CHAPTER - II

A GEOGRAPHICAL PROFILE OF THE STUDY AREA
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2.0 INTRODUCTION

The summit here is to outline, by the way of calling to intelligent discussion about the study area, the background on which the study of understanding the Chamarajanagar District, with some of its relevant data. This chapter discusses about the geographical background of the study area; that is Chamarajanagar district of Karnataka state lies entirely in the southwestern transitional zone of an extension of Deccan Plateau towards south. The state extends 805 kms from north to south and about 283 kms from east to west. The total measured area of the state is 1, 91,781 sq kms. Chamarajanagar district is enclosed in the north by the districts of Mysore and Mandya of Karnataka state, towards southeast by the districts of Nilgiri and Coimbatore of Tamilnadu state, towards southwest by Wynad district of Kerala state. The Chamarajanagar district which is of our concern, has been separated from Mysore district and formed as an independent district on 15th August 1997.

2.1 LOCATION AND EXTENT

Chamarajanagar is one of the 28 districts of the state of Karnataka forms as a distinct land unit. The entire area lies between 76°-24’ east to 77°-43’ east longitudes and 11°-32’ north to 12°-16’ north latitudes. It covers an area of 5685 sq kms. It holds 17th place in terms of the area, with a population of 965462. (2001 census)

Chamarajanagar district comprises 4 taluks, namely Chamarajanagar, Gundlupet, Kolegal and Yalandur with 16 hoblies (Figures 2.1). Kolegal is one of the largest of all the taluks with an area of 2786 sq.kms comprises 49.00
per cent of the total area of the district, while Yalandur is the smallest with an area of about 265 sq.kms or 4.66 per cent. The district holds some 512 revenue villages, of which, 446 are inhabited and rest 66 are uninhabited.
(2001). The new district is not with its share of history. Chamarajanagar was named after the than king of Mysore, called Chamaraja Wodeyar, who was borned in this place in 1818 A. D, and till then the town was known as Harikutara.

2.2 RELIEF:

Physiographically Chamarajanagar district is an undulating tableland with granite rocks producing a strange interval. The general elevation of the district ranges between 700 to 900 meters above mean sea level. General slope of the land lies from north east to south west, towards north east the general altitude averages 900m, while towards south west the slope gradually decrease, where it attains average of 700m. The mountain ranges in the district originates from the Niligiris of southern borders runs in north west and north-east direction with Ghats between the Ghats lies the Chamarajanagar plateau, which is a peneplane with an average elevation of over 760meters (Figure 2.2). Except in the north, the district is almost encircled by Western and Eastern Ghats where some places are having an elevation of more than 1200 meters above sea level. The principal hills are the Biligiri Rangana Hills (1687 meters), Kattaribetta (1816 meters), Honnameti Betta (1773.27 meters), Ponnachi Betta (1490 meters), Honnattikal Betta (1451 meters), Ettina Betta 91363 meters) and Punajnur Betta (1252 meters) which forms a part of eastern ghats. The Kattaribetta is the tallest among all the hills of the district. The Malemahadeshwara hills form a hill range of about 976 meters above the sea level. Gopalaswamy hill is a lofty range extremely picturesque in appearance rising to a height of 1468 meters above mean sea level. In traditional writings it is called as Kamaladri and Dhakshina Govardhanagiri. It is generally enveloped in clouds and mist; hence the name Himvad Gopalaswamy betta has been coined more appropriately to this hillock.
2.3 GEOLOGY:

Geologically the district is mainly self-possessed of igneous and metamorphic rocks of Precambrian age either exposed at the surface or covered with a thin mantle of residual and transported soil. The rock formation of the district falls into two groups, charnockite series and granite gneiss or genesis granite. A fairly wide area of the district consists of Charnokites series of rocks particularly along the southeastern border of Yalandur taluk and Biligirirangana Hills. The superseding ground consists of granite gneiss with thin beds lenses and lengthened runs of various hornblendic rocks, phyroxenites and durities containing chromite and magnetite. The southern termination of the linear croupet granite batholithic takes place in Kollegal taluk, which are surrounded by the hills of charnockite. Large numbers of dolerite tracks are also noticed in Gundlupet taluk.
2.4 SOILS:

The two dominant soil types of the district are red-loam- sandy loam and black cotton soil. In the taluks of Chamarajanagar, Gundlupet and Kollegal there are deep red loam base soil strips irregularly interspersed with black soils. The red sandy loamy soils are derived from the granites and gneisses. Many parts of Yelandur taluk are covered by black cotton soil and occasionally shallow to deep well drained and do not contain lime lodules. The black soils 3.7).

Figure 2.3.
2.5 CLIMATE:

The district enjoys cool, delightful and equable weather condition throughout the year. The climate of the district may be identified as tropical monsoon type, which is a product of the inter-play of the two conflicting air masses of the southwest and northeast monsoons. Over the greater part of the district, summers are warm and winters cool. By and large, Chamarajanagar district is gifted with an ideal climatic condition. Depending upon the prevailing climatic conditions, the following four seasons are applicable to Chamarajanagar district.

**Cool weather:** This season begins early in the month of January and continues till the end of February. During this season, the weather is comparatively dry except in the catchments areas of the rivers. There are noticeable variations in the day and night temperatures. The lowest temperature recorded in this season is 13.5 °C, the average temperature does not go below 16.5°C. January is the coldest month and records lowest temperature with 14.5 C. The temperature during this season (Nov-Feb) ranges from 13.3 °C to 16.1°C.

**Warm weather:** This season begins in the month of March and increases its intensity towards the end of May. During this season the temperature is high and ranges from 19.7°C –35.1°C. Land surface becomes very hot and there is a wide range of variations between day and night temperatures. However, there is an occasional relief from pre-monsoon thundershowers (also see Table 3.1).

**South -west Monsoon:** The southwest monsoon sets in at the end of May or early June and continues with some intervals till the end of September. It is a dominant rainy season of the state, although the district receives insufficient rainfall from the southwest monsoon. The normal annual rainfall is 760mm spread over the period of seven months, from the later half of April to October. Rainfall is gradually decreasing from west to east and the annual rainfall ranges between 600mm to 1100mm.
**Northeast Monsoon:** The northeast monsoon commences in October and ceases by the end of December. The monsoon winds bring more rain to the eastern parts of the district. The duration of monsoon is shorter and the intensity of rain is more confined to smaller area of the district.

**2.6 TEMPERATURE:**

It is no doubt that temperature influences considerably on the socio-economic activities of the people of a region. The district in general enjoys cool and calm weather. The period from March to May, experiences a continuous increase in temperature. April being the hottest month of the year where the mean daily maximum temperature reaches to 34.5°C and the daily minimum of 21.1°C. During summer, temperature may exceed 39°C. But there will be welcome relief from the heat when thundershowers occurred during April and May, which is a pre monsoon period.

![CHAMARAJANAGAR DISTRICT TEMPERATURE IN 2003](image)

Figure 2.4

The day temperature drops appreciably throughout the southwest monsoon period and weather is satisfying. After mid-November, both day and night temperature decreases. January is considerably coldest month with mean daily maximum temperature of 11°C. Occasionally during the period
November to January, the minimum temperature may go above the mean daily maximum temperature recorded at Chamarajanagar district was 36.93°C on the April 1998 and the minimum temperature was 15.50°C in December 2003. The maximum and minimum temperature is graphically represented in figure 2.4 for the year 2003.

2.7 HUMIDITY:

The Relative humidity is generally high during the southwest monsoon season. It is about 80 per cent and above in the morning times through out the year, while in the afternoon, humidity is comparatively low except during the southwest monsoon season. During the months of January to April, the humidity is not as much of 35 percent and still lower in the afternoons. (Figure 2.5).

![Relative Humidity - Chamarajanagar District](image)

2.8 RAINFALL:

The hundred year’s rainfall data of the district shows not much difference in annual rainfall variations (1903 to 2003). The normal average rainfall of the district is 704.5mm. The village wise rainfall data is made available, of 512 villages of the district, over 114 villages get more than
960mm of rainfall, and 199 villages between 720 and 750mm. The remaining villages receive with less than 550mm. The heaviest rainfall in 24 hours recorded at many station in the district was 205.5mm at Chamarajanagar on the 17th October 1916. On an average the district receives rainfall for 45 days in a year with a rainfall of 2.5mm or more in a day

2.9 MONTH WISE DISTRIBUTION OF RAINFALL:

The distribution of rainfall in the district is confined to the months of April to November. October being the rainiest month with an average of 177.2 mm while December receives the lowest rainfall of 0.2mm (fig.2.6).

![Average Monthly Rainfall in(mm)](image)

**Figure.2.6**

2.10 TALUK WISE DISTRIBUTION OF RAINFALL:

Table 2.1 shows rainfall distribution in the district by taluks. The average normal rainfall of the district is 704.44 mm and the actual rainfall stands at 351.55 mm. However, within the district at taluk level the two taluks namely Chamarajanagar (627.7mm) and Gundlupet (622.5mm) receives less than the district average (704.44). These taluks experience comparatively dry spell condition throughout the year. The distribution of rainfall in the district is however, not satisfactory. Kollegal and Yalandur taluks are located in the transitional zones; as a result it cannot be ruled out that these taluks receive
rainfall better than those of the other two taluks of the district. The highest rainfall ever recorded in Kollegal was 1446mm in 1987 and the lowest being 174 mm in 1986.

**TABLE 2.1 RAINFALL DISTRIBUTION BY TALUKS.**

<table>
<thead>
<tr>
<th>Taluks</th>
<th>Normal</th>
<th>Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamarajanagar</td>
<td>627.7</td>
<td>414.6</td>
</tr>
<tr>
<td>Gundlupet</td>
<td>622.5</td>
<td>212.6</td>
</tr>
<tr>
<td>Kollegal</td>
<td>775.1</td>
<td>481.8</td>
</tr>
<tr>
<td>Yelandur</td>
<td>792.6</td>
<td>297.2</td>
</tr>
<tr>
<td>Total</td>
<td>704.44</td>
<td>351.55</td>
</tr>
</tbody>
</table>

Source: DSO, Chamarajanagar District –2003

From the above table it is clear that the normal rainfall in the district is 704.44 mm; and actual rainfall is 351.55mm, at taluk wise rainfall distribution Kollegal receives with 481.8mm followed by Chamarajanagar with 414.6mm, Yelandur with 297.2mm and Gundlupet taluk with lowest rainfall of 212.6 mm. in the district (also see chapter III, p-5).

2.11 SPECIAL WEATHER PHENOMENA:

During the months of October to November, cyclonic storms are common with moderate to heavy rainfall. Thunderstorms are frequent during the hot season and the post-monsoon months. Rainfall during the monsoon season is sometimes associated with thunder.

2.12 DRAINAGE PATTERN:

Chamarajanagar district is a dry region, the surface and sub-surface water facilities are not so favorable with the agriculture point of view, few rivers, which drain this region, are non-perennial in nature. The **Suvarnavathi river**, which is the major drainage system of the district traverses from south to north-east along with its tributaries **Chikkahole, Honnuhole** etc, and joins the
river Cauvery at Hampapura village in Kollegal taluk. The River Cauvery flow from Mysore district drains parts of Kollegal taluk of Chamarajanagar district before entering into Tamilnadu. This River forms a natural boundary between the study area and Tamil Nadu in the district.

**Suvarnavathi:**

Suvarnavathi known as Honnuhole rises in the South-eastern part of the district near Gejjalahatti valley of Chamarajanagar taluk, the border area between Karnataka and Tamilnadu states and flows northwards through Chamarajanagar, Yelandur and Kollegal taluks. With a catchments area of about 187 sq.km and a total track of about 88 km in the district. The two streams viz, Neredurighalla originating from Attikani estate and Araikadihalla originating at Dimbam, the former traversing for about 19km while the latter for about 32km before joining together near Budipadaga and formed as Suvarnavathi. Further receives this river another tributary called Chikkahole at a distance of 11 km, and finally it joins the Cauvery from right side at Hampapura village.

![Map of Suvarnavathi and river Cauvery](image)

**Figure 2.7**
The Gundal hole:

This river originates in Gundlupet taluk at Gopalaswamy Betta and enters into Nanjangud taluk and joins the Kabini river nowadays the flow of water even during rainy days has been drastically reduced due to the construction of barriers under watershed management scheme.

The Moyar:

The Moyar River forms a common boundary of about 22 Km between Chamarajanagar of Karnataka and Udagamandalam of Tamilnadu (Ooty) states respectively. The Moyar river cuts into a picturesque gorge known as ‘Mysore ditch’ for about 260 meters deep forming one of the most beautiful landscapes over looking the famous Nilgiri mountains. Some minor tributaries like Kekkanahalla and Sikattihalla are drains in the southern frontiers of Chamarajanagar district before joining the Moyar Rivers.

The Udutore Halla: The Udutore halla is a tributary to the Tattehalla, which in turn confluences with the river Cauvery on its right side. It has a total course of about 80km with the catchment area of about 790 sq.km (fig 2.7).

2.13 NATURAL VEGETATION:

Chamarajanagar district is one of the well-known parts of the Karnataka state in respect of forests area; it has 7.58 per cent of the total forest area of the state. Of the total geographical area of 5685 sq km, forest constitutes 2756.1 sq. km forming 48.36 per cent of the forest area of the district.[2003census]. The vegetal cover of the district comprises of two distinct types: the moist deciduous, where the rainfall is 900-1100 mm per annum, and dry deciduous where the rainfall is 700-900mm (figure2.8).

The forest area of the district has been controlled by two sub-divisions, namely Kollegal and the Chamarajanagar. The forest belt of the district begins from western part of Gundlupet taluk, it spreads along the border of Kerala and
Tamilnadu states and ends in south and east. The thickest and richest forest areas are located in Gundlupet taluk. The principal species include Teak, Rosewood, Honne, Dindiga, Eucalyptus and Sandalwood. It is high altitudes hilly area that resemblance of evergreen forests type. Area under forest cover in Kollegal taluk accounts with 70 per cent of the district followed by Gundlupet with 16.27 per cent, the Chamarajanagar and Yalandur taluks with 9.76 and 3.84 per cent respectively. The major produce of these forests is teak, sandalwood, matchwood, bamboo and building materials.

![Vegetation Map of Chamarajanagar District](image)

**Figure 2.8**

**2.14 WILD LIFE SANCTUARIES:**

Bandipur National Park, which is one of the best, managed out of 15 National Parks in India. It is situated at a distance of about 56 km from Chamarajanagar on Mysore –Ooty road, and 85 km from Mysore. It has an area of about 874.2 sq.km. at an altitude of about 1025 meters and above from sea level. The climate of Bandipur is a salubrious one with temperatures varying from 20 to 30°C. The National park is the home for all the important wild animals found in south India. This part is also declared as Project Tiger Area.
Biligiri Rangana Temple wild life sanctuary is situated at about 45 km from Chamarajanagar, covering an area of about 324.4 sq.kms. This sanctuary lies in semi evergreen forest belt important wild lives like elephants, tigers and panthers.

2.15 AGRO-CLIMATIC ZONES:

The National Commission on Agriculture has studied taluk-wise rainfall variations in Karnataka and identified 26 rainfall categories. These categories have been classified into 4 agro-climatic regions as such the coastal belt, the western ghat region, transitional belt and dry belt. The Chamarajanagar district fall under southern dry zone and southern transition zone where the normal southwest rainfall is 275.5 mm and 391.4mm respectively. (University of Agricultural Science1973).

![Agro Climatic Zones Map](image)

Figure 2.9

Those areas comprises of mainly sandy soils with intermittent patches of shallow black soils. In this zone 20 out of 42 per cent of the total net sown area
is under irrigation. The southern dry zone comprises the taluks of Chamarajanagar, Kollegal and Yelandur and a major portion of Gundlupet taluk. Where the elevation varies between 700-900 meters. On the other hand, the southern transitional zone consists of completely the western part of Gundlupet taluk and few taluks of Mysore district. Where the elevation ranges between 800-1100 meters. The crops of these two agro-climatic zones are very much in relation to the nature of productive environment. (Figure 2.9)

2.16 LANDUSE PATTERN:

As per the available land use statistics of the district for the year 2001-02 the total geographical area of the district accounts for about 569901 hectors. Of this, nearly 48.36 per cent of area is under forest cover. The net sown area of the district accounts 26.89 per cent, the area sown more than once is 8.84 per cent, followed by non-agricultural land use constitutes 8.06 per cent, cultivable waste with 1.34 per cent, permanent pasture with 3.99 per cent and trees and groves with 0.83 per cent respectively (see figure 2.10).
According to 2001-02 statistics the net sown area in the district is 26.89 per cent. At taluk level the net sown area varies considerable. The highest net sown area was found in the Kollegal taluk (34.76%), followed by the taluks of Gundlupet taluk (31.00%), Chamarajanagar (30.99 %). The lowest net area sown is found in Yalandur taluk with 3.23 per cent. Cultivable wastelands in the district are very negligible amount with less than 1.5 per cent of the total land put under agriculture. In order of the taluks, Chamarajanagar with 2.37 per cent, Gundlupet with 2.32 per cent have shown above the district average. While Yalandur taluk with 0.55 per cent per cent and Kollegal with 0.46 have shown below the district average.

The fallow lands in the district accounts for 10.52 per cent of the total geographical area. It includes current fallow as well as other fallows. Among the taluks highest fallow lands are noticed in the taluk of Yalandur with 18.10 per cent, followed by Chamarajanagar with 16.34 per cent, Gundlupet with 14.2 per cent and the lowest is observed in the taluk of Kollegal with 5.41 per cent.

2.17 CROPPING SEASON: Based on the seasonal characteristics of climate, the study area has three distinct seasons of cropping. The bulk of crops and their cultivation season extend over the periods of the two Monsoons, viz southwest and north-east. Land with irrigation is found to be busy under some crop through out the year. However, the cropping system of the district could be broadly categorized into three seasons.

1. Kharif or hain season (mungar), starting from June and ending in September (south-west monsoon season)

2. Rabi or hingar season, commencing from September-October and ending in November, and

3. Summer or kar season, commencing from about December- January and lasting upto the end of April.
A. High-yielding variety seeds: During the third Five Year Plan, a new thrust was given to agriculture in the entire country including four taluks of Chamarajanagar district, by introducing high yielding variety seeds, which have subsequently diffused throughout the district. They have been followed with intensive application of chemical fertilizers, pesticides, insecticides and also weedicides. Hence, some of the traditional local varieties have been gradually replaced with improved seeds resulting in substantial total agricultural production.

![Map of Karnataoka Chamarajanagar District showing area under H.Y.V. Seeds]

Figure 2.11

About 31.37 per cent of the total grass cropped area (1997-98) of the district was under High Yielding Varieties (HYVs). The two highly irrigated taluks namely Yalandur and Kollegal have reported with 70.65 percent and 26.19 percent of area under HYVs respectively (Fig.2.11). In other taluks of the district, the percentage of area under HYV is of marginal importance. But the taluks in the transitional belt, though they are predominantly rainfed have substantial area under HYVs, example it is 12.75 percent in Gundlupet taluk, is
evident that the area under high yielding varieties is much higher in the taluks of the transitional belt, while the highly irrigated taluks are left out of consideration.

**B. Cropping Pattern:** Variety of crops is being cultivated in the district. Rainfall distribution and irrigation have greatly determined the cropping pattern. Wet crops like paddy and sugarcane are principally grown in the irrigated tracts, while Ragi, Jowar, Maize, Cotton, Oilseeds and millets constitutes the bulk of the rainfed crops. Cereals appear to be major crops in the district, occupying a fairly higher share in the total cropped area of the district with 53.33 per cent (1997-98) and have been decreased to 46.87 percent in the year 2002-03.

**C. Principal Crops:**

i. **Paddy:** The area under paddy cultivation in the district was 18851 hectares (12.15%) in 2001-02. The main paddy growing taluks are Kollegal, Yalandur and Chamarajanagar. Gundlupet is the least growing taluk. Paddy is grown under varied conditions; a larger area is under assured irrigation from canals tanks and lift irrigation facilities. The improved HYV seeds are made available in the irrigated taluks. The efforts have been made by the department of agriculture in introducing different local improved varieties have been largely successful and high yielding varieties- Jaya, Jyothi, IR-64, Mangala, IR-20, Pushpa, IET 2254 and Sonam etc are gaining importance under improved cultivation practices.

ii. **Jowar:** The area under Jowar in the district is 22709 hectares (14.63%) in 2001-02. In 1997-98 jowar was 20613 hectares. The jowar growing important taluks are Gundlupet and Chamarajanagar. It is grown as Kharif
crop under rainfed conditions. The high yielding varieties such as CSH-1, 6, CSV-5, M-35-I are in practice in these taluks.

iii. **Hybrid Maize:** The area under hybrid maize (Zea Mays) is 20215 hectares (2001-02). Kollegal is the important maize growing taluk of the district. Deccan and Decan –101 are the important maize varieties cultivated in the district. Maize is being successfully grown as rainfed crop in the district.

iv. **Ragi:** The area under ragi (elusive coracana) cultivation is 27585 hectares (17.78%) in 2001-02. The main ragi growing taluk is Kollegal. During 1997-98 ragi was grown in an area of 22419 hectares. Ragi is mainly rainfed crop and it has been under irrigation. The important high yielding varieties are purna, Shakti, indaf-1, indaf-3, indaf-5 and DR-202.

v. **Pulses:** The important pulse crops of the district are grams (1100 ha), Tur (2472 ha) and other pulses (29569 ha). The area under the pulses was 33141 hectare during 2002-03. In recent years the area under horse gram is gradually decreasing in the district, as a result, special schemes like pulse development programs are being implemented in the district, both under central and state sponsored schemes. Under these schemes demonstration programs procurement and distribution of certified and truthful labeled seed, supply of plant protection chemicals and pant protection equipments under subsidized cost are being taken up.

vi. **Oil seeds:** The important oilseeds grown in the district are groundnut, caster, Safflower. Sunflower, and groundnut is the major oil seed. Groundnut is grown both under Rainfed and irrigated conditions. The important varieties of groundnut under cultivation are Spanish improved TMV-2. The major groundnut growing taluks are Gundlupet and Kollegal. It occupied 11864 hectares during 2001-02.

vii. **Cotton:** cotton is an important fiber crop of the district. In 1997-98 the area occupied under cotton was 11935 hectares. In 2001-02 the area under cotton
has decreased to 9652 hectares. The major cotton growing taluks are Gundlupet and Kollegal. Varalaxmi, Jayalakshmi and DCH-32 are the major varieties. Special schemes are being implemented for the development of cotton in the district. DCH-32 is the hybrid cotton varieties cultivated under Rainfed and irrigation conditions.

viii. Sugarcane: Sugarcane is one of the commercial crops of the district. The crop is being grown in about 15, 397 hectares (2002-03). Chamarajanagar and Gundlupet are the major sugarcane growing taluks. Two to three roteen crops are being raised and with good managerial skills, more yields are being obtained than the main crop. Co-62175, B-37172 and Co-419 are the important sugarcane varieties cultivated in the district. In order to improve the production of sugarcane the department of agriculture is encouraging the farmers to adopt various strategies like supply of good quality seed materials, organizing demonstrations, timely plant protection measures and conducting crop compitation etc.

ix. Horticultural crops: The department of Horticulture deals with various aspects of horticultural crops cultivation in connection with extension, research and technology. It includes the cultivation of fruits, vegetables, plantation crops, spices and flowers. Horticulture farms have taken up scientific method of cultivation of fruits and vegetables of exotic and indigenous varieties besides maintaining the verities collection of fruits and vegetables, introduction and acclimatization work. Nurseries at taluk level have taken up the task of raising the seedlings of fruits, plantation, rooted cuttings, spices crops etc., to distribute among the needy cultivators. (The Biligirirangana hills farm at Yalandur taluk is established with the purpose of producing disease free potato tubers).

x. Sericulture: Sericulture is a combined venture including cultivation of mulberry plants, silkworm rearing for cocoon production and reeling of silk. Cultivation of mulberry and rearing of silkworm are agricultural in
character the reeling of silks is distinctly industrial in nature and it is carried on either in cottage establishments or in large-scale factories called ‘filature’. It is the traditional occupation of the people of the entire Chamarajanagar district. **Chamarajanagar district stands first in area with 14,388.78 hectares of land under mulberry cultivation.** About 19032 farmers are practicing in 512 villages including hamlets in the district. The cocoon production was 6618.976 tones in 2001-02.

There are five cocoon markets in the district, one each at Chamarajanagar, Harvae, Santhemarahalli, Kollegal and Hanur. There are five silk industries in the district, one each at Kollegal, Mamballi, Santhemarahalli, Chamarajanagar and Mudigundam (figure 2.12).

![Figure 2.12](image-url)

**2.18 IRRIGATION AND WATER RESOURCES:** Chamarajanagar district has an irrigation potential of about 19 percent (57162 ha.) of the total area under cultivation. Of this, canals irrigated area accounts 25.01 per cent (14298 ha.), tanks with 10.15 per cent (5804 ha.), wells with31.13 per cent (17799 ha.),
tube wells with 32.29 per cent (18461 ha.) and lift irrigation with 1.39 per cent
800 ha.) Respectively in the district.

However, the share of irrigated lands varies substantially among the
taluks of the district. The eastern dry belt taluks have been given much
importance for irrigation. The taluk wise distribution of irrigated land
accounts 37.49 percent in Kollegal, 51.33 percent in Yalandur and 20.57
percent in Chamarajanagar. The western transitional belt taluk namely
Gundlupet has 10 percent of its total land under irrigation. The area
irrigated by canal in different taluks are appraisable, Yalandur stands with
45.97 per cent (3974 ha.), followed by Kollegal with 29.73 per cent (6374 ha.),
Chamarajanagar with 21.44 percent (3950 ha.) respectively, Gundlupet has no
canal irrigation facilities.

Wells are the main source of irrigation in the district, which accounts
31.13 per cent of the total irrigable area. Kollegal taluk with 58.77 per cent of
area (12599 ha,) stands first, followed by Yalandur with 31.20 per cent (2697),
Gundlupet with 25.09 percent (2173 ha.) and Chamarajanagar with 0.17 per
cent (330 ha.) respectively.

The tube wells irrigated area in the district accounts for about 32.29
percentage of area under irrigation (18461 ha.) taluk accounts with 56.63 per
cent of area (10433ha.), followed by Gundlupet with 23.40 per cent, Yalandur
with 8.02 per cent and Kollegal with 4.54 per cent respectively (figure 2.13).

River valley projects: Chamarajanagar district is endowed with good
potentials of surface water Dams have been constructed for some of the rivers
like Suvarnavathi, Chikkahole, Uduthore Halla and Gundal detailed discussion
is made in the following paragraphs:

Suvarnavathi Project: The Suvarnavathi dam was constructed across the river
suvarnavathi, a tributary of the river cauvery, near Attigulipura, with 28 meters
high and 1.240 meters long, at a cost of Rs. 368.99 lakhs. Two canals have
been designed for irrigation, one on either side of the reservoir to irrigate an area of 2580 hectares in Chamarajanagar taluk including stabilization of 4362 hacters under existing anecuts. The estimated cost of the project was 410 lakhs and has the storage capacity of 35.4 Mcum and the proposed utilization is 95.19 Mcum. The work of this project commenced in 1967 and completed in 1984. An area of 508 hectares has been submerged due to the construction of the reservoir.

**Chikkahole Project:** The Chikkahole dam, 745 mts long and 24 mts height is constructed across the river Chikkahole, a tributary to the Suvannavathi River near Ankanashettypura village in Chamarajanagar taluk to irrigate an area of 1630 hectares, including 240 ha. Stabilization in Chamarajanagar taluk. The estimated cost of the project was Rs. 93 lakhs. The work of the project was commenced in 1958 and completed in 1969. The floods of 1972 damaged the dam and it was rebuilt with an estimated cost of Rs 325.58 lakhs during 1976-84. About 160 hectares of area has submergence due to the construction of the reservoir. The storage capacity of the reservoir is 10 to 65 M.cum and proposed utilization is 21.94 M.cum.

**Uduthore Halla Project:** The Uduthore halla project envisages construction of a storage reservoir across Uduthore halla (a tributary to the Tattehallala, which in turn confluence's with the river of Cauvery) near Ajjipura village in Kollegal taluk with an estimate cost of Rs. 75 lakhs at 1977 price rate. An earthen dam of about 1560 mts length and 41.30 meters height with masonry spill way on right flank mound is proposed to be constructed for forming the storage reservoir with gross storage capacity of 26.19 Mcum and live storage capacity of 22.01 Mcum. The catchment area of the dam site is 202 sq.km with 75 percent dependable yield of 25 to 85 Mcum at the dam site. The proposed utilization is about 34 to 84 Mecum.

**Gundal Project:** The Gundal reservoir envisaged construction of earthen dam across the Gundal stream following in Kollegal taluk and a tributary to the river
Cauvery, with a saddle spillway on the right side along the Gillagegudda hill range. The total length of the dam is 1220 meters and the height of the dam above the riverbed level is 30 meters with a gross storage capacity of 23Mcum. The catchment area of the dam site is 9389 km with an estimated average yield of 50.9 Mcum at the dam site. The project work was commenced in 1970 and completed in 1980. About 208 hectares of cultivable dry land has submerged and 300 farmers were affected. The inflow pattern into the reservoir is usually poor. However, the Kabini right bank canal when completed runs in the command area of Gundal project providing irrigation benefits over 3248 hectares and leaving the balance of 2863 hectares for the direct command under Gundal project.

### Table –2.3: Taluk wise area under irrigation by different sources during 2001-02

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Taluks</th>
<th>Canals</th>
<th>Tanks</th>
<th>Wells</th>
<th>Bore wells</th>
<th>Lift Irrigation</th>
<th>Others</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Chamarajanagar</td>
<td>3125</td>
<td>3810</td>
<td>340</td>
<td>10199</td>
<td>-</td>
<td>-</td>
<td>17474</td>
</tr>
<tr>
<td>2</td>
<td>Gundlupet</td>
<td>-</td>
<td>110</td>
<td>2419</td>
<td>5334</td>
<td>-</td>
<td>-</td>
<td>7863</td>
</tr>
<tr>
<td>3</td>
<td>Kollegal</td>
<td>5145</td>
<td>330</td>
<td>8393</td>
<td>825</td>
<td>900</td>
<td>-</td>
<td>15593</td>
</tr>
<tr>
<td>4</td>
<td>Yalandur</td>
<td>3760</td>
<td>1208</td>
<td>1879</td>
<td>290</td>
<td>-</td>
<td>-</td>
<td>7137</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>12030</td>
<td>5458</td>
<td>1303</td>
<td>16648</td>
<td>900</td>
<td>-</td>
<td>48067</td>
</tr>
</tbody>
</table>

Source: Statistical Department, Chamarajanagar District 2001-02, p-21.

![Taluk wise area under irrigation](image-url)
2.19 MINERAL RESOURCES: Variety of minerals are found in Chamarajanagar district. Porphyry and Fedlspar are found in all the four taluks of the district. Copper is found in Hadabanahatta, Helavanahundi, Parasegowdanapalya and Kalamatthara Doddi in Kollegal taluk. Deposits of minerals like corundum occur in various types of ultra basic rocks. Corundum is present in area of Bheemanabeedu, limestone and dolomites are found in Begur of Gundlupet taluk. A small deposit of iron ore is also noticed by the regional survey department in an area of 200 sq.km. in few parts of Kollegal taluk. Kyanite and sillunciate deposits are also found in association with other minerals, such as granite, sterrolite and graphite in Kollegal. Magnetite deposit occurs sporadically distributed in the district.

The industrial development has not been much significant in the district. During 2001-02, there were 1,170 small and medium scale industries in the district. Roughly more than 10 small-scale industries have come up in Kollegal taluk recently (including Kunther sugar Industry).

2.20 TRANSPORT: Chamarajanagar district is well served by a large network of roads connecting all the villages and important trading centers outside the district due to the recognition of independent district on 15th August 1997. Transportation and communication facilities in the district has its own importance, almost all taluks of the district are well connected with transport and communication network. The taluks of Chamarajanagar, Gundlupet and Kollegal are the border taluks of Karnataka state adjacent to the other states and connected with neighbors of Tamil Nadu and Kerala. More than half of the existing roads are village roads. In fact, the village roads constitute 36.73 percent of the total road length of the district. The state highways and district roads account for 8.04 percent and 14.42 percent respectively to the total road length in Chamarajanagar district. Yalandur taluk has the highest length of roads with 107km per 100 sq.km of an area, Chamarajanagar taluk with 100 km per 100 sq km, Gundlupet taluk with 59 km and Kollegal taluk has the lowest road length of 32 km per 100 sq.km of an
area. The district is poorly served by railways network. It has only 18 km of meter gauge railway line between Mysore-Chamarajanagar. The proposal for the construction of new railway line between Chamarajanagar and Mettupalayam (Tamil nadu) has been submitted to the Government of India.

2.21 TRADE AND COMMERCE: All the taluk head quarters and the Municipal towns are the centers of trade and commerce. All the towns have branches of commercial and banks, agricultural produce market centers and sub markets have been set up in the taluk headquarters to help the farmers to secure better prices.

In 2001 there were 36 commercial banks and 5 co-operative banks in the district. Chamarajanagar and Kollegal taluks with 14 each, Gundlupet with 5 and Yalandur with 3 respectively. In addition, the taluk level primary land development banks are functioning with a view to providing medium and long term loans to the farmers for sinking irrigation wells, energizing pump set and reclamation of cultivable lands. Considering its progress in respect of development and utilization of irrigation facilities, exploitation of forest wealth and sericulture potential, it may be concluded that Chamarajanagar district is one of the prosperous and developing districts of the state of Karnataka.

2.22 POPULATION: Chamarajanagar district is encircled by the states of Kerala and Tamilnadu. These states have some influence on the life style of the people in the border taluks of the district. The southern tip of the district is the meeting place of the eastern and Western Ghats, therefore, the taluks like Chamarajanagar, Gundlupet and Kollegal have blessed with moist-deciduous and scrub type of forests. In those forests, Soligas, Jenukuruba, Kadukuruba, Handi kuruba etc, of hill tribal people are found in considerable number. The life style of people in the villages bordering the forest area differs slightly from those of the people of plains of the district.

As per 2001 census, the population of the district was 9,65462. Constituting 8,17372 rural (84.62 %) and 1,48090 (15.38%) urban. The district
ranks 17th in area (2.96 per cent) and 25th in terms of population (2001) of the state. It constitutes 1.96 per cent of the total population of the state.

The taluk wise distribution of population in the district for 1981-2001 and the percentage share of each taluk in the total population of the district are given in the table 2.4

Table 2.4. Taluk wise population distribution in Chamarajanagar district: 1981-2001.

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Taluk</th>
<th>Area in sqkm</th>
<th>1981 Rural</th>
<th>Urban</th>
<th>Total</th>
<th>1991 Rural</th>
<th>Urban</th>
<th>Total</th>
<th>2001 Rural</th>
<th>Urban</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CH,nagar</td>
<td>1229(21.61)</td>
<td>232895(85.21)</td>
<td>40422(14.78)</td>
<td>273317(35.56)</td>
<td>266845(85.71)</td>
<td>44478(14.29)</td>
<td>311323(35.24)</td>
<td>277013(82.62)</td>
<td>60558(17.38)</td>
<td>337571(100)</td>
</tr>
<tr>
<td>2</td>
<td>G.pet</td>
<td>1406(24.72)</td>
<td>148914(88.18)</td>
<td>19965(11.82)</td>
<td>168879(22.0)</td>
<td>171772(87.77)</td>
<td>23934(12.22)</td>
<td>195706(22.15)</td>
<td>186742(87.63)</td>
<td>26340(12.36)</td>
<td>213082(100)</td>
</tr>
<tr>
<td>3</td>
<td>Kollegal</td>
<td>2786(49.0)</td>
<td>228518(86.36)</td>
<td>36109(13.64)</td>
<td>264627(34.44)</td>
<td>257086(84.39)</td>
<td>47585(15.60)</td>
<td>304621(34.49)</td>
<td>284231(84.38)</td>
<td>52607(15.61)</td>
<td>336838(100)</td>
</tr>
<tr>
<td>4</td>
<td>Yalandur</td>
<td>265(4.67)</td>
<td>54665(89.07)</td>
<td>6710(10.93)</td>
<td>61375(8.0)</td>
<td>64037(89.29)</td>
<td>7678(10.70)</td>
<td>71715(8.12)</td>
<td>69386(88.98)</td>
<td>8585(11.01)</td>
<td>77971(100)</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5686(100)</td>
<td>536853(87.08)</td>
<td>79649(12.91)</td>
<td>616502(100)</td>
<td>664992(75.27)</td>
<td>103206(24.73)</td>
<td>883365(100)</td>
<td>817372(84.62)</td>
<td>148090(15.38)</td>
<td>965462(100)</td>
</tr>
</tbody>
</table>

Source: Census of India. Parentheses is % of population

**Taluk-wise population:** There are wide ranges of differences in the geographical sizes of taluks as well as in the dimensions of the population. Kollegal is the largest taluk (2,786 sq.kms) while Yalandur is the smallest taluk (265 sq.kms). Therefore, the population of the district is not uniformly distributed among the taluks. The distribution of population maintains no relationship with the size of the taluks or area.

The Chamarajanagar taluk accounts for the largest share with 34.96 percent of the total population of the district: 2001. And Yalandur taluk shares lowest with 8.07 percent of the total population. However, there is a considerable variation from taluk to taluk in the percentage of population to the total population. In Chamarajanagar district, the total scheduled caste population was 237624(2001) forming 24.60 percent of the total population of the district.
Population Density: The population is one of the important factor determinants, and it can be used as a factor scale in order to measure the carrying capacity of the land. The district average density is 189 persons per sq km (2001). In 1981, it was 166 persons and it declined to 156 persons in 1991. This decline in density is attributed by the fact that the district was re-organized only in 1997.

The density of population in Yalandur taluk has increased from 270 in 1991 to 293 persons in 2001. Kollegal taluk had a density of 109 persons in 1991 and increased to 121 persons in 2001. The pattern of spatial distribution of population in the district can be analyzed on the basis of the density of population. As per 2001 census, the average density of population for the district as a whole was 189 per sq.km. The density values as varies from 121 (Kollegal taluk) to 293 (Yalandur taluk) in the district. The two patterns of population densities are identical of the study: the low-density areas and high-density areas as shown below:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Density/ per sq.km in 2001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low density</td>
<td>(121-153)</td>
</tr>
<tr>
<td>High density</td>
<td>(275-293)</td>
</tr>
</tbody>
</table>


Low density is found in the border taluks of the district of Kollegal (121) and Gundlupet (153). Those taluks are have large tracts of non-irrigated uplands with residual soils and small patches of irrigated alluvial low lands, are the reasons for the thin and sparsely distribution. The taluks of high density form a compact region of some parts of the district. Yalandur (293) and Chamarajanagar (275). These regions include the irrigated areas where intensive agriculture is being practiced.

Relative growth of Rural and Urban Population: Chamarajanagar district holds a population of 9,65462 distributed in 446 settlements, of which 442 are
rural, followed by 4 towns of various population sizes. Rural population comprises nearly 84.62 per cent of the total population. The growth rate of rural population has been uneven in the district. Majority of taluks have recorded a higher growth rate of rural population. The distribution of rural population in the district by taluk wise analysis shows that, Yalandur taluk has the largest rural population with 88.98. Percent followed by Gundlupet (87.63), Chamarajanagar (82.62) and Kollegal with 84.38 per cent (Fig 2.14).

The urban population of the district was 123,675 in 1991, and it has increased to 1,48,090 in 2001, indicating an increase of 24,415 persons or 16.48 percent during the period of one decade. Chamarajanagar taluk has the noticeable increase of urban population with 17.93 percent followed by Kollegal, Gundlupet and Yalandur taluks with 15.61, 12.36 and 11.01 per cent respectively. The variations in the growth of urban population may be due to the concentration of urbanization and other economic activities) in the district headquarters.
2.23 LITERACY

Education plays an important role in bringing about many socio-economic changes. According to the census of India, literate means one who can able to read and write his/her name. More than literacy it is education, which brings about changes for improving socio-economic condition.

Table 2.5 Literacy rate in Chamarajanagar District 1971-2001

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamarajanagar</td>
<td>21.8</td>
<td>23.46</td>
<td>36.6</td>
<td>49.2</td>
</tr>
<tr>
<td>Gundlupet</td>
<td>19.77</td>
<td>22.66</td>
<td>37.99</td>
<td>49.4</td>
</tr>
<tr>
<td>Kollegal</td>
<td>24.58</td>
<td>24.17</td>
<td>40.3</td>
<td>53.9</td>
</tr>
<tr>
<td>Yalandur</td>
<td>20.68</td>
<td>21.02</td>
<td>36.9</td>
<td>49.6</td>
</tr>
<tr>
<td>District rate</td>
<td>21.7</td>
<td>22.83</td>
<td>38.2</td>
<td>50.9</td>
</tr>
<tr>
<td>State rate</td>
<td>31.52</td>
<td>38.41</td>
<td>56.04</td>
<td>66.6</td>
</tr>
</tbody>
</table>


The district consists of 50.9 per cent of literacy (2001). During 1971 the district literacy rate was very low with 21.7 per cent. The low percentage of literacy in the above said period was attributed by socio-economic cultural factors, followed by limited number of government and private primary schools, non accessibility to schools, lack of transportation, hilly terrain and Forrest etc in the poor villages. By 2001, the literacy rate has slightly increased to 50.9 per cent, than the previous decade. State government has taken initiatives to establish Anganavadis, Adult education programmes, Operation black board level programme, followed by government and private schools in the district. Besides this, L.P.S have been established in most of the villages in the district, Establishment of adult education center, and continued education centers in the different part of the districts, contributed to the growth of literacy. It cannot be neglected that, possible push given by the socio-economic factors, which contributed to the higher literacy in the district (fig.2.15).
Sex ratio in the district is presented in the table 2.16 for four decades of 1971 to 2001. The overall sex ratio in the district stands at 971 female per 1000 males as per 2001 census, while the ratio for the state in the same year was 965. Between 1971 and 2001 a slight hike of ratio is seen in the table, however this hike is a negligible one. The two taluks, that display relatively high sex ratio, than the district average are Chamarajanagar 983 and Gundlupet with 984 females per one thousand males. The other taluk display the lower sex ratio.

Table 2.6. Sex ratio in different decades

<table>
<thead>
<tr>
<th>Taluk</th>
<th>Years</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Chamarajanagar</td>
<td>963</td>
<td>959</td>
<td>952</td>
<td>983</td>
</tr>
<tr>
<td>Gundlupet</td>
<td>977</td>
<td>984</td>
<td>983</td>
<td>984</td>
</tr>
<tr>
<td>Kollegal</td>
<td>947</td>
<td>934</td>
<td>935</td>
<td>951</td>
</tr>
<tr>
<td>Yalandur</td>
<td>956</td>
<td>962</td>
<td>954</td>
<td>984</td>
</tr>
<tr>
<td>District S.R.</td>
<td>956</td>
<td>953</td>
<td>953</td>
<td>971</td>
</tr>
</tbody>
</table>


Viewed at the taluk level perspectives of 2001 the sex ratio in Chamarajanagar (983) and Gundlupet (984) taluks. In Gundlupet taluk, sex ratio in earlier decades was 984, 983 in 1981, and 1991 respectively. During
this period some male population migrated to the adjoining states of Tamilnadu and Kerala. After the cauvery dispute, the taluk was experienced in migration (return back) to the native place. As a result an increasing trend is observed.

![Taluk Wise Sex Ratio 1971-2001](image)

**Figure. 2.16**

**2.25 OCCUPATION STRUCTURE**

The study of the economically active population or work force occupies an important position in the field of Human resource development. The economic and social development of the nation, state, district and a region depends on the number of person who are economically active, and the quality of their work. Work force comprises 46.52 per cent of the total population and this has been changed in decades, and also noticed that various occupation structure in the 2001 census. As per the 2001 census the work structure consists of four categories, such as cultivator’s agriculture, labor, household industry and others. Others include that other than household industry and tertiary activity. Table 2.6 shows that. Cultivators and agriculture labours (agriculture) constitutes a major part, with 71.2 percent of the working population. This figure is higher than the national and state average. The other work force including household industries accounts 4.3 per cent and activities with 24.5 per cent. The other work force is not dominant in the district; fact is that a
majority of the rural population is concentrated in agriculture sector. Therefore, agriculture is the primary occupation of the district, while industrial activities are not well established. As per the 1971 Census 75.67 per cent of the total population was engaged in Agricultural activity, it has declined to 71 per cent in 2001. This decline is attributed by the fact that, a series of crop failures, decrease in agriculture yield, followed by poverty of the people have forced the people for out migration,

Table 2.7. Occupation structure in Chamarajanagar District

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cultivators</td>
<td>46.7</td>
<td>51.4</td>
<td>46.6</td>
<td>38.5</td>
<td>45.8</td>
</tr>
<tr>
<td>Agri. Labors</td>
<td>28.7</td>
<td>27.2</td>
<td>26.3</td>
<td>38.9</td>
<td>37.3</td>
</tr>
<tr>
<td>H.H. Industry</td>
<td>3.7</td>
<td>5.0</td>
<td>3.2</td>
<td>4.6</td>
<td>4.6</td>
</tr>
<tr>
<td>Others</td>
<td>20.9</td>
<td>16.4</td>
<td>23.9</td>
<td>19.6</td>
<td>20.2</td>
</tr>
<tr>
<td>Total</td>
<td>36.2</td>
<td>35.7</td>
<td>36.1</td>
<td>36.2</td>
<td>36.05</td>
</tr>
</tbody>
</table>


Fig.2.17
Reference:
3. Indian express daily newspaper 15th August 1997 page-8
4. Karnataka at Glance 2001