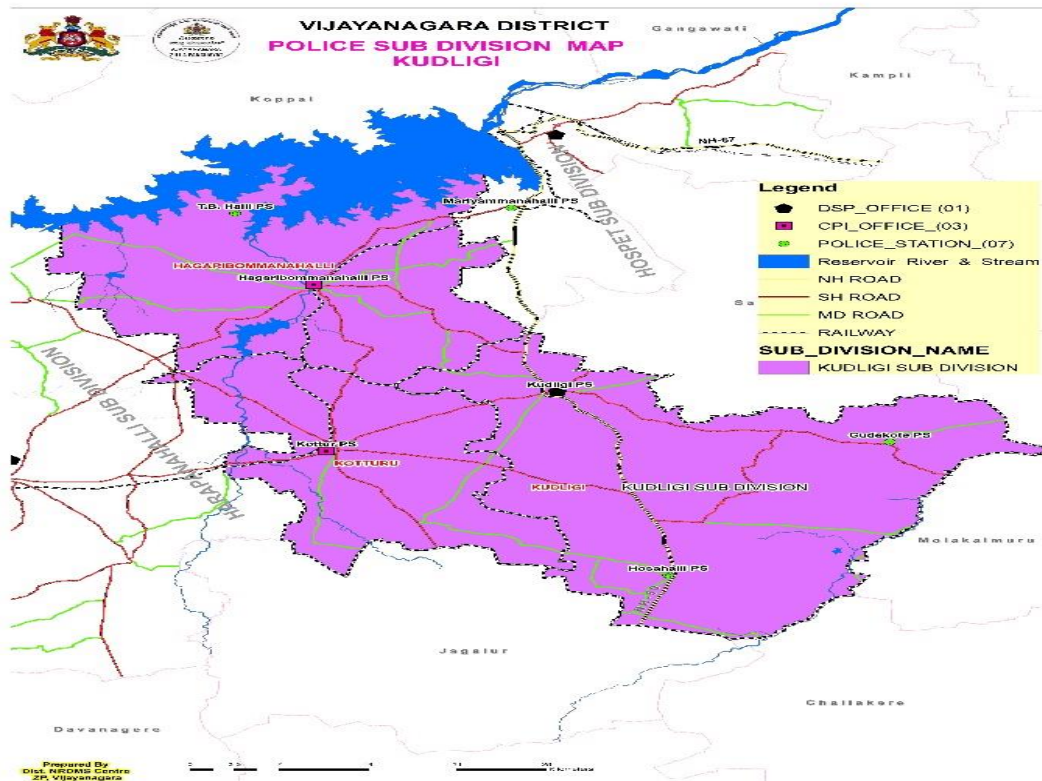


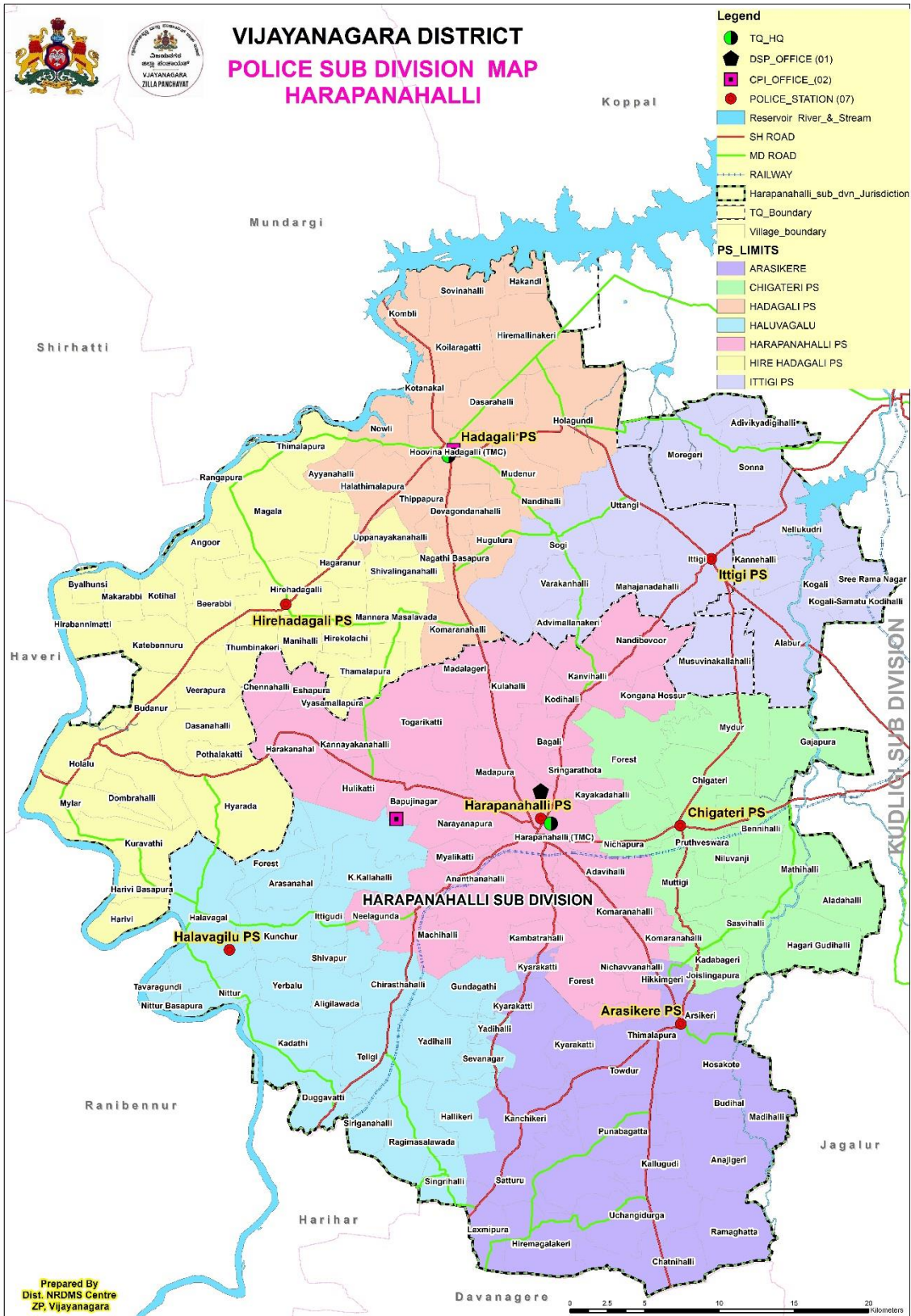


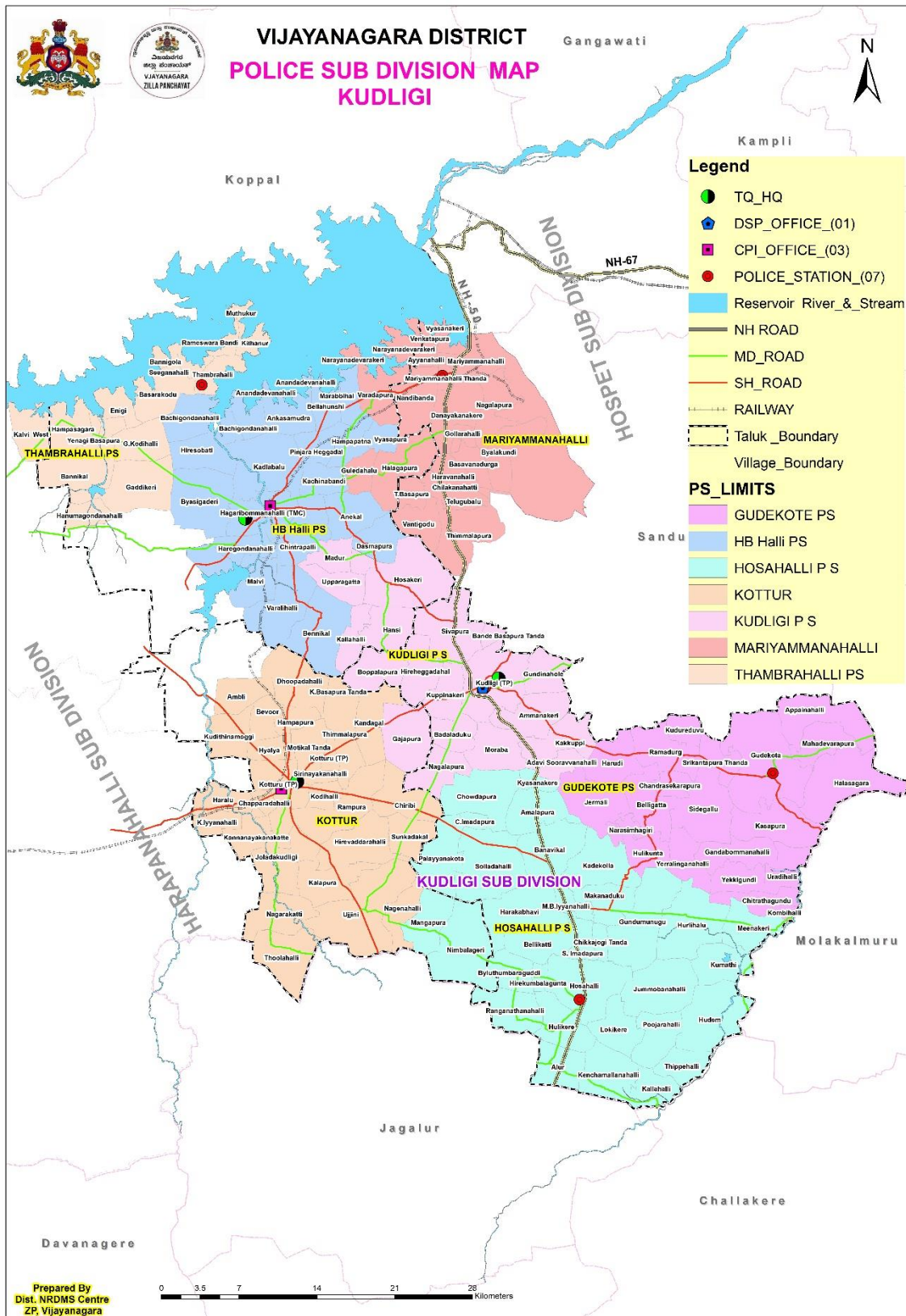


Prepared a Map of police sub-Division, Circle and Police Station jurisdiction & Accident Zone maps in Vijayanagara district

SP, OFFICE. has given the direction to NRDMs to Prepare Maps regarding all police sub-Division, Circle and Police Station jurisdiction maps & Accident Zone in vijayanagara District, Therefore, we collected the data from SP, OFFICE Office vijayanagara & consolidated the data using Arc GIS & prepared map as shown below:

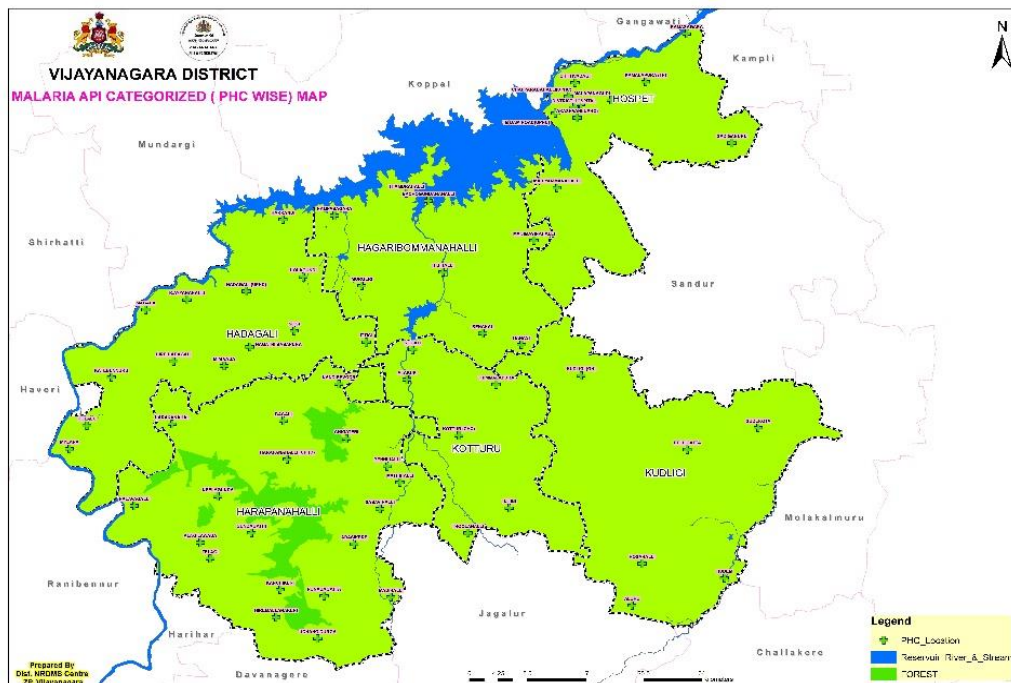
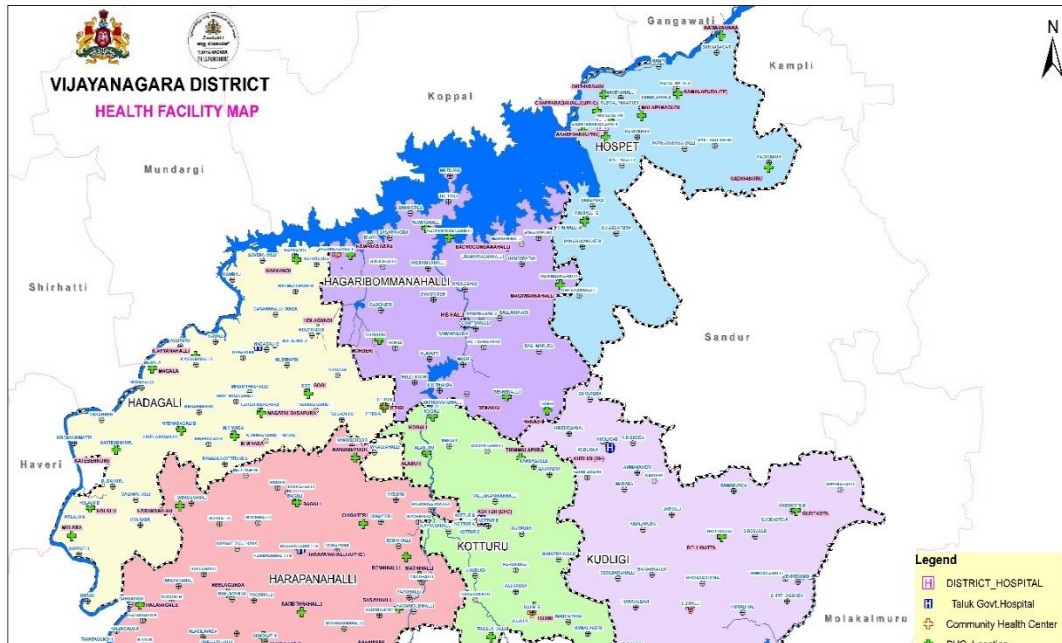






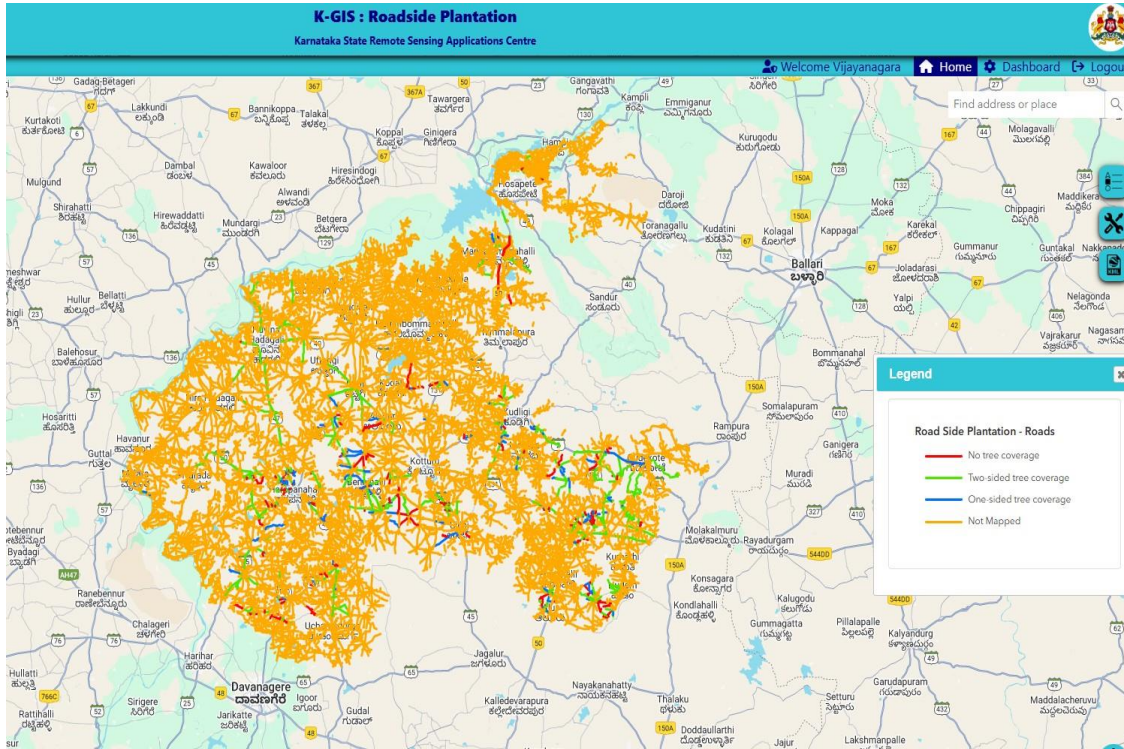
Health Department

- Pictorial maps and public health facility maps related to the health department were prepared for the district.



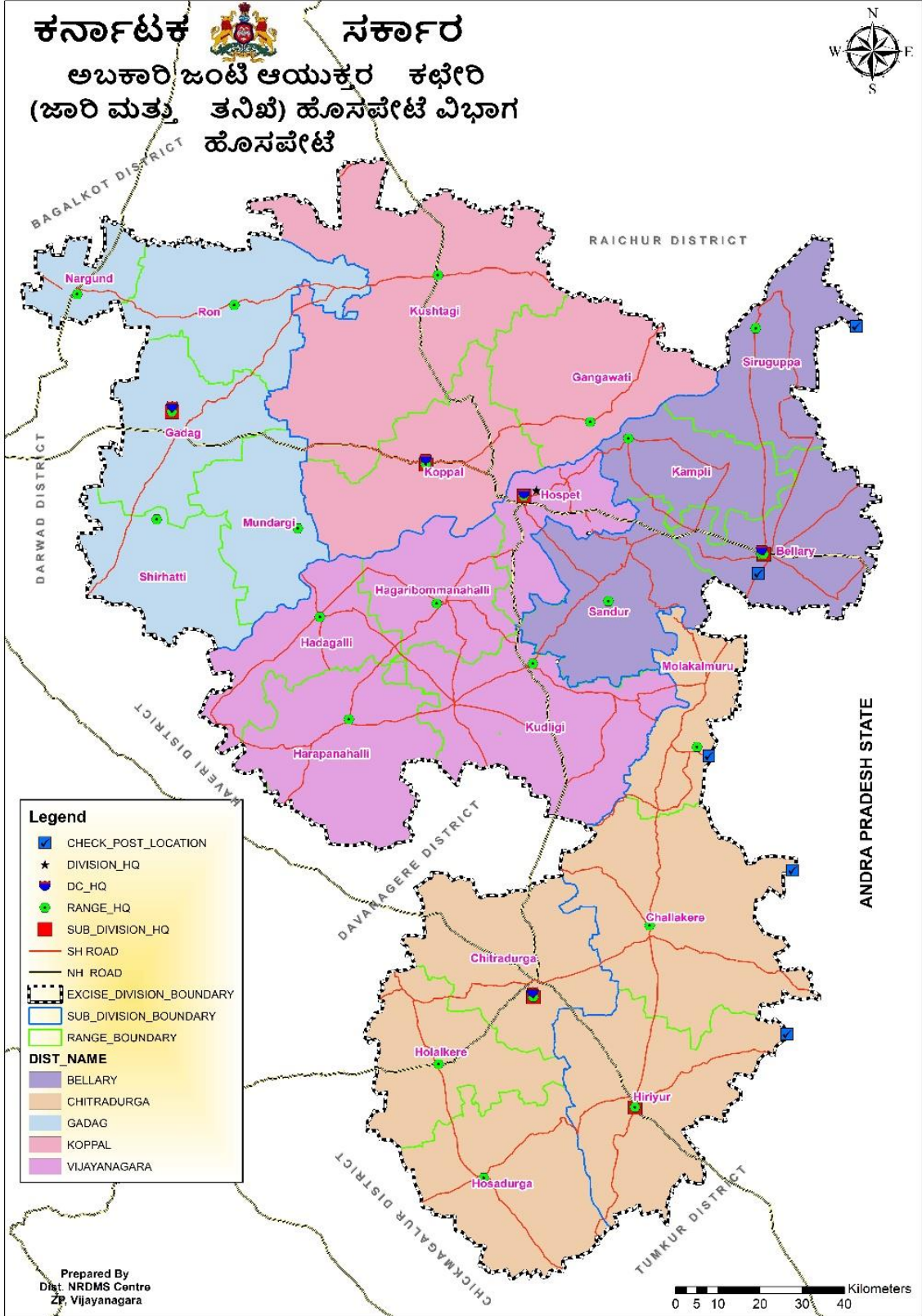
Forest Department

- Technical assistance is being provided to the technical team to update roadside plantation in KGIS PORTAL.



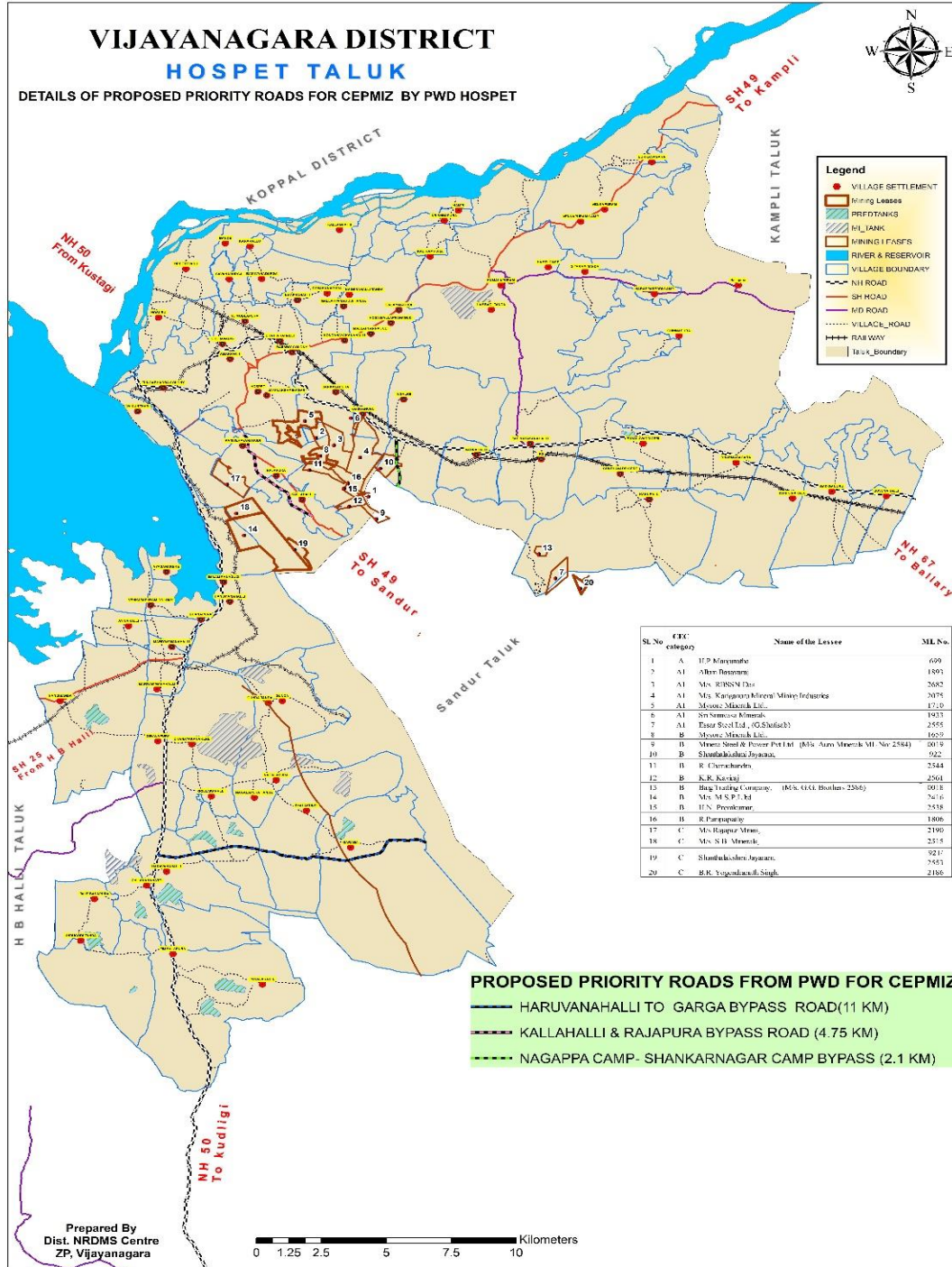
Excise Department

Prepared excise jurisdiction map of Hospet excise Division



PRED Department

Prepared pred & pwd proposed road on google earth.



- A one-day workshop program was attended at KSRSAC, Bengaluru, in collaboration with RDPR about “ Roadside Plantation Kgis web application”.
- Attended Training – Karnataka State Action Plan on Climate Change.
- Attended a five days training program focused on District disaster planning and management at ATI Mysore.

Training Imparted to Line Departments

- Training was provided for Rfo and technical personnel of forest department for road side plantation in kgis portal .
- Training was provided for New appointed Village accountant officers(VAO)

CONCLUSION:-

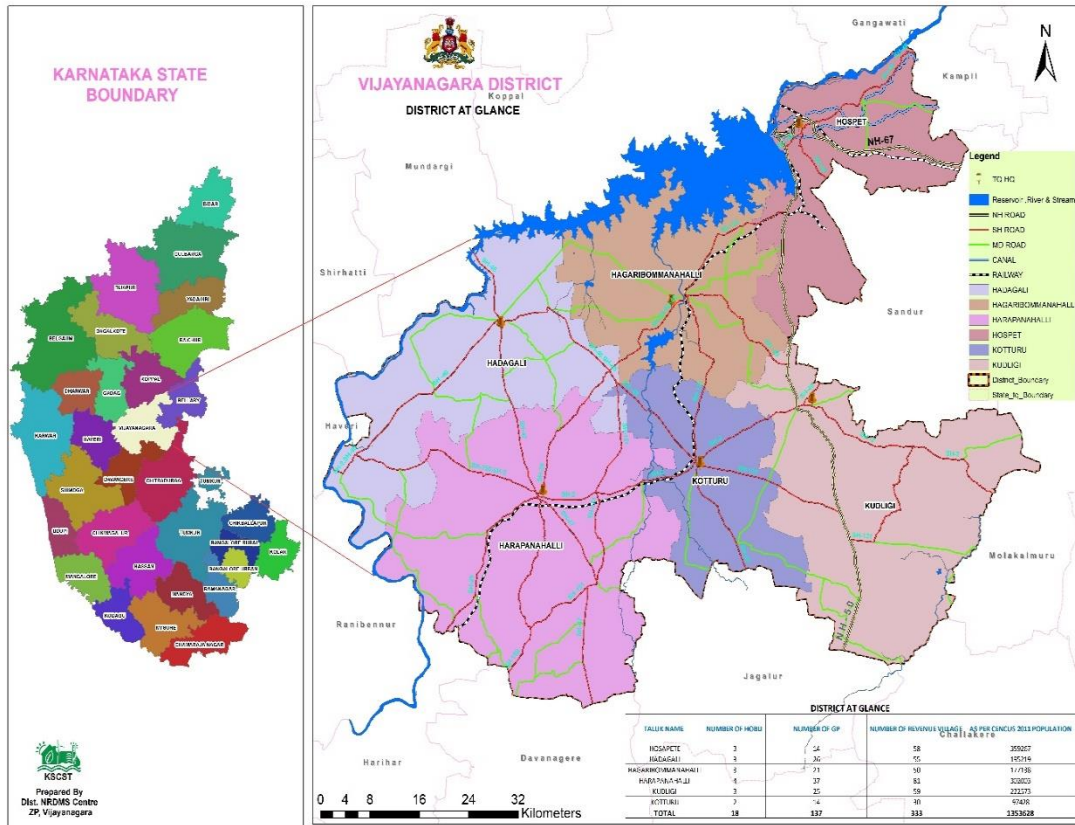
District NRDMS Centre collected all required information time to time from concerned line departments and accordingly the following sets of maps were prepared as per the specific requirements at hand:

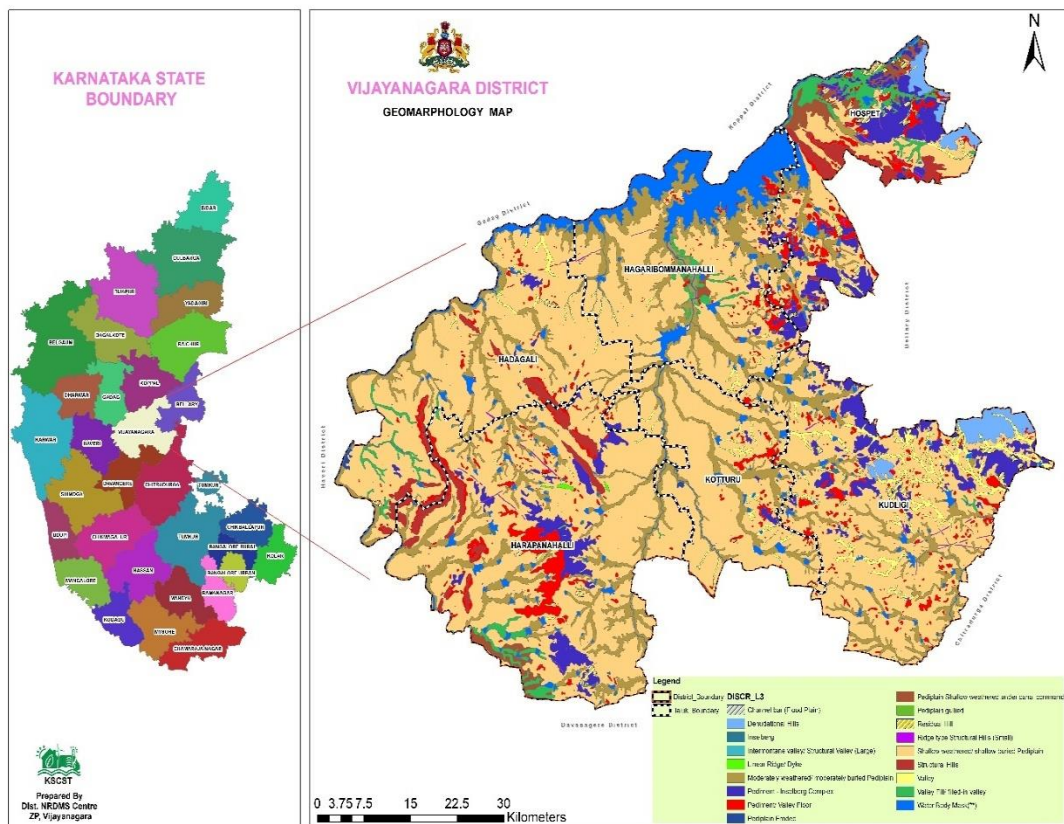
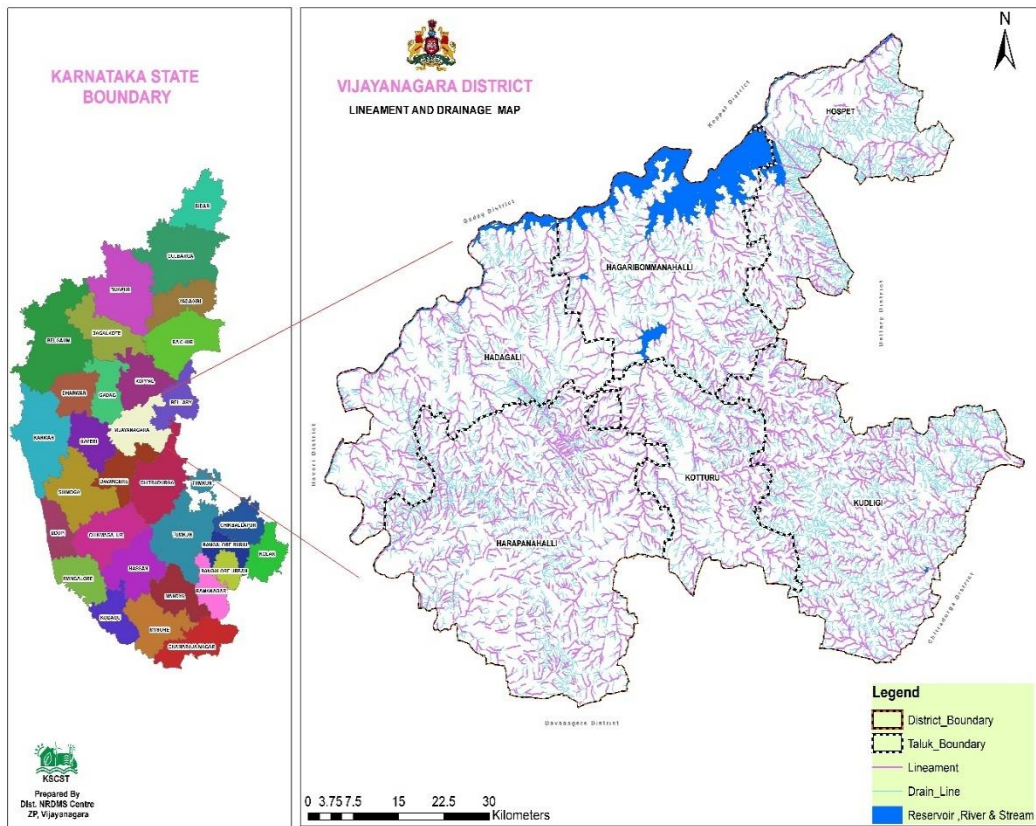
Commitment to Improve NRDMS Activities:

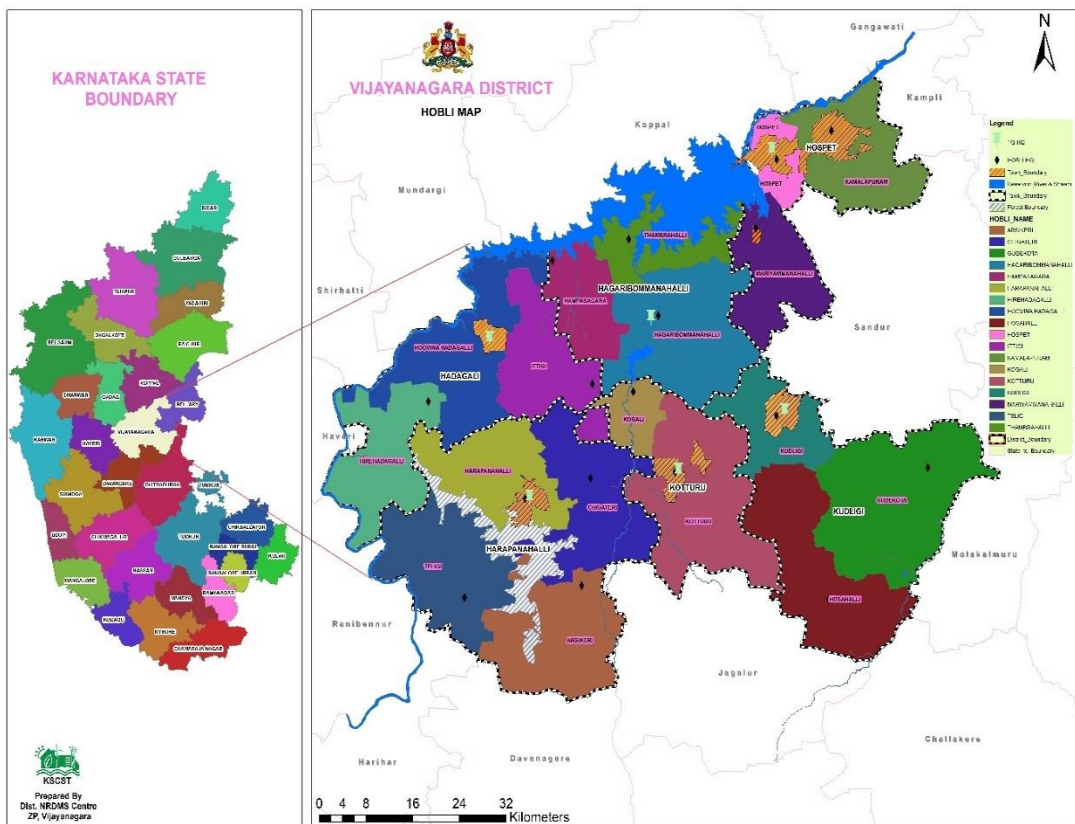
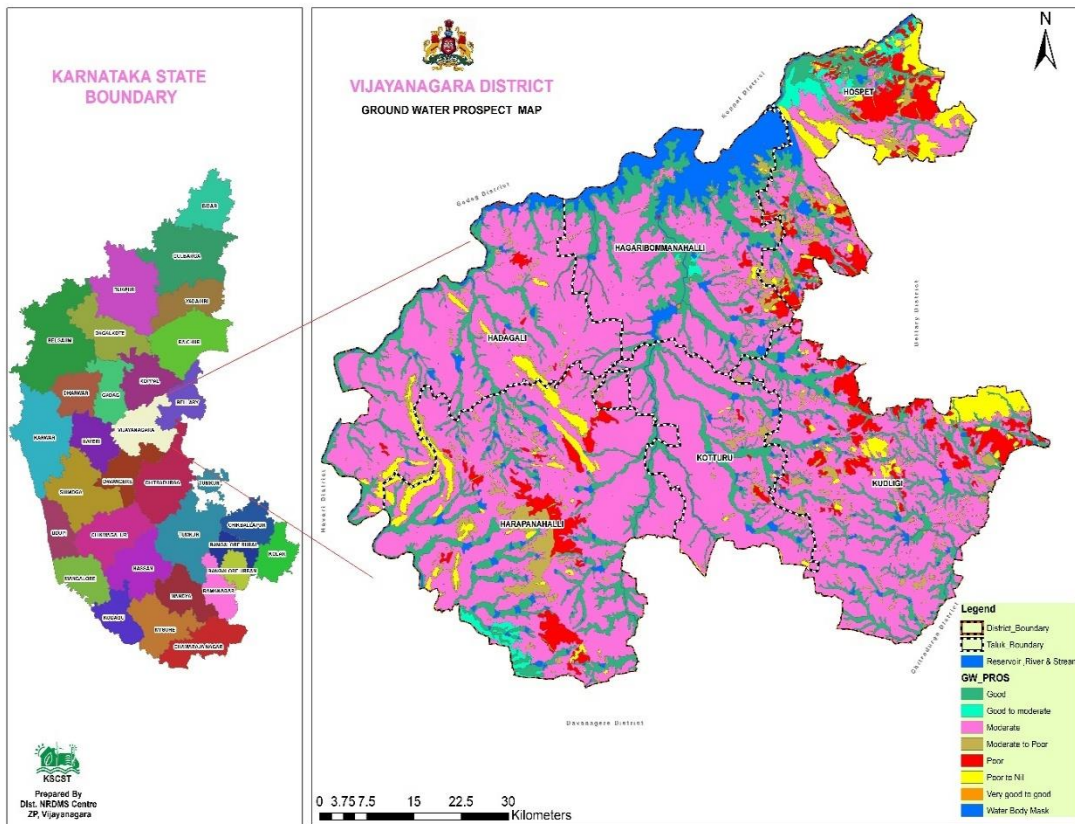
- Needs to prepare All GP Asset Map

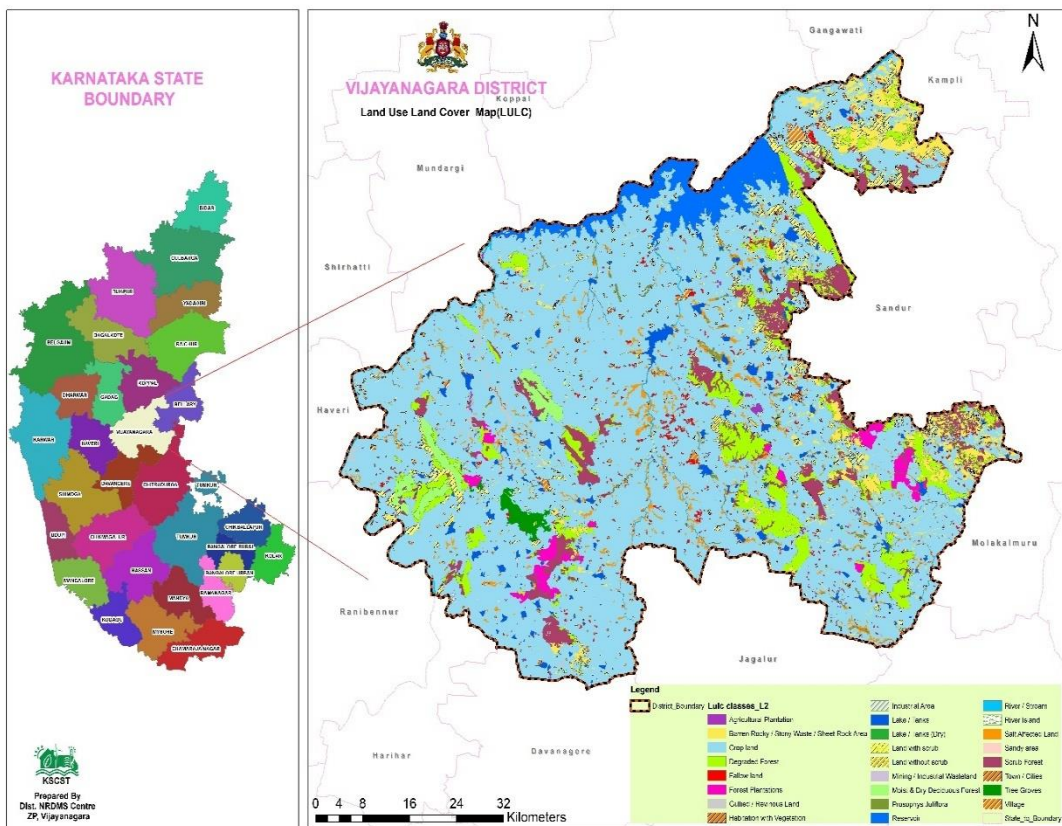
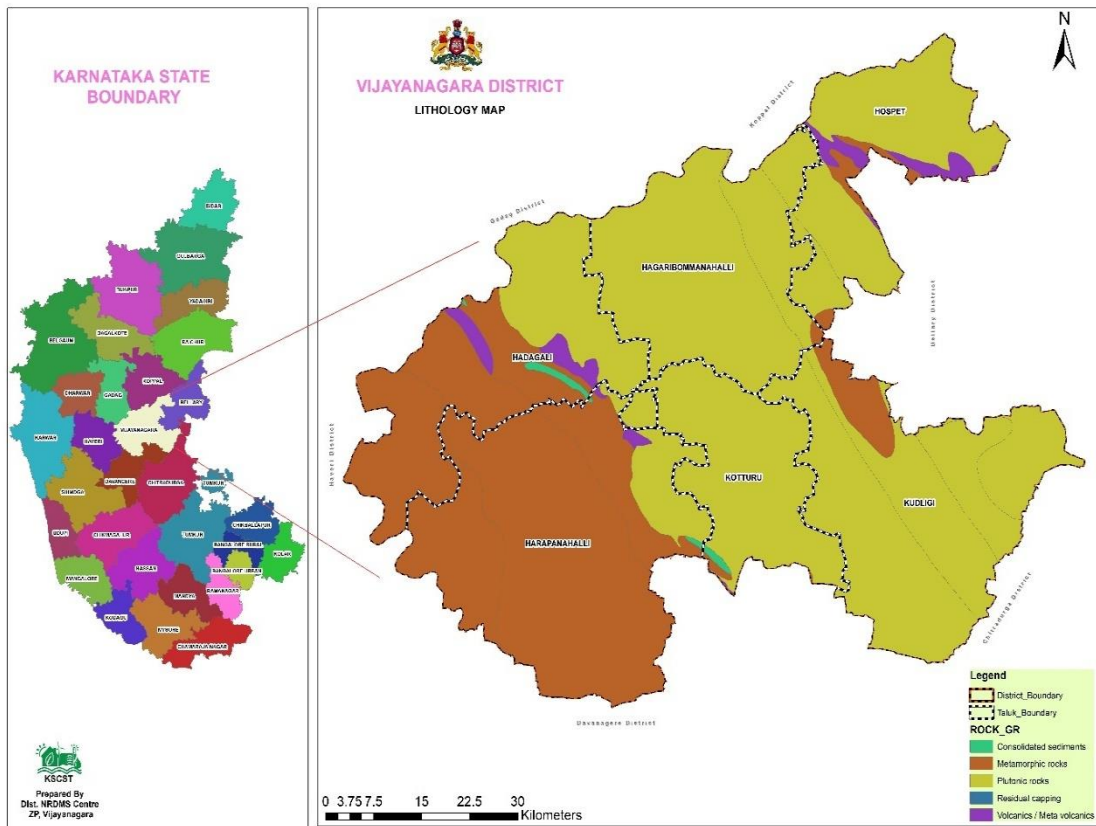
District Maps:

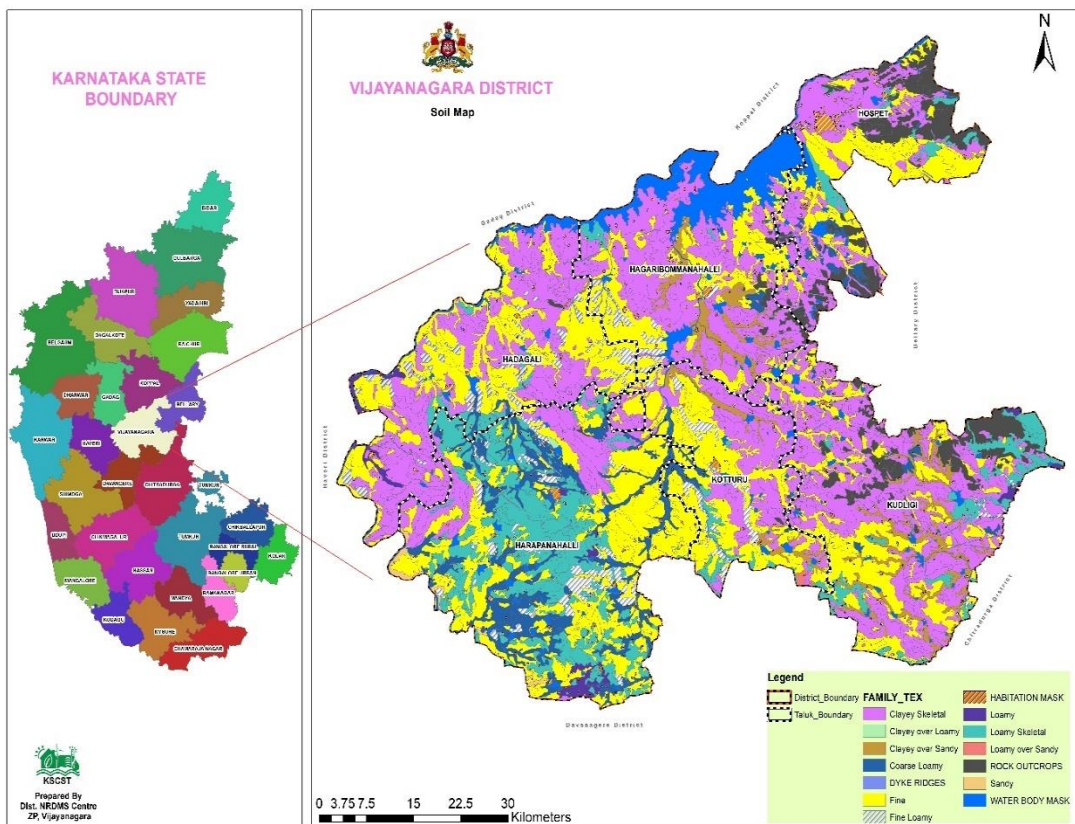
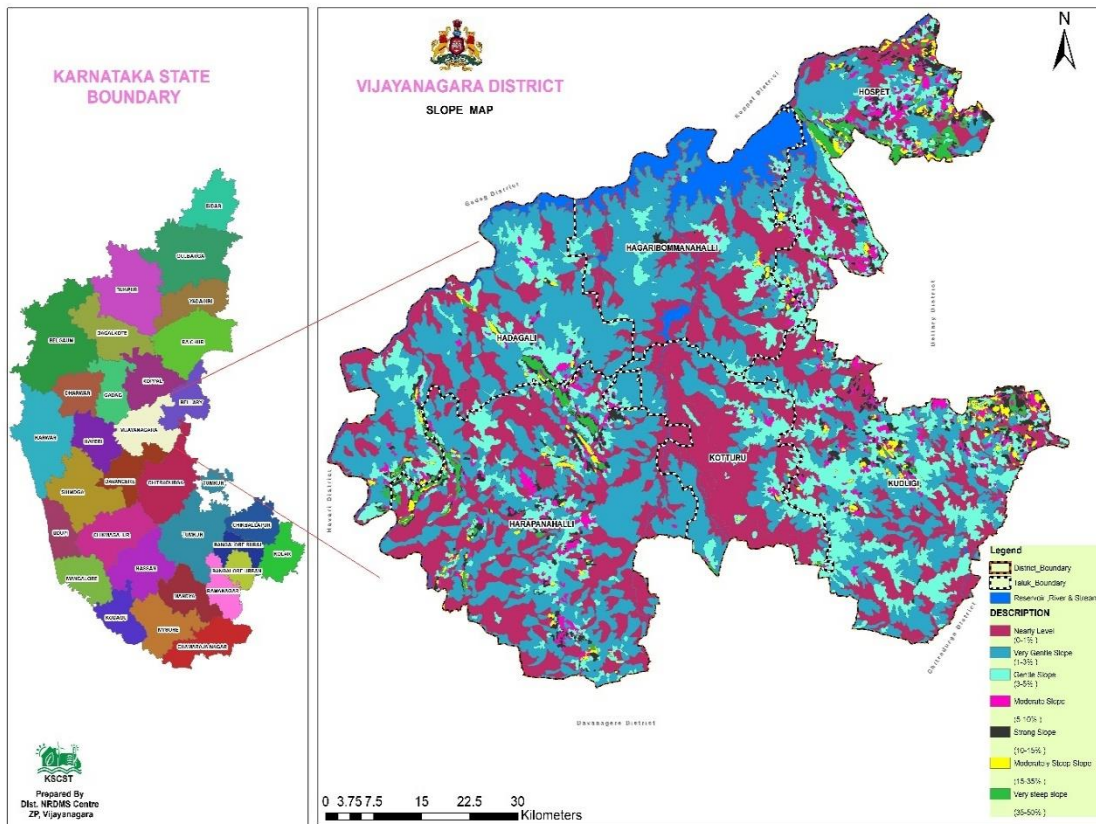
Administrative & Thematic Maps related to NRDMS activities.











Photographs of events/field visits

As per CEO sir direction we went field inspection of MGNREGA Works along with Assistant Secretary





VAO TRAINING PHOTOS



15.CONCLUSION:-

District NRDMS Centre collected all required information time to time from concerned line departments and accordingly the following sets of maps were prepared as per the specific requirements at hand:
