NATURAL RESOURCES DATA MANAGEMENT SYSTEM (NRDMS)

MONTHLY ACTIVITY REPORT
April - July 2025

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

Submitted to
Karnataka State Council for Science and Technology (KSCST)

*Indian Institute of Science Campus,
Bengaluru – 560012*

2. BASIC INFORMATION OF THE DISTRICT

- District Name : Dharwad

- Division : Belagavi

- District Established Year : 1992

- Headquarters : Dharwad

- Current CEO : Shri. Patil Bhuvanesh Devidas, (IAS)

  Zilla Panchayat, Dharwad

- Current CPO : Shri. Deepak Madival,

  Zilla Panchayat, Dharwad

3. NRDMS BACKGROUND OF THE DISTRICT

At the initiation of Department of Science & Technology, Govt. of India and Dept. of Science & Technology, Economics and Statistics and Institutional Finance the Natural Resource Data management Center was stated at Dharwad during 1992, Karnataka State Council for Science & Technology has taken the responsibility of implementation at district level. The District NRDMS center was started during 1992 at Kousali Institute of Management Studies, Karnataka University, Dharwad. Due to immediate accessibility problem the center was shifted to Dharwad Zilla Panchayat during 1998. The center had created the database on Natural Resources and collateral data on socio-economic aspects of the district since inception through assisting district administration by providing analyzed graphic outputs and maps as per their requirements. The NRDMS center had became part and parcel of the Zilla Panchayat, It is considered as individual Department where most of the data available in spatial and non spatial farm and also assisting academic research students of Engineering colleges and Karnataka University, Dharwad.

- As primary objective of the NRDMS Project, the NRDMS Centre has created Extensive data base on Spatial Database (Maps) and Non-Spatial Database (Attribute data) of Natural Resources, Socio & agro-economic parameters and Infrastructure facilities of the district after collating from the line departments and other organizations and it is been updating regularly based on nature of availability of data and requirements.

4. GEOGRAPHICAL FEATURES

- **LOCATION & BOUNDARIES:**

Dharwad district is situated in the Western sector of the northern half part of Karnataka State. The District encompasses an area of 4263 sq. kms lying between the latitudinal parallels of $15^0 02'$ and $15^0 51'$ North and longitudes of $73^0 43'$ and $75^0 35'$ East. The district is bounded on the North by the District of Belgaum, on the East by the district of Gadag, on the South Haveri and on the West by Uttara Kannada district. All these districts, which surround Dharwad district, belong to Karnataka State itself.

The District lies approximately about 800 mts above the sea level, which is why it enjoys a moderate and healthy climate. The District may be divided into 3 natural regions, viz., the Malnad, Semi-Malnad and Maidan. These regions, on an average, receive moderate to heavy rainfall and have dense vegetation. Kalghatagi and Alnavar area in Dharwad taluka in particular receive more rainfall than other talukas of the District.

DISTRICT DETAILS	
Taluk	8
Gram Panchayat	146
Hoblies	14
Villages	379
Corporation	1
Municipalities	6
Geographical Area	427329 Hectares
Population	1847023
Density	377
MLA Constituency	7
MP Constituency	1

- **GEOGRAPHICAL COORDINATES:**

  Latitude: 15⁰02' and 15⁰51' North

  Longitude: 73⁰43' and 75⁰35' East

- **TOPOGRAPHY:**

  Dharwad district has a varied topography, featuring distinct Malnad, Semi-Malnad, and Maidan (plains) regions, with the eastern parts under the Malaprabha river basin and the west near the Kali river basin. The district is situated at an altitude of approximately 800 meters, leading to a moderate climate. It has a mix of soils, including black soil suitable for crops like cotton and wheat, and red soil for paddy cultivation. The landscape includes rocky terrains, plains, and forest areas with rich flora and fauna.

- **CLIMATE:**

  AVERAGE RAINFALL:

  Average Annual Rainfall 748 mm**.**

  TEMPERATURE RANGE:

  The annual temperature range in Dharwad can vary significantly, with average annual minimums around 14°C and maximums reaching over 38°C during the hottest month of April. Winters typically see lows of around 15°C, while summer temperatures can reach peaks of approximately 35°C.

  CLIMATIC ZONES:

  Dharwad has a tropical monsoon climate, with a hot, dry summer (March to May), a heavy monsoon season (June to September) with significant rainfall, and a mild, pleasant winter (December to February). Temperatures during the summer can exceed 35°C (95°F), while winter days average around 25°C (77°F). The average annual rainfall is approximately 800 to 900 mm (31 to 35 inches), with the highest precipitation occurring in July and August.

  NATURAL RESOURCES:

  Dharwad district's natural resources include minerals like Bauxite, Kaolin, and Red Ochre, along with building stone and clay. Additionally, it possesses fertile

land suitable for various agricultural crops, including cotton, jowar, maize, groundnuts, onions, and fruits like Alphonso mangoes and guavas.

MAJOR RIVERS/ WATER SOURCES:

The district is rich in groundwater and has several important rivers such as the Bennihalla, Bedthi, and Shalmala, along with tanks and reservoirs.

5. NRDMS SPATIAL AND NON-SPATIAL DATA AVAILABLE IN DISTRICT NRDMS CENTRE:

SPATIAL DATABASE

Sector / Subsector	Scale	Source	Survey / Publn. Year	Area covered	Status Code	File Format
1. Natural Resources						
Land						
1. Topography						
Contour Map	1:50,000	SOI		District	NA	SHP
Slope Map		SOI	Can be generated			
2. Geology – A						
Rock features	1:50,000	MGD	NA	District	CC	SHP
Structural features	NA	NA	NA	NA	NA	NA
3. Geology – B						
Rock features	1:50,000	MGD	NA	District	CC	SHP
Structural features	NA	NA	NA	NA	NA	NA
4. Mineral Resources	NA	MGD	NA	NA	NA	NA
5. Geomorphology	NA	MGD	NA	NA	NA	NA
6. Land use	1:50,000	KSRSAC	NA	District	CC	SHP
7. Waste Lands	1:50,000	KSRSAC	NA	District	CC	SHP
8. Soils	1:50,000	NBSS&LUP	NA	District	CC	SHP
9. Forest & Wildlife						

Forest type	NA	KFD	NA	NA	NA	NA
Crown Density	NA	NA	NA	NA	NA	NA
Forest Category	NA	NA	NA	NA	NA	NA
Forest admn.	NA	SOI	NA	NA	NA	NA
Wild Life	NA	NA	NA	NA	NA	NA
Water						*CC*
1.Ground water						CC
Hydro Geology	1:50,000	MGD	NA	District	CC	SHP
Hydro chemistry	NA	ZP	NA	NA	NA	NA
Ground water budget	NA	NA	NA	NA	NA	NA
2.Surface water						*CC*
Drainage	1:50,000	MGD	NA	NA	NA	NA
Surface water bodies	NA	SOI & KSRSAC	NA	NA	NA	NA
3.Climate	NA	NA	NA	NA	NA	NA

Sector / Subsector	Scale	Source	Survey / Publn. Year	Area covered	Status Code	File Format
2.Demography						
Population						
Tehsil boundary	1:50,000	KSCST	2020	District	CC	SHP
District boundary	1:50,000	KSCST	2020	District	CC	SHP
Current popln. distbn.	NA	NA	NA	NA	NA	NA
Literacy						
Levels of education	NA	NA	NA	NA	NA	NA
Occupation						
Village boundary	NA	NA	NA	NA	NA	NA

Employment						
District scenario	NA	NA	NA	NA	NA	NA
Employment exchange	NA	NA	NA	NA	NA	NA
Assets & Expenditure	NA	NA	NA	NA	NA	NA
Migration	NA	NA	NA	NA	NA	NA
Destitutes	NA	NA	NA	NA	NA	NA

3.Socio Economy						File Format
Industry	NA	NA	NA	NA	NA	NA
Developmental activity	NA	NA	NA	NA	NA	NA
4.**Agro Economy**						
Land Utilisation						NA
Private Land	NA	NA	NA	NA	NA	NA
Common property	NA	NA	NA	NA	NA	NA
Land Ownership pattern						NA
General scenario	NA	NA	NA	NA	NA	NA
Farmer's holdings	NA	NA	NA	NA	NA	NA
Principal crops	NA	NA	NA	NA	NA	NA
Irrigation						
Minor irrigation						
Canals	NA	DLR & SS	NA	NA	NA	NA
Tube wells	1:50,000	DLR & SS	2019	District	CC	SHP
Dug wells	NA	DLR & SS	NA	NA	NA	NA
Tanks	1:50,000	DLR & SS	NA	District	CC	SHP
Lift irrigation	NA	DLR & SS	NA	NA	NA	NA
Major irrigation						

Reservoirs	1:50,000	DLR & SS	2010	Taluk	CC	SHP
Anicuts	NA	DLR & SS	NA	NA	NA	NA
Agricultural implements	NA	NA	NA	NA	NA	NA
Animal husbandry	1:50,000	AHVS	2021	District	NA	NA
Pisciculture	1:50000	Fishery	2024	District	CC	SHP
Plantation	1:50000	Horticulture	NA	NA	NA	NA

Sector / Subsector	Scale	Source	Survey / Publn. Year	Area covered	Status Code	File Format
5.Infrastructure						
Communications						
Post offices	NA	DLR& SS	NA	NA	NA	NA
Telecommunication	NA	DLR& SS	NA	NA	NA	NA
Drinking water	1:50,000	DLR& SS	NA	District	CC	SHP
Educational facilities	1:50000	DDPI	2022	District	CC	SHP
Electricity	NA	Land Records	NA	NA	NA	NA
Financial institutions	NA	DLR& SS	NA	NA	NA	NA
Markets	NA	DLR& SS	NA	NA	NA	NA
Health	1:50,000	DHO	2022	District	CC	SHP
NGO's	NA	DLR& SS	NA	NA	NA	NA
Tourism	NA	KSTDC	NA	NA	NA	NA
Transport	1" = …miles	PWD	2021	District	CC	SHP

6.Miscellaneous						
District map with taluks	1" =... miles	DLR& SS	2017	District & Taluk	CC	SHP
District & taluk boundaries	1:50,000	SOI	2017	District & Taluk	CC	SHP
District map with hoblies	1: =.. miles	DLR & SS	2017	District & Taluk	CC	SHP
Village boundary with settlement	1:50,000	SOI/KSR AC	2022	Village Boundary	CC	SHP
Police station details	NA	SP	NA	NA	NA	NA
Details on Assembly constituencies	1:50,000	DC	2023-2024	District	CC	SHP
Gram Panchayhs& Zilla Panchayaths, its jurisdiction for all taluks	1:50,000	DC	2022	Taluks	CC	SHP

NON-SPATIAL DATABASE

Sector / Subsector	Source	Survey / Publn. Year	Area covered	Status Code	File Format
1. Natural Resources					
Land					
1. Topography					
Contour	SOI	NA	District	CC	SHP
Slope	SOI	Can be generated			
2. Geology – A					
Rock Features	MGD	NA	District	CC	SHP
Structural features	NA	NA	NA	NA	NA
3. Geology – B					
Rock features	NA	NA	NA	NA	NA
Structural features	NA	NA	NA	NA	NA
4. Mineral Resources	MGD	NA	NA	NA	NA
5. Geomorphology	MGD	NA	NA	NA	NA
6. Land use	KSRSAC	NA	District	CC	SHP
7. Waste Lands	NA	NA	NA	NA	NA
8. Soils	NBSS & LUP	NA	NA	NA	NA
9. Forest & Wildlife					
Forest type	NA	NA	NA	NA	NA
Crown Density	NA	NA	NA	NA	NA
Forest Category	NA	NA	NA	NA	NA
Forest admn.	NA	NA	NA	NA	NA
Wild Life	NA	NA	NA	NA	NA
Water					
Ground water					

Hydro Geology	MGD	NA	NA	NA	NA
Hydro chemistry	CGWB	NA	NA	NA	NA
Ground water budget	MGD	NA	NA	NA	NA
Surface water					
Drainage	NA	NA	NA	NA	NA
Surface water bodies	NA	NA	NA	NA	NA
Climate	IMD	NA	NA	NA	NA

2. Demography					File Format
Population					
Tehsil boundary	DLR & SS	NA	District	CC	SHP
District boundary	NA	NA	District	CC	SHP
Current popln. distbn.	DES	NA	NA	NA	NA
Literacy					File Format
Levels of education	NA	NA	NA	NA	NA
Occupation					
Village boundary	DES	NA	NA	NA	NA
Employment					
District scenario	EO	NA	NA	NA	NA
Employment exchange	EO	NA	NA	NA	NA
Assets & Expenditure		NA	NA	NA	NA
Migration		NA	NA	NA	NA
Destitute		NA	NA	NA	NA

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

Developmental activity	DIC	NA	NA	NA	NA

4. Agro Economy					File Format
Land Utilization					
Private Land	DSO	NA	VILLAGE	NA	NA
Common property	DSO	NA	NA	NA	NA
Land Ownership pattern					
General scenario	DSO	NA	NA	NA	NA
Farmer's holdings	Rev. Dept	NA	NA	NA	NA
Principal crops	JDA	NA	Taluk	NA	NA
Irrigation					
Minor irrigation					
Canals	CADA	NA	District	CC	SHP
Tube wells	DSO	NA	District	CC	SHP
Dug wells	DSO	NA	District	CC	SHP
Tanks	MIC/ ZPE	NA	District	CC	SHP
Lift irrigation	MID	NA	NA	NA	NA
Major irrigation					
Reservoirs	CE (N)	NA	NA	NA	NA
Anicuts	CE (N)	NA	NA	NA	NA
Agricultural implements	Ag Census	NA	NA	NA	NA
Animal husbandry	AH&VS	2024	District	EXCEL	SHP
Pisciculture	Fishery	2024	District	CC	SHP
Plantation	Horticulture	NA	NA	NA	NA
Horticulture	HD	2024	District	CC	Excel
Sericulture	SD	NA	NA	NA	NA

Sector / Subsector	Source	Survey / Publn. Year	Area covered	Status Code	File Format
5. Infrastructure					
Communications					
Post offices	SSPO/ DES	NA	Village	NA	NA
Telecommunication	TDM / DES	NA	NA	NA	NA
Drinking water	ZPE	2021	Village	NA	NA
Educational facilities	DDPI	2024	Village	NA	Excel
Electricity	Census	NA	NA	NA	NA
Financial institutions	LEAD bank	NA	NA	NA	NA
Markets	FACS	NA	NA	NA	NA
Health	DHO	NA	District	CC	Shp
NGO's	DRS	NA	NA	NA	NA
Tourism	KSTDC	NA	NA	NA	NA
Transport					
Roads	PWD	2021	District	NA	SHP
Rail network	ZPED	NA	NA	NA	NA
Air transport/Helipad	PWD	2021	Taluk	NA	NA
Vehicle census	RTO	NA	NA	NA	NA
Inland & coastal waterways	NA	NA	NA	NA	NA
Veterinary services					
Veterinary facilities	AHVS	2023	District	NA	Excel
Other veterinary serv.	AHVS	NA	NA	NA	NA
Incidence of diseases	AHVS	NA	NA	NA	NA
Anganwadi	D W&C	2024	District	NA	Excel

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

6. NRDMS CENTRE ACTIVITIES [APRIL 2025 – JULY 2025]

1. GRAM PANCHAYAT MAP THAT SHOWS DISTANCES IN KILOMETERS.

The Project Director has requested NRDMS Centre to prepare a GP distance map. This map should use Koliwad centre of Hubballi and Kubihal as a centre of Kundagol Taluk, with distances measured in kilometers

2. MAP SHOWING VILLAGES SITUATED ALONG THE BENNIHALLA AND TUPRIHALLA TRIBUTARIES.

As the District Commissioner ordered NRDMS Centre for the preparation of a map showing flood-affected villages along with Bennihalla and Tuprihalla. This map will be used to take precautionary measures to rescue people from floods and livestock, and to help arrange shelter and food for them. Madam also asked to prepare Drainage pattern and population Distribution.

3. CENSUS OF INDIA: EXTENSION OF FREEZING THE BOUNDARIES OF ADMINISTRATIVE UNITS

Based on the 2011 census Metropolitan Corporation divided this area into 82 wards for 2021.

The Metropolitan Corporation divided this area into 82 wards for 2021. According to the old census, 1621 enumeration blocks were further divided into 2032 enumeration blocks. The Chief Census Officers and Commissioners HDMC, Hubballi asked NRDMS to prepare these enumeration blocks. Using Google Earth Pro and ArcGIS, the enumeration blocks have been demarcated. This includes 12 Zones, 82 Wards, and 2032 enumeration blocks.

7. Training Programmes Attended

- Online yuktdhara training @ Zilla Panchayat, Dharwad on 01.04.2025
- KGIS Web Application (Road side plantation) portal training @KSRSAC, Bangalore. On 09.05.2025.

8. TRAINING IMPARTED TO LINE DEPARTMENTS

- Yuktdhara training was given to PDO's at the Hubli Taluk Office, on 07.04.2025.
- The KGIS Web Application (Roadside Plantation portal) was provided to RCF on May 14, 2025. Three RCF representatives attended the training session @ District NRDMS Centre, ZP, Dharwad.

9. SCIENCE OUTREACH ACTIVITIES:

<div align="center">**NIL**</div>

10. CONCLUSION

Natural Resources Data Management System Centre (NRDMS) initiated a major programmed for generation of District natural resource data management system under the guidance and funding support of Karnataka State Council for Science and Technology (KSCST), Dept. of Science and Technology, Govt. of India, and Government of Karnataka,

and with the technical support from State NRDMS Centre, KSCST, Indian Institute of Science, Bangalore.

- GIS is rapidly becoming a key technology to support decision making of all kinds.
- Near future GIS will be applied in a variety of fields i.e. Government and Private sectors at a staggering pace.
- Field is wide open for students, Official and all the Peoples.

11. ANNEXURES

- **District Maps:**

MAP SHOWING VILLAGES SITUATED ALONG BANKS OF TUPPARI HALLA AND BENNI HALLA TRIBUTARIES DHARWAD DISTRICT

DRIANAGE PATTERN & POPULATION DISTRIBUTION - DHARWAD DISTRICT
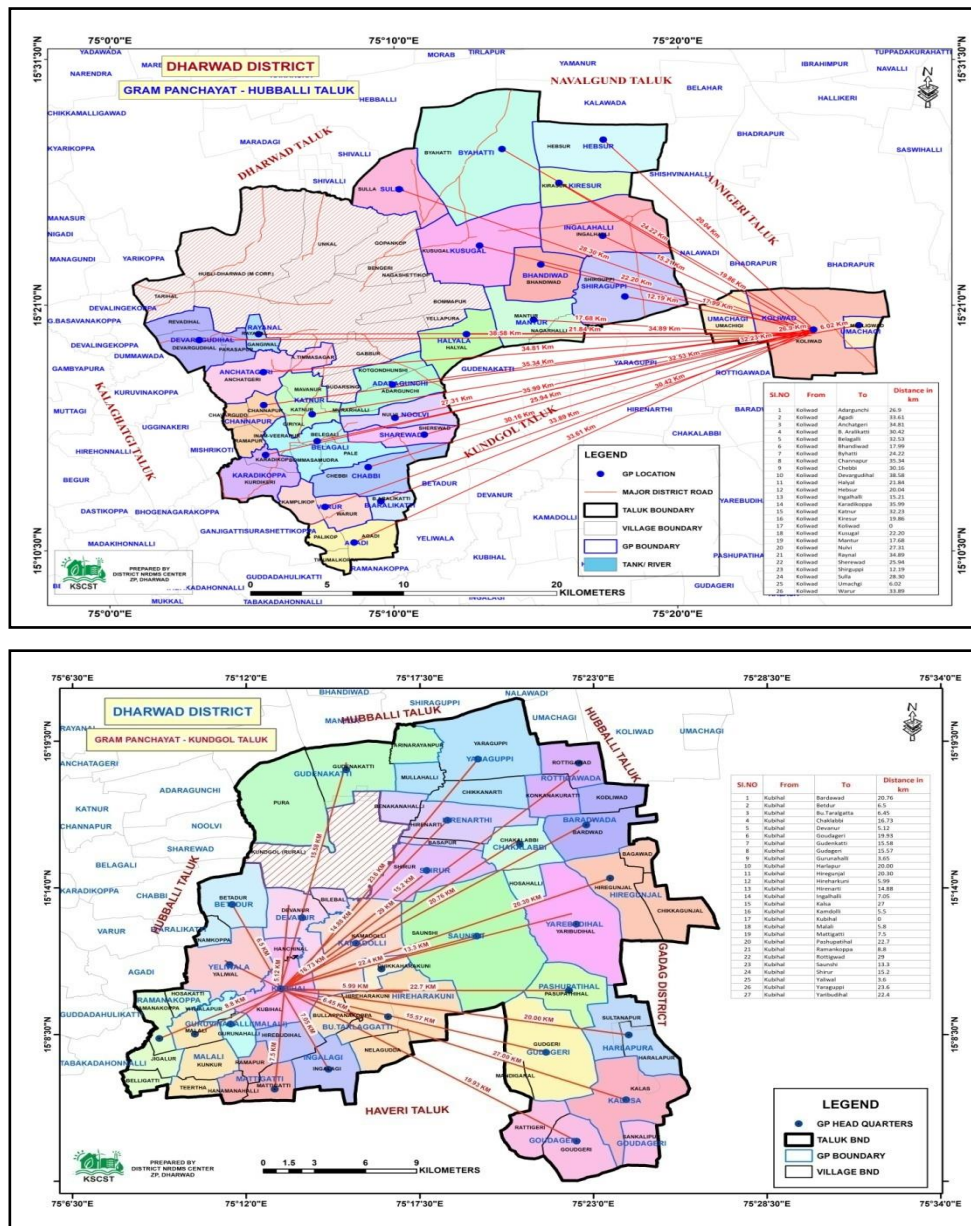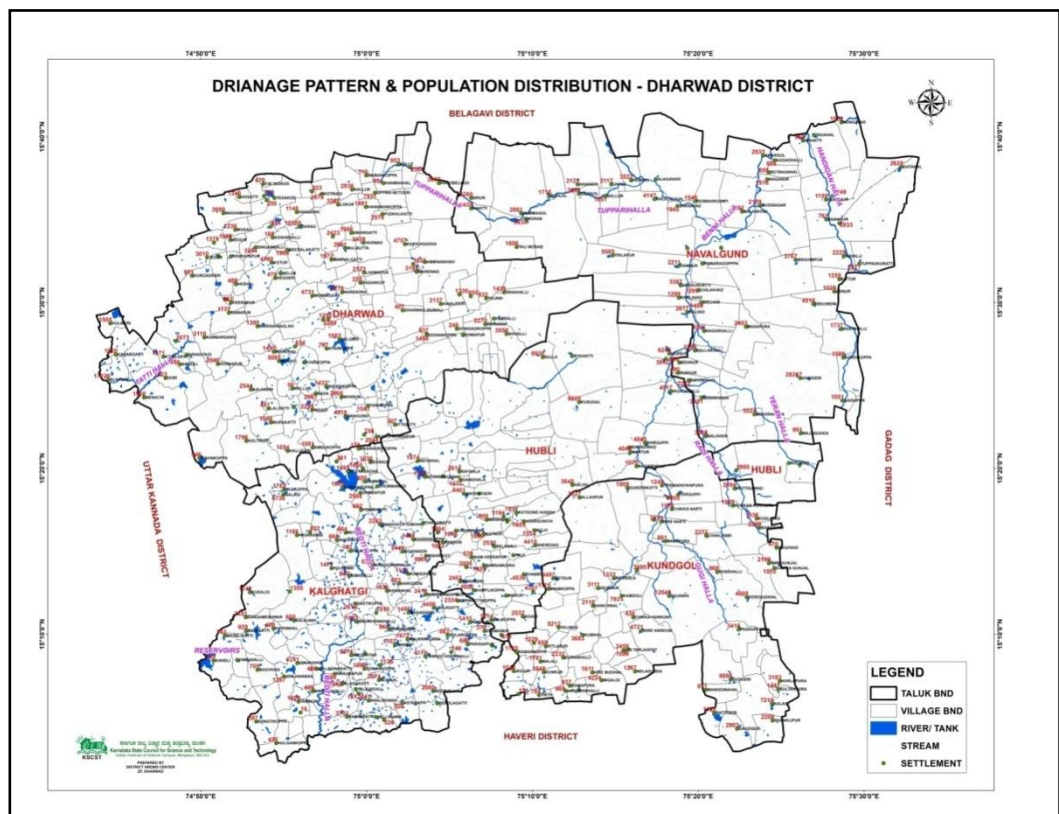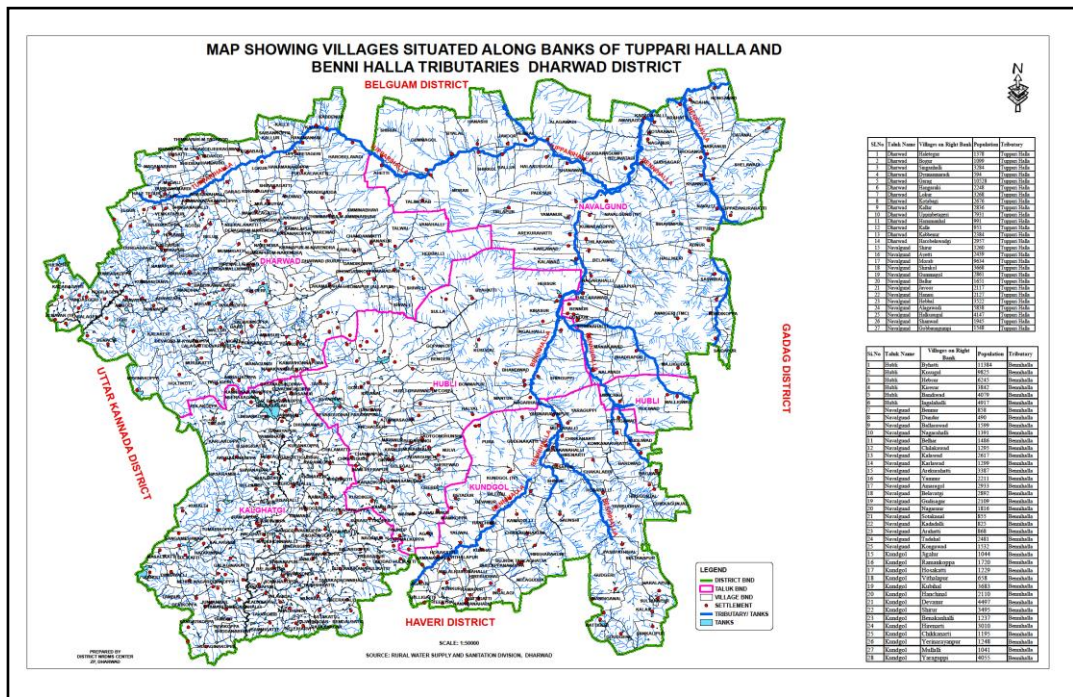
MAP SHOWING ELECTION BOUNDARY (EBSS), WARD BOUNDARY
ZONE 1- HUBLI-DHARWAD MUNICIPAL CORPORATION

LEGEND

☐ ENUMERATION BLOCKS

WARD_NO
- WARD 10
- WARD 11
- WARD 12
- WARD 15
- WARD 18
- WARD 19

KSCST
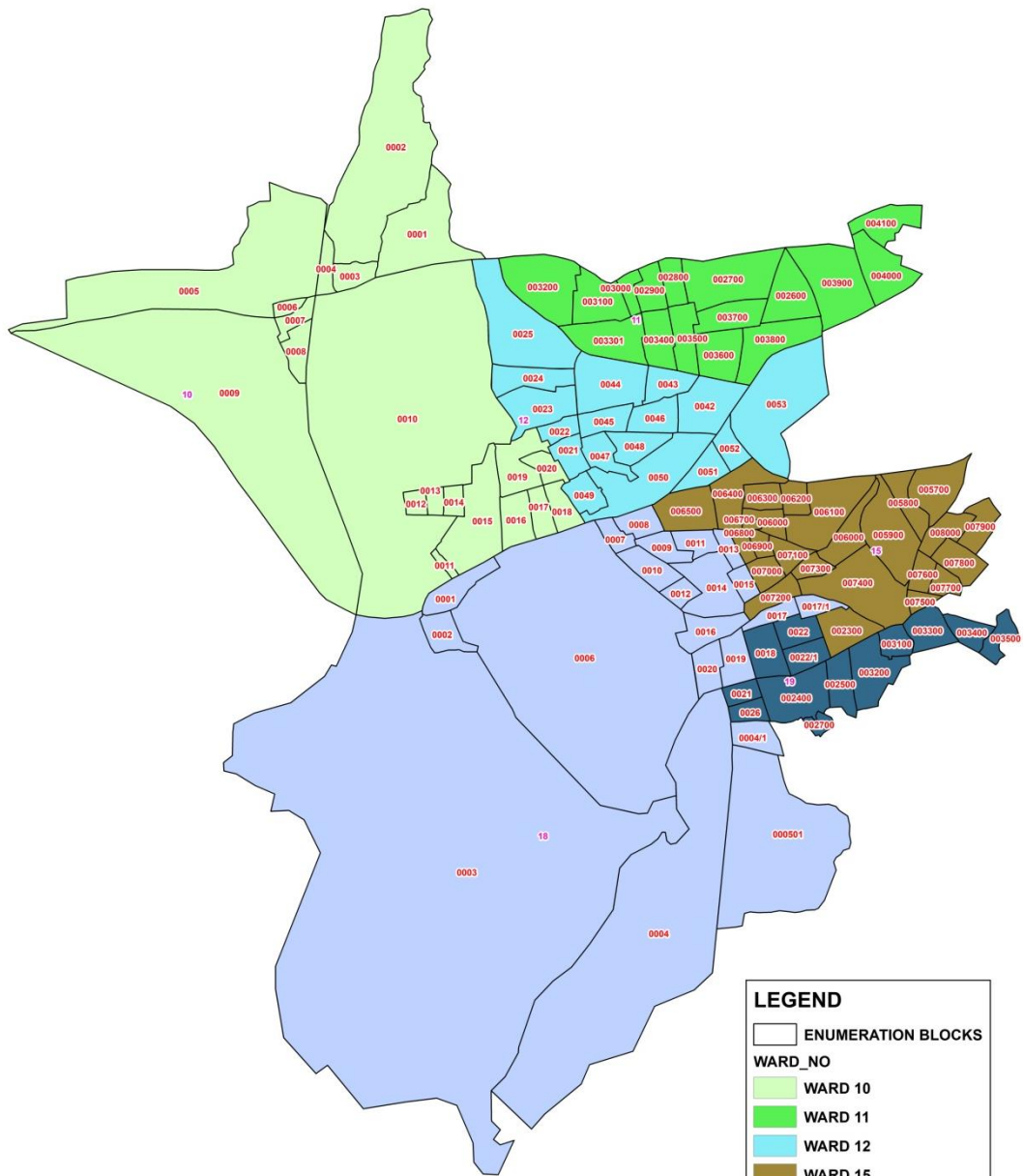
PREPARED BY
DISTRICT NRDMS CENTER
ZP, DHARWAD

0   0.75   1.5 Kilometers

LOCATION MAP

INDIA

KARNATAKA STATE

N

DHARWAD DISTRICT

NAVALGUND

DHARWAD

ALNAVAR

ANNIGERI

HUBBALLI

HUBBALLI_ URBAN

HUBBALLI

KALGHATGI

KUNDGOL

DHARWAD DISTRICT MAP

LEGEND
DHARWAD DISTRICT
TMC/ CITY
TALUK BOUNDARY
VILLAGE BOUNDARY
NATIONAL HIGHWAY
RAILWAY
STATE HIGHWAY

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FOREST MAP - DHARWAD DISRTICT

BELAGAVI DISTRICT

NAVALGUND

DHARWAD

ALNAVAR

ANNIGERI

HUBBALLI

HUBBALLI_URBAN

HUBBALLI

UTTAR KANNADA DISTRICT

GADAG DISTRICT

KALGHATGI

KUNDGOL

HAVERI DISTRICT

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LEGEND

DISTRICT BND
TALUK BND
FOREST BND

0   10   20   40
Kilometers

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DRAINAGE MAP - DHARWAD DISRTICT

DHARWAD DISTRICT
GEOMORPHOLOGY

BELAGAVI DISTRICT

NAVALGUND

DHARWAD

ALNAVAR

ANNIGERI

HUBBALLI

HUBBALLI

KUNDGOL

KALAGHATGI

UTTAR KANNADA DISTRICT

GADAG DISTRICT

HAVERI DISTRICT

LEGEND
DHARWAD DISTRICT
TALUK BOUNDARY
GEOMORPHOLOGY
DENUDATIONAL HILLS
FLOOD PLAIN
PEDIPLAIN
SETTLEMENT
STRUCTURAL HILLS
WATER BODY

0 3 6   12   18   24 Kilometers

74°45'0"E   75°0'0"E   75°15'0"E   75°30'0"E

15°30'0"N

15°15'0"N

24