CHAPTER II

STUDY AREA
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2.1. Location and Physical Aspects:

Geographical background of a study area is very essential to understand the present position. Therefore, an attempt has been made here to deal briefly with the extent of location, physiography, geology, soils, rainfall, drainage, climate, vegetation, socio-economic and infrastructural aspects of Bellary district.

Bellary district, spanning over an area of 9885 sq. kms. in the central region of the eastern sector of the Karnataka state, lies between 14°-30' and 15°-50' North - Latitudes and 75°-40' and 77°-11' East Longitudes. River Tungabhadra, the veritable back-bone of the economy of the district, meanders its way in a north easterly course and forms the natural boundary of the district on the north and the west. Beyond Tungabhadra, on the north, lies Raichur district. The western border of the district is somewhat narrow and resembles an arc whereas, the southern and eastern borders present a truncated appearance. The district is bonded on the west by Dharwad district; on the south (and, the southern half of the eastern border as well) by Chitradurga district and the east (i.e., the northern half of the eastern border) by the districts of Ananthpur and Kurnool of Andhra Pradesh state. The Bellary district has 589 villages with a population of 1890092 (1991). The district has 8 taluks and 12 urban centres.

a) Climate: Bellary district is situated in a semi arid zone. The rainfall is scanty and capricious. Generally, the showers are light. The average rainfall for the district is about 575mm per annum which precipitates in about 39 rainy days spread over a period of 6 months. Usually, August and September are the months which have a higher number of rainy days and consequently receive relatively heavier amounts of rainfall. Bellary district is known for its hot summers and a dry weather for a major part of the year. The months of December, January and February are comparatively cooler. December is the coolest month with 16.7 °C temperature. The hilly areas around Sandur, (especially at Ramanadurga, which is a hill station) are endowed with a salubrious climate. The recent construction of the large artificial dam across the river Tungabhadra and the network of canals drawn thereof have to some extent modified the local climatic conditions in the northern and eastern portions of the district. Average temperature during May is 40°C. Prior to the advent of assured canal irrigation on a large scale, the district was susceptible to frequent droughts and feminies. The soils in the western division are predominantly sandy and red loamy while those in the eastern portion covering the taluks of Bellary and Sirguppa are mainly of the deep black-cotton type. Under
rainfed conditions, these soils yield the crops of jowar, cotton and ground nut. However, when suitably irrigated the same lands would yield paddy and sugarcane as well.

Geographically, Bellary district consists of Archean complex composed of crystalline schists, epidorites, granitic gneisses and later granites. The Sandur hill range cuts across the district from north - west to south - east and divides the district into two distinct natural divisions. The eastern portion is smaller and consists of a treeless plain country with sporadic rocky hills. On the other hand, the western portion which is larger, abounds in picturesque valleys studded with lush green vegetation and enchanting sceneries. Of these, the Sandur valley deserves a special mention. The hill above the famous Kumaraswamy temple near Sandur rises to a height of 1020 meters above the mean sea level and incidentally this peak happens to be the highest point in the district.

b) Drainage: Tungabhadra which flows all along the western and the northern boundary of the district is the most important non-perinial river originating in the western Ghats of Karnataka (which records about 250cms of annual rainfall) has two tributaries, namely Hagari in the east and Chikka-Hagari in the west. In addition, there are a few minor streams (such as Haggaranuru stream, Hampasagara stream, Bellahunnasi stream, Gauripura stream and the Narihalla stream) which ultimately flow into the river Tungabhadra. The district has about 200 tanks of which 22 have been classified as 'major tanks'. Dams have been built across the Tungabhadra, the Hagari and the Narihalla stream to form large reservoirs which provide water for irrigation purposes in some portions of Bellary district as well as Andra Pradesh state. The waters of Tungabhadra have been harnessed for generation of Hydro-electric power as well.

c) Vegetation: The district has very poor and spars forest area of 119247 hectares which is about 12.47 percent to the total geographical area. (during 1991-1992). The natural vegetation is almost in the form of grass lands including scrubs and bushes of deciduous type. The type of forests in the district can be divided into two main division: (i) Dry deciduous and (ii) Scrub. The dry deciduous forest mostly found in Sandur taluka, and a smaller portion in Kudligi taluka. The species in this forest consists of Kamara, Dindiga or Dindala associated with Hurgalu and other fuel species. Some Sandal and Teak species are found only in Sandur range of forest. In Kudligi taluka date-palm is found in good number. On the eastern side of Bellary taluka, on either side of the Hagrari river, vast plains of scrub and thorny scrub jungles are found in abundance.

2.2. Land use:

The term land use denotes the multifacet use of the land including natural and artificial covers of the land. The information regarding the existing land use is essential for all
geographic studies. The standard classification of land, includes net sown area, cultivable waste, forest, fallow land etc.

a) **Net sown area**: Agriculture land is the major economic resource which has been providing sustenance to people of the district. Although agriculture land is the backbone of economy, agriculture land is also a major factor which governs the population distribution and density in a particular region. In Bellary district the net sown area is 63.45 percent (606771 hectares) of the total geographical area (1991). Among all 8 taluks of the district, Bellary taluka has registered higher amount of net sown area i.e, 82.08 percent, followed by Hadagalli taluka with 76.93%, Sirguppa taluka with 69.69% and Harpanhalli 67.89%. Minimum net sown area is recorded in Hospet taluka i.e., 40.82%.

b) **Cultivable waste**: This category of land includes permanent pastures, grazing lands and miscellaneous tree grooves. This type of land use is very important from the point of view of future expansion of agriculture. The Bellary district had cultivable waste of 41193 hectares (4.30%) in the year 1991.

c) **Forest**: The area under this category of land has not changed in the study period from 1981 to 1991. It is natural because Bellary district is known for its arid and semi-arid conditions. Therefore, the forest, in fact, is very poor in both spatially and qualitatively. It contributes hardly 12.47 percent to the total geographical area of the district.

d) **Fallow Land**: The term fallow is applied to lands which are not under crops at the time of reporting, though it was sown in the immediate past. Bellary district had a fallow land of 49565 hectares (5.18%) to the total geographical areas in 1991. The maximum fallow land is found in Sirguppa taluk i.e. 14.76% followed by Hospet 8.82%, Bellary 5.69% and 0.39% in Harpanhalli.

e) **Irrigation**: The area under irrigation in the district is also not significant. Out of 6,06,771 hectares of net sown area hardly 1,67,927 hectrages is under irrigation (27.67%). Hospet taluka has registered highest percent under irrigation i.e., 55.15% followed by Bellary taluka with 47.21% and least amount of area under irrigation is recorded in Sandur taluka i.e., 9.44%. Among the types of irrigation area under canal irrigation is 63.04% being highest in the district, well irrigation is 15.64%, tube well irrigation is 8.83%, tank irrigation is 3.95% and irrigation by other sources is 8.60%.

f) **Agriculture**: In Bellary district agriculture is the most dominant activity. The total workers in the district are 809989 being 42.85% of the total population (1991), of which 32% are engaged in agriculture activity. In Bellary district the important crops grown under dry farming are jowar and pulses, while cotton, sugarcane, rice and oil seeds are cultivated under irrigation. Generally jowar, groundnut, rice, tur and pulses are major crops in the district. Jowar is the leading crop which covers 27.09% of cropped land followed by ground nut 13.15%, rice 6.93%, other pulses 4.82% and Ragi 4.13%.
2.3. Infrastructure:

a) Road: Roads are the important means of transport for the development of a region. Bellary district is mainly served by four type of roads viz., National highway (NH13), state highways, district roads and village roads. National highway passes through Kudligi to Hospet with a length of 90 kms, while 471 kms, length of state highways, 1260 kms length of district roads, and 1224 Kms of other district and village roads are spread over in the entire district.

b) Railways: The district has all along been enjoying good railway network. The total broad gauge length of railway is 127 kms, which passes through the towns of Bellary, Hospet and Sandur. The railways connect the district from Bangalore in the south, Hubli city in the west, Hyderabad from north-east and Tirupati, Chennai from south-east. While meter gauge length of railway line is about 183 kms, which passes through Bellary, Hagribommanhalli, Hospet, Kudligi, and Sandur taluks to link the iron ore and manganese mining areas. On the whole the district has 310 kms. Railway network.

For channelising the rural development activities in the state, Zilla Panchayat have been constituted in each district under the provision of the Zilla Panchayat Act, 1985. Such a Zilla Panchayat has been constituted in Bellary district too and just as there are 8 taluks for Revenue Administration, there are 8 taluk panchayats for developmental administration. Each taluk panchayat (which is analogous to the term C.D.Block) is administered by a committee of elected representatives called the 'Taluka Panchayat Samiti' which is provided with the services of a Chief Executive Officer popularly known as the Block Development Officer. The jurisdiction of a Taluka Panchayat coincides with that of the taluka of the same name but excludes the statutory towns. The district possesses 66 nursery schools, 1414 primary schools, 156 high schools, 36 senior colleges, 18 degree colleges, one medical college, one engineering college and 5 polytechnic colleges. There are 13 Govt. hospitals, 18 private hospitals, 22 nursing homes, 4 primary health units, 11 dispenseries, 18 family planning centres and 294 sub health units.

2.4. Industrial Scenario:

Industrial development is one of the most important factor in determining the population concentration. Bellary district is moderately developed in Industries. Though it is a backward area in Karnataka state, there are small scale and large scale industries spread over the district. As per 1998 data there are 280 industries in the district employing 18637 persons. Out of 280 industries 65 are textiles, 2 are chemicals, 26 engineering, 1 iron and steel, 3 sugar and 183 belonging to other types. In Bellary taluka alone there are 158 industries, while in Hospet 41 industries.