

S.K.E SOCIETY'S
R.P.D.COLLEGE OF ARTS AND COMMERCE, BELAGAVI



PROJECT REPORT ON

**MORPHOLOGICAL CHARACTERISTICS OF BELAGAVI CITY OF
KARNATAK**

**PROJECT REPORT SUBMITTED TO THE ANNUAL PRACTICAL EXAMINATION IN
GEOGRAPHY FOR B. A. VI SEMESTER STUDENTS, CONDUCTED BY THE RANI
CHANNAMMA UNIVERSITY, BELAGAVI**

UNDER THE GUIDANCE OF

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SUBMITTED BY

STUDENTS B. A. VI SEMESTER

DEPARTMENT OF GEOGRAPHY

AUGUST-2021



S.K.E SOCIETY'S
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CERTIFICATE

This is to certify that Mr./Miss -----
(Exam Seat No: -----) has successfully completed the project work entitled
**“MORPHOLOGICAL CHARACTERISTICS OF BELAGAVI CITY OF
KARNATAK”** under my supervision during the academic year 2020-21 as a partial
fulfillment of B. A. VI Semester Practical Work in Geography. Prescribed by the Rani
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I humbly submit this field report to Department of Geography as a partial fulfillment of B.A. VI semester practical syllabus prescribed by the Rani Channamma University, Belagavi.

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CHAPTER -I

MORPHOLOGICAL CHARACTERISTICS OF CITIES

INTRODUCTION:

Urbanization is now a significant area of research for an increasing number of contemporary geographers. They are focusing their attention on the study of urban areas. The object under the lens of the urban geographers is the analysis of the activities of man, the physical forms of structures developed for these activities and their association and arrangements with one another and with the land. This is expected to provide theoretical notions regarding the morphology of the towns, that is, study of the layout and build of towns viewed as the expression of their origin, growth and function. Robert E. Dickinson concludes in his article "The scope and status of urban Geography" that much work of the inferior quality has appeared in this field, and although investigation of the town plan and build began to be systematically undertaken about 50 years ago, it has received virtually no serious attention from geographers. However, it is seen that some attempts were made to study the individual town layout of streets and blocks which were analyzed in relation with public buildings, natural and planned growth. It seems necessary, therefore, that geographers should pay more attention to the physical ground plan on which the city rests. As a matter of fact, towns with their appreciable size have an internal geography that is full of interest and significance. The physical forms and arrangement of spaces and buildings which consist of urban landscape provide an ample opportunity to geographers to investigate and analyse their nature, their relative disposition and their social interdependence.

One of the Indian geographers V.N.P. Sinha (1976) had considered the study of morphology of urban settlements as primarily concerned with the ground plan. The ground plan consists of an external outline and internal arrangement of streets, forms and materials of buildings and the functional structure of town. Taneja's (1971) work demonstrates the morphological setup of the various functions that differ from place to place and time to time. It varies because it is the outcome of human creative instincts projected through the total setting of resources and cultures within the limits of time and space. However, the explanation of urban land-use arrangement based on scientific orientation is studied by R. L. Singh (1955) and K. S. Ramegowda (1972).

The 'urban land use' also refers to the physical and functional structure of land occupancy of towns and cities. It involves the study of layout pattern of internal structure, street pattern, alignment and architecture of buildings, densities and the different functions of the city. Cities are always developed and transformed through the interaction between the different socio-cultural, political, economic and technological forces. Hence, these forces create the urban land use its pattern in the city. The pattern of urban land use in a city reveals the land under different functions which indicate the level of development. It reflects the existing disparities in level of development of different functions on intra-urban level.

OBJECTIVES:

The main objective of the present study are:

- I. to study the geographical setting of Belagavi City.
- II. to analyze the population characteristics, trends, patterns and functions of Belagavi City.
- III. to study the functional and Morphological characteristics of Belagavi City

DATA COLLECTION AND METHDOLOGY:

The basic data pertaining to the urban centre and other demographic, Morphological aspects of the study region is collected through Karnataka state census-population tables, socio-economic abstracts and statistical reports. The annual reports of city municipality, district census handbooks and Gazetteers are also used.

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CHAPTER -II

PHYSICAL SETTING

In the urban Geography study of morphology refers to the physical arrangement and structure of town, pattern of streets, functions, densities of layout etc. here an attempt has been made to analysis the morphological facts of Belagavi city.

LOCATION:

The Belagavi city is located in southwestern part of Belagavi district and falls within the transitional belt where Malnad (wet zone) and Maidan (Dry zone) Zones meet. Geographically the city is located at 15° 51' Northern latitude and 74° 31' Eastern longitude, at an altitude of 710 meters above mean sea level. As per 2011 city has spread in 96.72 sq.km area. The Belagavi city stands on the right bank of the Markandeya river, which is a tributary of Ghataprabha river. The river Markandeya flows from southwest to northeast and Bellary Nala, which is three km south of the city also flows in the same direction. The location of Belagavi city is on the spur of a hill, situated Markandeya river valley has strengthened the urban character through the advantage of defense and nodal position for commerce. Belagavi City Corporation (BCC) is a Grade-I Corporation. As a growing metropolis, Belagavi city is dominating the urban centrality of the entire North West Karnataka state. Belagavi is situated on the northern slope of the basin of watercourse called the Bellarynallah.

Belagavi city is the district, and divisional Headquarter of Belagavi Division. It is situated on Miraj- Bangalore Board-gauge Railway line of the South-western Railway. The Pune- Bangalore National high-way NH-4 and Belagavi-Raichur State Highway passes through the city and it is located at a distance of 350 kms from Poona city, 510 kms from Bengaluru city 146 kms from Panaji city and 96 kms from Dharwad- Hubblili city. The Belagavi airport is located in the northeastern part of the city about 10 kms away from the city center. Karwar and Marmgoa are the nearest ports located from the city.

The situation of Belagavi in North Karnataka increased its importance in terms of secondary and tertiary activities. Belagavi is well connected to Bengaluru the capital of Karnataka, Mumbai the capital of Maharashtra, Panaji the capital of Goa and many other leading cities of India. Such a nodal situation of Belagavi in an urban environment has

shown its extraordinary growth in terms of population, industries, trade and commerce, transport and communication, services and education facilities.

The study area comprises of two parts i.e. (i) Belagavi Municipal Corporation and (ii) Belagavi cantonment area. The total geographical area of Belagavi City (MC) is about 96.82 sq.kms whereas the Belagavi Cantonment covers an areas about 7.20 sq.kms.

Location Map of Belagavi City

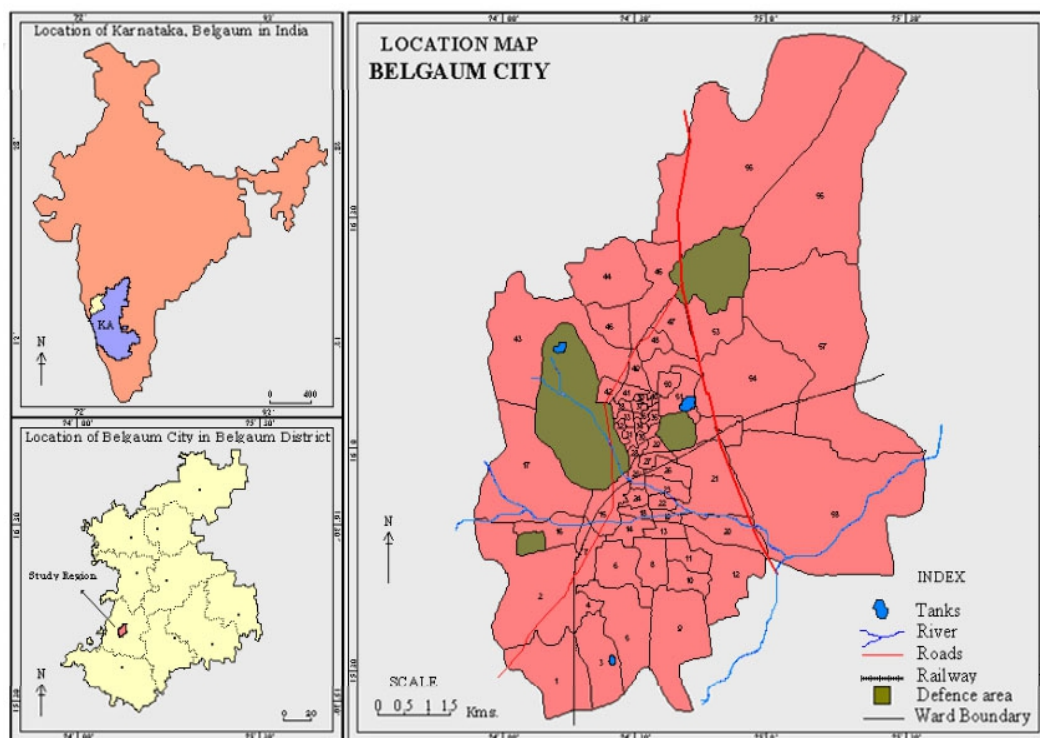


Fig. 2.1

HISTORICAL BACKGROUND:

‘Belagavi’ is one of the oldest city among the cities of Karnataka state. In the history of Karnataka and South India, Belagavi has its unique and commanding position, because Belagavi was a part of the ancient Kuntal province. Belagavi city is referred to as ‘Venagram’ (Bamboo village) in the inscriptions of 12th and 13th centuries. Belagavi might have been called ‘Bidira Male’ in Kannada language, which means a place having a group of bamboo groves.

Belagavi city was ruled by many rulers viz- Shatavahanas, Chlukyas, Rashtrakutas, Kadambas, Peshwas and Bririshers. Belagavi Fort was built by Rashtrakutasjain king in the year 1519. “Shahpur” originally known as Shahapet was

built by Sherkhan as the market for Belagavi Fort. In 1818 Belagavi town was captured by British forces from Peshwas. During the British regime, the town increased greatly in size. In 1841, leading citizen of Belagavi under the guidance of collector formed a committee, raised voluntary subscription in the guidance of collector formed a committee, raised voluntary subscription in the town and constructed new roads repaired old streets and lanes. As a reward the government sanctioned Rs.6000 to improve the town at that time. It was chosen as a military station of Poona of Western command and was usually garrisoned by the British and native infantry. Later in 1956, during the states reorganization, Belagavi city was integrated in Karnataka state and became district headquarter and divisional headquarter of Belagavi district and Belagavi division.

The development of Belagavi city assumed new dimension by the construction of new roads and repairs of the streets and lanes in the year 1841 by a citizen committee. The Belagavi municipality came into existence on the 1st Dec. 1851. Belagavi was considered as class III town in 1901, then emerged as class II town 1931, class I town in 1961, and it has continued as a class-I city till date. Now at present Belagavi is fourth biggest city among the cities of Karnataka State having population of 5.1 lakh according to 2011 census.

Historically, Belagavi district is known for events and incidents. It is a land of great philosophers and great personalities of great men and women to its credit. Many of them have sacrificed their life for the cause of India's freedom. Belagavi is the place from where national leader Balagangadhar Tilak had launched his "Home Rule League" in 1916. The city has the honor of hosting 39th All India Congress Session in 1924 that was the only session in Karnataka, which was presided over by Mahatma Gandhi. Belagavi also has to its credit of hosting first assembly sessions of Karnataka Vidhanasabha and Vidhanparishad during the year 2006. It is first in the history of Karnataka, that such a sessions have been conducted outside Bangalore the capital of Karnataka is Government of Karnataka going to organize International Kannad Sammelan in the month of February, 2011. It is also first in history of Karnataka, that international Kannada Sammelan in Belagavi City. The Government of Karnataka has proposed making Belagavi the second capital of the state of Karnataka and built a second state administrative building Suvarna Vidhana Soudha was inaugurated on 11th October 2012.

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CHAPTER -III

POPULATION CHARACTERISTICS IN BELAGAVI CITY

Population growth is the most fundamental demographic processes with which all other demographic attributes are directly or indirectly associated. Population growth affects density, distribution pattern and composition of population. Therefore an understanding of the process of population growth is essential.

The dynamics of population growth mainly depends on two forces, namely natural increase and migration (Peter Hegget 1972). Natural increase is the result of variation between the number of birth and deaths. If the birth rate exceeds the death rate or mortality rate, there will be a population increase and vice-versa. The second force is that of increase in the number of population due to immigrants.

If it is compared with in population of 1901, the present population of Belagavi city increased sharply about 17 times what it was 100 years back. Demographic growth in an expression commonly used to indicate quantitative as well as qualitative changes in the population composition of the area under study. Several amenities such as educational facilities, administrative activities, urban amenities and facilities, means of transport and communication, business activities, concentration of industries etc. are reason for the population growth of the city. In the modern era, the process of industrialization accelerated the rate of population growth and has led to urbanization, due to this factor demographic and ecological structure has undergone vast change in the city.

MUNICIPAL CORPORATION:

The Municipal government was first introduced in the town of Madras by the East India Company in 1687, and similar institution was introduced in Bombay and Calcutta in 1726. The provision of the government of India Act XXXVI of 1850 was made applicable to the Belagavi town from the year 1851. Further from 1st April 1883 it was raised to town municipality. At that time the area of the town was only 1.17 Sq. Km. during the period of 130 years the town has developed very rapidly in morphological and ecological respects. Since that time the town has separate administration from cantonment area.

In 1901, the population of Belagavi city (MC) was 22,434 persons, by the 1911 it rose to 29,636. (32.10%). During the 1912 the population size of the city was 36,354 persons, it rose to 38,169 in 1931 and the growth rate between these two periods was 4.99 percent. The population of the city increased to 58,319 persons during 1931 to 1941. The growth rate between these two periods was 52.79 percent (Table 6.2:A).

It is important to note that, the population of Belagavi city during 1961 was about 1, 27,885 persons and its urban growth rate was about 53.18 percent during 1951 and 1961. The highest urban growth rate was recorded during this period, due to high concentration of population and Belagavi city has been classified as class-I city by the Authority of Census of India.

TABLE 3.1. DECADAL GROWTH OF POPULATION IN BELAGAVI CITY (MC)
(1901-2011)

Period	Population	Actual decadal Variation	Decadal Variation (%)	Actual Variation (%)
1901	22,434	--	--	--
1911	29,636	7202	32.10	3.20
1921	36,354	6718	22.66	2.26
1931	38,169	1815	04.99	0.49
1941	58,319	20,150	52.79	5.27
1951	83,483	25,164	43.14	4.31
1961	1,27,885	44,402	53.18	5.31
1971	1,92,427	64,542	50.46	5.04
1981	2,74,430	82,003	42.61	4.26
1991	3,26,399	51,969	18.93	1.89
2001	3,99,653	73,254	22.44	2.24
2011	4,90,045	90,392	22.62	2.26

Source: Census of India- 1901-2011, Growth rate is computed by researcher.

TABLE. 3.2. DECADAL GRWOTH OF POPULATION IN BELAGAVI
CANTONMENT AREA1901-2011

Period	Population	Actual decadal Variation	Decadal Variation (%)	Actual Variation (%)
1901	10,641	--	--	--
1911	11,172	531	4.9	0.49
1921	10,014	-1158	-10.36	-1.36
1931	11,230	1416	14.14	1.4
1941	14,431	3001	26.25	2.6
1951	16,717	2286	15.84	1.5
1961	18,905	2188	13.18	1.3
1971	21,445	2540	13.43	1.4
1981	25,942	4497	20.96	2.09
1991	23,953	-1989	-7.66	-0.76
2001	23,779	-174	-1.74	-0.17
2011	19,411	-4368	-16.31	1.63

Source: Census of India- 1901-2011, Growth rate is computed by researcher.

There was rapid population growth during 1961-1971 due to immigration of population into Belagavi, during these two decades major industries were established, new educational institutions and commercial complexes were opened in the city, have attracted migration of population and major socio-economic services were made available during this decade. It is also due to the migration from surrounding regions for the purpose of jobs and education.

According to 1981 census the total population has reached to 2, 74,430 persons. Growth rate during this period was 42.61 percent. The population of Belagavi city in the year 1991 was 3,26,399 it exceeded three lakhs by 1991 and growth rate was about 18.93 percent the lowest growth rate occurred during this period after independence. This was mainly due to increase in the rate of literacy and increase in the number of the educated in the city that made it control natural growth of population.

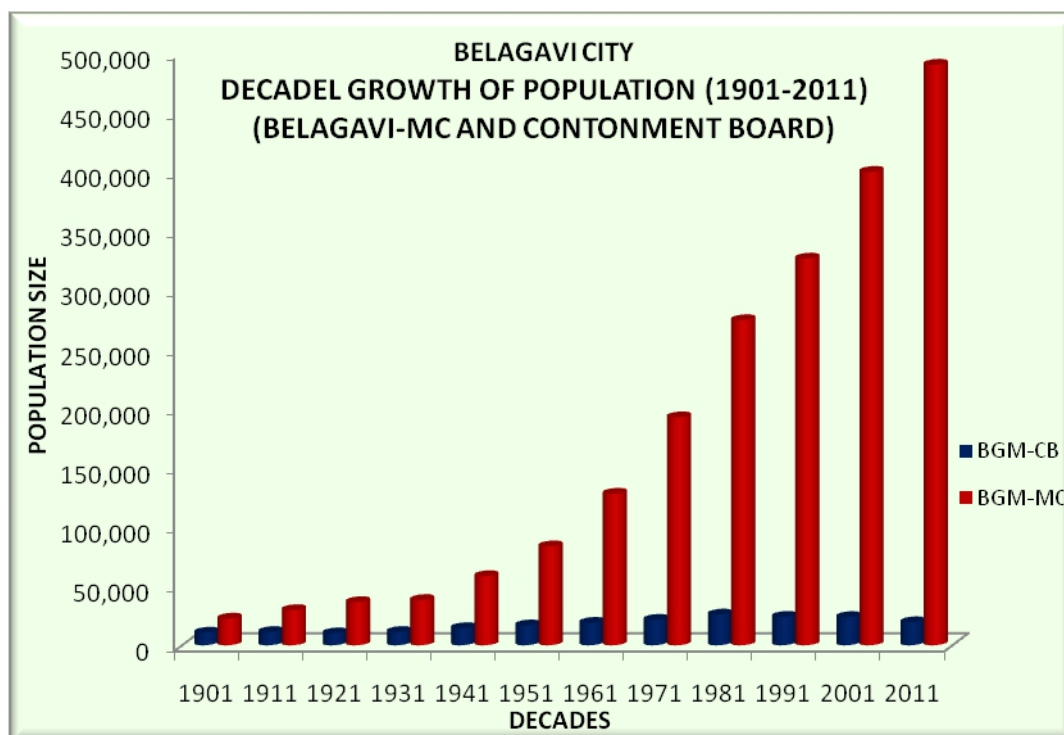


Fig 3.1

According to 2001 census, population of Belagavi city reached 3, 99,653 persons and growth rate is found to be 22.44 percent. During 2011 city population was 4, 90,045 persons and growth rate was 22.62 percent. There is slight increase in the urban population growth rate of the city as compared to earlier decades.

BELAGAVI CANTONMENT AREA:

The population of Belagavi Cantonment area, which was 10,646 during 1901 and it grown upto 11,172 by 1911. The urban population growth rate during these two periods was 4.90 percent. The urban population growth rate has gone down in cantonment during 1911 to 1921 i.e. 10.36 percent the lowest growth rate occurred during this period in cantonment due to the epidemic. According to 1941 census the total population of cantonment has reached to 14,431 and growth rate during this period was about 26.25 percent. The highest urban population growth experienced during this period. The growth rate during 1951, 1961 and 1971 remains same and constant (i.e. 15.84% 13.18% and 13.43%) respectively. The urban population of cantonment area in the year 1981 was 25,942 persons and growth rate was 20.96 percent.

The population size of cantonment area is continuously declining since 1981. The population size of cantonment during 1991 was about 23,953 persons by 2001, 23,779

persons and by 2011, 19,411 persons respectively, and growth rate during these periods was about 7.66 percent during 1991 and -1.74 percent during 2001 and -16.31 percent during 2011. This was mainly due to migration and shifting of families from cantonment area to city residential areas. The study reveals that, there was a great variation in growth rate during 1991-2011, due to migration from cantonment area to residential areas and also restriction of defense authority to built houses in the cantonment area.

TABLE 3.3. OCCUPATIONAL STRUCTURE OF BELAGAVI (MC+ CB) CITY (2011)

Sl.No	Occupational Categories	Population	% to the total working population	% to the total population of town
I	Cultivators	3019	1.69	0.59
II	Agricultural laborers	2898	1.62	0.57
III	Livestock, forestry, hunting	110	0.06	0.02
IV	Mining and quarrying	54	0.03	0.01
V (a)	Household Industries	8179	4.57	1.61
V (b)	Other than household industries	20352	11.38	4.00
VI	Construction	31962	17.87	6.27
VII	Trade and Commerce	43065	24.08	8.45
VIII	Transport, storage and communication	37200	20.80	7.30
IX	Other services	32011	17.90	6.28
Total Working Population (Main and Marginal)		1,78,850	100.00	35.11
Non-working population		3,30,606		64.89
Total population of Belagavi Town		5,09,456		100.00

Source: Belagavi Town Statistical Report- 2011.

According to 2011 census, out of the total population (5, 09,456) 1,78,850 persons are workers (35.11%), 24.08 percent of people are engaged in trade and commerce, 20.80 percent in transport, storage and communication, 17.90 percent engaged in other services, 11.38 percent of workers are other than household industries Very less percent (below 5.00 %) of workers are engaged in household industry, cultivators, agricultural labors, livestock, forestry, hunting and mining and quarrying etc.

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CHAPTER -IV

MORPHOLOGICAL CHARACTERISTICS OF BELAGAVI CITY

The spatial structure of the city is the product of competitive interaction between its people market facilities, transportation and communication agencies, type of functions performed in the city. The functional zones of a city are subject to cultural and physical influences. The influences which the city exerts on the social and economic structure of the areas helps in the formation of land use pattern.

Table 6.6 and fig 6.2 exhibits the spatial distribution of various functions of Belagavi city. The total area of the Belagavi city is about 104.02 sq.km (2011) out of which 96.82 sq.km area is controlled by the municipal corporation and 7.20 sq.km area is controlled by the cantonment board. The city had enjoyed 42.32 sq.km (4,232.21 hectares) developed area under Municipal Corporation to the total area of the city. The city is developed towards north, south and eastern direction. The areas lying in this direction are namely Yamanapur, Basvankol, Muttenuhatti, in the north, Kudachi, Ramateerth, Siddeshwar temple, Kanabargi, Anjneyngar, and Alarwad in the east Hanuman nagar, TV center in south and R.C. Nagar in the western direction. The study reveals that, it is because of an increase in the size of population and development of different types of occupations and other factors like historical, economic, social and political etc. have contributed to the aggregation or sporadic growth of various functions in the city.

The present study deals with the analysis of internal spatial structure of the Belagavi city on the bases of different functions. The area has been classified continently into eight functional zones mainly residential, commercial, industrial and public and semipublic, parks and play grounds, roads and railways, water bodies and nalas, vacant land and agriculture. Each have been studied and analyzed in detail in the present study.

RESIDENTIAL USE:

In the present study the area under residential use was occupied large area as compared to other. The total area under residential use is 32.29 percent of the developed area and 14.12 percent of the total area of the City Corporation. The core of the city is very thickly crowded and mixed with various functions like residential, commercial, industrial, public and semipublic uses. Especially Darbar galli, Ganapati Galli, Raviwar

Peth, Basti Galli, Maruti Galli, Gondhali Galli, Kadolkar Galli, as well as Shahpur and Khasbag area are very thick residential areas of the city. Nearly 25 percent of the total population of the city is concentrated 8.0 percent of the total area of the city. The density of population in the central area varies from 500 to 950 persons per hector and the density of houses in these areas also varies from 75 houses per hectare to 190 hours per hector.

The main part of the city (Channamma circle) consists of government offices namely the Divisional Commissioner office, the Collector office, Municipal Corporation office, Tahsildar office, District Municipal court, Zilla-panchayat office, CADA office. Further development of residential units taken place rapidly all around the city. The residential areas of the city with street very narrow and packed with numbers of houses, it is observed in the residential areas of the Khasbag, old Belagavi, Vadagaon, Hindwadi, Tilakwadi, Angol etc. Which are situated in the southern part of the city where as the density of population varies from 120 persons per hectare to 240 persons per hectare. The congestion and haphazard development are noticed in eastern part of the city i.e. shivajinagar, Gandhinagar and central part of the city.

TABLE.4.1. EXISTING LAND USE PATTERN OF BELAGAVI CITY (2011)

Sl.No	Land Use Type	Area (in Hect)	Developed Area (%)	Total Area (%)
1	Residential	1366.72	32.29	14.12
2	Commercial	756.16	18.98	7.81
3	Industrial	503.02	12.63	5.20
4	Public and semipublic	204.49	5.12	2.11
5	Parks ,playground and Public Utility	191.25	4.80	1.97
6	Transport and Communication	962.25	24.15	9.94
	Total Developed Area	3983.89	100.00	41.15
	Water bodies/Nalas	67.83		0.70
	Vacant land	994.30		9.57
	Agriculture	4635.98		47.88
	Grand Total	9682.00		100.00

Source: Belagavi Urban Develop Authority (BUDA)- 2011.

The city enjoys well developed planned residential areas which are confined to Bhagya Nagar, Channamma Nagar, Nanawadi,Nargundgakar Colony in the South Guruprasad Colony, Swami Vivekanandanagar and Vinayak Nagar in the west, Hanuman Nagar, TV Centre, Vishweswarayya Nagar and Sadashiv Nagar in the North

Western part of the city, Nehru Nagar Shahu Nagar Vaibhav Nagar, Yamanapur, Basavankol, Muttenhati, Indal Colony, Ramateerth located in the North and Mal Maruti Extension Area it includes Mahantesh Nagar, Anjaney Nagar, Rukmini Nagar and Kudachi and Alarwad in the west. The suburban areas like Kanbargi, Kudachi, Alarwad and Yamnapur, which have been merged recently in the corporation area of Belagavi city. The density of population varies from 60 persons per hectare to 180 persons per hectare and density of houses in these in these area varies from 15 houses per hectare to 60 houses per hectare. The density of population in the extension areas like Mal Maruti Extension area Kanbargi, Ramateerth Kudachi Alarwad and Hanuman Nagar is low. These areas cover 50 percent of the total municipal area of the city and 15 percent of the total population of the city.

LAND USE CHARACTERISTICS AND GROWING SERVICE CENTERS IN BELAGAVI CITY

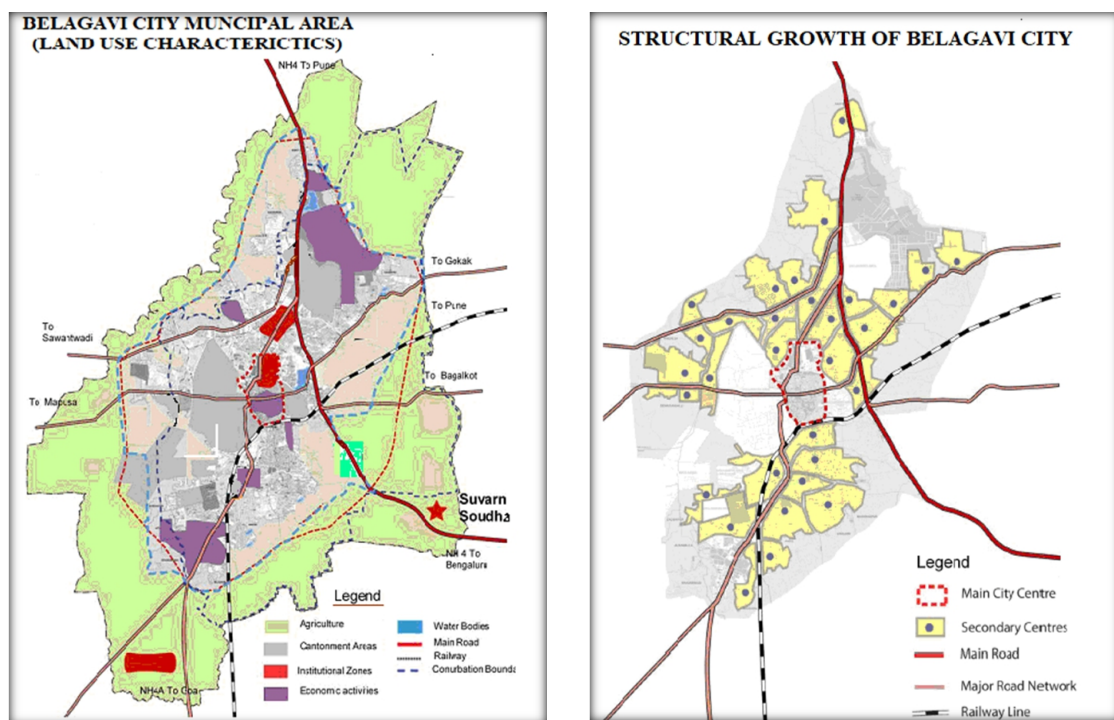


Fig.4.1

The complex nature of land use in the city makes it very difficult to recognize unfunctional areas almost all residential areas. Some residential areas often have different functions like shops, offices, schools and house hold industries. The residential areas like Hanuman Nagar, T.V Center, and Vishveshwarayya Nagar, RC Nagar, Bhagya

Nagar, Tilakwadi, Mal Maruti Extension, and Vaibhav Nagar are not mixed with other land uses. It is because, these are located in extension areas. It is observed that each has been constructed with sufficient compound area and gardens. In the case of Cantonment area is maintained sufficiently and it is controlled by the special Board. It enjoys good layouts of roads and buildings and the density of the population of this cantonment area is very low.

COMMERCIAL USE: It is clear from the table 5.6 that, the area under commercial use was very less as compared to residential and industrial land uses. As it was noticed above, the land use pattern of Indian cities and towns is meant to serve various purposes. Various commercial institutions and their composition and the people engaged in different activities gives the pictures of commercial land use of any urban community. In the present study some blocks in Raviwar Peth, Ganapati Galli, Khade Bazar, Bendi Bazar, Ramdev Galli and Maruti Galli are used for commercial residential and other purposes. But these are the only important commercial areas of the city named as Central Business District (CBD) area of the city.

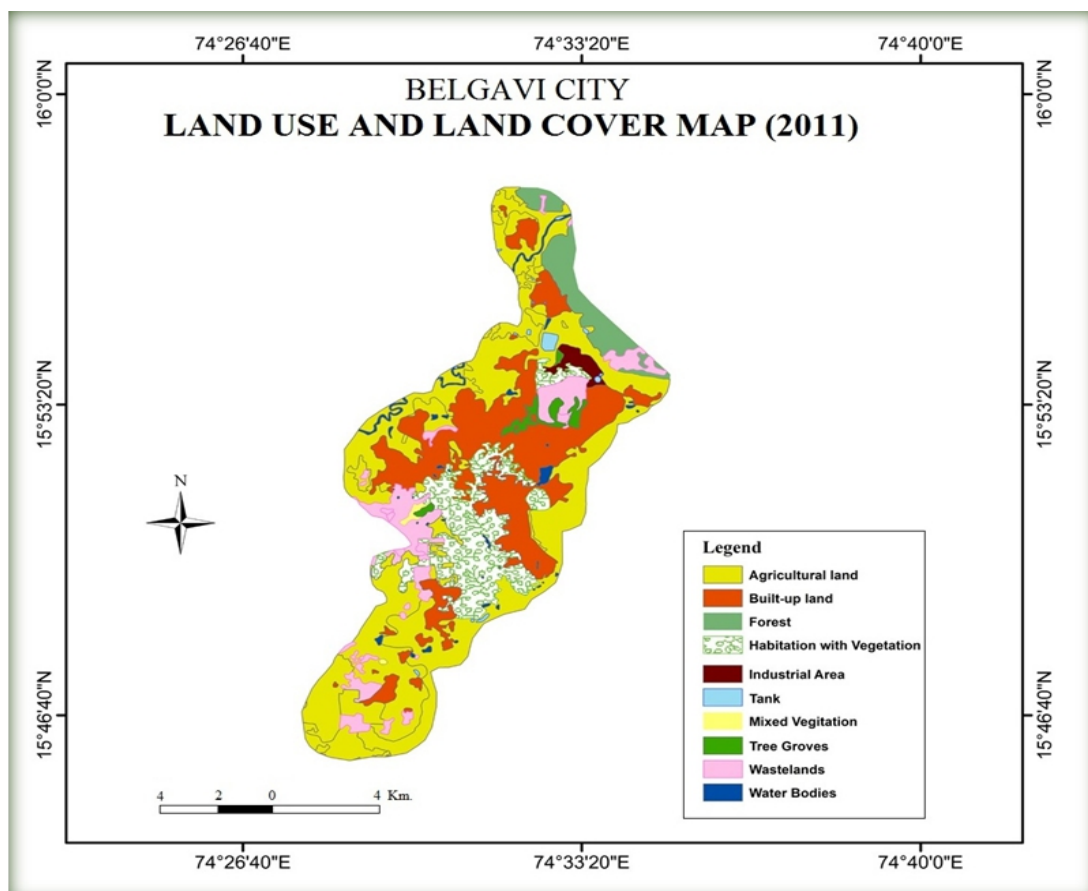


Fig 4.2

Source: Google Base Map-2011 (Prepared by Researcher and GIS Technician).

Out of the total developed area only 1.84 percent is used for commercial purposes, and it is considered as well-known commercial city in Karnataka State. The wholesale market in Raviwar peth is situated in narrow streets with a very small area. Loading and unloading facilities are not provided in this wholesale market area, even then the loading and unloading works for about is carried in this congested area till today. It is observed that every day from about 500-800 trucks come inside the city and they are used for loading and unloading goods.

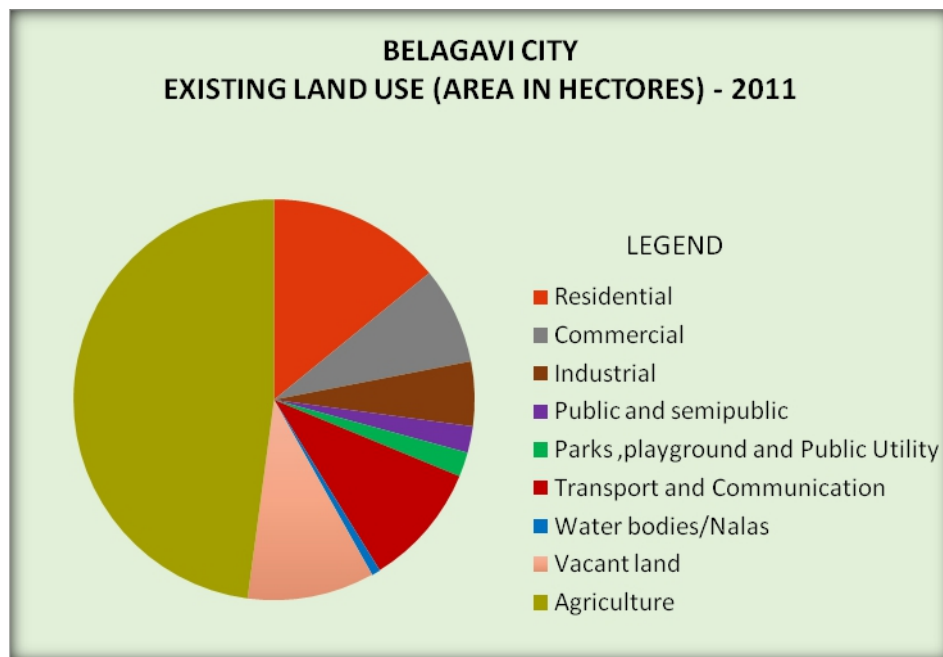


Fig 4.3

The weekly market is held on every Saturday in the central business area. It is observed that there are about six to seven thousand vendors visited to city for the purpose for trade activities permanent vendors who occupy area in the front parts of the shops and their number exceeds the street vendors along the main roads of residential areas where front parts of the houses are used commercial purposes. This area has not undergone any change in respect of road width. Whereas the commercial activity has increased several fold and has largely diversified. The study reveals that, there is an acute congestion space problem it is suggest that there is a need to a separate and it strongly felt that commercial activity may be separate.

In the newly extended areas adequate space is earmarked for commercial use. A separate land is proposed for wholesale vegetable market and trade. It is also proposed to

construct adequate stalls for retail vegetable trade in different parts of the city so as to reduce the congestion in C.B.D areas (table 5.6).Belagavi is the main collecting and distributing center of various products to the surrounding regions. The important connecting places are Hubbli-Dharwad, Karwar, Goa, Bengaluru, Pune, Kolhapur, Vijayapur, Bagalkot, Gokak, Mumbai, Miraj, Sankeshwar, Nippani, etc. About 70 percent of commodities are transported by lorries and railways to various places because in city suburban area grow vegetables in large scale is grown and the rest is consumed in the city itself.

INDUSTRIAL USE:

In the present study the industrial area occupy the fourth largest land use in the city. Out of the total developed area 11.88 percent of the total area is provided industrial use in the Municipal limit and share was about 5.19 percent to the total area of the city. At present there are three defined industrial complexes mainly Aluminium factory, which is situated in the north eastern part of the city, Kanabargi, Autonagar, considered as residential and industrial area and other Industrial Estate situated at the extreme South West part of the city. Other industrial units are scattered all over the city.

There are some workshops in the residential area located in the central part of the city nearby Hans's talkies road and fort road. The motor engineering industries are located along the National Highways and fort road. The wood working industries are concentrated along the National Highway and Khanapur road. The household industries like weaving, dying, and utensil making industries are located in Shahapur, Khasbag and Madhavapurand Vadgaon areas. All these cottage industries occupy a small portion of the house with simple devise and making of carpets, dying of raw silk are the other important industries. It is also observed that, the large number of handlooms in the city and majority of them are installed in dwelling houses. Engineering industries, foundries and manufacturing industries are found in the Udyambagh industrial estate. Most of the industries located in narrow and congested areas there is a great need of sufficient space for industries to expand their location and dumping raw materials. It is suggested that the present industries, which are located in residential and commercial areas should be shifted to the industries Estates and handed over to district planning committee under.

Recently with the guidelines of district Commissioner the motor Engineering Industries which were located along the national highways and fort roads have been shifted to Kanbargi and Auto Nagar industrial areas. But still 50 percent of the industries

remain located along the fort road and national highways and care should be taken to shift to their industrial areas of the city.

PUBLIC AND SEMI-PUBLIC:

In the present study the area devoted to public and semipublic use covers an area about 4.84 percent, which is the 5th largest area covered in the city. The public and semipublic includes Schools, Colleges, Government offices, Hospitals, Temples and other public institutions. The area devoted for this purpose is about 204.49 hectare (4.84 percent of the developed area of the city). There is a heavy concentration of public and semi-public uses in civil area rather than in cantonment. As the cantonment is controlled by the Defense Department, almost all the area is used for defense purpose but only small area is preserved for public Use like schools and High Schools.

Belagavi city being the district and divisional headquarter, all most all the Govt. Offices are concentrated in the city. However adequate buildings are not existed for these offices. At present many offices are run in rented residential blocks scattered in different parts of the city. It is suggested that the multi-story building may be constructed to locate all the Govt. Office at one location so as to help the public of the city.

In the city, there are 15 Degree colleges, 7 Medical institutions, (including Nursing, Dental, Ayurvedic and Homeopathic) 7 Engineering colleges, 15 Business Management colleges, 12 Diploma Colleges, 12 Educational Colleges (B.Ed.) 15 P.U Colleges, 55 Secondary schools, 135 Primary School, and 48 Nursery Schools, apart from these many short-term technical institutions Vocational Courses and other training institutions also exist. In addition there are two universities mainly Karnataka University Belagavi and Vishveshwarya Technical University Located in the northern and southern part of the city respectively.

Commissioners offices, Courts, LIC Offices, Police Head Quarter, Chief Engineer Offices, K.S.R.T.C. Divisional offices, Divisional forest Office, P.W.D. offices, Town Planning office, Post and Telegraph office, Railway offices, C.B Office, power houses etc are located in the central part of the city. The department of mines and geology office located in Hindwadi and Tilakwadi areas. Town planning office in Sadashiv Nagar, K.P.S.C. office in Mahantesh Nagar areas. Since there is no common office in the city and some decentralized offices by the Government of Karnataka are scattered in the different part of the city due to non-availability of own buildings and office should be concentrated in one place of the city. There are four Government

Hospitals (including Cantonment Board) in the city. Most of the medical centres are located in the northern part of the city. The District Hospital is far away from the residential areas mainly from Kanbargi, M.M. Extension area Angol, Vadgaon, Hindwadi, Tilakwadi, Majagaon, etc. In addition there are some PHCs scattered throughout the city. It is interesting to note that the vaccine Institute located in Tilakwadi occupies a vast area (about 60 hect) and now same part of the area has been given for construction of new hospital.

PARKS AND PLAYGROUNDS:

In the present study, it is found, the area devoted to parks and playgrounds is about 3.39 percent of the total developed area of the city. The area developed for parks and playgrounds is very insignificant. There are only 22 maintained parks in the city, out of which, two are located in SPM road and another one is at Goaves Circle, two in Tilakwadi and remaining all parks are located in opposite to Dist Hospital, opposite to Ashok Nagar, Angol, R.C.Nagar, M.M.Extension area, Congress road, 2nd Railway gate, Hudco Colony, Vishweshwaraiyya Nagar, sadashivnagar, and S. Bose Nagar. Military Temple Park is the biggest park located in Cantonment area, near railway station. Another one is in Mal Maruti extension area. There were no parks in eastern, southern, northern south Western parts of the city (table 5.6). Police parade ground and the K.L.E stadium maintained by J.N. Medical College are two major playground used for conducting district level sports. The other playground of the city are Sardar High School Playground, Lingraj College ground, R.P.D. college ground, Benon smith Play Ground, CPED round, etc. are the main.

ROADS AND RAILWAYS:

The roads and railways cover an area of about 22.74 percent of the total developed area of the city. In Belagavi city the roads which are suitable for vehicular traffic are N.H-4, N.H4-A Tilakwadi, Vadgaon road, Venugrla road, Bagalkot road, Bauxite carrying road, Mahantesh Nagar road, College road, Hindwadi road, Guntmal, Vijaynagar road, etc. are the important roads, where the entire city enjoys worthy and mass transportation. The rest of the roads in the city are very narrow, irregular and have intersections. The railway station is ideally located in between Tilakwadi and the old city. But the railway line runs across the congested area of the old city, Tilakwadi, Angol

areas are experiencing many level crossings, due to this traffic jams are very common in the city.

WATER BODIES:

In the present study the area under water bodies and Nalas are about 0.70 percent of the total developed area of the city. The main parts of the city are Kotikeri tanks, Jakkeri Tanks, Bellary Nala and Landi Nala etc. The Landi Nala separates the cantonment and the civil area flows in the south eastern direction ultimately joining the Bellary nala, Kottikeri tanks in the North and Jakkery Tank cantonment tank, Angol Tank in the city have a large command area. Most of the tank water bodies are used for the purpose of drinking water for animals, washing purpose and agricultural uses in the city.

VACANT LAND:

The area under vacant land is about 21.89 percent of the total developed are of the city located in the area of Mutenahatti, Kudachi Alarwad, Ramateerth Nagar a Laxmi tekadi areas. Future, these vacant lands should be used for city extension purposes.

AGRICULTURAL LAND:

The area under agriculture land use is about 55.59 percent of the total area of the city. A vast belt from west to east in between old city and Shahapur, Vadgaon, Majagaon, Angol area and M.M. Extension, Kudachi, Alarwad areas and Kasbhag areas cover very small portion of agricultural land. At present, available agricultural land in the city is used for growing vegetables and other corps (paddy, jowar, pulses, etc.) At present in the agricultural land paddy and vegetables are grown in large scale and city enjoys all types of vegetables.

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CHAPTER - V

CONCLUSION

The research was also concentrated on the study of morphological characteristics of towns which refers to its various land-uses. The spatial spread of the town depends upon its total population, types of functions it performs, the economic conditions of people living in it and the nature of physical landscape in which town is located. Therefore, indirectly the morphological characteristics may influence on the centrality hierarchy and rank-size relationship of towns. In Belagavi town (MC) out of the total municipal area 32.29 per cent of land is used for residential purposes while transportation and communication land use is 24.15 per cent, 18.98 per cent of land used for commercial purposes, 12.63 per cent of land use under industrial sectors and remaining land occupy the public and semi-public and parks, playground, etc. the vacant land is 9.57 per cent while agricultural land is 47.88 per cent.

The urbanization trends in Belagavi city were slow before independence whereas it was faster after independence. This speaks that the developing and changing nature of occupational structure of people in Belagavi city has certain bearing on growth trends of urbanization. The development of service amenities to the rural and urban folk emphasis laid to the development of economic activities including agriculture and small scale industries has helped to gather the momentum of people's prosperity in Belagavi district, therefore this has tremendously influenced on the formation of urban centres.

It is suggested that the transportation planning should be made very systematically for the Belagavi city. Heavy loading transportation should be done outside the city. It is suggested that, the hawkers causing too much congestion on the roads of CBD, which puts everybody into trouble as it blocks the free movement of transportation and pedestrians. Hawkers should be provided fixed place in some appropriate areas, so that this kind of congestion can be minimized. There should be a limit in providing the licenses to these people to make the city neat and clean, healthy and spacious for the people. During festivals due to these hawkers it becomes very difficult to walk in the CBD. Some areas should be such which are hawker free and people can move for their shopping very freely. The provision of various amenities such as widths of streets, drainage lines, water supply lines, parks, playground, etc. should be made to meet the

future requirements. The closed or underground pipes are costly and they are adopted in large cities. For this purpose the surrounding villages should be linked up with suitable transport facilities.

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