CHAPTER - V
CHAPTER – V

PUBLIC UTILITIES

Public utility services and amenities are added to the landscape of a city from time to time to serve its population. These amenities generally are not in proportion to the phenomenal growth of population and the expansion of the city to measure the urban standard and its growth. An attempt has been made in this chapter to visualize the importance and impact of these services on the city's life. The amenities and services can be broadly categorised as follows.

1) Housing
2) Water supply
3) Sanitation facilities
4) Health services
5) Transport and communication
6) Educational facilities
7) Electricity
8) Marketing
9) Cultural and recreational facilities.
These play an important role in the process of urbanization and development. The greater importance has to be given to the development of these facilities in the region to improve the living standard of the people. A city having efficient amenities carries on its economic development more effectively. Urbanization leads to an increased availability of a wide range of services and alternative types of work, housing, food, clothing, educational facilities, medical facilities and so on (Kundu, A. 1980).

The urban centres from their nature became focal points for various socio-economic services and activities to their people and also to the people of their tributary areas. Though many scholars are not sure as to where the concentration of amenities at a certain point leads to the formation of any urban centre, after the origin of a centre, these facilities start to accumulate. It is possible that urban centres and amenities are concomitant to each other.

The development of a country or any geographical area must be seen as the sum total of the facilities available to millions of men and women who constitute its population (Dare, 1991). The main aim of any developmental activities in a region, or a country is to provide better living conditions. Thus the developmental process aims at reaching the expected level of human welfare.
Through the temporal study of urbanization level and the expansion of basic facilities it is obvious that the growth of urbanization has a significant impact upon the spread of education, health and other civic amenities.

Thus urbanization acts as a vehicle of modernization of society, and it is a necessary factor for a better society equipped with science, technology and improved quality of life (Lewis, O. 1965).

The Human Rights commission for social development at the international level stressed the need for the preservation of humanity and improvement in the quality of life, for all people without any kind of distinction (Gerald Wen, 1979).

The concept of development does not include only the objective experience of expansion and the level of achievement (Smith, D.M. 1977). The focus on the social needs provides a basis for quality of life. In general, through the development of public utilities an improvement of humanity can be ensured.

In developing countries like India, where the societies are traditional and orthodox, much care and investment for modernizing and reorganizing better socio-economic standard are necessary (Rao, H. 1984).
In terms of the total human needs, the values and standards of life perceived by the various societies are undergoing a change. Thus it is not stagnant, but is an indispensable means for improving the quality of human life.

The development of amenities are studied by several scholars, and much research has been done including studies conducted by U.N.O and World Bank of the levels of development in different parts of the world by choosing different indicators to measure the levels of development in the developing area (Jain, G.N. 1971)

**HOUSING:**

House is a building unit, an area of measurable dimensions in which individuals spend a greater part of their life. House or shelter is the basic need of human beings. It is next in importance only to food and clothing. The following table shows the availability of housing facilities in Hubli-Dharwad.

**Table No.31: Availability of housing facilities in Hubli-Dharwad**

<table>
<thead>
<tr>
<th>Year</th>
<th>Houses</th>
<th>Percentage growth of Houses</th>
<th>Population</th>
<th>Percentage growth of population</th>
<th>No.of People per house</th>
</tr>
</thead>
<tbody>
<tr>
<td>1961</td>
<td>53,483</td>
<td>-</td>
<td>2,48,489</td>
<td>-</td>
<td>4.64</td>
</tr>
<tr>
<td>1971</td>
<td>62,055</td>
<td>13.81</td>
<td>3,79,166</td>
<td>34.46</td>
<td>6.11</td>
</tr>
<tr>
<td>1991</td>
<td>1,08,805</td>
<td>22.45</td>
<td>6,48,298</td>
<td>18.69</td>
<td>5.95</td>
</tr>
<tr>
<td>2001</td>
<td>2,08,805</td>
<td>47.89</td>
<td>7,86,018</td>
<td>17.52</td>
<td>3.84</td>
</tr>
</tbody>
</table>
The table No. V\(\cdot\)I and the graph No. V\(\cdot\)I show the improvement in the housing facility from 1961 to 2001. The rate of increase of growth in number of houses and population is particularly significant between 1991 and 2001. The efforts put in by the government and its policy made many housing sites available to the public, particularly to the people below the poverty line. Besides many individuals have also constructed houses and many colonies and complexes were also developed. This has resulted in decreasing number of people per house.

**Structural Conditions:**

Details on structural conditions of houses are collected from the office of the Housing Board located at Chankyapuri.

The structural condition of the houses are below average and most of the houses are of sub-standard quality. About 78 per cent of the houses are of moderate structural quality and 16 per cent of the houses have fair structural conditions and 6 per cent of the houses are ripe for immediate demolition.

The classification of houses based on materials used for construction reveals that 40.03 per cent of the houses have burnt bricks, 30.84 per cent of the house have mud walls. 13.72 per cent of the house have unburnt bricks, 6.22 per cent of the
Fig. 1: Population and House in Hubli - Dharwad Cities From (1961 to 2001)

Growth of population and houses in Hubli-Dharwad City in [%]

Census Years

- Population
- Housing

Scale - OX 1cm = 20,000 population and houses
OY 3.5 cm = 1 Census Year

Fig 1.1
houses have stone walls, 2.38 per cent of houses have walls with grass, leaves, bamboos... and 1 per cent of the houses have walls with other materials like iron sheets and zinc sheets and others.

**Housing Accommodation:**

The housing accommodation is not satisfactory. That is 43 per cent of the total families live in one roomed dwellings, 28 per cent in two-roomed dwellings, 16 per cent in three roomed dwellings. The remaining 13 per cent of the houses are single storeyed, 87 per cent of dwellings are row type, 6 per cent semi-attached and 7 per cent detached. Nearly 18 per cent of these are more than 50 years old. The houses between 20 to 50 years old are 22 per cent and 51 per cent of the houses are 5 to 20 years old, 9 per cent of the houses are fit for immediate demolition or have a life of less than 5 years.

**WATER SUPPLY:**

Water is one of the basic requirements of human existence. The quality of water and the level of its consumption are reliable indices of development and progress. There is acute shortage of potable water in many parts of the world.
The rapid growth of population has resulted in acute shortage of safe drinking water and Hubli-Dharwad cities are no exception to this. As the cities are expanding at a very rapid rate, the problem of water supply is becoming more severe. In the colonial India, British Government constructed many sources of water supply such as open wells, like Jakani bhavi, Nuchambli bhavi, Court well, and the tanks like Yemmikeri, Sathanakeri, Saidapur tank, Kelegeri, Saptapur tank and municipal reservoir all of which are located in Dharwad and Tirkaram's lake and Unakal tank in Hubli. With the expansion of the cities many of the tanks have been reclaimed for construction purposes. Many of the wells are highly polluted reducing the water supply.

Rapid increase in the population has further aggravated the problems of water. In order to supply the required amount of water to the growing population the Neerasagar reservoir was commissioned in 1956. It has a capacity of 40 lakh gallons per day.

However, due to newly established industries, and continuing increase in population, the Neersagar reservoir's water was not sufficient. As a result the Renuka sagar reservoir on Malaprabha was commissioned in the year 1973 to meet the demands of water by people as well as various industries. The reservoir is situated near Saudatti at a distance of 47 Kms. from Hubli-Dharwad and has a capacity of 9 millions gallons of water per day.
DHARWAD CITY

Fig. V-2
As there is no sufficient water to supply the growing cities and their population, water was being supplied once in two days during 1986-98 and after 1998 once in three days. Now the water is being supplied to citizens of Hubli-Dharwad cities once in 5 days. In addition to increasing demands, there are problems like reduced storage of water in Neersagar, blocking effect in catchment area, frequent power failures and also frequent damages to the pipe lines deliberately caused by the farmers who want to irrigate their agricultural land with this water.

The water is supplied both in bulk and also on per capita basis. The bulk supply for various purposes is as follows.

<table>
<thead>
<tr>
<th></th>
<th>Kiloliters/ Per day / capita</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domestic</td>
<td>27.20</td>
</tr>
<tr>
<td>Non-Domestic</td>
<td>35.02</td>
</tr>
<tr>
<td>Commercial</td>
<td>49.20</td>
</tr>
</tbody>
</table>

Source: Sewage and water supply Department of Dharwad 2001.

In addition to piped water supply, HDMC also has taken up the digging of bore-wells at various places. There are 1,019 bore wells, 261 with power pumps and 758 with hand pumps in the twin cities. Though bore wells are being dug every year, the supply is not sufficient, as many of them are not functioning. Further underground water storage also is reduced due to increased pumping.
At present nearly 40 per cent of the dwellings have their own separate taps, and about 24.8 per cent shared taps. Nearly 33 per cent of dwellings are benifitted by the public taps and nearly 2 per cent of the people are still dependent upon wells.

Due to the successive drought years and siltation, Neerasagar reservoir which was supplying 40 per cent of water to Hubli city, has more or less dried up. Work on the pipe-line connection from Renukasagar reservoir to the areas fed by Neerasagar reservoir has been taken up. When completed, the problem of water supply may ease. There are also plans to replace the pipe lines form Malaprabha with steel pipes so that there is no loss while transporting water from the reservoir. As the population is growing fast, there are plans to take up Malaprabha next stage.

SANITATION FACILITIES:

Sanitary arrangements, such as sewerage system implies the network of mains and branches of underground conduits for the convergence of sewage to the final point of disposal. While those that carry storm water from roofs, streets and other surfaces are know as storm water drains, those carrying both sewage and storm water are called combined sewers. The city is provided with both a system of underground sewerage and a surface drainage system to cover the areas not served by sewerage system and also to drain out excess rain water from the town.
However, in city the areas that are not provided with a sewerage system, there is generally open drainage system. Where even this system is not prevalent the house holders have made their own arrangement such as soak pits and septic tanks.

Like sewage system, the drainage system is also of different types, depending upon the construction materials and also the shape of drains. The two most important types of drainage / sewerage system prevailing in the town are the box surface drains and open drains. Those built of stone masonry are called pucca gutters.

There are three systems of disposal of human waste viz., under-ground sewerage, sanitary water and flush latrines with individual disposal like septic tank, leading cesspool, and collecting well and dry type of latrines with manual seweraging.

Latrines both public and private are covered here. The water borne latrines include all types of flush-out latrines, while service latrines refer to only those that are being serviced by manual scavengers either everyday, or twice or thrice a week.

The area covered by drainage system in Hubli-Dharwad is 57 per cent in Hubli and 39 per cent in Dharwad. It is found that sanitary arrangements are most unsatisfactory and are badly maintained in Hubli-Dharwad. In the old areas of the city hardly 35 per cent of the houses have independent lavatory block. The
areas like old Hubli and Mangalawar peth, Shukrawar peth and Deshpande nagar in Dharwad, have the maximum number of population with inadequate sanitary facilities. In the extension areas each house has septic lavatory with underground drains of the city.

In the slum areas there are a few public toilets which have concentration of population in the cities. Recently government gave subsidy to individual houses in these slums to construct latrine. While quite a few of them have taken advantage of this, there are many who could not construct them for want of space and other reasons.

Public toilets are also insufficient and many of their locations are not properly selected.

There are about 34,775 water borne latrines and 1221 urinals, including other types, which are very inadequate. That works out to one urinal for a population of 218.

Health services:

Health is an important aspect of the social development of any area. The easy availability medical services is an indication of relatively better level of development. The suffering of human beings is related more to diseases than to other medical facilities that reduce physical suffering and enhance longevity of life. The
quantity and quality of medical care facilities available in the city area, vary from small dispensaries to organized, sophisticated and advanced health care units. Hubli-Dharwad cities are no exception to this. The facilities of health units determine the quality of people and the advancement of Hubli-Dharwad cities.

Medical facilities like civil hospital, health care units, family planning, Ayurvedic, Public and Semi-public dispensaries are spread over Hubli-Dharwad cities and sub-urban villages and extension areas. There are many doctors, specialists including cardiologists, Physiotherapist, opthalmologists, eyes, nose and throat specialists in Hubli-Dharwad. The twin cities have good facilities of maternity care in the government and semi-public hospitals. Some government health care units and primary health centres are located in sub-urban areas also. There are 4 government hospitals located in the Hubli-Dharwad cities. There are some hospitals which are run by Municipal Corporation.

Some of the diseases like small pox, cholera and plague have been totally controlled by different preventive measures, such as compulsory vaccination etc. But malaria which was eradicated in the past is again raising its head.
PUBLIC UTILITIES IN HUBLI - DHARWAD CITIES

INDEX

- UNIVERSITY
- DEGREE COLLEGE
- P.U. COLLEGE
- HIGH SCHOOL
- H.P. SCHOOL
- M.P. SCHOOL
- PRIMARY SCHOOL
- LOWER SCHOOL

PO POST OFFICE

PARK

DISPENSARY

SCALE

Fig.: J.3
### Table No.TUT-Medical Facilities in Hubli Dharwad area

<table>
<thead>
<tr>
<th>Name of Hospital</th>
<th>Units No.</th>
<th>No. of Beds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Civil hospital</td>
<td>4</td>
<td>2,252</td>
</tr>
<tr>
<td>Semi-public hospital</td>
<td>25</td>
<td>5,650</td>
</tr>
<tr>
<td>Maternity Hospital</td>
<td>15</td>
<td>1,240</td>
</tr>
<tr>
<td>Family planning centres</td>
<td>8</td>
<td>980</td>
</tr>
<tr>
<td>Public Health Care Units</td>
<td>140</td>
<td>325</td>
</tr>
<tr>
<td>Primary Health units</td>
<td>70</td>
<td>285</td>
</tr>
</tbody>
</table>

The above table shows the number of beds in various hospitals of Hubli-Dharwad cities. There are 597 doctors registered for private consultation in Hubli-Dharwad city.

The twin cities lack charitable hospitals particularly to serve population below poverty line.

**Transport and Communication:**

“The role of transportation right from the beginning to all the stages of development of a city is pivotal to the study of urban morphology. Transport system in the cities is analysed from two angles. One intra-city and the other inter-city. The intra-city transportation is important, because it links several functional areas whereas the inter-city transportation is important since it is the underlying force which connects the city and other surrounding area”, (Mahadev, P. D. 1975)
The cheap and rapid means of transport and communication between home and place of work is considered indispensable to the efficiency of urban community. Socio-economic conditions of the society largely depends upon facilities of transport which have been called the essence of regional development. Geographer's main concern is space or place and transport is necessary to satisfy the function of a place. It creates space utility says N.R.Banavia (1936). Concentration of settlements, regional interaction and industrial activities which lead to the process of modernization and urbanization are definitely related to the process of transportation. Efficiency and development of transportation are very closely associated with a high level of urbanization and in turn this urbanization exerts its influence upon the area it surrounds.

As a city grows, its zone of influence increases. This increase is facilitated by transportation and communication facilities. Hubli-Dharwad twin cities are located at the point of intersection of important roads and railway. The total length of roads in the twin-cities is 565 Kms, of this 490 Kms is surfaced and 75 Kms is unmetalled road. National Highway No.4 which passes through the region has exerted its influence on the suburban areas of Hubli-Dharwad city. It is this surfaced road that most of the industrial establishment have emerged. In Hubli-Dharwad region and Raypur town industrial centres are being developed.
By and large the region is served by state and district highways. There are many unmetalled roads also. Each suburban centre is connected by an approach road. Cart tracks are found in large numbers.

In Hubli-Dharwad twin cities the major traffic originating points are Pune, Kolhapur and Belgaum form the North, Bagalkot, Bijapur and Solapur form North-East, Bangalore, Davanagere, Harihār and Haveri form the South. Similarly the eastern traffic originating points are Bellary, Gadag, Nargund and Navalagund, whereas from Panaji, Vasco and Mangalur are from South. (Refer Fig. No. 24).

The road linking these points carry slow as well as fast moving vehicles from Hubli and Dharwad. It is observed that, there is a relation between the size and quality of roads and the number of vehicles moving on the roads.

**National Highways No. 4:**

The Pune-Bangalore Highway passes through Dharwad and literally bisects the town into old and new town. The eastern side of the National Highway consists of old Dharwad and Central Business District whereas the western part, consists of new extension of Dharwad, Deputy Commissioner's compound, Karnataka College, University etc. The National Highway cuts across the Hubli city in North-South direction seperating old Hubli and new Hubli.
A bye-pass road of the National Highway No.4 was proposed in 2000 taking diversion near Gabbur village on the south running beyond the city on the east, and joining the N.H. 4 near Narendra village at Dharwad. The bye-pass has a total length of 30.35 kms. The bye-pass will be provided with underpasses and over-passes for existing access roads, cattle passes for movement of animals and interchanges for providing access to the three important roads Karwar Road, Goa Road and Kalaghatagi Road. The bye-pass is presently designed for two lane traffic with a clean 7 meter wide paved surface. The entire stretch of this bye-pass shall have on either side, a paved shoulder. A road over bridge (ROB) will be constructed at the railway line crossing the bye-pass.

**Road pattern:**

In Dharwad the existing road system is of radial pattern. It is neither planned nor designed on any recognised pattern because of physical factors. It has always been observed that, interior cities produce circular pattern of roads. The chief characteristic of unplanned cities is the haphazard layout of roads. Hubli has the road of radial pattern. The traffic island near rural bus depot (Old Bus stand) at Hosur is the converging point for all the major roads of Hubli.
Important roads:

In Dharwad the important roads are Pune-Bangalore National Highway No.4 Karwar road, Soudatti road, Goa road, and Haliyal road (Fig. No.\text{X}4). Most of the roads and those of Dharwad city meet this road which forms the backbone of the existing road system. NH4 is the longest road which passes through the twin cities for a length of about 30 kms and its width varies form 9.15 to 11 meters. The second important road is from Dharwad to Karwar. This road enters Dharwad near Tejaswninagar, then it joins NH4 near Tollnaka (See Fig. No.\text{X}4). The width of this road is 7.2 meters. Dharwad-Soudatti road is another major road in the north-eastern part of the city. This road enters the city near Murughamath. Its width generally is 7.6 meters. The road from Vasco enters the city via Sadhanakeri which does not carry heavy traffic. Haliyal road which has a width of 5.5 meters connects Dharwad to Haliyal and Dandeli. This road enters the town near Karnataka University. Kelageri road with a width of 20 meters enters the city near Bharatinagar. The other minor roads are Byhatti road in the East, Goa frontier road in the North, Saptapur road, Station road, Maratha Colony road, Vidyaranya High School road, Hosyallapur road and Someshwar road.
Subhas road is found in the inner part of the city. It is a major shopping street of the city. Garment shops, book stalls, hardware shops, hotels and photo-studios and other are found on this road. The width of this road is 7.62 meters.

A rectangular street pattern is a common feature in all the newly residential areas developed by HDUA. This type of roads are found to the west of the National Highway No.4 namely Kalyanagar, Narayanpur, Srinagar and part of Saptapur. The roads are uniform in width and straight in alignment, which facilities swift and smooth flow of traffic.

**Zig Zag roads:**

In Dharwad city irregular and haphazard zig zag roads are found in Hosayallapur, cotton market, Haveripeth Mrutunjayanagar, Malapur and Kamalapur.

**Composition of Traffic Volume in Dharwad:**

According to the traffic survey the highest volume of traffic is on NH4 at Jubilee Circle crossing, where the maximum number of incoming and out-going vehicles with 425 fast moving vehicles towards Pune and 205 vehicles coming from Pune per hour. This road accounts for 25 per cent of the total traffic of the city. Next comes the Subhas road crossing the Bus stand which is located in the central part the city.
**Peak hour Traffic:**

In Dharwad the traffic has its peak between 10 to 11.30 in the morning and 5 to 7 in the evening, in case of majority of the intersections. The maximum traffic per hour is marked at Subhas road i.e. 3,357 while on the court side it is only 2,657. The crossing near Jubilee Circle handles the maximum volume of traffic on the Pune-Bangalore road. The next busiest road is college road from Anjuman college to Karnatak University cross as many colleges and Government office are located on either side of this road.

**City Bus services:**

Rapid urbanization with resultant increase in administrative offices, educational institutions, business and commercial activities have made it necessary for the large segment of population to depend on transport system. The Karnataka State Road Transport Corporation provides bus service to the city population. The frequency of city bus services is maximum between C.B.T and Karnatak University due to maximum floating population. There are as many as 91 buses plying from CBT to Karnatak University Campus. This works out to almost one bus for every 15 minutes. Next in importance is CBT to Agricultural
University to which as many as 50 buses ply. This works out to
one bus every 20 minutes. The number of buses would have been
almost equal to that of Karnatak University but the Agricultural
University has its own buses to pickup its employees and the
students. On an average three buses per hour ply between C.B.T.
and Railway Station. Different parts of cities including new
colonies, suburbs/villages are provided with bus service.  

The maximum frequency of buses is found between 7 a.m. to
12 noon and 5 p.m and 8 p.m. in the evening. Buses are not
adequate in number as the moving population is more.

**Road pattern in Hubli and density:**

The road pattern in Hubli is worse than that of Dharwad. The road pattern in Hubli is radial. The traffic island near rural
bus depot, Hosur is the converging point for all the major roads of
Hubli. All the major district roads and National Highway radiate
form this point.

There are a number of major roads which pass through Hubli
city. They are Pune-Bangalore National Highway No.4 Karwar
Bellary state highway and Hubli-Bijapur state highway. District
roads also pass through Hubli city. National Highway No.4 cuts
across the city in north-south direction separating old Hubli and
New Hubli. It passes through different localities of the city like Unkal, Hosur, Cotton Market, Old Hubli, New Hubli, Yellapur and Narayanapur. The width of the road is 9.15 –11 meters. Most of the roads of Hubli city join this road. The densest traffic is found on this road. It is estimated that 10 to 12 thousand tonnes of traffic passes through this road per day.

The second important road is Karwar-Bellary state highway popularly known as Karwar road although it is named differently in different areas. It runs east-west at right angles to the National Highway. This road enters the city near the electric grid in old Hubli in the west, then it runs in front of the corporation office to join NH4 near traffic Island. From there it takes a turn towards the east. The width of this road varies between 5.5 and 9.15 meter. It is calculated that nearly 400 tonnes of goods traffic moves daily on this road.

The third important road is Hubli-Bijapur state highway which enters the city near Keshwapur in the north-east. It joins Karwar road at Keswapur cross. It is also knows as Solapur road. The traffic on this road is moderate with a traffic of 400 tonnes per day. Other minor roads are to Gadag in the east, Hebbali and Byahatti in the north.
The important roads and streets, inside the city are old Hubli road which is the major shopping street in Hubli, Station road, Ganeshpeth road, Deshpande Nagar road, Hosur-Gokul road. They run parallel to NH4 Timmasagar road and Mantoor road and others.

As in the case of Dharwad, road system in Hubli is neither planned nor designed. There is no regular pattern of roads in old Hubli, Durgadbail, Bammapur and part of Yellapur. In these areas roads are zig zag and haphazard. The general width is 2.5 to 3 meters. Old Hubli and Durgadbail are the major commercial localities of Hubli. Because of narrow curved and poor quality roads in the city, traffic appears to be heavy. While the major roads of the city are always occupied by four wheelers, cycles, rikshaws. In some interior parts 60 per cent of the roads are yet to be metalled. In the rainy season all these roads get muddy and in the dry season produce long clouds of dust. It is one of the great problems of the city.

Road conditions are good in newly developed residential localities. A rectangular street pattern is found in Gokul, Rayanal, Topalgatti, Krishnapur, Narayanapur and parts of Keshwapur. These roads are uniform in width.

The density of roads is high in Hubli compared to that of Dharwad. This is because Hubli is a commercial and industrial city. The total geographical area of Hubli is 7702 hectares in which the total length of roads is 244462.99 meters. Therefore
the average density of roads works out to 27.75 feet per hectares. However, density of roads varies from one part of the city to another. The density of road is thick in the central part of the city and it decreases with increasing distance form the city center.

In the slum areas the roads are very narrow, over crowded and congested. Dharwad is one of the stations on Bangalore-Pune broadguage line and Hubli is one of the major railway junctions on the Pune-Bangalore broadguage. Hubli-Guntkal and Hubli Solapur broad guage lines start from here. Both the railway lines were introduced in the year 1878. Today Hubli has south western railway headquarters.

**Means of Communication:**

Means of communication is very very important due to globalisation. Though the postal communication services are introduced during 19th century, the system could not work out properly till 1908. Since then a number of post offices were established in Hubli and Dharwad and also suburbs and villages. Today there are 105 post offices. The postal services also passport service, EMS, Speed post service and Premium services.

Earlier there were only telegraph centres in the whole of before the use of telephones became popular, telegraph offices were more
in number. Today, due to advancement of science and technology, many organisations have come forward to extend the fastest means of communication at comparatively cheaper rate. There is only one head office of telegraphs located in Hubli and in Dharwad. Even though the fastest means of communications are available on hand, most of the government organisations still prefer the telegraph services.

As far as telephone connection is concerned in Hubli-Dharwad, the main branch of telephone exchange located in Hubli in New cotton Market area and sub-branch is located in Dharwad at Channamma park near Belgaum Toll naka. There are 16 telephone exchanges distributed in the twin city area. Of these there are 9 exchanges located in Hubli and the remaining in Dharwad. The telephone connections are also given to suburban areas and villages.

There are as many as 55,836 connections in the city and suburban villages, residential and government offices.

News paper circulation is fairly good in twin cities of Hubli-Dharwad. There are a number of newspapers printed in Hubli-Dharwad viz. Samyukta Katanatak, Deccan Herald (Prajawani), Vijaya Karnatak, and a number of local news papers.
Educational Institutions:

One of the primary functions of urban centres is to provide education to its population and also to the population of surrounding areas.

Educational institutions are the basic factors for human resource development among the various facilities. The overall improvement in the standard of education may be considered as an investment in the improvement of the quality and working efficiency in the human beings in a region. It serves as an indicator of the development which is needed by society for its progress.

Education is a crucial factor of economic development and social upliftment in any place and Hubli-Dharwad cities are no exception to this. The level of education determines the quality of people and their advancement. The right type of education endeavors to increase the productivity and general standard of people.

Dharwad is the main educational centre in North Karnataka. It has two universities, medical colleges, research institutions, engineering and many degree colleges, Pre-university colleges, training colleges and schools run by the government and private agencies. Hubli also has the same facilities – medical, engineering, technical, degree and pre-university colleges and schools.
There are many primary schools as well as high schools located at various parts of Hubli-Dharwad including in the extensions and suburban areas. Originally most of them offered Kannada as a medium of instruction. As there is great demand, many of them offer English medium also. There are a few schools which offer Marathi, Urdu and Hindi as medium of instruction.

The following table shows educational facilities in the twin cities of Hubli-Dharwad.

Table No. XII: Educational Facilities in Hubli – Dharwad, 2001

<table>
<thead>
<tr>
<th>Name of the Institution</th>
<th>No. of Institutions</th>
<th>No. of students.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools</td>
<td>201</td>
<td>2,55,954</td>
</tr>
<tr>
<td>Pre-University</td>
<td>16</td>
<td>37,252</td>
</tr>
<tr>
<td>Degree (including Educational training and law)</td>
<td>31</td>
<td>37,649</td>
</tr>
<tr>
<td>Universities</td>
<td>2</td>
<td>5,298</td>
</tr>
<tr>
<td>Technical</td>
<td>10</td>
<td>8,340</td>
</tr>
<tr>
<td>Medical</td>
<td>5</td>
<td>10,885</td>
</tr>
</tbody>
</table>

Source: 1. Education Department
2. Technical University, Belgaum
3. Karnataka Medical College
4. Karnataka University
5. University of Agricultural Sciences.

Many colleges have good facilities like library, laboratories, open space, hostels etc.,
There are two universities in Dharwad viz. Karnataka University and University of Agricultural Sciences. Karnataka University, is one of the important institutions of the country with 42 departments imparting knowledge in Arts, Science and, commerce and offering research and training facilities.

The University of Agricultural Sciences with 55 departments impart knowledge on various aspects of agriculture, veterinary courses and forestry.

Apart from these institutions, Dharwad city has many institutions under Dakshina Bharath Hindi Prachara Sabha. Hubli also has a number of degree colleges, medical, engineering colleges and technical institutes.

**Electricity and lighting:**

Electricity is one of the essential necessities of life. It is necessary for economic prosperity and civilization. Here the discussion is not with electricity as a source of power for industrial purposes but as an item of community utility. Electricity was formerly supplied to the public by private companies but today it is supplied by the Karnataka Electricity Board, a Government of Karnataka undertaking.
Before 1935, when the town was not served with electricity, kerosene lamps were the main source of street slighting as well as domestic lighting. After 1935 electricity was being supplied to the city. As the supply was very limited many of the ginning mills has their own generating sets in the beginning. After the establishment of the Mysore State Electricity Board more power was made available to Hubli-Dharwad town resulting in the establishment of a number of small and medium industries and also industrial estates at Hubli and Dharwad.

Now 110 megawatts power is supplied to Hubli and Dharwad city for domestic purposes. There are 22,012 road lighting points, 16,485 streets lights and 785 others. While the areas settled earlier have sufficient street lighting many of the new extensions of HDMC are yet to be provided with proper lighting facilities.

The rapid urbanization and increasing demand for electricity has resulted, in shortage of electricity. The total electricity supplied is 110 megawatts to domestic purpose, and government offices. In the city 40 per cent of the street lights were damaged or burnt. This may be because of out lasting the life period of bulbs or misuse by the public.
Supply of electricity has become so acute that the system of power cut is introduced everyday for every locality on a shift basis for one hour to two hours per day. This shows the supply of electricity is not keeping pace with the growing population and their living standards in the Hubli-Dharwad city.

As shortage of supply of power is a major problem faced by the twin cities and in fact the whole state, it is becoming increasingly difficult to meet the growing demand for domestic lighting, street lighting and industries.

**Marketing facilities:**

Markets are important for city development as they are an important adjunct to infrastructural facilities. Market is a meeting ground for buyers and sellers.

Hodder, B. W. (1965) stated that a market centre is an authorized public gathering at an appointed place and at regular intervals. Market centres are the places to which consumers travel to complete the process of exchanges (Berry 1967). A market place is based upon a large number of simultaneous person to person transactions. Markets may be compared to organisms with fixed functions, behavioral patterns, growth process depending upon the link in terms of a transportational network.
Generally a market place is located near other centrally placed organizations, such as places of worship, administrative offices and socio-cultural centres. In major urban areas market is located within a short distance from the residents of a town/city. Thus markets play an important role in the economic development of a region. The markets are classified as retail and whole sale, depending upon the volume of commodities traded and the type of trade transactions.

Hubli has been an important trading centre since the nineteenth century because of its location between the black soil plains, and the Karwar coast. Further with the development of modern communication faciliteis Hubli has become an important distributing centre of commodities for a large area.(Fig. No. 3.6)

The business activities both wholesale and retail have led to the inevitable trend of population growth in Hubli.

Today in Hubli the whole sale business is more or less concentrated in Deshpande Nagar, where the cotton market area and the A.P.M.C. yards are located. This has the sales of grains and cotton, cloth and stationery goods. Another area for wholesale trade is Hirepeth and the adjacent area, around Durgadbail. New Hubli has retail and whole sale trade of flowers, fruits, vegetables and grocery. With the development of engineering industries, many shops, trading in the engineering goods, electronics and software have further added their contribution in such growth.
LOCATION OF MARKET CENTER IN HUBLI CITY

Fig. 7.6
Retail shops with various types of goods are found in Durgadbail, Belgaum Galli, Maratha Galli, Hirepeth and station road.

There are retail shops spread near the Tuljabhavani temple, Hosur market, Gandhinagar, Akkihonda, Keshwapur, along the National Highway, the Bijapur road and Ganeshpeth. Organized shopping centres in Hubli city have not developed at the expected rate because of inadequacy of buildings and lack of adequate parking and servicing facilities.

Dharwad is not known as a commercial centre but never the less it has a fairly good volume of wholesale trade in cotton, oil seeds and food grains. (E:R Y:V)

Many new shops and commercial centres have come up in recent years along the main roads of the city.

Central large scale business areas are located in the old town and at the main Cotton market and Raviwar peth. Newly developed areas like Srinagar and Saptapur,Narayanapur, Yemmikeri, Railways station road, Vidyagiri and other have retail business. Along Azad park and Belgaum road and around Municipal Corporation, and near Muraghamath there are many footpath hawkers.
LOCATION OF COMMERCIAL CENTRE IN DHARWAD CITY

Fig. v^
If there is hindrance to fast growth, it is because buildings housing these enterprises are inadequate and parking space very limited even in Dharwad.

**Cultural and Recreational Facilities:**

Recreational facilities help efficiency of people and indirectly add to the development of city. To assess the development of recreational facilities in Hubli-Dharwad, facilities like cinema halls, auditorium, community halls, public libraries, reading rooms and parks have been taken into consideration.

Cinema is considered to be the most powerful and popularly known entertainment facility which can make a person joyful irrespective of his age and economic status. At present in Hubli-Dharwad there are 25 cinema halls and on an average there is one cinema hall per 31,440 persons.

Auditoriums and community halls are essential in the present Hubli-Dharwad cities for the purpose of various cultural and other activities. Hubli and Dharwad have 15 auditoriums and 43 community halls. On an average population with facility of auditorium in the Hubli-Dharwad area is one for 50,241 and with community hall facility is one for 18,279.

However, it can be observed that the number of recreational facilities are far less than the expected demand.
The stadium is a good indicator to assess the healthy development of urban centres. As stadium gives entertainment to urban residents through games and cultural activities conducted by government and various non-government organizations. These stadiums also give an opportunity to the younger generation to grow fast in the field of sports by providing modern facilities. In Hubli-Dharwad there are 5 stadiums.

Library and reading room facilities are available in Hubli-Dharwad area, indicating the progress of literacy standard and levels of development. Hubli-Dharwad has got 23 libraries including reading rooms. The average population per library and reading room in the study area is 34,174. In the study area we can find the highest number of libraries compared to other urban centres of North Karnataka. In addition to the libraries, there are also mobile libraries and circulating libraries in the twin cities of Hubli-Dharwad.

There are public parks for recreational purposes, in both Hubli and Dharwad. Beside those long established ones, new colonies have also left some open spaces for the parks and recreational facilities for children.

The twin cities also have swimming pools and clubs.