

NATURAL RESOURCES DATA MANAGEMENT SYSTEM (NRDMS)

Udupi District Technical Report

Dec 2025 - March 2026



Submitted By

District NRDMS Centre,
Zilla Panchayath, Udupi

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

Indian Institute of Science Campus,
Bengaluru – 560012

1. Basic Information of Udupi District:

District Name: Udupi

Division: Mysore

District Establishment Year: 1997

Headquater: Udupi - Manipal

Current CEO : Prateek Bayal, IAS

Current CPO: Dr. Uday Shetty, Zilla Panchayath, Udupi

2. Background of District NRDMS Centre, Udupi :

NRDMS programme aims to analyze the evolution of methodologies and techniques for formulating development strategies. In a scenario of large diversity of data sets, data users and data generating agencies, the programme aims at developing and demonstrating the use of spatial decision support tools for integrated planning and management of resources at the local level.

Udupi district was new district craved out of undivided Dakshina Kannada district in the year 1997 and District NRDMS Centre was established in the year 2007-08 at Zilla Panchayath Office. District NRDMS Centre is been actively involved in providing Geospatial support to Zilla Panchayath office, District administration and line departments of the districts for better planning and execution of development work.

3.1 Geographical Features:

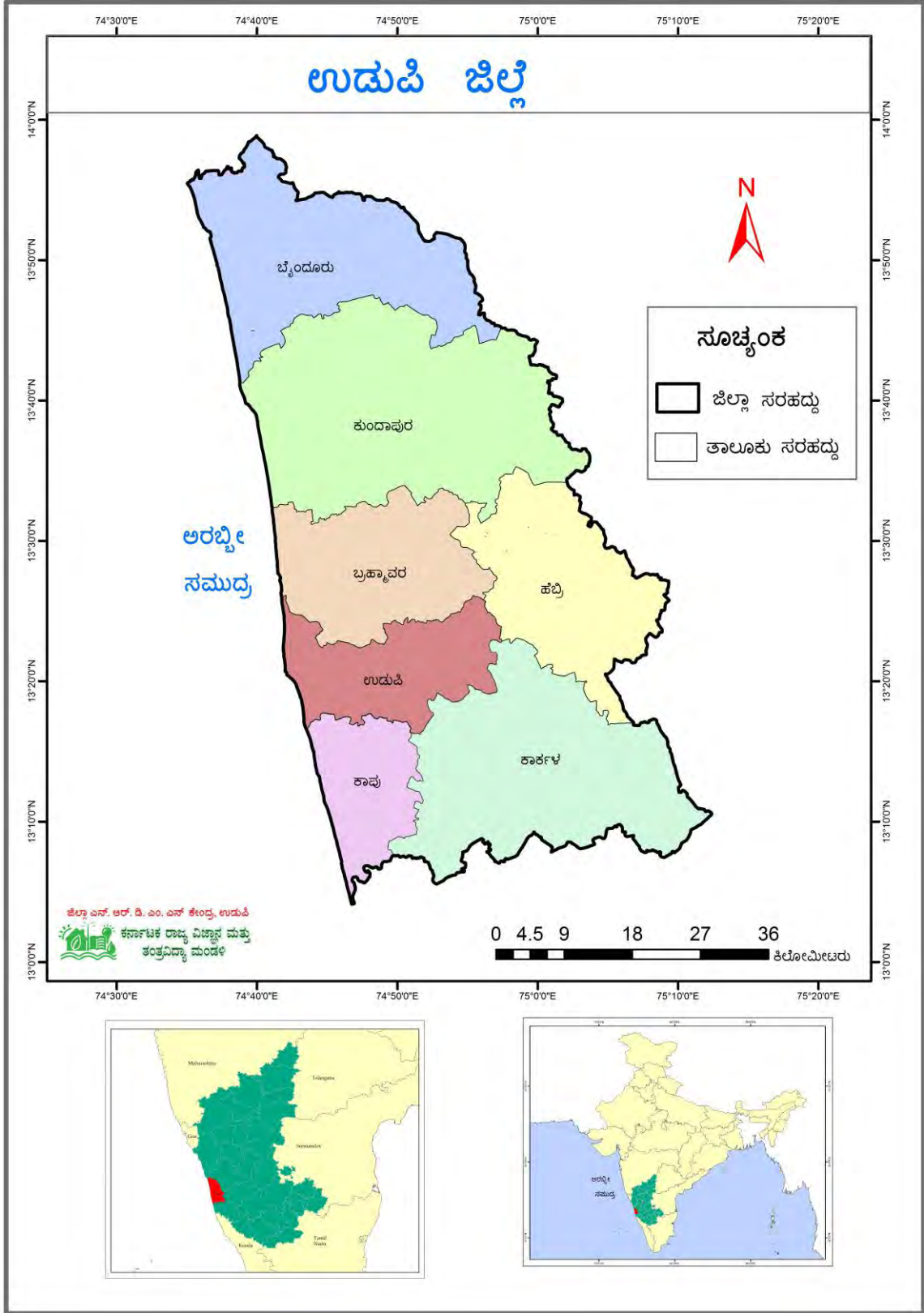
It is a coastal district, with the Western Ghats to its east and the Arabian Sea to its west.

- North: Bordered by the Uttara Kannada district.
- East: Bordered by the Shimoga and Chikmagalur districts.
- South: Bordered by the Dakshina Kannada district.
- West: Bordered by the Arabian Sea

3.2 Location & Boundaries:

Udupi District is a coastal district in the state of Karnataka, India, situated between the Western Ghats and the Arabian Sea. Its boundaries are: the Arabian Sea to the west, the Uttara Kannada district to the north, Shivamogga and Chikmagalur districts to the east, and the Dakshina Kannada district to the south. Udupi District lies between 13°04' and 13°59' North latitude and 74°35' and 75°12' East longitude.

Map 1: Location map of Udupi District.



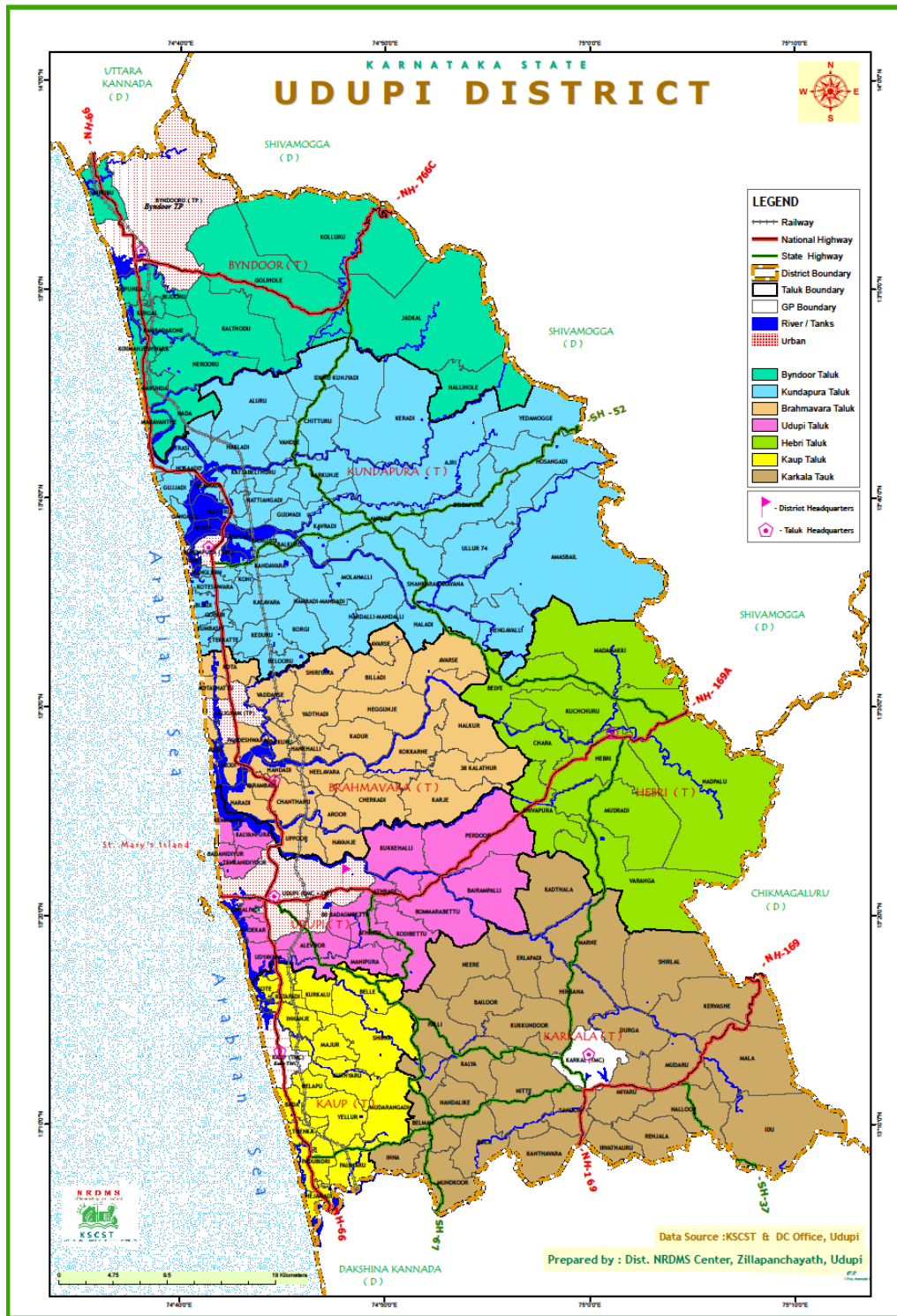


Table - 1 showing administrative details of Udupi district.

| SL No | Taluk | No of Villages | No of Hoblis | No of GP's | No of ULB's |
|-------|------------|----------------|--------------|------------|-------------|
| 1 | Brahmavara | 46 | 2 | 27 | 1 |
| 2 | Bynduru | 26 | 1 | 15 | 1 |
| 3 | Hebri | 16 | 1 | 9 | 0 |
| 4 | Kapu | 22 | 1 | 16 | 1 |
| 5 | Karkala | 37 | 2 | 27 | 1 |
| 6 | Kundapura | 68 | 1 | 45 | 1 |

3.3 Topography:

Udupi's topography features a coastal plain that transitions into a rolling, hilly terrain towards the east, bordering the Western Ghats. The area is defined by its position between the Arabian Sea and the Ghats, characterized by fertile soils, lush vegetation, and numerous rivers like the Varahi and Swarna. The elevation is low, with the city at approximately 27 meters above sea level.

3.4 Climate:

Udupi district has a tropical climate characterized by high temperatures, high humidity, and significant rainfall due to its location on the coast and proximity to the Western Ghats. The climate experiences three distinct periods: a hot summer (March-May), heavy monsoon (June-September) with strong winds and showers, and a pleasant, cool, and dry winter season (October-February). The best time to visit is during the winter, from October to March, when the weather is most comfortable.

Temperature

The temperature in the Udupi district generally ranges from 20°C to 32°C during the winter months (October to March) and can be hotter during other times of the year, with some coastal areas reporting temperatures exceeding 39°C during extreme heat. Udupi experiences high humidity throughout the year and receives moderate rainfall during the monsoon season.

Rainfall:

The climate of the district shares the wider climatic pattern of the other West Coast districts of India. It is characterized by excessive humidity (78%) during the greater part of the year.

There are four seasons viz.,

1. Four wet months of June, July, August and September, when the district encounters strong winds, high humidity, heavy showers and a slight fall in temperature.
2. Two warm and damp months of October and November when south west monsoon is retreating.
3. Three cool months of December, January and February when generally dry conditions prevail and

4. Three hot months of March, April and May which is the period of rising temperature. Climate in the district is generally equable. However, it is colder in the interior than in the coast

o 2013, 2014, 2015 and 2016 Rain Fall Data

o

o

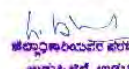
o

Table : 2

ಉಡುಪಿ ಜಿಲ್ಲೆಯಲ್ಲಿ 2013,2014,2015 ಮತ್ತು 2016ನಾಡಿನಲ್ಲಿ ಆಗಿರುವ ತಾಪಗ್ರಹಣಾ ದಳ ವಿವರ ದಿನಾಂಕ:30.09.2016 (ಎಂ.ಎಂ.ಬೆಂಗಳೂರು)

| ಸಂ | ಕಾಲ | ಉಡುಪಿ ತಾಲೂಕು | | | | | ಕುಂದಾಪುರ ತಾಲೂಕು | | | | | ಕಾರ್ಕಳ ತಾಲೂಕು | | | | | ಚಿಕ್ಕದಿನಿ ಪರಾಸುರ ಪಟ್ಟಣ | | | | |
|----|------------|--------------|--------------------|--------------------|--------------------|--------------------|-----------------|--------------------|--------------------|--------------------|--------------------|---------------|--------------------|--------------------|--------------------|--------------------|------------------------|--------------------|--------------------|--------------------|--------------------|
| | | ಸಾಮಾನ್ಯ ಮಳೆ | 2013ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2014ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2015ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2016ರಲ್ಲಿ ದಿನದ ಮಳೆ | ಸಾಮಾನ್ಯ ಮಳೆ | 2013ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2014ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2015ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2016ರಲ್ಲಿ ದಿನದ ಮಳೆ | ಸಾಮಾನ್ಯ ಮಳೆ | 2013ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2014ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2015ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2016ರಲ್ಲಿ ದಿನದ ಮಳೆ | ಸಾಮಾನ್ಯ ಮಳೆ | 2013ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2014ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2015ರಲ್ಲಿ ದಿನದ ಮಳೆ | 2016ರಲ್ಲಿ ದಿನದ ಮಳೆ |
| 1 | ಜನವರಿ | 3.0 | 8.0 | 0.0 | 1.1 | 0.0 | 1.0 | 5.0 | 0.0 | 1.5 | 0.0 | 7.0 | 0.0 | 0.0 | 0.4 | 0.0 | 3.7 | 4.3 | 0.0 | 1.1 | 0 |
| 2 | ಫೆಬ್ರವರಿ | 2.0 | 4.0 | 0.0 | 0.3 | 0.0 | 2.0 | 20.2 | 0.0 | 0.0 | 0.0 | 1.0 | 38.6 | 0.0 | 11.3 | 0.0 | 1.7 | 20.9 | 0.0 | 0.3 | 0 |
| 3 | ಮಾರ್ಚ್ | 3.0 | 0.0 | 0.0 | 20.5 | 0.0 | 4.0 | 0.0 | 0.0 | 34.3 | 0.0 | 8.0 | 4.4 | 1.6 | 40.1 | 0.0 | 5.0 | 1.5 | 0.5 | 31.6 | 1.4 |
| 4 | ಏಪ್ರಿಲ್ | 35.0 | 39.3 | 2.6 | 46.4 | 0.0 | 26.0 | 60.8 | 0.2 | 45.6 | 0.0 | 49.0 | 0.0 | 27.0 | 84.0 | 0.0 | 46.7 | 33.4 | 9.9 | 50.7 | 1.8 |
| 5 | ಮೇ | 172.0 | 278.0 | 118.8 | 101.1 | 126.0 | 159.0 | 99.2 | 132.0 | 98.7 | 102.3 | 180.0 | 161.0 | 198.0 | 215.4 | 147.9 | 170.3 | 179.6 | 119.6 | 138.2 | 125.1 |
| 6 | ಜೂನ್ | 1033.0 | 1194.0 | 526.8 | 858.3 | 1306.3 | 1041.0 | 1241.8 | 803.3 | 888.8 | 1230.8 | 1092.0 | 1356.8 | 695.7 | 1031.0 | 1199.9 | 1055.3 | 1264.2 | 875.3 | 926 | 1255.7 |
| 7 | ಜುಲೈ | 1259.0 | 1089.6 | 1858.0 | 1198.4 | 911.8 | 1736.0 | 1963.6 | 1833.5 | 1208.9 | 945.6 | 1649.0 | 1787.9 | 2063.7 | 1319.6 | 1146.7 | 1381.3 | 1613.7 | 1918.6 | 1242.2 | 1001.3 |
| 8 | ಆಗಸ್ಟ್ | 718.0 | 758.6 | 121.1 | 612.0 | 547.1 | 706.0 | 675.0 | 489.7 | 696.8 | 666.1 | 977.0 | 725.9 | 717.5 | 772.6 | 780.4 | 800.3 | 719.8 | 442.8 | 695.3 | 654.7 |
| 9 | ಸೆಪ್ಟೆಂಬರ್ | 326.0 | 489.4 | 285.1 | 270.2 | 260.1 | 329.0 | 485.0 | 353.1 | 353.2 | 293.3 | 383.0 | 437.3 | 482.2 | 264.8 | 420.0 | 346.0 | 470.5 | 373.5 | 296.5 | 324.6 |
| 10 | ಅಕ್ಟೋಬರ್ | 179.0 | 275.8 | 251.4 | 220.1 | - | 147.0 | 211.6 | 208.4 | 162.8 | - | 275.0 | 242.8 | 331.9 | 267.7 | - | 199.3 | 243.4 | 263.9 | 217 | - |
| 11 | ನವೆಂಬರ್ | 83.1 | 33.0 | 34.1 | 143.9 | - | 82.0 | 38.0 | 24.2 | 137.9 | - | 141.0 | 64.0 | 51.5 | 221.5 | - | 103.3 | 45.00 | 36.6 | 156.3 | - |
| 12 | ಡಿಸೆಂಬರ್ | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - | 0.0 | 0.0 | 0.0 | 0.0 | - |
| | ಒಟ್ಟು | 3813.1 | 4169.7 | 3198.7 | 3472.2 | 3151.3 | 3733.0 | 4800.2 | 3544.4 | 3628.5 | 3238.1 | 4765.0 | 4819.2 | 4569.1 | 4217.4 | 3694.9 | 4102.9 | 4596.3 | 3770.7 | 3763.1 | 3374.6 |

ದಿನಾಂಕ:30.09.2016


 ಜಿಲ್ಲಾಧಿಕಾರಿಯವರ ಕಛೇರಿ
 ಉಡುಪಿ ಜಿಲ್ಲೆ, ಉಡುಪಿ

Summer:

Summers in Udupi begin from the end of March and continue till May. Owing to the scorching temperature in the daytime, evenings are relatively cooler.

The climate in Udupi remains fairly constant, offering very warm temperatures throughout the year. Typically, maximum daytime temperatures range from a very warm 33°C in April to a comfortable 29°C in the coolest month, January. Nights are cooler, with temperatures generally dropping to 23°C, particularly during the colder months.

3.5 Natural Resource:

Coastal & Marine Resources

- Beaches: Udupi boasts numerous picturesque beaches, including Malpe Beach, Padubidri Beach, and Maravanthe beach.
- Fisheries: A natural harbor at Malpe serves as a significant fishing hub.

Udupi's natural resources include extensive beaches and a rich marine environment, diverse plantation crops like coconut and areca nut, spice crops, fruit, and vegetables, along with wildlife sanctuaries and natural attractions like waterfalls, such as Someshwara Wildlife Sanctuary and Mookambika Wildlife Sanctuary. The region's rich agricultural and forest areas, particularly in the Western Ghats, support its economy through fishing and the cashew industry.

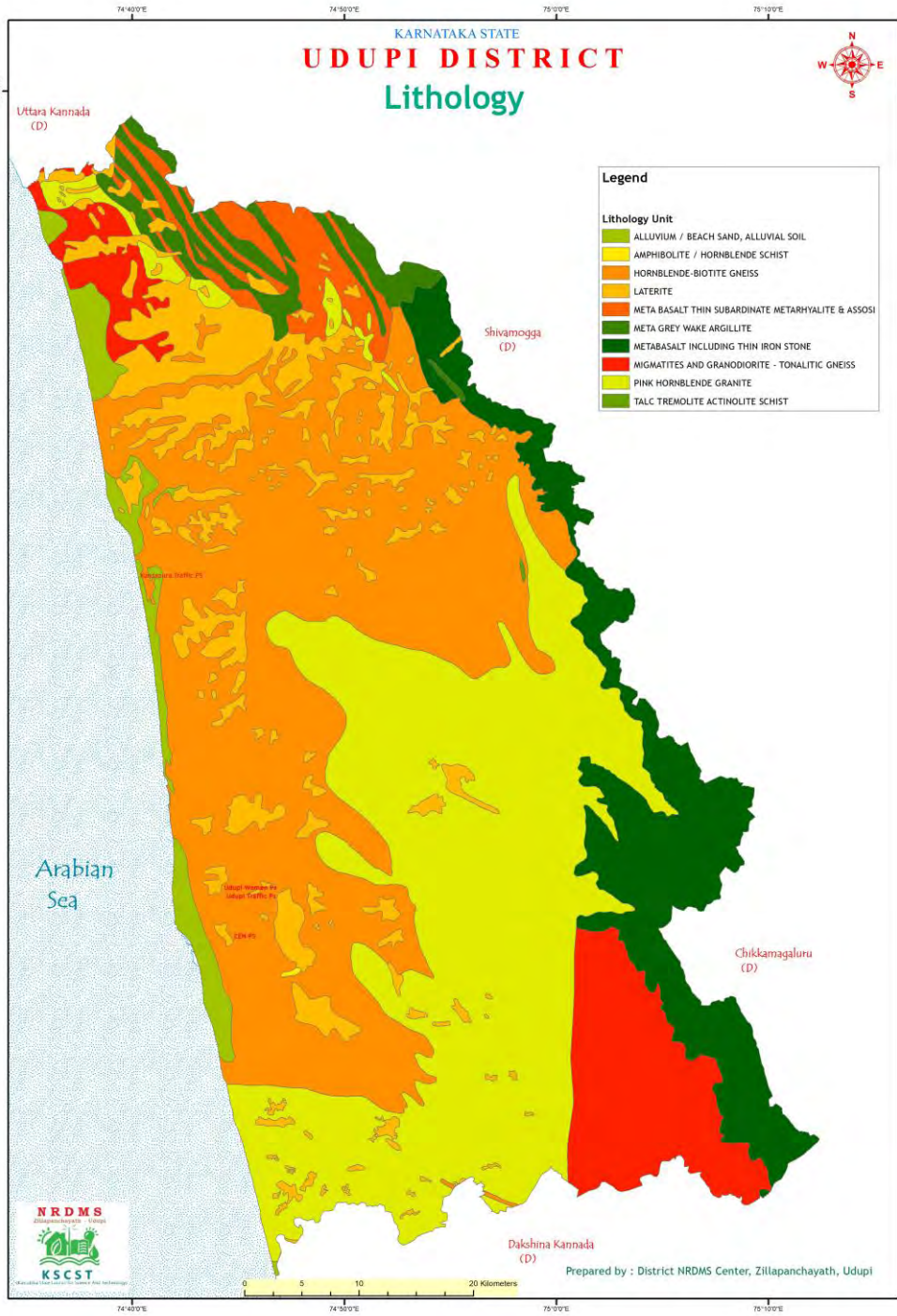
Soil Resources:

Udupi's soil resources consist primarily of red lateritic soil, which is the dominant type, along with sandy soils along the coast and yellow loamy soils found in river valleys and low-lying areas. The red lateritic soils are rich in aluminum and silica, formed from the weathering of sedimentary rocks, while sandy soils are fine-textured and excellent for ground water recharge. Yellow loamy soils are transported, good for irrigation, and used in the tile industry.

Types of Soil Resources in Udupi

- **Red Lateritic Soil:**
This is the most common soil type in Udupi, characterized by its texture, which can range from fine to coarse. These soils are derived from the weathering of sedimentary rocks and are rich in aluminum, silica, and potassium.
- **Sandy Soil:**
Found in a narrow coastal strip, these fine-to-medium textured sands have a high infiltration rate, making them effective for ground water recharge.
- **Yellow Loamy Soil:**
These soils are transported from other areas and are typically found along riverbanks and in lower valleys. They are well-suited for irrigation and are used in the tile industry.
- **Composition:** Udupi's lateritic soils are rich in aluminum, silica, and potassium.
- **Texture:** While some soils are sandy or loamy, many soils in the district have a sandy clay loam or sandy loam texture, influenced by coarse parent materials and fine particle runoff from heavy rainfall.
- **Acidity:** Paddy soils in the Udupi area are often acidic.
- **Micronutrients:** Soils in the Kundapura taluk show high sufficiency for copper and manganese, with Udupi taluk following closely behind.

Map 2



Soil-Related Activities

- Horticulture:

The Horticulture Department in Udupi implements various schemes for horticulture development, including comprehensive programs for oil palm cultivation and integrated pest and disease management.

- **Areca nut Cultivation:**

Studies have characterized the soil under areca nut-based cropping systems to understand its properties for cultivation.

- **Industrial Use:**

Yellow loamy soils are used in the tile industry.

- **Construction:**

Lateritic soils, including lithomarge clay, are present and require thorough characterization to understand their suitability for building infrastructure like roads, railways, and buildings.

- **About 50.68% of the district falls under 2 to 5% slope and remaining fall under more than 5% slope. Most part of Lateritic capped ...**

- **Characterization of soils of micronutrients under areca nut ...**

25 Nov 2022 – the results presented in Table 1 indicates that the particle size. Distribution of selected soils under different areca...

The Pharma Innovation Journal

- **MINERALOGICAL EVALUATION OF LATERITIC SOIL OF ... - iaeme**

High content of Mn, Ni, Cr and Al was found in Palli. Samples collected from Udupi contained high Percentage of K, Si, Al and Low ...

iaeme

3.6 Major Rivers and Water Resources:

Rivers:

The main rivers flowing through or near Udupi are the Sita River and the Swarna River. Other rivers, including the Souparnika River, Varahi River, Chakra River, Kedaka River, and Kubja River, also flow through the Udupi district, with several merging into the Arabian Sea at the Panchagangavali estuary.

Key Rivers in and around Udupi:

- **Sita River:** Rises in the Western Ghats and flows through the Udupi Taluk before joining the sea.
- **Swarna River:** Flows from the southeastern hills of the Taluk and is a prominent feature in Manipal, where it flows through the town.
- **Kedaka River (Kheta River):** Flows through Kundapur and Gangolli.

- Souparnika River: Originates from the Kodachadri Hills and passes near the famous Kollur Mookambika Temple.
- Varahi River: Famous for the Varahi Hydro Electric Project.
- Chakra River: Joins with the others at Panchagangavali.
- Kubja River: Also part of the confluence at Gangolli.

Udupi's water resources include the Arabian Sea, groundwater (aquifers), and surface water from rivers and lakes. The Central Ground Water Board has conducted aquifer mapping and management studies for the region, and projects like the Karnataka Integrated Urban Water Management Investment Program are focused on improving water supply systems. Challenges include managing groundwater stress, ensuring water quality, and conserving this vital resource for agriculture, industry, and domestic use.

Primary Water Sources

- Arabian Sea:

Udupi is located on the west coast, bordering the Arabian Sea, which serves as a natural body of water but is not typically used for freshwater supply.

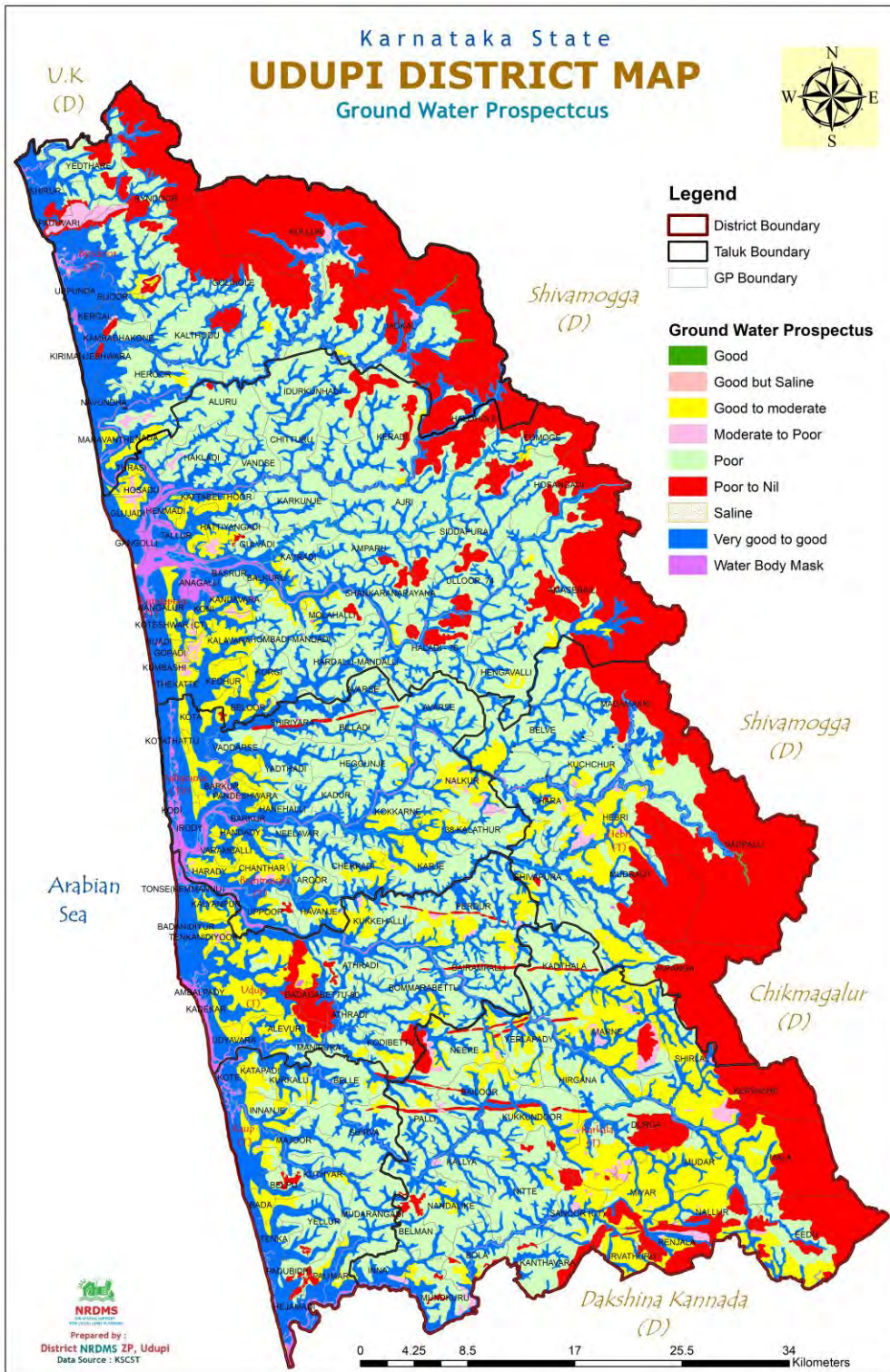
- Groundwater:

Aquifers are a significant source of groundwater, with the Central Ground Water Board (CGWB) undertaking mapping and management plans for Udupi Taluk. Groundwater is a crucial source for rural drinking water and irrigation.

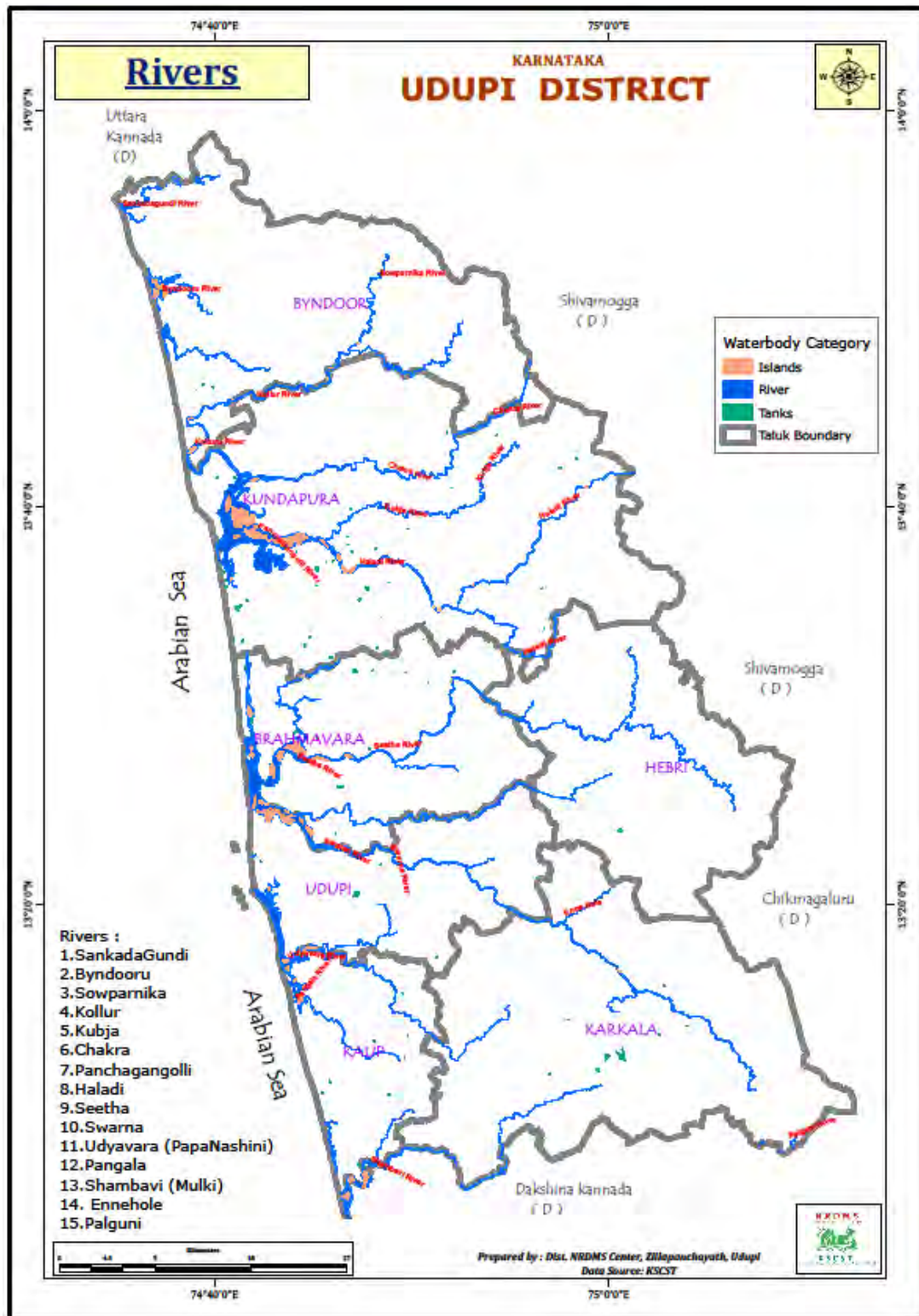
Udupi is situated in an area with west-flowing rivers, contributing to its surface water resources. Rivers, streams, ponds, and lakes also serve as important sources of water.



Map 3



Map 4



Groundwater: Groundwater in Udupi faces quality and quantity issues due to over-exploitation and contamination, particularly from lateritic soil and seawater intrusion, demanding regular monitoring. The Central Ground Water Board (CGWB) has conducted aquifer mapping to understand resources and management in Udupi Taluk. People in Udupi depend heavily on open wells for domestic water, with problems often more severe before the monsoon.

Key Characteristics & Challenges

- Dependency on Groundwater:

The district relies more on open well water for domestic consumption compared to surface water sources.

- **Lateritic Soil & Leaching:**

The presence of lateritic soil contributes to issues, with slow leaching of iron (Fe) and aluminium (Al) from the soil affecting groundwater quality.

- **Seawater Intrusion:**

Its location along the Arabian Sea leads to seawater intrusion into the groundwater, especially during pre-monsoon periods.

Mineral Resources:

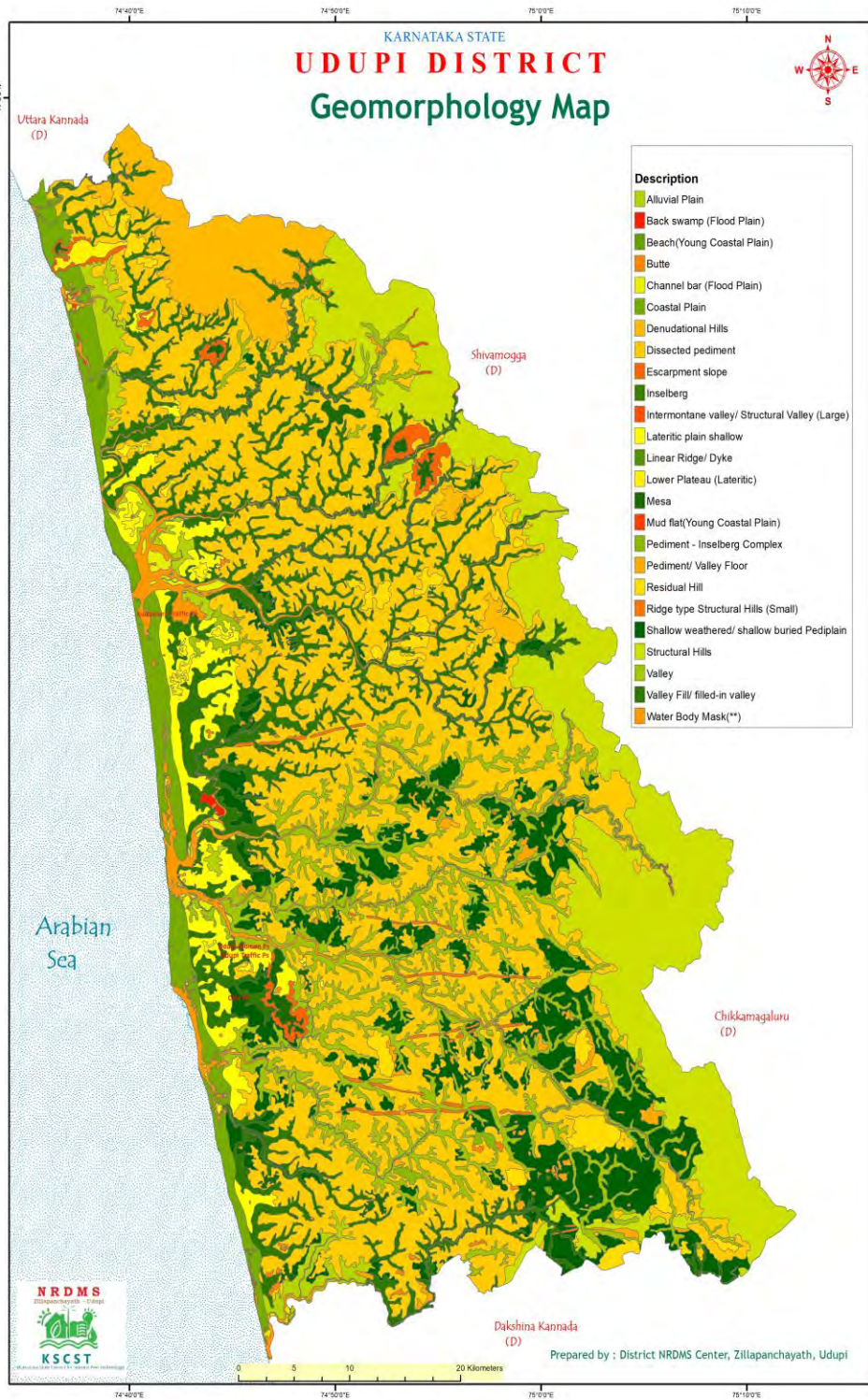
Udupi District has deposits of non-metallic minerals including quartz/silica sand and granite. Limestone has also been found in the district.

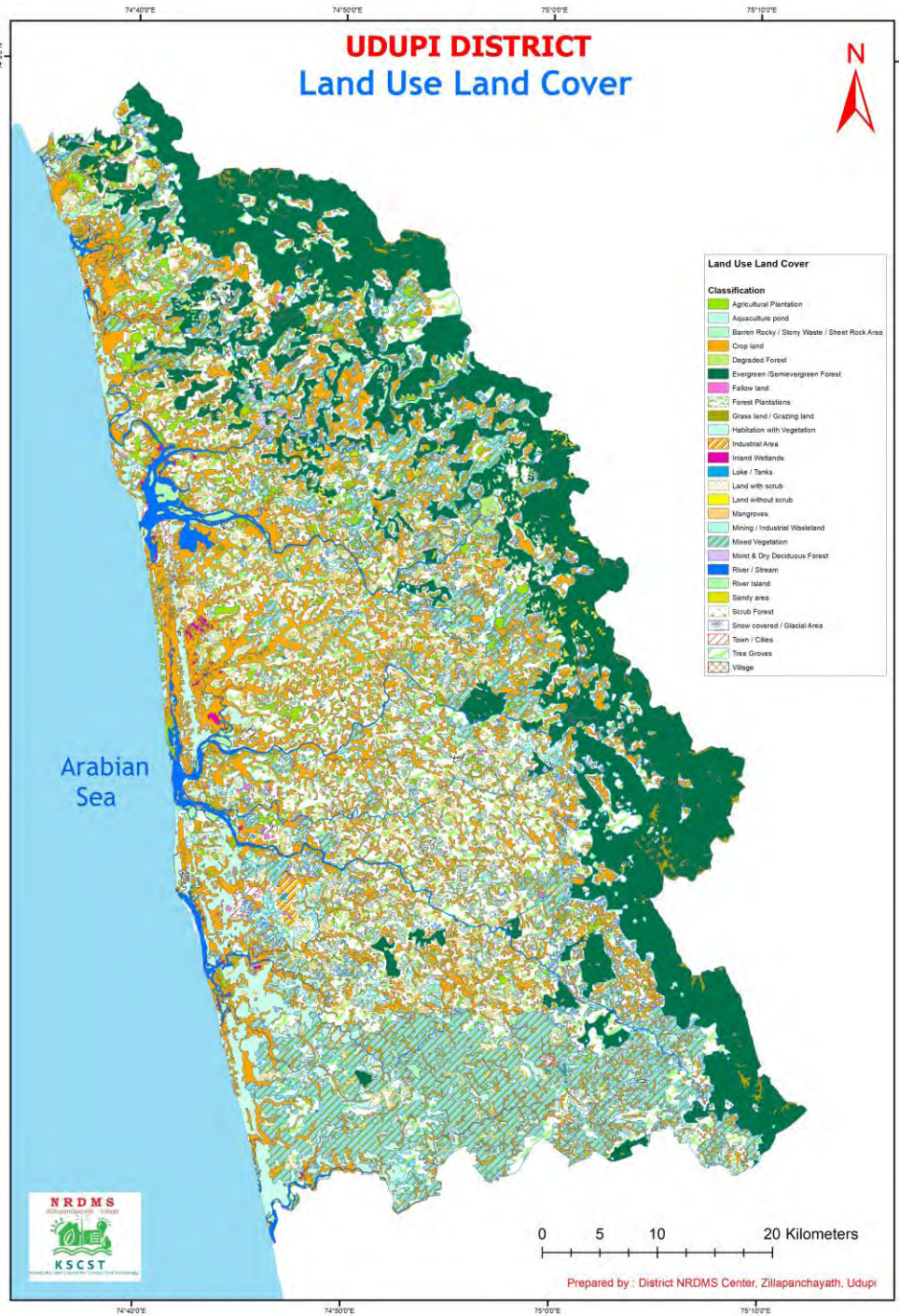
Here's a breakdown of the minerals found in Udupi District:

- **Quartz/Silica Sand:** This is a non-metallic mineral found in the district.
- **Granite:** Granite, a dimension stone, is also present in Udupi.
- **Limestone:** This non-metallic mineral is also listed as occurring in Udupi District.

Forest Resources:

Udupi's forest resources in Karnataka's Western Ghats include diverse forest types such as evergreen, semi-evergreen, and moist deciduous forests, supporting rich biodiversity with diverse flora and fauna. However, forests are under significant threat, with a substantial decline in tree cover due to unplanned infrastructure projects, agriculture, mining, and other pressures. Key forest areas are within the Kudremukh and Someshwara Wildlife Sanctuaries.





Forest Types and Biodiversity

- Evergreen and Semi-Evergreen Forests: These are found at higher altitudes, including the forests of the Kudremukh National Park.

- Moist Deciduous Forests: Also present in the Someshwara and Mookambika Wildlife Sanctuaries.
- Diverse Wildlife: These forests are home to various species, including tigers, panthers, elephants (though occasional), wild boar, and several types of macaques and birds.

Agricultural Resources

- Plantation Crops: Coconut, arecanut, cashew, and rubber are extensively grown in the district.
- Spice Crops: Udupi also produces spices like pepper, ginger, and turmeric.
- Horticulture: Mango, pineapple, banana, and other fruit and vegetable varieties are also cultivated.

- Wildlife Sanctuaries:

The district is home to wildlife sanctuaries like the Someshwara Wildlife Sanctuary and Mookambika Wildlife Sanctuary, which are rich in biodiversity.

Agriculture resources in Udupi include diverse plantation and cash crops like coconut, areca nut, cashew, pepper, and ginger, supported by a network of agricultural companies and government-backed support through the Krishi Vigyan Kendra (KVK). The district also boasts resources for animal husbandry such as dairy, poultry, piggery, and goat farming, along with fishing, as Udupi is located in a coastal region.

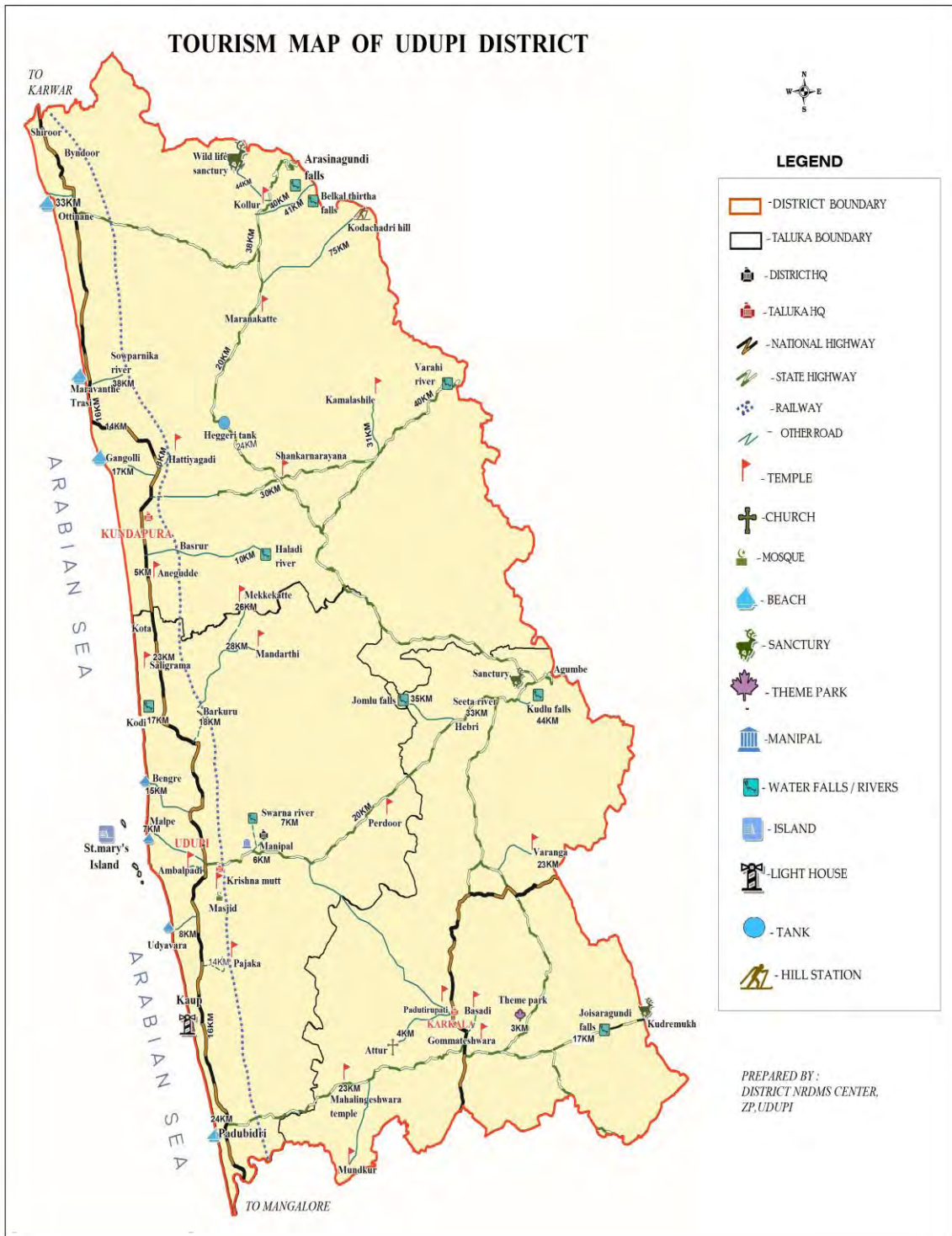
Tourism :

Udupi, Karnataka, is a coastal destination famed for the Udupi Sri Krishna Temple, its world-renowned cuisine, beautiful beaches like Malpe and St. Mary's Island, and serene natural landscapes. Visitors can enjoy a mix of spiritual experiences, water sports, and delicious food, making it ideal for both nature and culture lovers. The best time to visit is during the pleasant winter months from October to March Top Attractions.

- Udupi Sri Krishna Temple: A spiritual centre known for its architecture and religious significance.
- St. Mary's Island: An island famous for its unique geological formations, particularly the basalt columns, and pristine beaches.
- Malpe Beach: A popular beach offering water sports, scenic beauty, and a delightful sea walk.
- Kaup Beach: A beautiful beach with a historic lighthouse.
- Mookambika Temple: Another notable temple in the region.
- Kudlu Falls: A scenic waterfall surrounded by lush forests.
- Hasta Shilpa Heritage Village Museum: An open-air museum showcasing traditional architecture and heritage.

Map : 7

TOURISM MAP OF UDUPI DISTRICT



Agricultural Resources

Land & Crops:

Udupi district is rich in various crops, including plantation crops like coconut and areca nut, spice crops such as pepper and ginger, and fruits like mango and pineapple.

- Crops Grown:

Key crops include:

- Plantation: Coconut, Areca nut, Cashew, Rubber.
- Spices: Pepper, Ginger, Turmeric.
- Fruits: Mango, Pineapple, Sapota, Banana.
- Vegetables: Brinjal, Bhendi, Cucumber, Chilli, Leafy Vegetables.

- Renewable Energy Potential:

Udupi is a hub for wind energy, with numerous windmills installed due to favorable **wind conditions on the Deccan Plateau. The district hosts one of India's largest** wind energy farms, contributing to renewable energy production.

Solar **energy potential is also significant, given the region's high solar insolation.**

Biodiversity:

Udupi's biodiversity includes rainforests, coastal ecosystems, and various wildlife sanctuaries like Someshwara and Mookambika, home to animals such as tigers, elephants, and various monkeys. Its coastal areas host diverse marine life including fish, mollusks, and marine mammals, while the Ghats region contributes endemic species, as Udupi is located within the Western Ghats hotspot.

Protected Areas and Ecosystems

- Someshwara Wildlife Sanctuary:

Part of the Western Ghats, this sanctuary features evergreen and semi-evergreen forests. It's also known for its high rainfall, earning it the nickname "Cherrapunji of South India," and is home to diverse wildlife.

- Mookambika Wildlife Sanctuary:

Also located in part within Udupi, this sanctuary contributes to the region's rich biodiversity.

- Coastal and Marine Biodiversity:

Udupi's coastline is an important habitat, featuring estuaries, backwaters, and wetlands that are rich in marine life, including corals, sponges, clams, and a variety of fish.

- Agumbe Ghats:

Located within the Someshwara Wildlife Sanctuary, this area receives very high rainfall and is known for its dense forests and biodiversity.

4. Spatial & Non-Spatial Data:

Status Code : Meaning

CC : Computerised.

ND : Not Digitized

NA : Not Procured

NR : Not Relevant

NF : Not Finalised

SPATIAL DATABASE

| Sector / Subsector | Scale | Source | Survey / Publn. Year | Area covere d | Status Code | File For mat | File path |
|-------------------------|--------------|---------------|----------------------------|---------------------|----------------|--------------------|--|
| 1. Natural Resources | | | | | | | |
| <i>Land</i> | | | | | | | |
| 1. Topography | | | | | | | |
| Contour Map | 30 Mtr | ASTER DEM | | Distric t | CC | .Sh p | E/NRDMS/La yer |
| Slope Map | 1:50,00 0 | KRSAC | | Distric t | CC | .Sh p | E/NRDMS/La yer |
| 2. Geology - A | | | | | | | |
| Rock features | 1:50,00 0 | KRSAC | | Distric t | CC | .Sh p | E/NRDMS/La yer |
| Structural features | 1:50,00 0 | KRSAC | | Distric t | CC | .Sh p | E/NRDMS/La yer |
| 3. Geology - B | | | | | | | |
| Rock features | | NA | | | | | |
| Structural features | | NA | | | | | |
| 4. Mineral Resources | | | | | | | |
| 5. Geomorphology | 1:50,00 0 | KRSAC | | Distric t | CC | .Sh p | E/NRDMS/La yer |
| 6. Land use | 1:50,00 0 | KRSAC | | Distric t | CC | .Sh p | E/NRDMS/La yer |
| 7. Waste Lands | | | | | | | |
| 8. Soils | 1:25,00 0 | NBSS & LUP | | Distric t | CC | .Sh p | E/NRDMS/La yer E/NRDMS/La yer |
| 9. Forest & Wildlife | | | | | | | |

| | | | | | | | |
|----------------------|----------|-------------|--|----------|----|------|-----------------|
| Forest type | 1:50,000 | KFD | | District | CC | .Shp | E/NRDMS/Layer |
| Crown Density | | NA | | | | | |
| Forest Category | | NA | | | | | |
| Forest admn. | 1:50,000 | KFD | | District | CC | .Shp | E/NRDMS/Layer |
| Wild Life | | NA | | | | | |
| <i>Water</i> | | | | | | | |
| 1. Ground water | | | | | | | |
| Hydro Geology | | NA | | | | | |
| Hydro chemistry | | NA | | | | | |
| Ground water budget | | NA | | | | | |
| 2. Surface water | | | | | | | |
| Drainage | 1:50,000 | SOI | | District | CC | .Shp | E/NRDMS/Natural |
| Surface water bodies | 1:50,000 | SOI & KRSAC | | District | CC | .Shp | E/NRDMS/Natural |
| 3. Climate | | | | | | | |

| Sector / Subsector | Scale | Source | Survey / Publn. Year | Area covered | Status Code | File Format | File path |
|------------------------|----------|--------|----------------------|--------------|-------------|-------------|---------------|
| 2. Demography | | | | | | | |
| <i>Population</i> | | | | | | | |
| Tehsil boundary | 1:50,000 | SOI | | District | CC | .Shp | E/NRDMS/Admin |
| District boundary | 1:50,000 | SOI | | District | CC | .Shp | E/NRDMS/Admin |
| Current popln. distbn. | 1:50,000 | SOI | | District | CC | .Shp | E/NRDMS/Admin |
| <i>Literacy</i> | | | | | | | |
| Levels of education | | NA | | | | | |
| <i>Occupation</i> | | | | | | | |
| Village boundary | 1:50,000 | SOI | | District | CC | .Shp | E/NRDMS/Admin |

| | | | | | | | | |
|---------------------------------|--|----|--|--|--|--|--|--|
| <i>Employment</i> | | | | | | | | |
| District scenario | | NA | | | | | | |
| Employment exchange | | NA | | | | | | |
| <i>Assets & Expenditure</i> | | NA | | | | | | |
| <i>Migration</i> | | NA | | | | | | |
| <i>Destitutes</i> | | NA | | | | | | |

| | | | | | | | |
|-------------------------|--------------|---------------------|----------|----|------|-------------|---------------------|
| 3.Socio Economy | | | | | | File Format | File path |
| 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 | 1:50,00 0 | DLR & SS (KRSAC) | District | CC | .Shp | | E/NRDMS /Natural |
| Tube wells | | NA | | | | | |
| Dug wells | | NA | | | | | |
| Tanks | 1:50,00 0 | DLR & SS (KRSAC) | District | CC | .Shp | | E/NRDMS /Natural |

| | | | | | | | |
|-------------------------|----------|-------------------|----------|----|------|--|---------------------|
| Lift irrigation | | NA | | | | | |
| <i>Major irrigation</i> | | | | | | | |
| Reservoirs | 1:50,000 | DLR & SS(KSRS AC) | District | CC | .Shp | | E/NRDMS /Natural |
| Anicuts | | NA | | | | | |
| Agricultural implements | | | | | | | |
| Animal husbandry | 1:50,000 | AHVS | District | CC | .Shp | | E/NRDMS /Point_data |
| Pisciculture | | NA | | | | | |
| Plantation | | NA | | | | | |

| Sector / Subsector | Scale | Source | Survey / Publ. Year | Area covered | Status Code | File Format | File path |
|------------------------|----------|---------------|---------------------|--------------|-------------|-------------|---------------------|
| 5. Infrastructure | | | | | | | |
| Communications | | | | | | | |
| Post offices | 1:50,000 | Dept of Posts | District | CC | .Shp | | E/NRDMS /Point_data |
| Telecommunication | | NA | | | | | |
| Drinking water | | NA | | | | | |
| Educational facilities | 1:50,000 | DDPI | District | CC | .Shp | | E/NRDMS /Point_data |
| Electricity | | Land Records | | | | | |
| Financial institutions | | NA | | | | | |
| Markets | | NA | | | | | |
| Health | 1:50,000 | DHO | District | CC | .Shp | | E/NRDMS /Point_data |
| NGO's | | NA | | | | | |
| Tourism | 1:50,000 | KSTDC | District | CC | .Shp | | E/NRDMS /Point_data |
| Transport | 1:50,000 | PWD & SOI | District | CC | .Shp | | E/NRDMS /Layer |

| | | | | | | | |
|--|----------|------------|----------|----|------|--|----------------|
| 6. Miscellaneous | | | | | | | |
| District map with taluks | 1:50,000 | SOI | District | CC | .Shp | | E/NRDMS /Admin |
| District & taluk boundaries | 1:50,000 | SOI | District | CC | .Shp | | E/NRDMS /Admin |
| District map with hoblies | 1:50,000 | DLR & SS | District | CC | .Shp | | E/NRDMS /Admin |
| Village boundary with settlement | 1:50,000 | SOI/KSR AC | District | CC | .Shp | | E/NRDMS /Admin |
| Police station details | 1:50,000 | SP | District | CC | .Shp | | E/NRDMS /Admin |
| Details on Assembly constituencies | 1:50,000 | DC | District | CC | .Shp | | E/NRDMS /ELE |
| Gram Panchayths & Zilla Panchayaths, its jurisdiction for all taluks | 1:50,000 | DC | District | CC | .Shp | | E/NRDMS /ELE |

Additional Data

| | | | | | | | |
|--------------------|--------|---------------|----------|----|------|--|-------------------|
| Cadastral Boundary | 1:7780 | SSLR & KRSRAC | District | CC | .Shp | | E/NRDMS /CADSTRAL |
|--------------------|--------|---------------|----------|----|------|--|-------------------|

Non-Spatial Database

| Sector / Subsector | Source | Survey / Publn. Year | Area covered | Status Code | File Format | File path |
|----------------------|--------|----------------------|--------------|-------------|-------------|-----------|
| 1. Natural Resources | | | | | | |
| <i>Land</i> | | | | | | |
| 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 | | |
| <i>Water</i> | | | | | | |
| Ground water | | | | | | |
| Hydro Geology | MGD | | | NR | | |
| Hydro chemistry | CGWB | | | NR | | |
| Ground water budget | MGD | | | NR | | |
| Surface water | | | | | | |
| Drainage | | | | NR | | |
| Surface water bodies | | | | NR | | |
| <i>Climate</i> | IMD | | | NR | | |

| | | | | | | |
|------------------------|----------|--|--|----|-------------|----------------|
| 2. Demography | | | | | File Format | File path |
| <i>Population</i> | | | | | | |
| Tehsil boundary | DLR & SS | | | CC | XLS | E/NRDMS /Admin |
| District boundary | | | | CC | XLS | E/NRDMS /Admin |
| Current popln. distbn. | DES | | | CC | XLS | E/NRDMS /Admin |

| <i>Literacy</i> | | | | | File Format | File path |
|---------------------------------|-----|--|--|----|-------------|-----------|
| Levels of education | | | | NA | | |
| <i>Occupation</i> | | | | | | |
| Village boundary | DES | | | NA | | |
| <i>Employment</i> | | | | | | |
| District scenatio | EO | | | NA | | |
| Employment exchange | EO | | | NA | | |
| <i>Assets & Expenditure</i> | | | | | | |
| <i>Migration</i> | | | | | | |
| <i>Destitute</i> | | | | | | |

| 3. Socio Economy | | | | | File Format | File path |
|------------------------|-----|--|--|----|-------------|-----------|
| Industry | DIC | | | NA | | |
| Developmental activity | DIC | | | NA | | |

| 4. Agro Economy | | | | | File Format | File path |
|-------------------------------|-----------|--|---------|----|-------------|-----------|
| <i>Land Utilisation</i> | | | | | | |
| Private Land | DSO | | VILLAGE | NA | | |
| Common property | DSO | | | NA | | |
| <i>Land Ownership pattern</i> | | | | | | |
| General scenario | DSO | | | NA | | |
| Farmer's holdings | Rev. Dept | | | NA | | |
| Principal crops | JDA | | Taluk | NA | | |
| <i>Irrigation</i> | | | | | | |
| <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 | E/NRDMS/ Point_data |
| Pisciculture | Fisheries | | | NA | | |
| Plantation | | | | NA | | |
| Horticulture | HD | | | NA | | |
| Sericulture | SD | | | NA | | |

| Sector / Subsector | Source | Survey / Publ. Year | Area covered | Status Code | File Format | File path |
|------------------------|-----------|---------------------|--------------|-------------|-------------|------------------------|
| 5. Infrastructure | | | | | | |
| Communications | | | | | | |
| Post offices | SSPO/ DES | | Village | NA | | |
| Telecommunication | TDM / DES | | | NA | | |
| Drinking water | ZPE | | | NA | | |
| Educational facilities | DDPI | | | NA | | |
| Electricity | Census | | | NA | | |
| Financial institutions | LEAD bank | | | NA | | |
| Markets | FACS | | | NA | | |
| Health | DHO | | | CC | XLS | E/NRDMS/ Point_data |
| NGO's | DRS | | | NA | | |
| Tourism | KSTDC | | | CC | XLS | E/NRDMS/ Point_data |
| Transport | | | | | | |
| Roads | PWD | | | NA | | |
| Rail network | ZPED | | | NA | | |
| Air | PWD | | | NA | | |

| | | | | | | |
|----------------------------|-------|--|--|----|-----|--------------------|
| transport/HELIPAD | | | | | | |
| Vehicle census | RTO | | | NA | | |
| Inland & coastal waterways | | | | NA | | |
| Veterinary services | | | | | | |
| Veterinary facilities | AHVS | | | CC | XLS | E/NRDMS/Point_data |
| Other veterinary serv. | AHVS | | | | | |
| Incidence of diseases | AHVS | | | | | |
| Anganwadi | D W&C | | | CC | XLS | E/NRDMS/Point_data |

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

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| 2 | Training Programmes Imparted to Line Department | |
| 3 | Science Outreach Activities | |
| 4 | Conclusion | |
| 5 | Annexures | |

3. Major Activities Carried Out during the period of Dec 2025 to March 2026 :

Activity -1

| | |
|------------------------------|--|
| Title of work | Tourism Mapping – District Tourism Department |
| Department Name | DC office and Tourism Department |
| Objectives | Village, GP and Roads |
| Data Used | Location of Tourism places |
| Data Process | Excel data provided by department was converted into point data and plotted to prepare action plan map |
| Type of Data Provided | JPG and PDF |

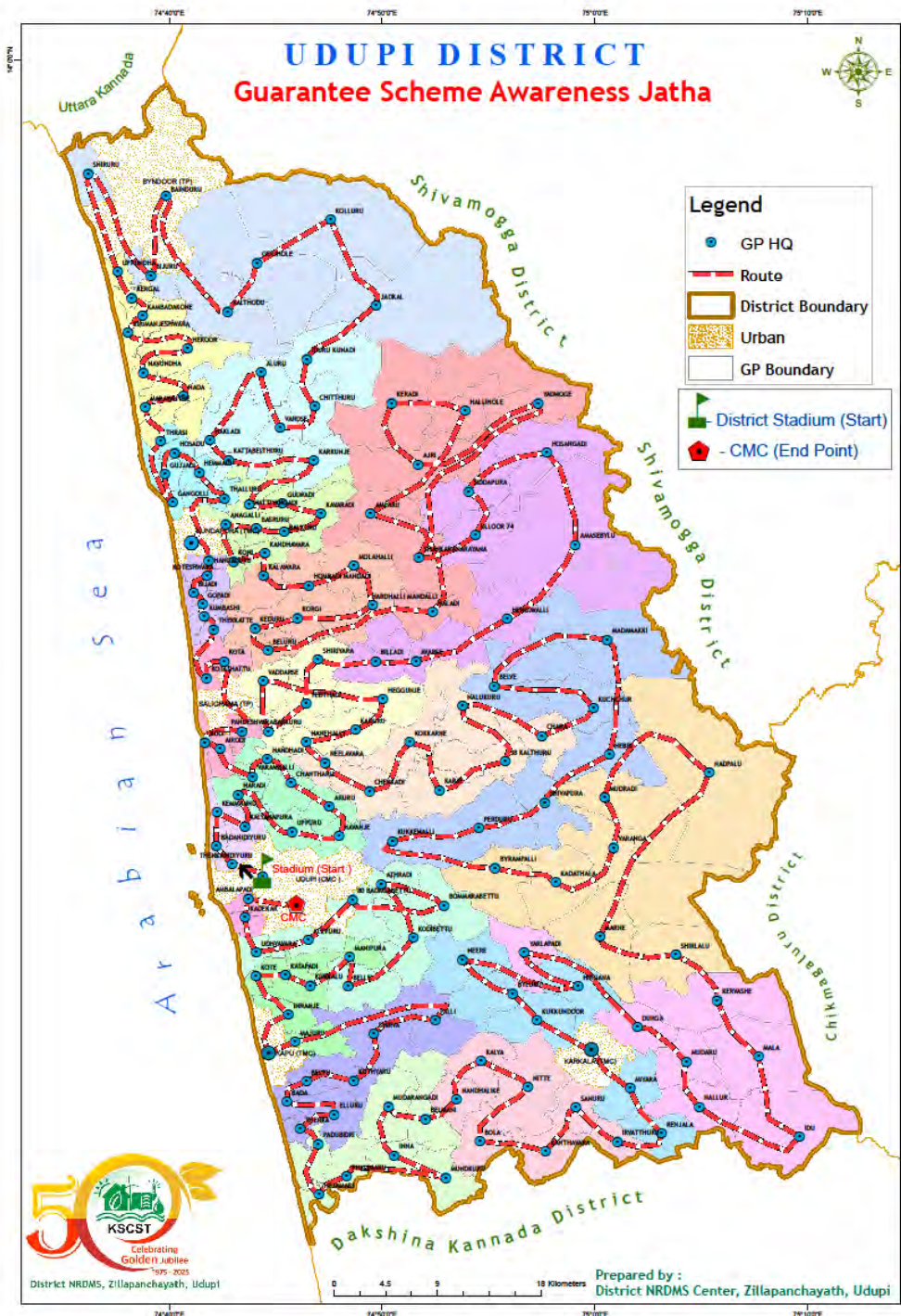
Map :8



Activity -2

| | |
|------------------------------|--|
| Title of work | Guarantee Scheme Jatha Mapping |
| Department Name | Chief Planning officer |
| Objectives | District wise route map for Awareness program regarding Karnataka State Government guarantee schemes |
| Data Used | District Boundary, Taluk Boundary, Village Boundary and Department wise work layer (Point) |
| Data Process | Excel data provided by department was converted into point data and Road Connection. |
| Type of Data Provided | JPEG Maps and PDF |

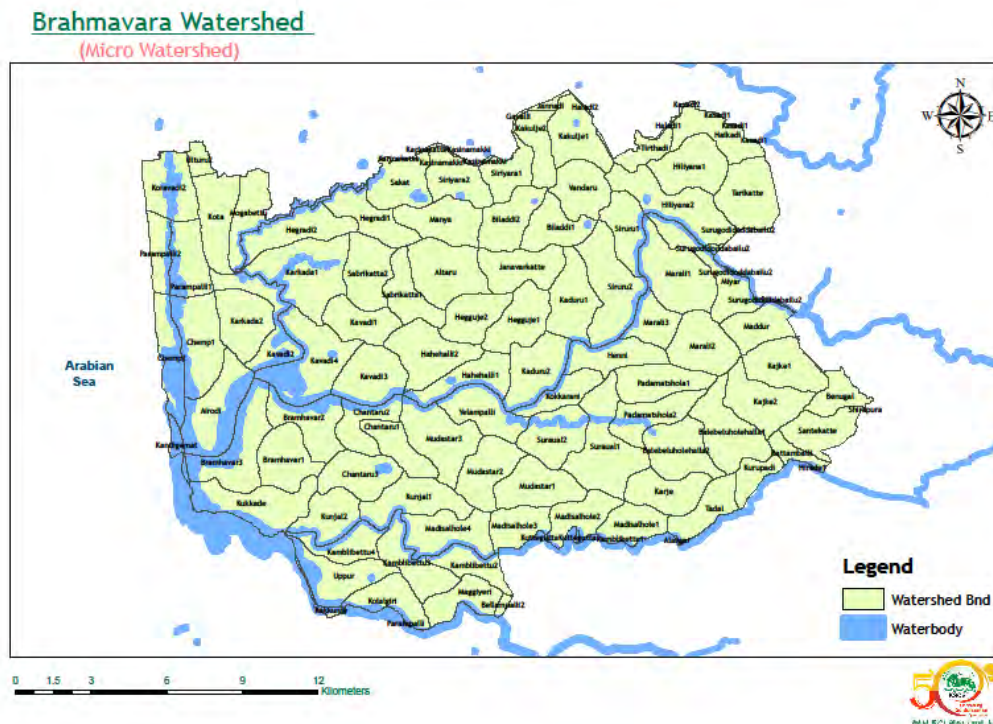
Map : 9



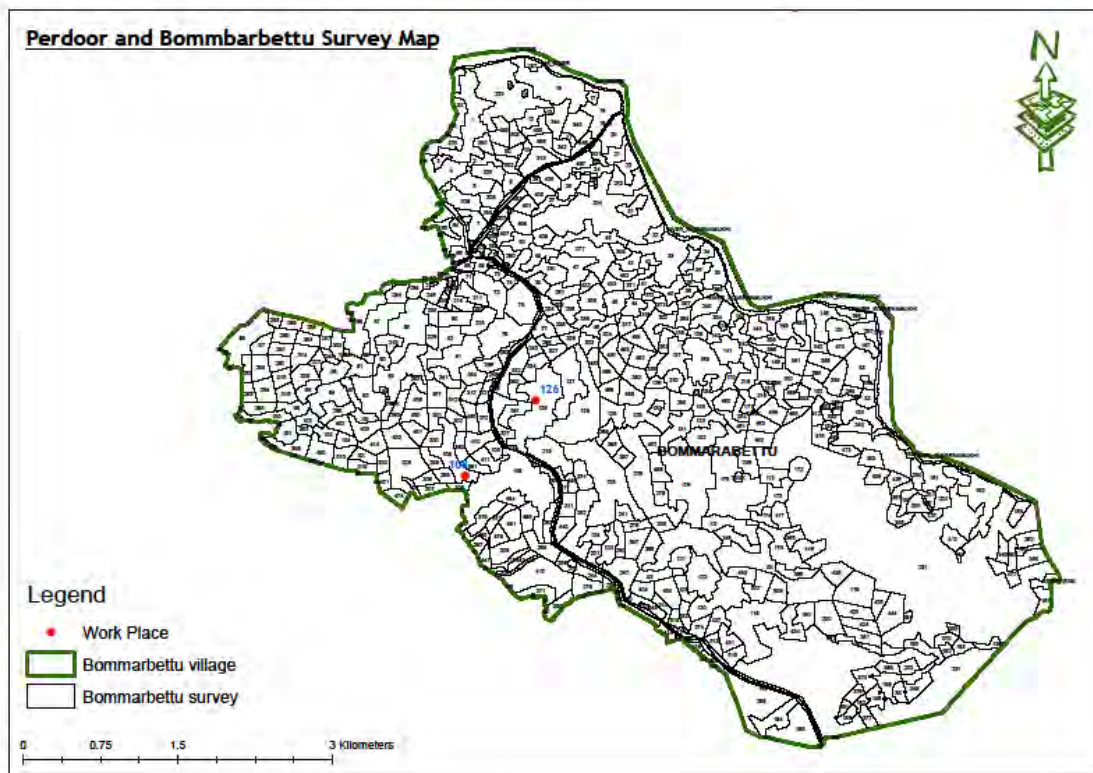
Activity -3

| | |
|------------------------------|---|
| Title of work | For the purpose of conducting a field-wise survey of Vented Dam Work Completion (Exact Location) |
| Department Name | Watershed (JD Agriculture) . |
| Objectives | To find out the cross check the Work completion of Vented dam work as per survey wise data |
| Data Used | Village bnd, Watershed bnd, Vented dam Location and Survey Number |
| Data Process | Excel data provided by department was converted into point data and GIS Layers. |
| Type of Data Provided | JPEG Maps and PDF |

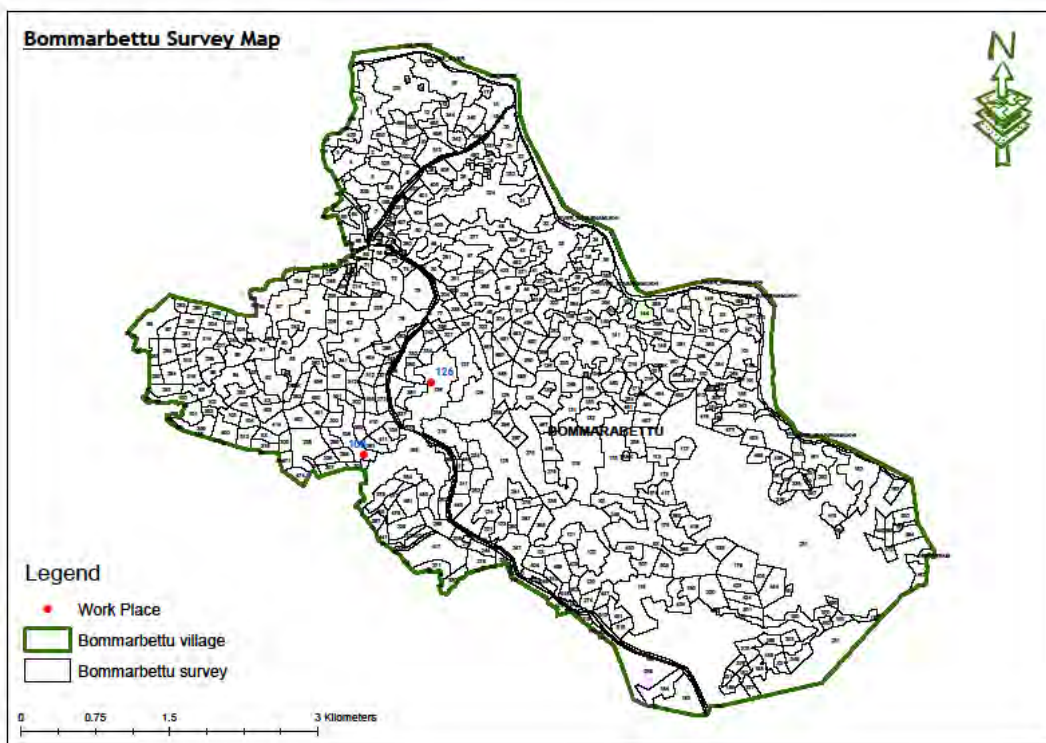
Map : 10



Map : 11



Map : 12



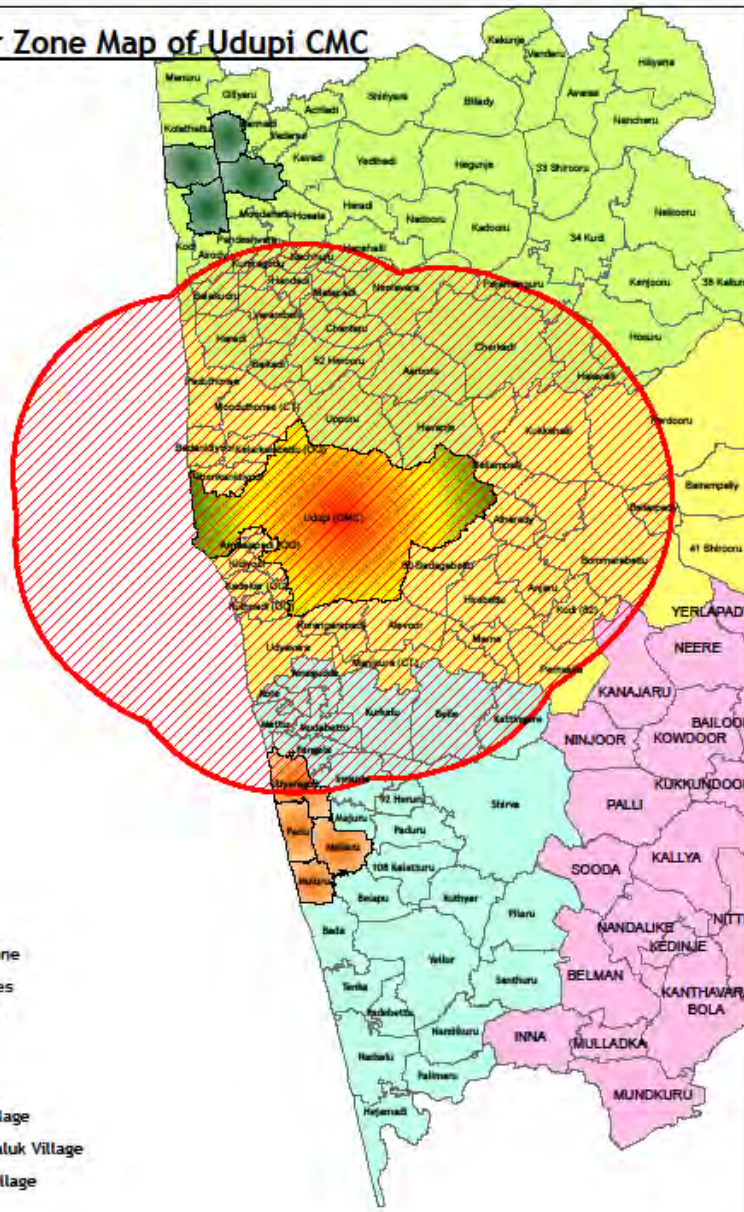
Activity -4

| | |
|------------------------------|--|
| Title of work | Buffer zone Analysis Map for city council area in udupi district |
| Department Name | Deputy Commissioner Office, Udupi |
| Objectives | Buffer zone map analysis in the wake of the notification of amendments to the land conversion fee (TAX) in the city council area. (Pertaining to the Village which comes under 5 KM and 8 KM buffer zone for particular criteria) |
| Data Used | Village Boundary, Urban Boundary (Area) and Buffer Zone |
| Data Process | List of Urban Area (Town Panchayath, TMC and CMC) |
| Type of Data Provided | JPEG Map and PDF |

Map : 13



8KM Buffer Zone Map of Udupi CMC



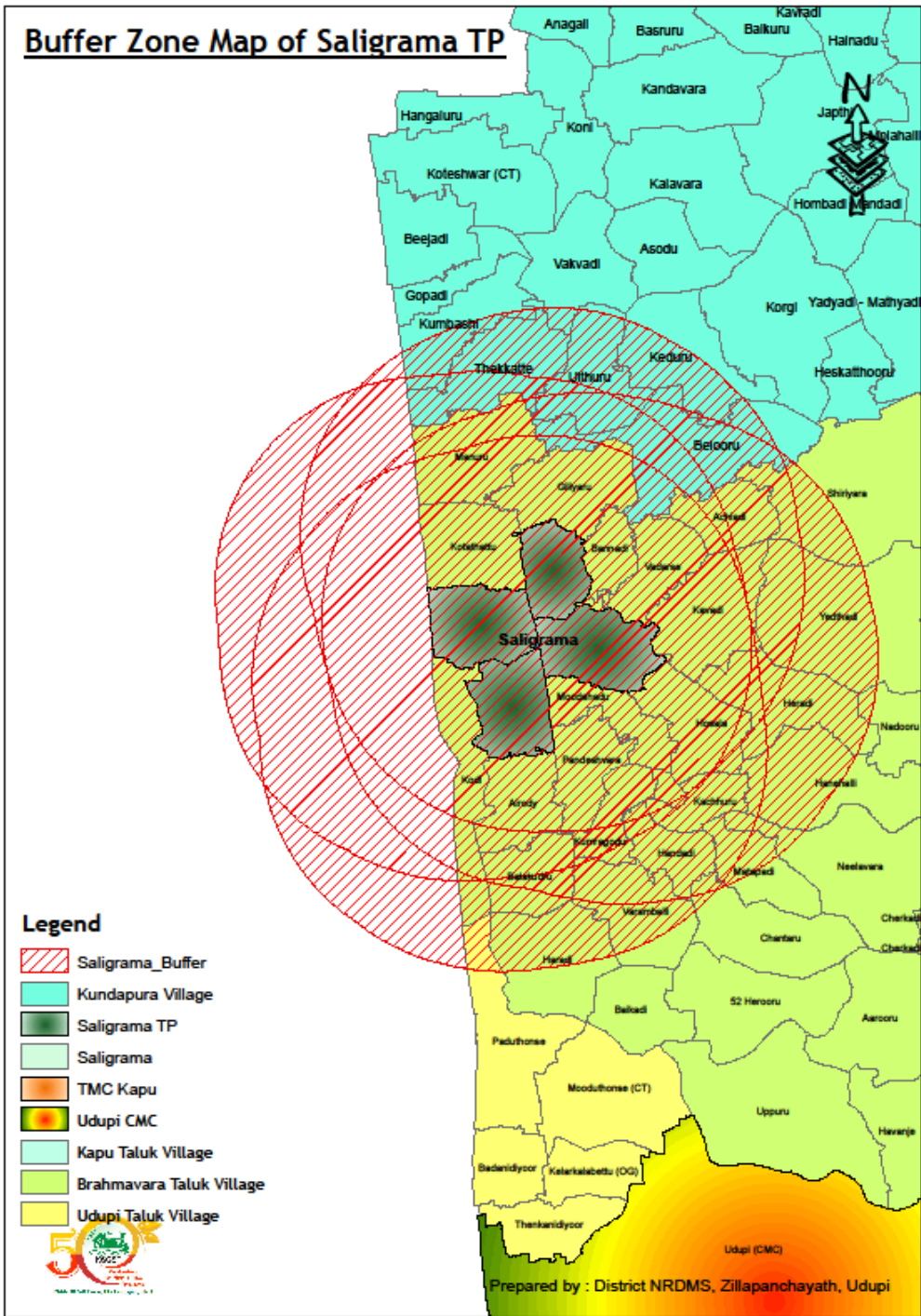
Legend

-  8KM Buffer Zone
-  Karkala Villages
-  Saligrama TP
-  TMC Kapu
-  Udupi CMC
-  Kapu Taluk Village
-  Brahmapara Taluk Village
-  Udupi Taluk Village

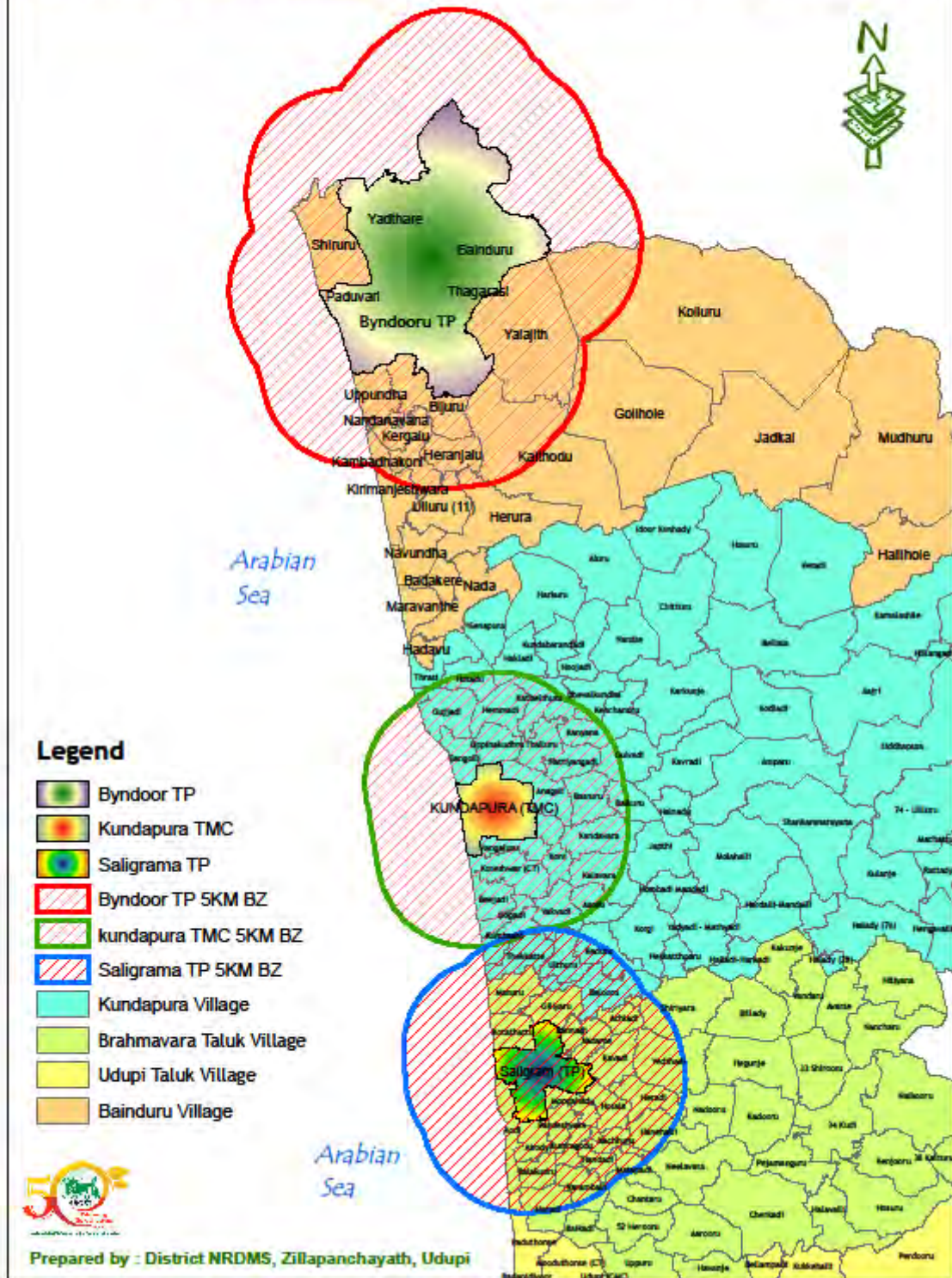


Prepared by : District NRDMS, Zillapanchayath, Udupi

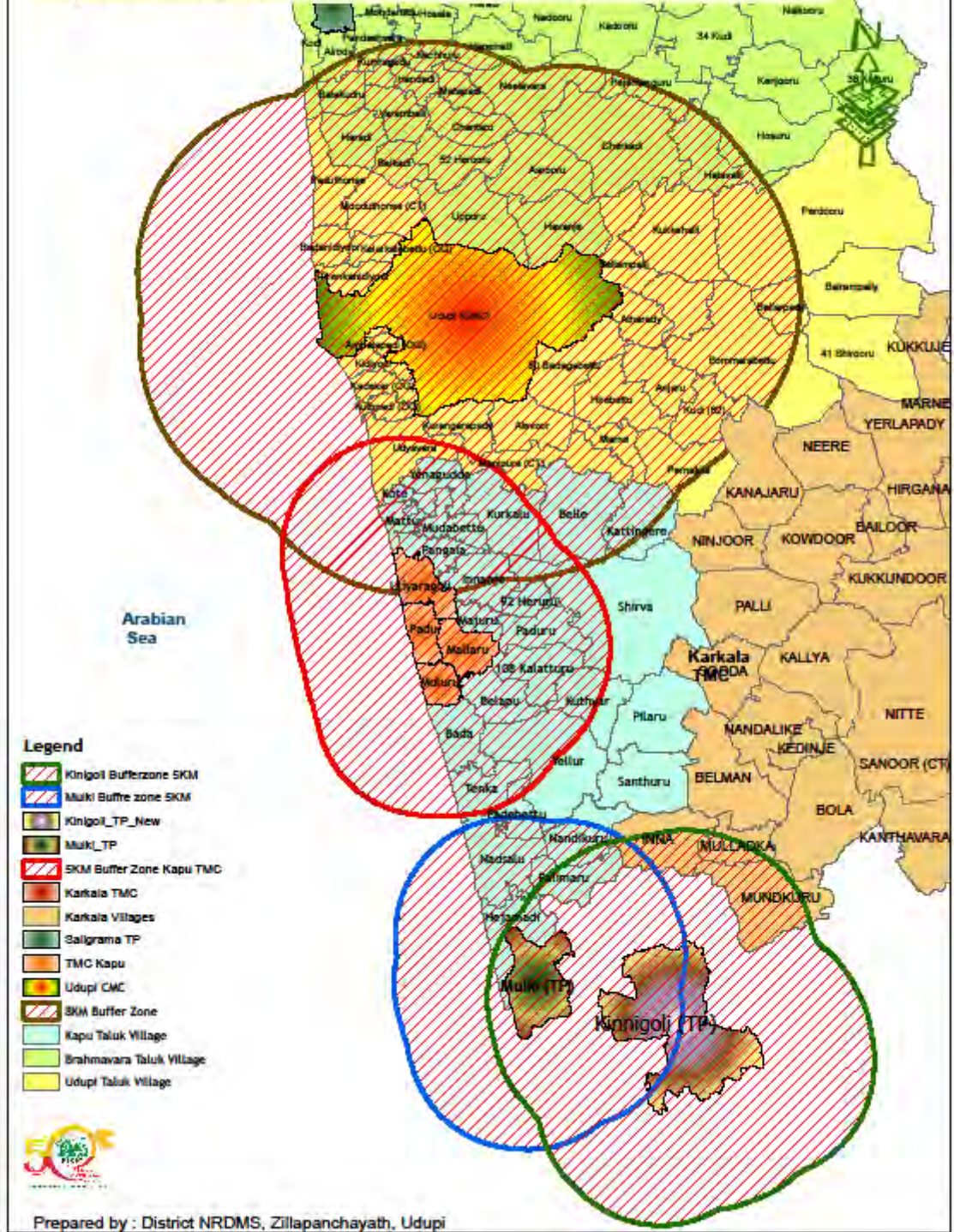
Buffer Zone Map of Saligrama TP



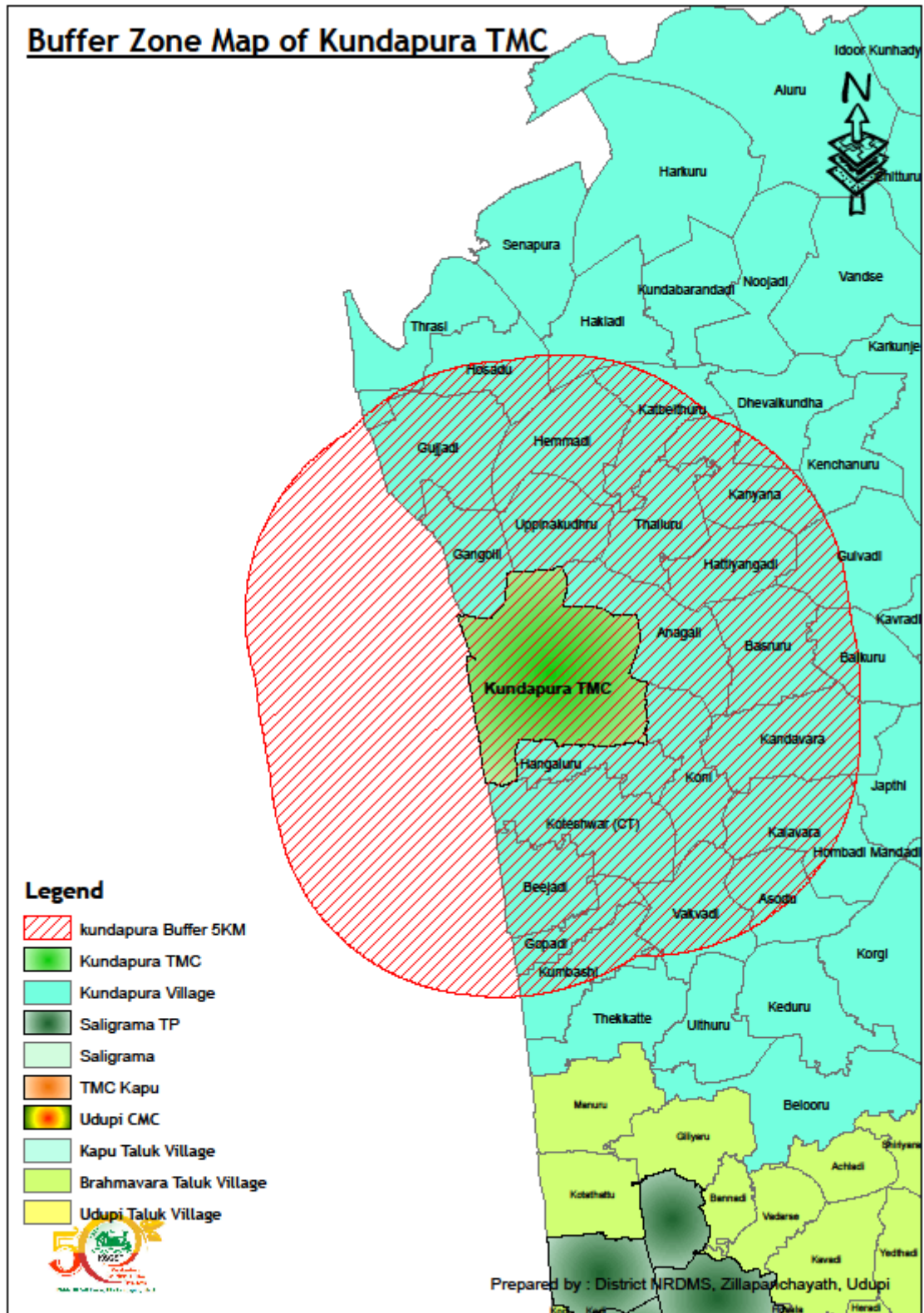
Byndoor TP, Kundapura TMC and Saligrama TP (5 KM Buffer Zone)



Udupi CMC (8KM), Kapu, Mulki TP and Kinigoli TP (5 Km Buffer Zone)



Buffer Zone Map of Kundapura TMC



4. Training Imparted to Line Department:

1. Provided GIS training to Taluk wise PDOs, Members and GP staffs regarding Yukthadhara Pertaining to the Natural Resources – in GIS Plan
2. Provided GIS training regarding Water Conservation and Tank conservation at GP level and MGNREGA Workers

5. Conclusion:

A) Summary of Activities under Take.

During this period district NRDMS center, ZP Udupi provided various Maps, data and report to Zilla Panchayath Office, Deputy Commissioner Office and various line department, pertaining to implementation of various activities and assist district administration in disaster management.

B) Commitment to Improve NRDMS Activities.

District NRDMS Centre ZP Udupi is committed to provide quality and scientific assistance to department for implementation of developmental activities in district.

District NRDMS center is also committed to update the existing data base as up to date to enhance its performance and to assist the departments.

Centre is also committed to learn and update our self to latest GEO SPATIAL technology and other software to improve our efficiency.

Appreciation letter from Deputy commissioner of udupi district

ಜಿಲ್ಲಾಧಿಕಾರಿ ಹಾಗೂ ಜಿಲ್ಲಾ
ದಂಡಾಧಿಕಾರಿಯವರ
ಕಾರ್ಯಾಲಯ, ರಜತಾದ್ರಿ
ಮಣಿಪಾಲ, ಉಡುಪಿ - 576104
Email: deo.udupi@gmail.com

ಕರ್ನಾಟಕ ಸರ್ಕಾರ Office of the Deputy Commissioner
& District Magistrate
Udupi District, "Rajatadri",
Manipal, Udupi - 576104
Office: 0820-2574924, 2574925
(ಕಂದಾಯ ಇಲಾಖೆ)



No.: ELN (1) CR : 01/2025

Date: 25.03.2025

Appreciation Letter

The Entire election process of the General Election to the Parliamentary Election – 2024 in Udupi District has been successfully conducted within the time schedule with the co-operation and team work of all the officers and officials, who rendered their service day and night. In this regard, I would like to place on record my heart full appreciation and gratitude to the Sri. Vikram.R, Project Associate, District NRDMS Center, ZP, Udupi for their valuable service provided regarding the GIS Maps during the election process.

He has taken up different projects as directed by the state officials and me, regarding the GIS mapping and submitted the maps and reports in time. I appreciate his effort and interest in successfully submitting the report.

(Dr. K. Vidyakumari, I.A.S)
District Election Officer &
Deputy Commissioner
Udupi district, Udupi.

To
Vikram. R
Project Associate, District NRDMS Center,
Zillapanchayath, Rajathadri, Manipal,
Udupi

Copy to:
1. Secretary, KSCST, Bangalore

Annexure: 10

List of Tables:

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Table 5: Location of the Sand Blocks (Village data)

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Map 10, 11, and 12: Map Showing Vented Dam Construction Location (survey Number)

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Date: / /2026

Place: Udupi

**Project Associate
District NRDMS Centre,
Zilla Panchayat, Udupi.**

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