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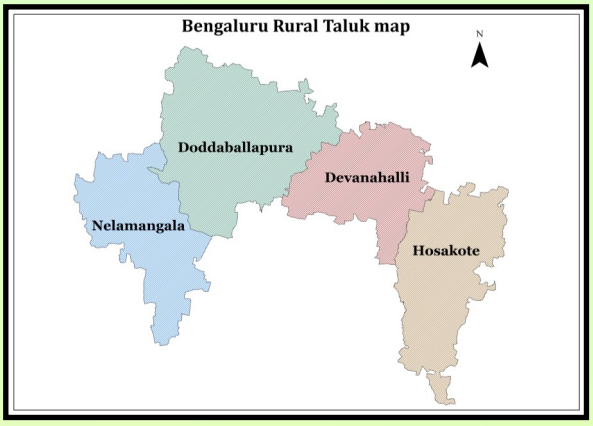
Introduction



Bengaluru rural district is one of 30 districts of Karnataka. Bengaluru district was split into two districts, Bengaluru Urban district and Bengaluru Rural district in 1986 [1]. Currently Bengaluru Rural district comprises of 4 taluks; Nelamangala, Doddaballapura, Devanahalli and Hosakote after Ramanagar district was carved out in 2007[2] shown in figure 1. There are 35 hoblies, 105 Gram Panchayats and one revenue division in the district. Bengaluru Rural district with an area of 2,298 Sq.km is second smallest district in the state [3]. Doddaballapura taluk is the largest taluk with an area of 778 square kilometers and Devanahalli is the smallest taluk with an area of 431 Sq Km. The district is surrounded by Tumakuru and Chickballapur districts in the North, Kolar district in the East, Ramanagar in the West and Bengaluru Urban district in the South.

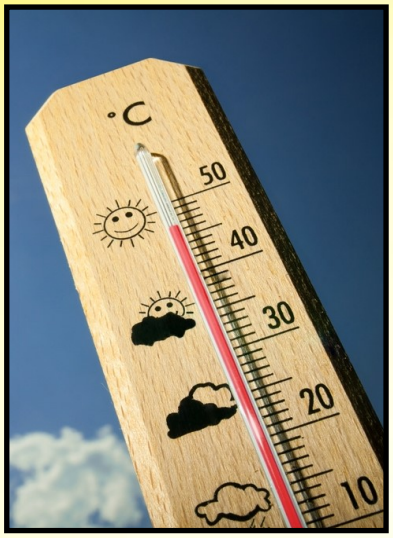
Bengaluru rural is located in south eastern part of Karnataka [1]. The district is spread between North Latitude 12° 15' and 13° 31' and East Longitude 77° 04' and 77° 59' covering parts of the Survey Of India (SOI) toposheets 57 G and H [4].

The district comes under the Agro-climatic zone V – Eastern Dry Zone.

Demography

The population of Bengaluru rural district as per 2011 census is 9,90,923 persons comprising 5,09,172 males and 4,81,751 females. The district has urban population of 2,68,744 and rural population of 7,22,179. The population density in the district is 431 per square kilometre. The district population is about 1.6 per cent of state population. The district owns 957 inhabited villages and 94 uninhabited villages. The district holds 9th rank in the State with a literacy rate of 77.9 per cent. The male literacy rate is 84.8 percent and the female literacy rate is 70.6 percent. Bangalore Rural District has the 1,051 villages, 5 Statutory Towns and 2 Census Towns. The decadal population growth is about 16.45 per cent with population increase of 1, 39,995 from 2001 to 2011. [3]

Climate



The climate of the district remains pleasant almost throughout the year. Most of its rainfall occurs in the monsoon season. The district climate is classified as seasonally dry tropical Savana. This climate includes four main seasons. Bengaluru rural have the hottest month in April and coldest in December with temperature fluctuations remarkably stable. The district experiences maximum temperature of 33.6°C and minimum temperature of 15°C. The district has two rainfall seasons i.e from June to September and October to November with opposite wind regimes. Any Depression in Bay of Bengal is reflected in this region. Thunderstorm and associated squall in April-May and September and October are important weather phenomena which are affecting the climate of the district. The district experiences early morning mister fog during winter. [3]

Rainfall

Bangalore Rural district average rainfall is 824mm. Nelamangala taluk experiences highest rainfall of 977 mm and that of Doddaballapura taluk which receives lowest rainfall of 802 mm. The contribution of rainfall of the taluks during the pre-monsoon rainfall is about 18 to 20 per cent of the annual rainfall, south west monsoon contributes 52 to 55 per cent and north east monsoon contributes 26 to 31 per cent of the annual rainfall.

- The coefficient of variation ranges from 42 to 51 per cent for pre monsoon season. The highest variability is seen in Nelamangala taluk.
- The co-efficient of variation for southwest monsoon ranges from 30 to 34 per cent, the highest being in Devanahalli taluk.
- The co-efficient of variation for north east monsoon ranges from 47 to 55 per cent, the highest being in Devanahalli taluk.
- The co-efficient of variation for annual rainfall ranges from 26 to 31 per cent. Devanahalli taluk experiences high variability of rainfall [3]. The annual average rainfall taluk wise is given in table -1:

Table 1: Annual average rainfall of Bengaluru rural district, taluk wise

Name of the Taluk	Statistical Parameters	Annual Rainfall (mm)
Nelamangala	Average Rainfall (mm)	977
Doddaballpur	Average Rainfall (mm)	805
Devanahalli	Average Rainfall (mm)	802
Hosakote	Average Rainfall (mm)	843

Source: - District census Handbook - Bengaluru rural, 2011

Geology

Bangalore rural district geology is broadly categorized under two groups; The dominating Archaean crystalline formation comprising peninsular gneissic complex with a small patch of hornblend schist in the northern part and intrusive closepet granite all along the western part of the district.

Unconsolidated sediments which are found in smaller stretches. The granite gneisses are mainly of migmatitic type, highly banded in composition from granite to diorite. Alluvium occurs along the river course [4].

Gneisses and granite gneisses are mainly found here which covers two thirds of the district. The strike of foliation is usually north-north-west to south-south-east and they are traversed by pegmatite and quartz veins. The depth of the weathered zone is important from the point of view of groundwater storage which is found maximum in valleys and water bearing formation. Coarse grained granites designated as closepet granites which are mainly found in range of hills running on the western margin of the district. Granite rocks are found in Nelamangala taluk. Laterite is confined to Hoskote and Devanahalli areas and is vesicular and quite porous [3].

Water Resource

River Arkavathi, Kumudhvathi and Dakshina Pinakini are main rivers draining in the district. The river Arkavathi which is tributary of river Cauvery flowing north to south enters Doddaballapura taluk and passes through the east of Nelamangala taluk. The River Kumudhvathi enters the district from west at Tippagondanahalli. River Arkavathi flows through the district and forms several large tanks at Doddaballapura & Hesaraghatta. The Dakshina Pinakini takes its name '**Pinaka**' which is known to be 'a bow from lord Shiva' and originates in Nandi hills like Arkavathi and flows southwards through Devanahalli & Hosakote taluks where it forms a big tank called the Hosakote tank [3]. Waterbodies and tanks details are depicted in figure 2.

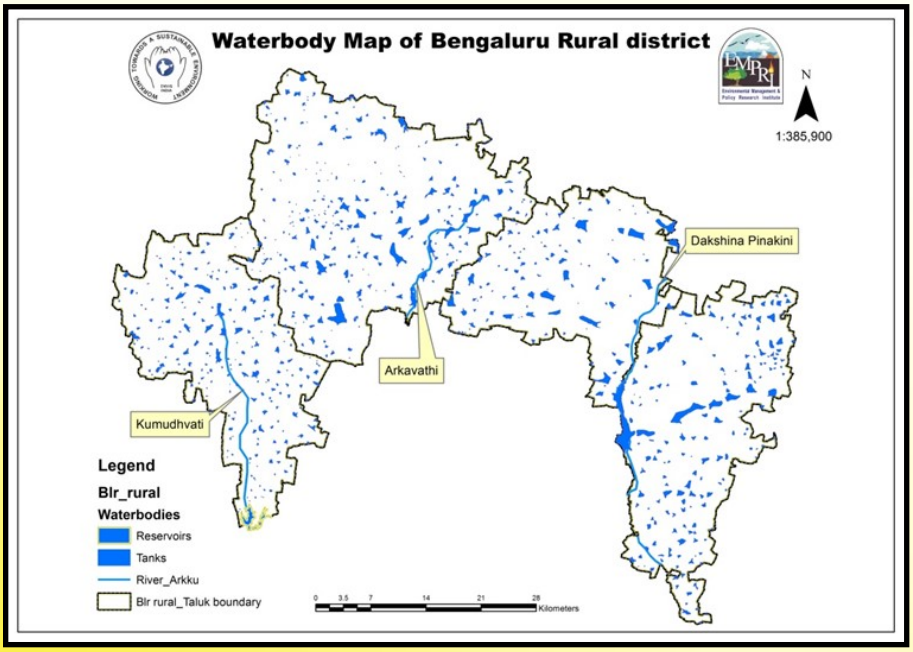


Figure 1: Bengaluru Rural district Waterbodies Map
(Source: Karnataka State Remote Sensing Application Centre, KSRSAC)

Groundwater

Bengaluru Rural district falls under Southern Eastern Dry Zone (Zone V) which has the characteristic of low rainfall pattern with more uniform and bi-modal distribution. Limited rainfall and variation in the rainfall in Bengaluru Rural district have caused failures of agriculture frequently and has forced the district to dependent only on the tube wells (0.256 Billion Cubic Meter(BCM)) and tanks (0.109 BCM) for the purpose of irrigation. There is no canal irrigation facility in the district [6]

Table 1: Status of surface water availability in Bengaluru Rural district

Sl. No	Sources	Tanks	Live capacity (BCM)	Total (BCM)
Surface Irrigation				
i) Minor Irrigation tanks (ZP tanks)				
A	Devanahalli	103	0.0014	0.0014
B	Doddaballapur	161	0.0037	0.0037
C	Hosakote	168	0.0097	0.0097
D	Nelamangala	182	0.0075	0.0075
	Total tanks	**614**	**0.0223**	**0.0223**
ii) Minor Irrigation tanks				
A	Devanahalli	14	0.0160	0.0160
B	Doddaballapur	39	0.0162	0.0162
C	Hosakote	24	0.0282	0.0282
D	Nelamangala	21	0.0248	0.0248
	Total tanks	**98**	**0.0851**	**0.0851**
iii) Lift Irrigation/Diversion (tanks)				
A	Devanahalli		0	0.0000
B	Doddaballapur	1	0.0003	0.0003
C	Hosakote (2 lift irrigation schemes)	2	0.0004	0.0004
D	Nelamangala	2	0.0005	0.0005
	Total tanks	**5**	**0.0012**	**0.0012**

(Source: Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), 2016)

Total Surface Irrigation - 717 tanks are available in the district

Table 2a: Status of Ground Water availability in Bengaluru Rural district

Ground Water				
Sl. No	**Sources**	**Wells**	**Live capacity (BCM)**	**Total (BCM)**
i)	**Open Well (Deep tube well)**			
	Devanahalli	5587	0.05590	0.05590
	Doddaballapur	6206	0.06851	0.06851
	Hosakote	6076	0.06448	0.06448
	Nelamangala	6297	0.06746	0.06746
	Total	**24166**	**0.256**	**0.256**

Table 2b: Status of Ground Water availability in Bengaluru Rural district

Sl. No	**Sources**	**Wells**
ii)	**Dug Well**	
	Devanahalli	**6**
	Doddaballapur	20
	Hosakote	5
	Nelamangala	12
	Total	**43**

(Source: Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), 2016)

Based on the methodology recommended by Ground Water Estimation Committee the ground water estimation is worked out. The salient features of the ground water resources are portrayed in table 1 and table 2. Block-wise data has been computed and the recharge computations are excluded for areas having slopes of more than 20 per cent [6].

Whole of Bengaluru Rural district is overexploited as per the ground water estimation studies indicated in the table 3, except for Nelamangala taluk which is safe (covering minor area of 10 per cent). The Annual replenishable recharge is less than the total draft which is about 32.2 per cent. The annual replenishable recharge can be enhanced by adopting recharging structures like recharge pits, trench cum bunds and bore well recharging structures etc.,. Drip and sprinkler irrigation for agriculture and horticulture crops can also be adopted for efficient use of available water [6]. Total Ground water – 24209 wells are available in the district.

Table 3: Status of ground water in Bengaluru Rural district

Taluk	Status of ground water exploitation- taluk wise (per cent area in each taluk)				Status of ground water draft, recharge (BCM)	
	Safe	Semi critical	Critical	Over ex-ploited	Annual Net groundwater available, BCM	Total under-ground water draft for all uses BCM
Devanahalli	--	--	--	100	0.04101	0.06053
Doddaballapur	--	--	--	100	0.04973	0.06500
Hosakote	--	--	--	100	0.0434	0.06252
Nelamangala	10	--	--	90	0.0598	0.06848
Total					**0.19394**	**0.25653**

Source: Pradhan Mantri Krishi Sinchayee Yojana (PMKSY), 2016)

Soils

The soils of Bangalore Rural districts are broadly classified into four categories viz (i) Loamy soil (ii) Lateritic soil (iii) Lateritic gravelly soil and (iv) Red sandy soil.

Red loamy soils generally occur on hilly to undulating land slope on granite and granite gneisses. Lateritic soil occurs in undulating terrain forming plain to gently sloping topography of peninsular gneiss region. Lateritic gravelly soils occur in upland regions of lateritic soils, Red sandy soil occurs in undulating land slopes. These soils are derived from acidic rocks granites and granitic gneiss. [3]

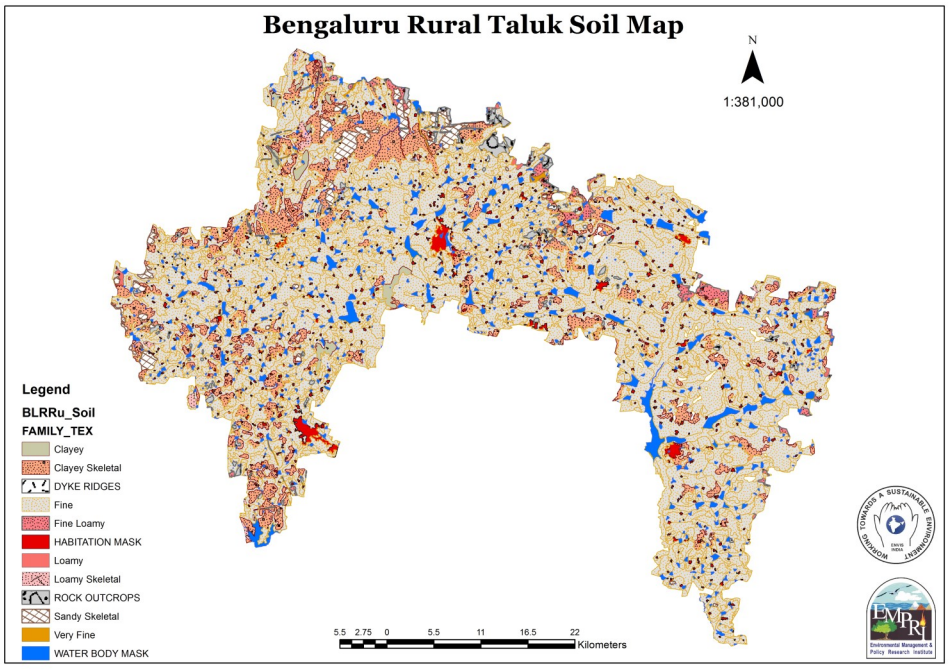


Figure 2: Bengaluru Rural district Soil Map (Source: KSRSAC)

Soil information is derived from the shape file data provided by Karnataka State Remote Sensing Application Centre, Bengaluru and is shown in the table 4 and the soil classification map is depicted in figure 3.

Table 4: Different types of soil present in Bengaluru rural district

Sl no.	Soil Classification	Area in SqKm
1	Clayey	17.55
2	Clayey Skeletal	268
3	Fine Loamy	31.75
4	Loamy	2.71
5	Loamy Skeletal	9.94
6	Rock outcrop	29.98
7	Sandy Skeletal	38.64
8	Very Fine	1.43
9	Fine	1715.5
10	Dyke Ridges	5.98

Source: Karnataka State Remote Sensing Centre (KSRSAC) – Soil Classification data shape file statistics

Vegetation and Wildlife

Vegetation

The vegetation in this district is regarded as deciduous jungle type and majority of species inhabiting in these area exhibit xeromorphy. The district vegetation is broadly classified into two groups

- The hilly vegetation,
- Pond and riverbed vegetation.

Majority of area are covered by thickets of extensive growth of lanthana. The common species found on the hilltop are Acacia nilotica (Karijali), Alangium salvifolium (Kalu Mavu) etc. The ground vegetation consists of herbaceous forms and a covering of grasses and others like Apluda mutica (Kaduhauchikadi), Argemone Mexicana (Datura) etc. The vegetation in general is regarded as deciduous type with the exception of the valleys and a majority of species inhabiting these areas exhibit xeromorphy.

Fabaceae, Poaceae, Cyperaceae, Asteraceae, Euphorbiaceae etc. are the most important flora families that exist in Bangalore Rural district. Floriculture is very predominant in Hoskote and Devanahalli taluks. [3].

Wildlife

Most of the Forest has reduced now due to urbaninization; the animals found in these forests are Lion, Elephant, Wild Buffalo, Bison, which are seen occasionally in the district. But, the earlier forest included animals like Lion, Tiger, Elephant, Cheetah, Jackal, Wild Buffalo, Bison, etc.

Domestic animals of the district consist of Horses, Cows, Bullocks, Buffaloes, Sheep, Goat, Dogs, Pigs, Cats, Cocks, etc., which are plentiful

Agriculture

The district is gifted with environment to grow agricultural and horticultural crops such as paddy, maize, ragi, rice, groundnut, small amount of bajra, sugarcane, castor and mulberry.

Kharif cropping is being practised to a great extent as the district falls under eastern dry agroclimatic zones of the State

Agriculture crop statistics:-

Among all the crops grown in the district, ragi is an important rain fed crop occupying 41,755 hectares of land, followed by maize occupying 10,935 hectares of land. The yield per hectare under irrigated conditions for cultivation of ragi is 3,370kg and under un-irrigated conditions, it is 2,307kg. Paddy is another major crop grown in the district, with the total yield of 6,805 kg per hectare. Among the oil seeds crops, nigerseed is grown in 2,626 hectares of land. The other oil seed crops are groundnut, castor, sesamum, rape and mustard and sunflower.

Different Horticultural crops grown in the district are Banana, Papaya, Grapes and Pomegranate. The yield per hectare of banana is 33,918 kg per hectare, Papaya is 33,216kg per hectare and Grapes is 31,030kg per hectare.

Sugarcane is the only commercial crop grown in the district. Other high yielding crops grown in the district are Cabbage, tomato, potato, brinjal, beans and lemon. Coconut is grown in an area of 4,505 hectare.

Arecanut, Coriander, turmeric, dry ginger, chillies and garlic are also grown in the district. [3]

Rose, Jasmine, Marigold and Aster like Floricultural crops are grown here. The soil and climatic conditions are congenial for the cultivation of mulberry, rearing of silkworms, and production of silk, besides other agro-based industries. [7].

Bengaluru Rose onion, which got its geographical indication tag for being grown in Bengaluru rural and other district in Karnataka. These onions are known for their uniqueness of their deep scarlet red colour and high pungency [8] [9].

Forest

Bengaluru rural division comprises of 1) Doddaballapura range, 2) Nelamangala range, 3) Devanahalli range and 4) Hosakote Range, from 21-8-2007. About 18642.92 ha of Forest land is present in Bengaluru rural division, which constitute of 8.25 per cent of geographical area of Bengaluru rural district. The forests here are of mostly tropical dry deciduous type. The main plant species in forest include Acacia, Albizia, Wrightia tinctoria, Zizyphus, Dendrocalamus strictus, Anogeissus latifolia etc., Most of the forests are usually covered with scrub jungle or

boulder strewn or plains [5].

From 1974 onwards, Forest Department engulfed large extents of Revenue lands. Under forest development and social forestry projects, forest plantations were raised in these class lands, which accounted for nearly 2175.66 ha of plantation [5].

The forest cover has about 8.5sqkm degraded forest, 75sqkm of Forest plantations; 48sqkm is scrub forest and 0.01sqkm of moist and dry deciduous forest as per Karnataka State Remote Sensing Application Centre (KSRSAC) forest shape file statistical data as shown in figure 4.

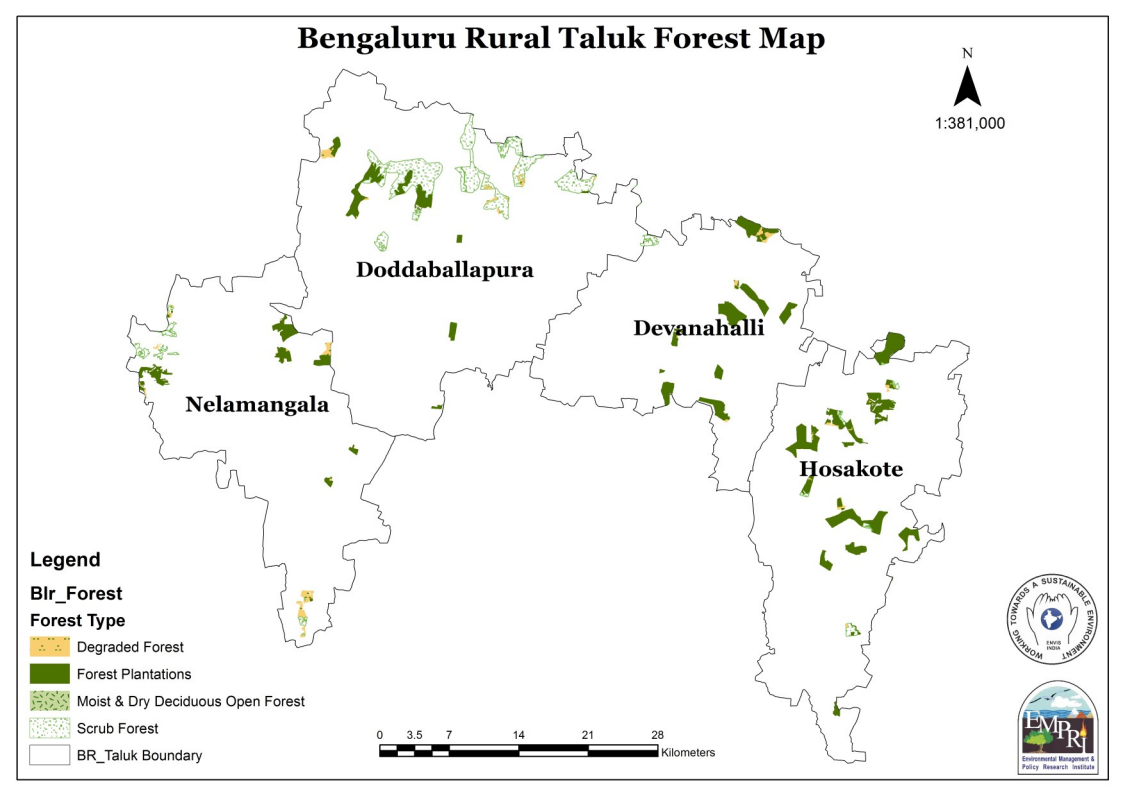


Figure 3: Bengaluru Rural district Forest type map (Source: KSRSAC)

Industries

Bengaluru rural district is the new industrial hub for many upcoming projects and investors. The district has a varied spectrum of industries like textile, electronic goods, automobile and parts, mulberry cultivation silk rearing and silk production is spread across the district. [3]

The district has two industrial estates and six industrial areas attracting many investors across the country. Under the Suvarna Karnataka Development project a dedicated Corridor is proposed for Food Processing Zone, Media & Entertainment Zone and Readymade Garment Zone covering the District [11].

The District's Industrial areas which are sector specific are given in table- 5

Table 5: Bengaluru Rural district's Industrial areas- Sector specific

Sl. no	District	Name of Industrial Area	Sector	Status
1	Bengaluru Rural	Bengaluru Aerospace Park	Aerospace	Established
2	Bengaluru Rural	Bengaluru Aerospace SEZ	Aerospace	Established

Source:KIADB Gis Portal- Industry Sector specific

Many industries are spread across the district and their distribution taluk-wise as per Karnataka State Pollution Control Board (KSPCB), F- Register is given below:-

⇒ Nelamangala – 921 Industries

⇒ Hosakote – 1444 Industries

⇒ Doddaballapur – 515 Industries

Transport

Road

The district has four national highways NH-207, NH-48, NH-7 and NH-4 passing through as per (KSRSAC Shape file data-2015) shown in figure 5. As on 2009-10, the district had the total road length of 6,169 km. comprising National Highway measuring 203 km., State Highways up to 191 km., Major district roads 610 km., other district roads of 38 km. and village roads of length 2,431 km. [3].

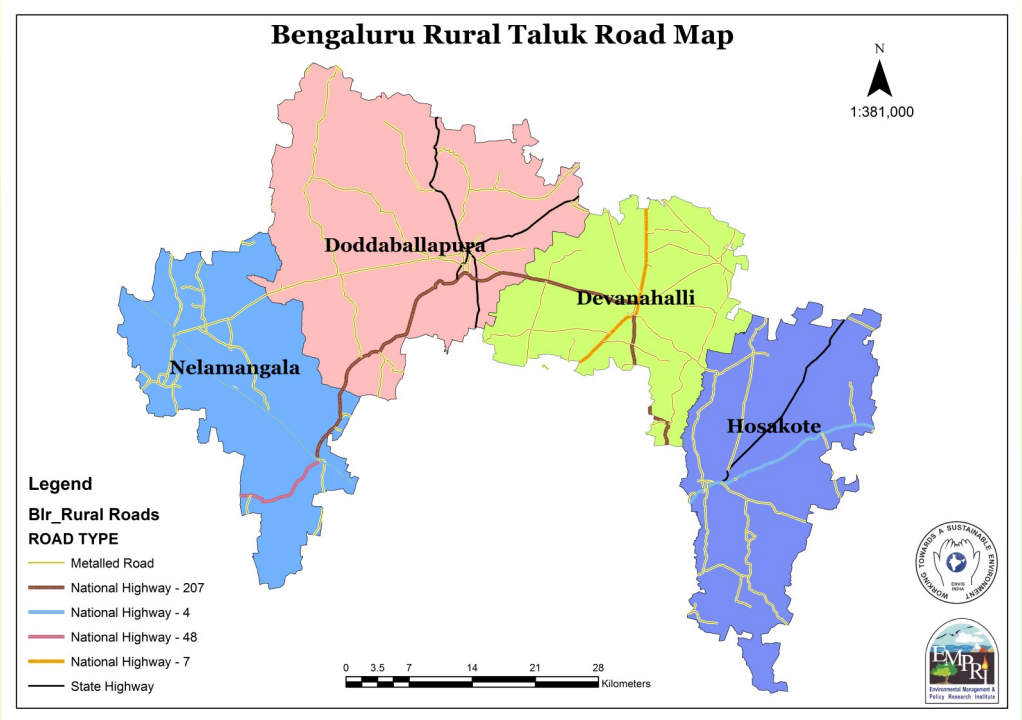


Figure 5: Bengaluru Rural district Road Map (Source: KSRSAC)

Rail

The district has a good connectivity of railways too. The district has a total length of 75 km. of broad gauge railway line and has 15 stations in the district [3]. The taluk wise details can be seen from the table 6.

Table 6: Bengaluru Rural district's Railway connectivity

Name of Taluk	Length of Railway line in km			Railway Station
	Broad Gauge	Metre Gauge	Total	
Nelamangala	23	0	23	6
Doddaballapura	20	0	20	2
Devanahalli	11	0	11	5
Hosakote	21	0	21	2
Total	75	0	75	15

(Source: District census Handbook- Bengaluru rural, 2011)

Airport

Source: archdaily.com https://www.archdaily.com/897315/kempegowda-international-airport-hok)

Bengaluru rural district encompasses International Airport popularly known as Kempegowda International Airport situated in Devanahalli taluk. The Airport is spread over 1600 hectare of area. It is the third busiest airport in the country as per passenger traffic in India inaugurated in

2008 [12]. The airport has installed solar roof top power plant which generates about 3.35 MW of power. [13].

Tourism

Manne (Manyapura)

This is a small village about 24 kms from Nelmangala which was once the capital of Gangas and now called as 'The Lost Capital of Gangas'. Gangas started their rule with Kolar as their capital, then shifted to Manyapura. Manne place has heritage structures and carries the imprints of Jainism. Many temples here are built during the period of Gangas. One such Temple is Kapileshwara Temple, which is about 1200 years old showed the richness of Ganga era.

Kapileshwara Temple, Manyapura, Nelmangala Taluk (Source: teamgsquare.com)

The village has another beautiful temple enriched with heritage structures which is the 'Someshwara Temple' which was built in 9th-10th centuary AD.

Mukthanatheshwara Temple, Binnamangala, Nelmangala Taluk (Source: teamgsquare.com)

Binnamanagala village has a temple built by Cholas. It is believed that Raja Rajendra Chola built this temple in 10th centuary AD in dedication to **Lord Mukthanatheshwara (Shiva).** This ancient temple is renovated recently with new stone art work. This temple is completely built in Dravidian style of architecture. **Vishwa Shanti Ashram** park situated in Binnamangala is idyllic for spiritual bliss and peaceful environment. The park has a magnificent statue of Vishwaroopa Vijaya Vital.

Shivagange: It is a mountainous place at an elevation of about 804.8meters located near Dobbaspet, Nelamangala taluk, Bangalore rural district. The place is popularised for rock climbing in Karnataka state. The location was under Hoysala king and queen Shanthala. Major attractions in Shivangange are the Nandi statue,

Gangadhareswara Temple, Shanthala drop and Patala gange.

Ghati Subramanya temple: The temple is situated near Tubagere, Doddaballapur. The temple attracts many devotees from across the state and the place hosts a cattle fair apart from festivals and rituals. The temple is believed to be more than 600 years old. The construction of the Ghati Subramanya temple is ascribed to King Ghorpade, who belonged to the Sandur dynasty who ruled parts of Bellary [9].

Ghati Subramanya Temple.

The high pyramid shaped gateway tower of the temple is one of the most distinctive features, a perfect example of Dravidian architecture. It is adorned with sculptures of various deities and events of Hindu mythology.

Devanhalli fort: The place has history of being ruled by many kingdoms. The fort is spread across an area of 20 acres. Rana Baire Gowda's son built the mud fort in 1501 century at Devanahalli. Later the fort was renovated with stone structures by Hyder Ali in 18th century.

The fort has 12 bastions at regular interval. These bastions are provided with gun point built with brick and lime. The fort embraces beautiful temples around, amidst all Venugopalswami temple is old and famous. The temple adorns a Dravidian style of architecture with the walls engraved with scenes from the Ramayana [10][11].

Devanhalli Fort

Taluks at glance

Nelamangala

The taluk is located in western part of Bengaluru Rural district. The place is perfectly soaked in the natural beauty of the marvellous temples giving a tinge of spirituality to the place. It is known for its rich culture and festivities for the places. The taluks main source of income is manufacturing of Silk, incense stick and handicrafts. [14].

Doddaballapura

The taluk is situated in north western part of the district. Doddaballapura taluk is one of largest silk producers in India. It was mentioned as 'Ballalapura Thanya in a record dated 1598 AD. It is believed that a cow used to drop one drop of 'Balla'of milk at the anthill and that is how the name of the taluk is derived.

Devanahalli

The taluk is located in north-eastern part of Bengaluru Rural district. Devanahalli is a Town Municipal Council in Bengaluru Rural district. The town is famous for the iconic fort, many temples around and International airport. The fort being the birthplace of Tipu Sultan, known as the 'Tiger of Mysore' is popular [15]

Silkworm rearing is major occupation along with agriculture in this place. India is said to be the second largest producer of silk in world. Karnataka stands to be largest state of silk produce. Devanahalli has about 3.12 acres covered by Mulberry nursery farms in Mallenahalli [17]. Largest cocoon market which is said to be Asia's largest market takes place in Sidlaghatta, near Devanahallli [18]

Devanahalli Pomelo (Popularly known as "Chakota"): Devanahalli Pomelo is a type of citrus fruit (Citrus maxima) which belong to 'Rutaceae' family. It is an exotic variety which is exclusively grown around Devanahalli region and has gained 'Geographical Indicator Tag'. The region has favourable climate and soil conditions to grow this fruit [19]. Devanahalli pomelo is said to be world's Largest Citrus Fruit and is a "rare piece of heritage", introduced 200 years ago in the region. This fruit shares ancestry with the grapefruit. Pomelo is one of four true citrus species from which all other citruses evolved [20].

Chakota

Hosakote taluk is located at eastern part of the district at about 25km from Bengaluru (Majestic). A battle between British East India Company and Hyder ali took place here in 1768 which was first British-Mysore war (Battle of Ooscata) [21].

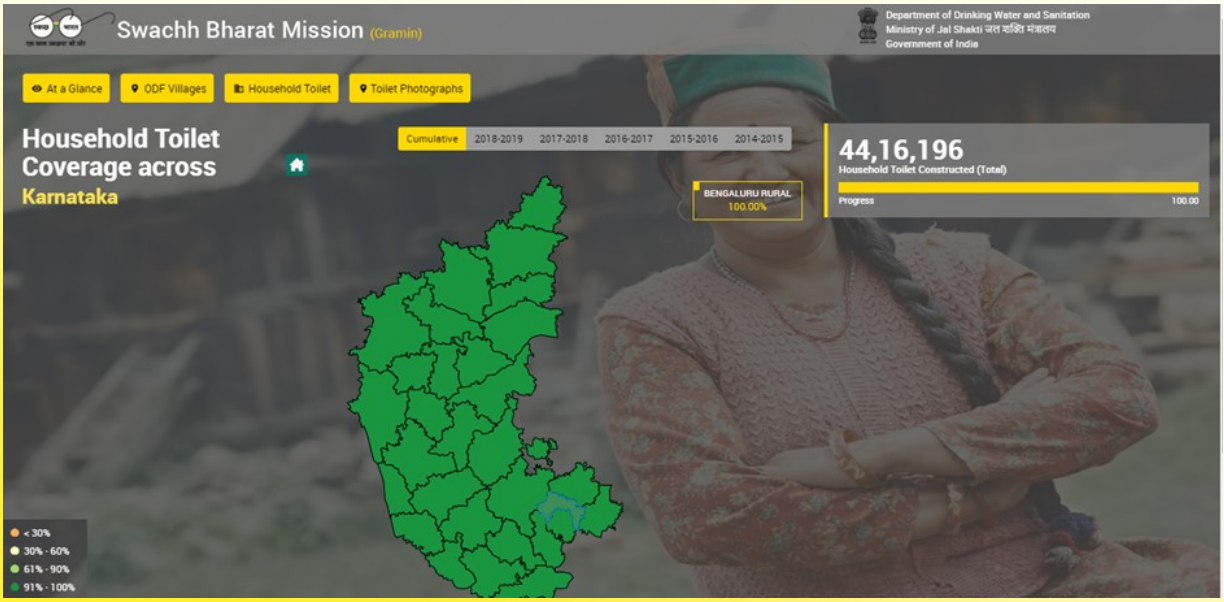
People's main occupation here is agriculture and along with horticulture, milk production and bee rearing is part of their earning for livelihood. Nandagudi is a place in Hosakote taluk where a Banyan Tree is known for world's largest number of bee-hives [22].

- **Hosakote Minor Irrigation Project:** Hosakote was facing scarcity of drinking water till a project was implemented in 2011 by Minor irrigation department. The minor irrigation project focussed to fill Doddakere lake in Bengaluru Rural district by diverting sewage water from Yelemallappa Shetty tank near KR Puram which was full because of the free flow of sewage water from Bengaluru city. This project has solved the drinking water crisis. The ground water table level got increased and it has helped increase the water table in about 30 villages surrounding Hosakote after the implementation of the project. As per the Water analysis reports provided by BMS college of Engineering Bengaluru the water was fit for drinking and agriculture [23].

Open Defecation Free status

Open Defecation Free is a part of Swachh Bharat Mission to achieve universal sanitation coverage and to put focus on sanitation. The Prime Minister of India, Shri Narendra Modi, launched the Swachh Bharat Mission on 2nd October, 2014 which aims to achieve Swachh Bharat by 2019 in concern to pay tribute to Mahatma Gandhi on his 150th Birthday.

As Per Swachh Bharat Mission – Gramin, all the districts in Karnataka State are declared as Open Defecation Free.



Source: Swachh Bharat Mission (Gramin)

NES- GRIDSS of Bengaluru Rural:

Environmental Management and Policy Research Institute (EMPRI) - Environmental Information system (ENVIS) activities in Bengaluru Rural District

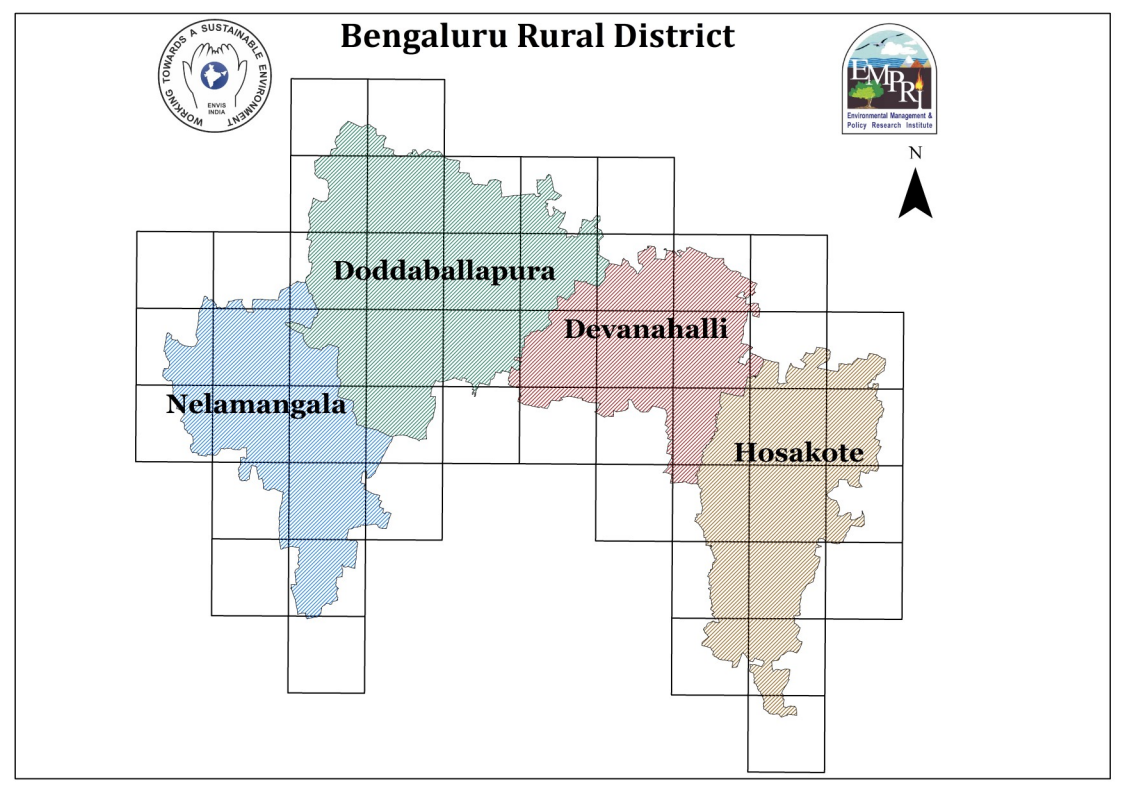
EMPRI-ENVIS has been entrusted 14 districts to carry out the Grid Based Resource Information and Decision Support System (GRIDSS) program for sustainable Management of National Environment Survey (NES) in the Ecosystem from 2019-2022 in consultation and approval of ENVIS Secretariat, Ministry of Environment, Forest & Climate Change (MoEFF&CC).

The Broad objectives of NES-GRIDSS program involves:

- To improve the understanding of ecological relationships between potential threats, vulnerability area, water quality, biodiversity.
- Identification and documentation of unique ecological features and areas for preservation and conservation biodiversity.

Study would be performed through different thematic layers by creating 9kmX9km grids.

EMPRI-ENVIS has selected Bengaluru Rural District as one of the district out of 14 districts for FY 2019-20 to carry out NES, GRIDSS program. Bengaluru Rural District is spread across 2,298sqkm. The district is divided into 9km by 9km grid cells on ArcGIS platform. The district area was divided into 52 Grids of 9km X9km each. The study for entire district was carried out using secondary data collected from Karnataka State Remote Sensing Application Centre, Bengaluru. The secondary data included 14 different thematic layers. Each theme was mapped to 9KmX9Km grids to facilitate decision making at different level and aspects of government.



Bengaluru Rural district with 9X9 Km GRID.

Methodology involved

The secondary data was collected from Karnataka State Remote Sensing Application Centre, Bengaluru. The secondary data was analysed and integrated for each grid. The maps generated at a scale of 1:50,000.

In order to obtain the status of various environmental parameters, natural resources, and terrain conditions etc., in the study area, different thematic maps are prepared. The methodology involved in preparing these maps as shown in figure 6.

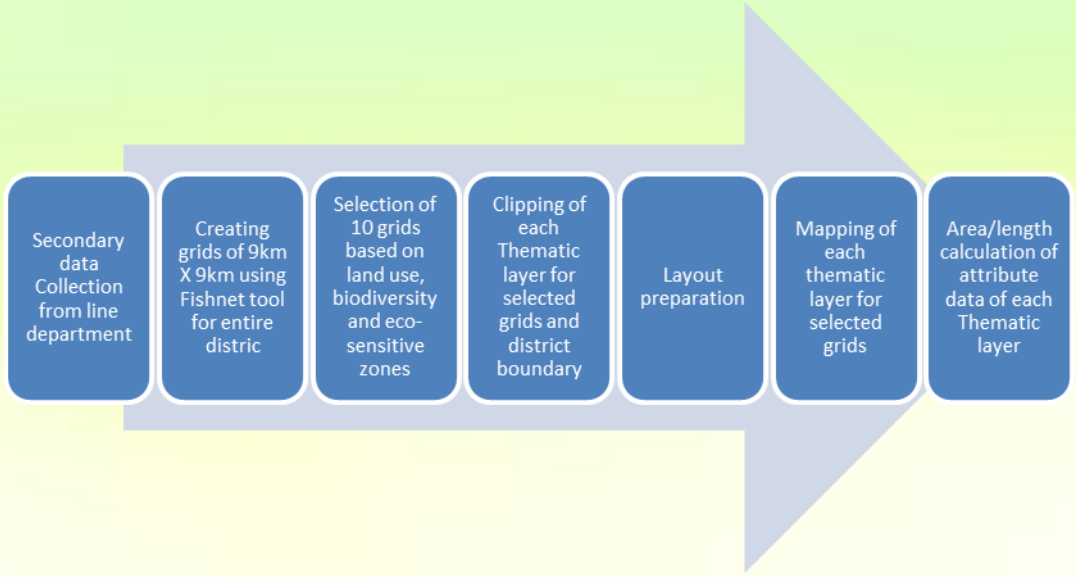


Figure 6: Methodology of Bengaluru Rural District grid maps

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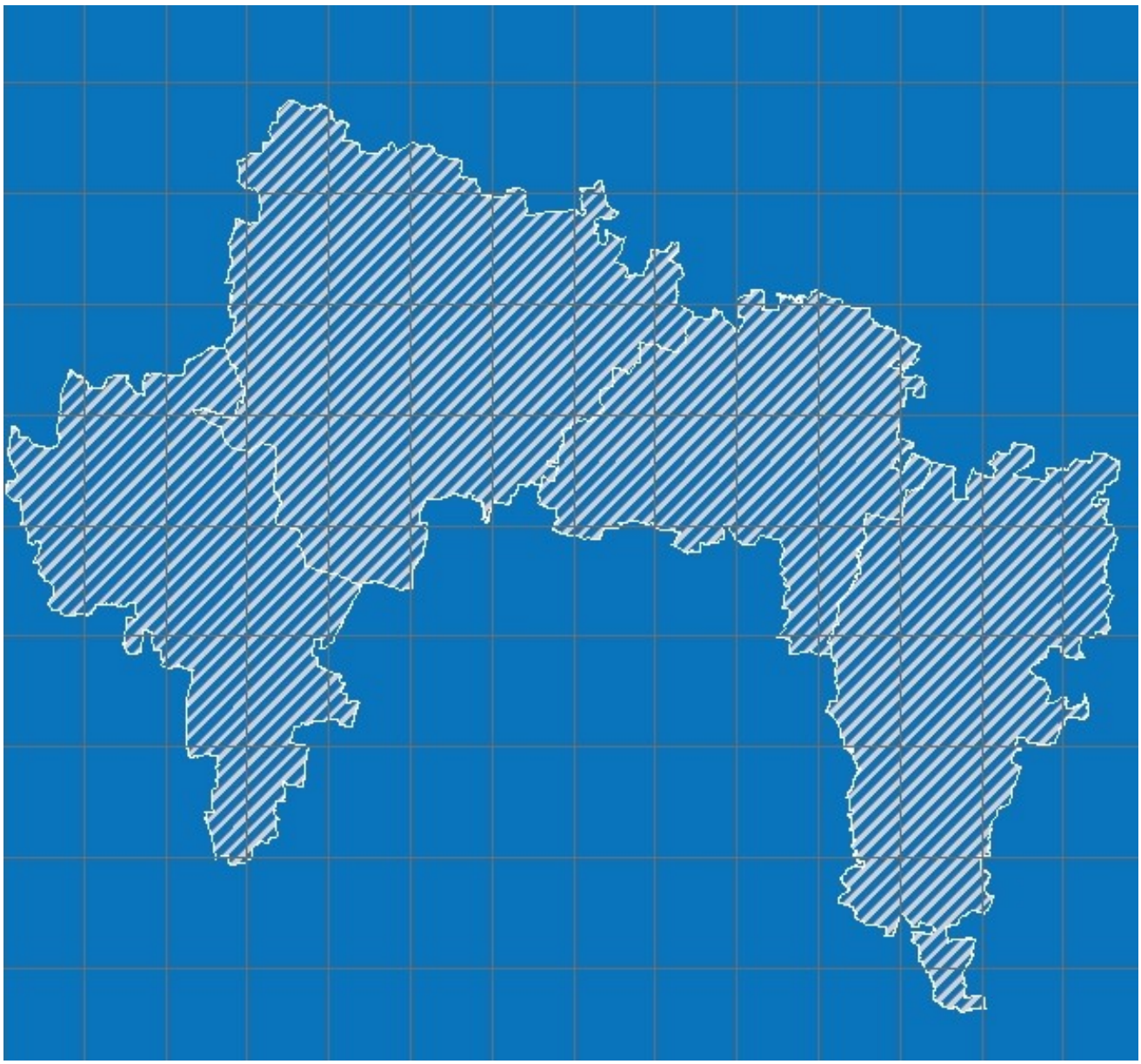

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