

**Research Study Series
Number 65**

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Urban Sector Profile : Karnataka

Sponsored by
Asian Development Bank, Manila, Philippines
Urban Sector Profile Project
ADB TA No. 2098-IND

National Institute of Urban Affairs
New Delhi, India
April, 1998

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PREFACE

The Asian Development Bank (ADB) has provided a technical assistance (TA) Grant to the Ministry of Urban Affairs and Employment, Government of India, for preparation of an Urban Sector Profile. The primary objectives of the TA are to address the urgent sectoral issues and to guide ADB's future sectoral investment and technical assistance programming in India. The National Institute of Urban Affairs, New Delhi, has been entrusted with the responsibility of coordinating all the activities of the TA.

As a part of the Urban Sector Profile Project, State Urban Profiles have been prepared for five states, namely, Andhra Pradesh, Gujarat, Karnataka, Rajasthan and Tamil Nadu. Each State Profile also focuses on a city which either has significant potential for urban-economic development and/or has acute urban problems which need immediate attention.

The focus of the current urban reforms in India is on improving governance at the state and local levels. The state and city profiles would enable identification of specific needs for reforms as well as areas of strategic interventions. The state and city profiles cover analysis of urbanisation trends and patterns, the legislative and institutional framework for urban development, status of urban infrastructure and services, review of municipal finance and estimates of flow of finances for urban development in the state. These profiles also make an attempt to identify critical areas for urban sector reforms and potential sub-sectors/areas which require further investment and development as well as major strategies for urban development.

The state and city profiles have been prepared with the help of regional institutions and local resource persons. I very much appreciate the cooperation of the regional institutions and contribution made by the resource persons. At the Institute, Dr. Pushpa Pathak, Associate Professor, has coordinated the research work that was undertaken by the regional institutions and local resource persons as well as the preparation of these reports for publication by the Institute staff.

I am grateful to the Ministry of Urban Affairs and Employment, Government of India and the Asian Development Bank, Manila for their support. I hope that these studies will provide useful insights for formulating their state-level interventions for urban development.

April 1998



Vinod K. Tewari
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ABBREVIATIONS

ADB	Asian Development Bank
BDA	Bangalore Development Authority
BHEL	Bharat Heavy Electricals Limited
BWSSB	Bangalore Water Supply and Sewerage Board
CC	City Corporation
CDP	Comprehensive Development Plan
CITB	City Improvement Trust Board
CMC	City Municipal Council
DK	Dakshina Kannada
GEM	Generators of Economic Momentum
GOK	Government of Karnataka
HAL	Hindustan Aeronautics Limited
HALDEP	Housing and Land Development Programme
HMT	Hindustan Machine Tools
HUD	Housing and Urban Development
HUDCO	Housing and Urban Development Corporation
IDPM	Infrastructure Development Programme
IDSMT	Integrated Development of Small and Medium Towns
IIM	Indian Institute of Management
IISc	Indian Institute of Science
ISRO	Indian Space Research Organisation
ITI	Industrial Training Institute
KEB	Karnataka Electricity Board
KHB	Karnataka Housing Board
KIADB	Karnataka Industrial Area Development Board
KUDS	Karnataka Urban Development Strategy
KUIDFC	Karnataka Urban Infrastructure Development and Finance Corporation
KUWS&DB	Karnataka Urban Water Supply and Drainage Board
LIC	Life Insurance Corporation
LPA	Local Planning Area
LPCD	Litres Per Capita Daily
MC	Municipal Corporation
MGD	Million Gallons Per Day
NA	Notified Area
NCU	National Commission on Urbanisation
NIUA	National Institute of Urban Affairs
NRY	Nehru Rozgar Yojana
ODA	Overseas Development Administration of United Kingdom
ODP	Outline Development Plan
OECE	Overseas Economic Cooperation Fund of Japan

OPEC	Organisation of Petroleum Exporting Countries
PRI	Panchayat Raj Institution
RCC	Reinforced Cement Concrete
SC	Scheduled Caste
SFC	State Finance Commission
SPUR	Spatial Priority Urbanisation Region
ST	Scheduled Tribe
STEM	Centre for Symbiosis of Technology, Environment and Management
T&CP	Town and Country Planning
TMC	Town Municipal Council
TP	Treatment Plant
UA	Urban Agglomeration
UBSP	Urban Basic Services for the Poor
UGD	Underground Drainage
UK	Uttara Kannada
ULB	Urban Local Body
WBM	Water Bound Maccadam

SECTION - I

KARNATAKA STATE PROFILE

I. TRENDS AND PATTERNS OF URBANISATION

INTRODUCTION

Karnataka occupies the eighth place among the states in the country, both in terms of area and population. Its comparison with the other major states in terms of population size is shown below in Table 1.1.

Table 1.1
Population of Major States, 1991

India/State	Population (million)
Maharashtra	78.75
Gujarat	41.17
Uttar Pradesh	139.03
Madhya Pradesh	66.16
Tamil Nadu	55.64
Kerala	29.03
Karnataka	44.81
India	844.32

The state of Karnataka, known as Mysore till 1973, was formed after the state's reorganisation in 1956. Its core was the old princely state of Mysore, with the integrating areas of the districts of Belgaum, Bijapur, Dharwad and Uttara Kannada, from the erstwhile Bombay state, the districts of Bidar, Bellary (which had been earlier transferred from Madras to Hyderabad), Gulbarga and Raichur from Hyderabad state, Dakshina Kannada and the taluk of Collegial from Madras state, and the territory of Coorg. Each of the areas that joined to form the new State carried with it different stages of economic growth and administrative traditions, which have played an important part in their future pattern of development.

The state is divided into 4 divisions and 20 districts (Table 1.2), which broadly provide physical contiguity and administrative coherence to make for efficient administration.

Table 1.2

Districts by Division, Karnataka, 1991

Name of division	Name of district
Bangalore	Bangalore Urban, Bangalore Rural, Tumkur, Shimoga, Chitradurga, and Kolar.
Belgaum	Dharwad, Uttara Kannada, Belgaum, and Bijapur.
Gulbarga	Bellary, Raichur, Gulbarga, and Bidar.
Mysore	Mysore, Hassan, Chikamagalore Hassan, Kodagu, and Dakshina Kannada.

Broadly, the Bangalore and Mysore divisions represented the old state of Mysore; the Belgaum division came to be known as Bombay - Karnataka; and the Gulbarga division as Hyderabad - Karnataka.

The state consists of three distinct geographic regions: a) the narrow coastal region along the Arabian Sea, stretching for about 300 kms; b) the hilly or Malnad region that flanks the coastal region. This is a part of the Western Ghats, running from the western edge of Belgaum district in the north to Kodagu in the south. Some of the thickest rain forests in the country are found here, and it is the place of origin of major rivers which traverse the state; and c) the plains, which occupy the rest of the state east of the Ghats. The major part of the state lies in the plains, a part of Deccan Plateau, which is divisible into the northern and the southern plains, on the basis of topography, soil and climate.

URBANISATION TRENDS

Karnataka is among the more urbanised states in the country, occupying the fourth place in this regard, with 30.91 per cent of its total population living in cities and towns. It ranks below Maharashtra, Gujarat and Tamil Nadu in this respect, but is well above the national average of 25.72 per cent (Table 1.3).

Table 1.3**Percentage of Urban Population in Major States, 1991**

India/State	Total population (million)	Urban population (million)	Urban population as percentage of total population
Maharashtra	78.75	30.50	38.73
Gujarat	55.64	19.03	34.40
Tamil Nadu	41.17	14.16	34.20
Karnataka	44.81	13.85	30.91
India	844.32	217.18	25.72

During the decade 1971-81, the urban growth rate of Karnataka was at an uncomfortable high of 50.65 per cent compared to the national rate of 46.24 per cent, causing over-crowding of urban areas and a severe pressure on civic services. In the next decade, however, during 1981-91, it fell to 29.09 per cent, lower than the national rate of 36.19 per cent. It is to be noted that the state's population increased by 20.66 per cent compared to the country's increase of 23.56 per cent. The relation of urban growth to total growth is shown in Table 1.4.

Table 1.4**Growth Rate of Population by Rural and Urban Areas, 1981-91**

India/State	Decadal growth rate (%)		
	Total	Rural	Urban
Karnataka	20.66	17.23	29.09
India	23.56	19.71	36.19

Karnataka's high urban growth during 1971-81 was caused mostly by migration and national increase than by the enlargement of urban areas (Table 1.5).

Table 1.5**Components of Urban Growth**

(in per cent)

Components	India	Karnataka
Natural Increase	41.25	34.81
Migration	40.13	54.81
Reclassification	18.60	10.37

A study conducted by the National Institute of Urban Affairs in 1988 reveals that the migration figures for Karnataka are the highest for any state in the country (except for Andaman and Nicobar Islands).

Migration, which contributes a significantly high proportion to urban growth, is a crucial factor to be considered in urban planning. It occurs both from rural to urban areas, as well as from smaller urban to larger urban areas. It is of considerable significance to urban planners that in Karnataka, 53 per cent of all migrants are urban - urban migrants. Urban-urban migrants do not contribute to over-all urban growth figures but they are an important factor in considering the hierarchy of towns, and the excessive economic clout that the larger urban settlements have come to possess. Table 1.6 shows the movement of rural to urban and urban to urban migrants during 1971-81.

Table 1.6**Urban Migrants during 1971-81**

State	Migrants		
	Total	Rural-Urban	Urban - Urban
Karnataka	873,429	402,652	469,442

Population Distribution by Size of Urban Centre

The 13.85 million urban dwellers in Karnataka live in the 254 urban settlements listed in the 1991 census (Table 1.7). It may be seen that as much as 64.6 per cent of the urban population lives in the 21 Class I towns, i.e., those with over 100,000 population. These figures

suffer from considerable distortion on account of the mega city, Bangalore, which with a population of 4.1 million, accounts for 29.5 per cent of the entire urban population of the state and 64 per cent of the population of all the 21 Class I towns. The smaller towns, especially those below 50,000 population (Class III and below) are in large numbers (85%), but contain only 28 per cent of the population. The 134 out of 254 towns, with population below 20,000 account for barely 10 per cent of the urban population.

Table 1.7

Distribution of Towns/Urban Agglomerations and Urban Population by Size Class of Towns, 1991

Population/Size Class	No. of towns/UAs	Proportion of towns/UAs to total No. of towns/UAs	Aggregate population	Percentage of aggregate population to total urban population
Class I (100,000 & above)	21	8.27	8,947,057	64.60
Class II (50,000-99,999)	17	6.69	1,017,913	7.35
Class III (20,000-49,999)	82	32.28	2,449,085	17.68
Class IV (10,000-19,999)	70	27.56	1,070,540	7.73
Class V (5,000-9,999)	40	15.75	289,555	2.09
Class VI (Below 5,000)	24	9.45	76,555	0.55
All classes	254	100.00	13,850,702	100.00

The number and population of urban centres by size class during 1971-91 is given in Table 1.8a and growth of urban population by size class is given in Table 1.8b. It is observed that although the proportion of urban population in class I cities has increased from 51.32 per cent in 1971 to 64.60 per cent in 1991, this class of urban centre has observed a drastic decline in its growth rate during 1981-91. On the other hand, Class II and Class IV towns have shown a significant increase in their growth rate of urban population during the same period.

Table 1.8 (a)
Number and Population of Urban Centres, 1971-91

Size Class/ Population	No. of UA's/Towns			Population		
	1971	1981	1991	1971	1981	1991
All Classes	227	250	254	7,122,093	10,729,606	13,850,702
Class I (100,000 & Above)	12	17	21	3,655,006	6,294,438	8,947,057
Class II (50,000-99,999)	9	11	17	5,98,028	6,90,849	1,017,913
Class III (20,000-49,999)	38	64	82	1,095,459	1,902,813	2,449,085
Class IV (10,000-19,999)	97	100	70	1,356,524	1,471,934	1,070,540
Class V (5,000-9,999)	45	42	40	3,29,315	3,07,545	2,89,552
Class VI (Below 5,000)	26	16	24	87,761	62,027	76,555

Table 1.8 (b)
Growth of Urban Population by Size Class of Towns, 1971-91

Population/Size class	Proportion of population in each size class to total urban population			Decadal growth rate (%)	
	1971	1981	1991	1971-1981	1981-1991
All Classes	100.00	100.00	100.00	50.65	29.09
Class I (100,000 & above)	51.32	58.66	64.60	72.21	42.14
Class II (50,000-99,999)	8.40	6.44	7.35	15.52	47.34
Class III (20,000-49,999)	15.38	17.73	17.68	73.70	28.71
Class IV (10,000-19,999)	19.05	13.72	7.73	8.51	27.27
Class V (5,000-9,999)	4.62	2.87	2.09	6.61	5.85
Class VI (Below 5,000)	1.23	0.58	0.55	29.32	23.42

The spread of population and the level of urbanisation in the four administrative divisions of the state is shown in Table 1.9. The two divisions of Bangalore and Mysore, which lie below the Tungabhadra river, houses two-thirds of the State's urban population. On the Bangalore-Mysore axis, and in the cluster of Bangalore, Kolar, Tumkur and Mysore districts live 6.55 million persons or 48 per cent of the urban population of the state.

Table 1.9

Urban Population by Division, 1991

Name of Division	Population (million)		Urban population as percentage of total population
	Total	Urban	
Bangalore	15.07	6.44	42.73
Mysore	10.57	2.49	23.78
Belgaum	11.16	2.95	26.43
Gulbarga	8.01	1.91	23.87
Karnataka	44.81	13.85	30.91

The 22 Urban Agglomerations listed in the 1991 census, where the urban spread has gone beyond their civic boundaries, are distributed over different classes of towns. In many cases, the UAs contain within their fold more than one urban local body.

The population and decadal growth rates of Class I and Class II towns/UAs are given in Tables 1.10 and 1.11.

Table 1.10

Population and Decadal Growth Rate of Class I Towns/UAs

Towns	Population 1991 (million)	Growth rate (%)	
		1971-81	1981-91
All Class I Towns	8.95	72.21	42.14
Bangalore UA	4.09	75.56	39.87
Mysore UA	0.65	34.69	36.15
Hubli-Dharwad MC	0.65	39.02	22.87
Mangalore UA	0.43	37.05	39.11
Belgaum UA	0.40	40.44	33.71
Gulbarga UA	0.31	52.02	40.05
Davangere UA	0.29	62.35	46.02
Bellary CMC	0.25	61.03	26.58
Bijapur UA	0.19	41.74	31.04
Shimoga UA	0.19	47.78	26.92
Tumkur UA	0.18	54.19	65.18
Raichur UA	0.17	56.28	36.66
K.G.F. UA	0.16	21.47	8.32
Bhadravathi UA	0.15	28.86	14.18
Hospet UA	0.13	51.44	16.98
Gadag-Betigeri CMC	0.13	22.99	14.10
Bidar UA	0.13	55.63	65.86
Mandya CMC	0.12	39.03	19.63
Udupi UA	0.12	12.30	252.39
Hassan UA	0.11	39.37	51.62
Chitradurga UA	0.10	48.41	38.57

Table 1.11
Population and Decadal Growth Rate of Class II Towns/UAs

Towns	Population 1991 (million)	Growth rate (%)	
		1971-81	1981-91
All Class II Towns	1.02	15.52	47.34
Kolar CMC	0.08	51.63	26.41
Gangavathi UA	0.08	69.52	38.09
Bagalkot CMC	0.08	31.14	13.21
Ranibennur CMC	0.07	42.62	16.00
Harihar TMC	0.07	54.43	27.37
Chickamagalur CMC	0.06	45.49	0.38
Rabkavi-Banahatti CMC	0.06	37.81	17.24
Channapatna	0.06	55.66	8.84
Doddaballapur CMC	0.05	32.49	15.48
Dandeli CMC	0.05	87.32	10.65
Shahabad UA	0.05	58.73	11.03
Gokak TMC	0.05	41.84	22.45
Nippani CMC	0.05	18.99	23.55
Karwar CMC	0.05	70.00	8.05
Sirsi UA	0.05	36.15	30.82
Ramanagaram TMC	0.05	39.96	14.86
Chintamani TMC	0.05	46.93	28.48

Population Distribution by Districts

There is considerable disparity in the levels of urbanisation of the various districts. The most urbanised district is Bangalore, with 85.82 per cent population living in urban areas. The least is Kodagu, with only 16 per cent. Apart from Bangalore, the most urbanised districts are Dharwad (34.95%), Bellary (29.93%), Mysore (29.76%) and Dakshina Kannada (28.31%).

The districts, however, exhibit sharp variations between the level of urbanisation already achieved, and the rate of urban growth during the decade 1981-91. The most urbanised districts did not invariably grow at the fastest rate. Chitradurga (40.88%), Bangalore (40.28%), Tumkur (40.22%) and Raichur (39.65%) are among the districts of maximum urban growth. On the other hand, growth has been the least in Chickmagalur (7.40%), Uttara Kannada (8.30%) and Kodagu (8.71%), indicating lower economic and social attraction of the towns in those districts and higher level of parity between the urban and rural areas in that respect. Urban growth rate was lower than the rural growth rate in the districts of Bellary, Chickmagalur, Dharwad, and Dakshina Kannada. Table 1.12 illustrates the position.

Table 1.12
Growth of Urban Population by Districts

State/District	Population 1991 (million)		Urban population as percentage of total population		Decennial growth rate (%) 1981-91	
	Total	Urban	1981	1991	Total	Urban
KARNATAKA	44.81	13.86	28.89	30.91	20.66	29.09
Bangalore	4.81	4.13	84.14	85.52	37.52	40.28
Bangalore (R)	1.66	0.30	17.37	18.21	14.62	20.14
Belgaum	3.52	0.84	22.54	23.88	18.21	25.23
Bellary	1.87	0.56	33.05	29.93	26.69	14.76
Bidar	1.25	0.24	17.82	19.49	25.78	37.56
Bijapur	2.92	0.69	24.09	23.58	21.53	18.96
Chickmagalur	1.02	0.17	17.54	16.88	11.54	7.40
Chitradurga	2.18	0.59	23.50	27.02	22.55	40.88
Dakshina Kannada	2.59	0.76	24.47	28.31	13.27	31.03
Dharwad	3.50	1.22	35.25	34.95	18.80	17.80
Gulbarga	2.57	0.60	22.86	23.48	23.74	27.06
Hassan	1.57	0.27	14.63	17.38	15.45	37.19
Kodagu	0.49	0.08	15.52	16.06	5.05	8.71
Kolar	2.21	0.52	22.45	23.34	16.14	20.73
Mandya	1.64	0.27	15.42	16.23	15.80	21.15
Mysore	3.16	0.94	27.61	29.76	21.57	31.98
Raichur	2.31	0.48	19.27	20.62	29.26	39.65
Shimoga	1.91	0.51	26.72	26.53	15.08	18.67
Tumkur	2.30	0.39	13.77	16.59	16.35	40.22
Uttara Kannada	1.22	0.20	2.32	24.17	13.49	8.30

Certain important towns in each of the districts contain a considerable portion of the urban population of the district. Bangalore, of course, is an urban district, with Bangalore UA accounting for 99.06 per cent of its urban population. To a lesser extent, Mysore UA (60.46%), Mandya CMC (65.01%), Mangalore UA (55.87%), and even Bidar UA (53.60%), account for a large portion of the urbanites in their respective districts. On the other hand, there is a wider spread of urbanisation in the districts of Bijapur, Shimoga, and Kolar, where the important towns of Bijapur UA (28.04%), Shimoga UA (30.09%), and KGF UA (30.28%), account for smaller proportion of urbanites (Table 1.13).

Table 1.13

Population of Important Cities as Percentage of Urban Population of the Districts, 1991

UA/City/Town	Population (million)		Population of UA/city as percentage of urban population of district
	Total	Urban	
Bangalore UA	4.09	4.13	99.06
Belgaum UA	0.40	0.84	47.77
Bellary CMC	0.25	0.56	43.51
Bidar UA	0.13	0.24	53.60
Bijapur UA	0.19	0.69	28.04
Chickmagalur CMC	0.06	0.17	35.42
Davangere	0.29	0.59	48.79
Mangalore UA	0.43	0.76	55.87
Hubli-Dharwad MC	0.65	1.22	57.95
Gulbarga UA	0.31	0.60	51.28
Hassan UA	0.11	0.27	39.83
Madikere TMC	0.03	0.08	36.88
K.G.F. UA	0.16	0.52	30.28
Mandya CMC	0.12	0.35	65.01
Mysore UA	0.65	0.94	60.46
Shimoga UA	0.10	0.51	30.09
Tumkur UA	0.18	0.38	43.00
Dandeli CMC	0.05	0.29	47.90

REGIONAL GROWTH PATTERNS

A useful classification for the purpose of our study is the division of the state into regions, based on geographic and socio-economic relatedness. The 20 districts in the state (after the split up of Bangalore district into Bangalore-urban and Bangalore-rural) are grouped into 4 regions as given in Table 1.14.

Table 1.14

Districts by Region : Karnataka

Southern	Northern	Malnad	Coastal
Bangalore-Urban	Belgaum	Hassan	Uttara Kannada
Bangalore-Rural	Dharwad	Chikmagalur	Dakshina Kannada
Kolar	Bijapur	Shimoga	
Tumkur	Raichur	Kodagu	
Chitradurga	Gulbarga		
Mandya	Bidar		
Mysore	Bellary		

Table 1.15 shows the trends of urban growth in each of the regions. It may be seen that in 1991 the Northern region had as many as 106 out of 254 towns in the state, though only 25.1 per cent of its population dwelt in these towns. This is a contrast with the Coastal region, where 30 urban centres contained 26.3 per cent of its population. The North represents a high rate of dispersal of urbanisation. The Southern region has a high rate of urbanisation mainly due to the location of Bangalore metropolis. The Southern and Northern regions are much larger in area and population than the Malnad and the Coastal regions. More than 85 per cent of the total urban population in the state live in these two regions, which secured in 1991 a marginal increase over its 1981 share. Correspondingly, the urban share in the Malnad and Coastal regions declined by about 1.7 per cent from 1981. The role of the metropolitan city of Bangalore in the growth figures for the southern region has to be noted.

Table 1.15**Growth of Urban Population by Regions**

Region/State	Number of urban centres		Percentage of urban population in regions		Urban growth rate (%)	
	1981	1991	1981	1991	1971-81	1981-91
Southern	69 (27.6)	72 (28.3)	28.1 (48.9)	30.9 (51.4)	46.2	30.2
Northern	105 (42.0)	106 (41.7)	25.4 (35.2)	25.1 (33.8)	46.6	25.9
Malnad	46 (18.4)	46 (18.1)	18.5 (8.1)	19.2 (7.4)	33.0	18.3
Coastal	30 (12.0)	30 (11.8)	24.9 (7.9)	26.3 (6.9)	64.2	19.0
State	250 (100.0)	254 (100.0)	28.9 (100.0)	30.9 (100.0)	50.7	29.1

Note: Figures in parentheses are per cent share in state.

An analysis of the growth pattern in the towns of the various regions shows interesting results. Table 1.16 illustrates these trends.

Table 1.16**Population Growth of Towns by Regions**

Region/State	Number of towns with population growth			
	Less than 20 per cent		More than 50 per cent	
	1971-81	1981-91	1971-81	1981-91
Southern	5 (7.2)	31 (43.1)	13 (18.5)	4 (5.6)
Northern	12 (11.4)	57 (53.8)	13 (12.4)	3 (2.8)
Malnad	16 (34.8)	34 (73.9)	2 (4.3)	3 (6.5)
Coastal	6 (20.0)	24 (80.0)	3 (10.3)	1 (3.1)
State	39 (15.6)	146 (57.5)	32 (12.8)	11 (4.3)

Note: Figures in parentheses are percentage of towns to total number of Towns.

A large percentage of towns in the Malnad and Coastal regions registered growth rates of less than 20 per cent. It is to be noted that the overall population growth rate is the lowest in the coastal region. The other two regions have a sizeable percentage of towns which had medium to high growth rates.

Table 1.17 shows the economic growth of the regions as indicated by per capita income. It is interesting to observe that the per capita income of the Malnad and Coastal regions are substantially higher than that of the other regions. The worst condition is observed in the Northern region. This is in line with other socio-economic indicators of the Malnad and Coastal regions where literacy, employment of women, age of marriage, growth of population, etc. show over those in the other two regions. It would appear that the rich agricultural and natural resources of the coast and the Malnad is able to sustain its population at higher standards of living.

Table 1.17

Per Capita Income of Regions, 1980-81 and 1990-91

Region/State	Per capita income at current prices		% of non-primary sector in income	
	1980-81	1990-91	1981	1991
Southern	1576	5023	51.8	56.0
Northern	1416	3944	50.3	53.1
Malnad	1627	5130	36.8	42.7
Coastal	1830	5136	55.0	64.2
State	1527	4631	54.2	61.3

CONCLUSION

Any discussion on the urban profile of Karnataka would be incomplete without special mention of Bangalore, the mega city. With a population of 4.09 million, it accounts for 29.5 per cent of urban population, and 9 per cent of the entire population of the state. It is notable that the next largest cities, Mysore, Hubli-Dharwad, both have population of 0.65 million, which is only 15 per cent of Bangalore's. This wide gap has caused considerable urban distortion in the state, and more so as Bangalore is located in its extreme south-eastern corner.

The growth of Bangalore, relative to the other towns of Karnataka, has been extremely rapid since independence. In 1941, its population was 2.7 times that of Mysore, but in 1991 it

was 6.3 times. Its salubrious climate, excellent communication links, and well planned infrastructure, has attracted top of the line industrial, educational and scientific institutions. It is here that the snowball effect is most evident. Despite the several steps taken to prevent overcrowding, Bangalore continued to grow both in numbers and economic strength, and is even today attracting large investments in banking and finance, software, information technology, and other sunrise activities.

The growth of Bangalore has lead to an uneven urban development in the state, which does not have any other city even close to the million mark. It has monopolised for itself much of the investments both public and private, which ought to have been dispersed throughout the state. At the same time, it is struggling to provide the basic infrastructural needs of the huge population that it carries, while defying all efforts to limit its growth.

II. STATE URBAN DEVELOPMENT POLICY AND STRATEGY

STATE POLICY ON REGIONAL URBAN SECTOR

Though urban centres have developed very fast to become not only big cities but also metropolitan centres, no comprehensive urban development policy was ever thought of either by the Government of India or any state government. Ad-hoc and piece-meal policies and programmes are being implemented both at centre and at the state level. It was only the Third Five Year Plan which made a mention of the need for an Urban Development Policy. The Fourth Five Year Plan document emphasised the need for slowing down of urbanisation process and also dispersal of urban population by developing smaller towns. The Fifth and Sixth Five Year Plans made a mention of four important objectives of urban development, namely : 1) augmenting civic services; 2) promoting development of smaller towns and non-urban centres to ease the pressure of increased urbanisation on metropolitan cities; 3) implementation of the national level urban development projects; and 4) to make efforts to tackle the problem of metros on a more comprehensive and regional basis.

But in actual practice, these objectives have remained on paper as there was hardly any attempt to allocate adequate funds for achieving these objectives.

The Eighth Five Year Plan enumerated the convergence of all related programmes to create the desired impact on small and medium towns beyond the threshold level in order to consolidate the spatial and economic dimensions of urban development by making it operational. The specific thrust has been to strengthen the rural-urban linkages and to develop both agriculture and employment generating non-agricultural activities in order to provide an effective avenue for absorption of surplus rural labour. For this, the spatial aspect of development has been recognised to provide an integrated plan for developing a hierarchy of rural and urban settlements in which small and medium towns provide the forward and backward linkages.

In identifying towns and cities, it was emphasised that priority should be given to primary economic functions and then integrated with service level deficiency of the primary economic functions and then integrated with service level deficiency of the towns. Coordination of the related programmes of the Ministry of Urban Affairs and Employment, (IDSMT scheme) and integration with employment generation scheme under NRY, UBSP are emphasised. Legal framework and management of urban government as well as various modes of funding urban development by mobilising internal resources and institutional finances have been enumerated.

The draft Eighth Five Year Plan of Karnataka has stated the objectives of urban development as follows : 1) to evolve a desired pattern of balanced regional development and to create effective linkages between urban and rural areas; 2) to pursue policies to distribute the urban population proportionately among various classes of towns and regions; 3) to contain the rate of growth of metropolitan and other large cities by dispersing economic activities; and 4) to provide at least a minimum level of resources for providing life of good quality to people in both urban and rural areas.

The other measures proposed to be take up in urban areas were : 1) formation of ring roads; 2) provision of protected water supply and sewerage; 3) encouraging cooperatives and private house builders; 4) devolution of higher allocation to the ULBs; 5) imparting technical training to municipal staff; 6) revision of property tax in order to mobilise resources for ULBs; 7) creation of an urban development bank to finance infrastructural development; 8) simplifying the procedure of land acquisition in urban areas; and 9) to continue the scheme of IDSMT with an emphasis on limiting the total number of towns to be covered with higher outlays rather than thinly spreading outlays on a large number of towns.

INSTITUTIONAL AND FISCAL REFORMS

Amendment of Constitution

The Constitution of India had not made local self-government a Constitutional obligation. While the State List referred to village panchayats there was no specific reference to municipalities except implicitly in entry 5 of the State List which placed local self-government as a responsibility of the States. This imbalance has been solved with Parliament's enactment of Constitution (74th) Amendment Act, 1992 pertaining to municipalities. The 12th Schedule of the Constitution (74th) Amendment Act contains the functions of urban local bodies.

State Municipal and Urban Development Acts

Karnataka has amended by Municipal Act to meet the requirements of the above Constitution Amendment. But coordination of activities between municipal authorities, urban planning and development authorities and the infrastructure development authorities is yet to be worked out. Amendments are needed in many other areas including Land Revenue Act, Urban Land (Ceiling and Regulation) act, etc. These are set to be enacted by the State Legislature for smooth functioning of urban development activities. Moreover, development of peripheral areas or fringe areas of urban centres will be a joint responsibility of Panchayat Raj institutions and urban local bodies. Karnataka Town and Country Planning Act has visualised the problem and it can regulate developments, where it is extended to all the towns and cities. But the Act is applicable at present to only 50 urban areas out of 254 declared as Local Planning Areas.

Constitution of District Planning Committees

According to the Constitution (73rd and 74th) Amendment Acts, matters concerning the urban-rural interface are entrusted to a District Planning Committee, which has to consolidate the plans prepared into a development plan for the entire district. These Committees are yet to be constituted for each district of Karnataka. It will no doubt have sufficient representation for elected representatives, but not for experts like engineers, town planners and architects. Moreover, a committee at the district level can function more as an economic planning committee than a physical planning one for each of the human settlements in the district. Therefore, urban local bodies need institutional reforms to meet the challenge of rapid urbanisation.

Elections to ULBs

As per the 74th Amendment of the Constitution, elections to all the ULBs have been completed (except a few where the elections have been postponed). By and large the Corporations and Councils have also been constituted in all towns and cities of Karnataka.

Regional Development Boards/Authorities/Agencies

In view of wide disparities in the development process of different regions, the state government has established regional development boards specifically to give special focus and emphasis for the development of the backward regions. The Hyderabad Karnataka Development Board was established as a coordinating agency for the development of five backward districts of northern Karnataka, Malnad Area Development Programme, Border Area Development Programme, Western Ghats Development Programme is being implemented as a special area development programme with additional budget allocations.

Backward Regional Development Programme

Backward area development is undertaken by different departments of government through locations of irrigation and agricultural projects in backward and remote areas, such as districts of Hyderabad - Karnataka region in the state. The location policy is designed to encourage starting of industries, through various incentives in backward districts of the state. Karnataka Industrial Area Development Board (KIADB), through construction of industrial sheds and developing industrial estates in different towns is encouraging decentralised location of industries and providing infrastructure facilities for industrial growth. Identification of growth centres is another technique adopted earlier for encouraging growth of industries in small and medium towns.

Coastal Development Programme

Coastal region of Karnataka is a narrow strip of about 60 to 80 kms. wide and 300 km. long in Dakshina Kannada and Uttara Kannada districts, lying between the Arabian sea and the Sahyadri hills of Western Ghats. The region has heavy rainfall and is covered by thick ever-green forests. The coastal environment is very fragile and care is needed to preserve the environment, while development programmes are undertaken in this region. The estuaries and the sea have rich marine wealth and water pollution will adversely affect it. Study reports are prepared by government of Karnataka under various programmes for development of urban and rural areas of the Coastal region without damaging the environmental condition of the region. However, increase in urban population, particularly around cities like Managalore, Udupi, Karwar and Dandeli, demands more urban land for habitation and economic activities and provision of infrastructure. Integrated development of small and medium towns in Coastal region will help in decentralising population concentration and avoiding adverse effects on the environment.

CIVIC ADMINISTRATION

The civic administration in the State is carried out through Urban Local Bodies, graded according to the population of the towns and other criteria into Municipal Corporation, City and Town Municipalities, and Town Panchayats. The Constitution (74th) Amendment Act, 1992, which came into effect from 1993, is expected to bring about a tremendous change in the scope and functions of these organisations. The ULBs have become vested with a constitutional status for the first time. The 74th Amendment provides for the reconstitution of the Municipal bodies, with the notable inclusion of Ward Committees which will bring local democracy within the immediate reach of the people. It seeks to empower the ULBs functionally by enlarging their domain and by defining their functions in the Twelfth Schedule of the Constitution. It provides for the setting-up of a State Finance Commission to recommend the devolution of funds to them, which is expected to strengthen their financial capacity considerably. The ULBs would thus have far greater responsibilities than in the past, and also the means to discharge them.

The ULBs in Karnataka are governed by the Karnataka Municipal Corporation's Act, 1976, and the Karnataka Municipalities Act, 1964, (and Amendment Act of 1994). Prior to the Amendment Act of 1994, there were 176 ULBs. Their composition is given in Table 2.1.

Now, ULBs have been graded into a four-tier system: City Corporations with a population of more than 300,000, City Municipal Councils with a population of 50,000 and above, and Town Municipal Councils with a population of 20,000 and above. The Town Panchayats have, not less than a population of 10,000, with the important provision that a taluka headquarter is exempt from this qualification. Their number and the total population in each category is shown below in Table 2.2.

Table 2.1**Urban Local Bodies in Karnataka, 1993**

Class of ULB	Number
City Corporations	6
City Municipal Councils	19
Town Municipal Councils	136
Notified Area Committees	13
Sanitary Boards	2
Total number of ULBs	176

Table 2.2**Population of Urban Local Bodies in Karnataka, 1994**

Class of ULB	Number	Population
City Corporations	6	4,856,000
City Municipal Councils	39	3,977,000
Town Municipal Councils	82	2,477,000
Town Panchayats	87	1,337,000
Total	214	1,2647,000

The state's response to the 74th Amendment has been to bring into effect the Amendment Act of 1994, whereby ULBs have been reconstituted. However, the Ward Committees are yet to be provided for. A Finance Commission has also been constituted. Its recommendations on the devolution of funds and other matters have been largely accepted by the State Government. The municipal enactments even prior to the Amendment Act of 1994, provided for a fairly comprehensive list of obligatory and discretionary functions to be discharged by the municipal bodies. They had also wide powers with regard to town planning, public health, poverty alleviation, etc. However, many of these functions are being discharged by other organisations. The important among them are town planning and land-use regulation, water supply, and slum clearance. This was due to historical necessity and for the principal reason that most ULBs did not possess sufficient technical expertise and financial ability.

CAPACITY BUILDING

The process of capacity building in the ULBs, of acquiring organisational, technical and financial ability cannot take place all of a sudden. The list of functions listed in the 12th Schedule can be taken over by ULBs only gradually. Some are out of the reach of all except the largest City Corporations, and will remain so in the foreseeable future. Every local body would have to attempt a prioritisation of these functions, consistent with its resources. It is, however, clear that if ULBs are to become instruments of effective local self-government, if they are to perform even their basic functions competently, they have to begin their capacity building without loss of time.

On the organisational side, the Amendment Act of 1994 provides ULBs with a tenure of 5 years. The President and Vice-President have tenures of 30 months each. This is, of course, better than some cases where the tenures are voluntarily accepted for as little as one year or sometimes even six months, as a matter of political adjustment. It takes time to understand the work connected with any office, and more so when effective leadership in civic affairs has to be provided.

The organisational capacity and technical expertise available with all but the largest ULBs is inadequate for discharging even their present limited functions. Only the City Municipalities have engineering staff of the level of assistant executive engineers, while the Town Municipalities have only junior engineers, and Town Panchayats have supervisors and pump operators. The level of expertise is low, and the slipshod methods of induction often resorted to contributes to poor functioning. The same situation exists with regard to other basic sectors like public health and sanitation, accounts and administration.

The economic strength of a local body determines the level of staff it is capable of employing. The Town Panchayats and most of the Municipal Councils cannot afford to employ staff who are adequately qualified even for maintenance work, let alone for undertaking new activities. Even with increased revenues in the future, they may not be able to do so. One possible solution to this problem is for clusters of ULBs to employ a nucleus of qualified technical staff, who can be deployed for specific works by the District Collector of the district.

The Karnataka Municipal Administration Services have been in existence for some years. Initial recruitment to these services is at the level of Chief Officers of TMCs and of Town Panchayats. However, recruitment has been infrequent, and today the higher administrative staff of the local bodies are generally drawn from other services. The Karnataka Municipalities (officers and officials) Recruitment Rules also provide for the recruitment of lower staff, clerks, health inspectors, junior engineers and others. Presently, such recruitment is centralised with the

Directorate of Municipal Administration. In many cases, recruitment also take place locally, and are then regularised.

There is a general agreement that the present organisation structure, methods of recruitment and level of expertise are all woefully inadequate. Rules of recruitment appropriate to each class of ULB would have to be carefully framed, to build structures capable of effective functioning in a modern socio-economic environment. Recruitment has to be undertaken quickly and systematically, to fill the large gaps.

There has been no systematic attempt to train the staff, which is a vital requirement. The Administrative Staff college at Mysore conducts a few training courses for municipal employees. But these are infrequent and offer no comprehensive coverage, which can be brought about only when training is made mandatory for all classes of employees, both at the time of first induction and later on at specified stages of services. Such training has to cover all aspects of municipal functioning relevant to the trainee. This will greatly strengthen the organisational capacity of ULBs. Considering the large number of municipal staff of various description who have to be trained, this task is stupendous. But it has to be undertaken, if need be, by enlarging existing training institutions and setting up new ones with this specific objective.

The effectiveness of ULBs in discharging their increased responsibilities would depend largely upon the competence of their administrative and technical staff. If this is absent, no amount of empowerment in other ways would be of any avail. It is, therefore, quite important that government should examine closely the structure and organisation of the municipal services, their recruitment and training, and evolve suitable systems whereby the ULBs come to possess adequate tools for their functioning.

LOCAL DEMOCRACY

The ULBs exist to provide civic governance to the people. This fact has received recognition by the 74th Amendment, which gives them constitutional status for the first time and defines their relationship with the state government. Though they do not have all the characteristics of a full-fledged government, like the responsibility for law and order, or prevention of crime, and are heavily dependant on the state government for their functioning, nevertheless they are institutions of local self-government, answering to the community's immediate civic needs.

They are in closer proximity to the voter than any other elected body. The Parliament and the State Legislatures are remote from the average citizen. The electorate is large and the constituencies occupy vast tracts. The structure of government prevents any continuous interaction between the elected representative and the voter. The ULBs, on the other hand,

provide for small constituencies where the scope for interaction between the voter and his representative is extensive. Indeed, the framers of the 74th Amendment have attached great importance to this factor by providing for the constitution of Ward Committees within the territorial area of a Municipality having a population of 0.3 million or more. This would bring civic governance close to the people even in the larger ULBs. It has been left to the State governments to determine compositions, powers and functions of the Ward Committees.

The ULBs are government of the people. Now, the opportunity is presented to them to become a government for the people and by the people. This can happen only when there is transparency and accountability in their dealings. There has been a lot of stress on the need for these two qualities in our public institutions, in recent times. Several steps are being taken from the highest levels of government downwards to demystify governmental functioning and make it more responsive to public needs. There are, of course, serious limitations to the extent to which either transparency or accountability can be introduced at the higher levels of government. If judiciously introduced, the result would be an enlightened government. If carried too far and indiscriminately, it could bring government work to a grinding halt. In the case of ULBs, no such danger exist. The ULBs address themselves to matters of local concern. Every citizen has the right to know, and to participate through such knowledge in the workings of the local body. There can be no accountability without transparency. All transactions of ULBs must be visible, and every tax payer must have the right of information. It is only then that the malpractice which flourish under concealment in a closed system can be held in check.

In practice, we can visualise how this would work. Among the matters of immediate concern to the urban citizens are, how municipal funds are spent, whether garbage is cleared, where they are dumped, whether the water supply system, the roads and pavements, and street lights, are kept in good order, whether the licenses and permits are issued in time and without harassment, whether public property is adequately safeguarded, and whether money is properly spent on works. These are some of the areas where in public perception most ULBs fail to function adequately. In an open system, these concerns would be adequately met, and individual or public grievances easily redressed. The very glare of publicity would deter improper conduct and increase efficient performance.

To cite examples of how this may work, in specific instances details of the number of garbage removers and street cleaners employed in each area, their hours of work, and the names of their supervisors should be prominently published in every Ward of division office. If this information is subjected to public scrutiny and debate, it would remedy largely the evil of non-working or non-existent municipal employees who swell the muster rolls, and waste tax payers' money. There is much talk of leakage of funds in the execution of works. If there is total transparency in contracting, execution and quality checking of works, the scope for corrupt practices, or apprehensions thereof, would rapidly diminish.

The people are reluctant to pay dues and taxes to ULBs. there is a sense of growing alienation and distance between them and the municipal bodies. The feeling exists that a good part of the tax-payer's money is misapplied. As long as this impression persists, there will always be attempts to evade taxes and to regard any levy as extortion. It can be changed only by complete openness of the manner in which the money is spent, and acceptance of accountability through debate.

The providing of information and the servicing of accountability would require time and staff. Some information should be routinely published, and others made available on request. The use of modern tools of information technology like computers and copiers is inevitable in the larger ULBs. The costs can be more than met by charging fees for providing copies, compiling and furnishing information, and such other services. With increasing public demand, the fees can even become a valuable source of income to the civic body.

The introduction of an open system would tone up civic administration as nothing else can. It would have an immediate impact upon the functioning of the civic employees, as well as the elected representatives. Their accountability would become a fact, and along with it their efficiency. It would also lead to the emergence of a new class of elected representatives, alive to their obligations, and responsive to public needs. In due course, when this system gets strengthened at the grass-roots level, it may even exert an influence upon other tiers of government.

It has been left to the State governments, under Article 243 (w), to provide a legislative framework for the functioning of the municipalities as "institutions of self-government". It is to be hoped that such legislation would create an open system, which would usher in local democracy in the true sense of the term.

STRATEGY FOR PROMOTING URBAN ECONOMIC GROWTH

The strategy for achieving this policy has been elaborated in a report titled "Urban Development Strategy for Karnataka State, 1994," which discusses : a) dispersal of urbanisation and equitable distribution of urban benefits; b) development of counter magnets to the Megacity to slow down the growth of the latter; c) establishment of a proper hierarchy of towns; d) establishment of urban-rural linkages through small and medium towns; e) development of areas of special potential, viz., the West Coast, growth centres of industries, important towns in growth areas, and administrative towns.

The same document lists the main components of urban development as: (a)infrastructural services, such as water supply, drainage, waste disposal and public health, lighting, roads, and market places and commercial facilities. The objective is to upgrade existing facilities to

normative levels and enhance them to meet future needs; (b) transportation and communication; (c) space for housing and infrastructural expansion. The objective here is to decongest towns and provide space not only for housing the increasing numbers of population, but for upgrading and adding to urban infrastructure and facilities.

The National Commission on Urbanisation (NCU) has identified many urban centres in the state for special consideration. Among them are those with potential for generating economic momentum (GEMs), which are the town of Gulbarga, Davanagere, Shimoga, Raichur, Tumkur, Bidar, Harihar, Karwar, and others. They have also identified spatial priority urbanisation regions (SPURs), among which are: (a) Belgaum, Hubli-Dharwad, Davanagere, Harihar; (b) Tumkur, Bangalore, Mysore, Mandya; and (c) Hospet, Bellary, Raichur. Another important recommendation of NCU is that small towns which serve the rural hinterland should be identified for the development as they would provide the essential linkage between urban and rural areas.

Urban Development Programmes

The important programmes and projects sponsored by the Government of India, implemented in towns and cities by the state governments are : (a) Nehru Rozgar Yojana (NRY) : Under this programme there are three components : i) Urban Micro Enterprises; ii) Urban Wage Employment; and iii) Housing and Shelter Upgradation; (b) Urban Basic Services for the Poor (UBSP) Programme; (c) Integrated Development of Small and Medium Towns (IDSMT); and (d) Integrated Programme on Low Cost Sanitation (LCS).

In Karnataka State, agencies/boards/authorities responsible for special functions and programmes in urban areas, directly connected with the urban planning and development are: (a) Karnataka Urban Water Supply and Drainage Board (KUWS & DB); (b) Karnataka Electricity Board (KEB); (c) Karnataka Housing Board (KHB); (d) Karnataka Industrial Area Development Board; (e) Karnataka Slum Clearance Board; (f) Urban Development Authorities; (g) City Improvement Board; and (h) Karnataka Urban Infrastructure Development and Finance Corporation.

The three state level departments directly concerned with the planning and development are : i) Department of Housing and Urban Development; ii) Directorate of Municipal Administration; and iii) Department of Town Planning.

Land Development

Development of a balanced human settlement structure requires integrated development of land with proper legislative and policy guidelines. Through such guidelines integrated land-use for transportation, housing, services, parks and infrastructure can be achieved. The major

implementing agencies of land development are : City/Municipal Corporations, Development Authorities and Sectoral Agencies.

The following are some of the activities carried out in the state by para-statal agencies :

- 1) Karnataka introduced urban development programmes in the two major urban centres of Mysore and Bangalore through the Mysore City Improvement Trust Board Act, 1903, followed by the Bangalore CITB Act, 1945. Town extension schemes through land acquisition and development were also practiced in almost all the small and medium towns. The Karnataka Town and Country Planning Act, 1961 was extended to most of the potential towns and cities in the state.
- 2) The state has prepared through its State Town Planning Department, Comprehensive Development Plans for cities and in some cases has set up about 50 Urban Development Authorities to develop land. Infrastructure is sought to be provided through state authorities like KUWS&DB, Karnataka Electricity Board (KEB), Karnataka Public Works Department (PWD) and Karnataka State Industrial Development Corporation. Housing for its employees are in some cases built by Municipal Corporations and by the Karnataka Housing Board.
- 3) Faced with increased slums and slum population, the Karnataka Slum Clearance (Improvement and Clearance) Act was passed in 1973 replacing the earlier Act of 1958. Subsequently in 1975, the Karnataka Slum Improvement and Clearance Board was created to provide better accommodation, to improve living conditions of slum dwellers, to promote public health and rehabilitate and improve the slum areas. The main objective of this Board has been to ensure some basic amenities to the slum dwellers. Faced with financial crunch, the state government has also involved international funding agencies for funding specific civic services in slum areas. The civic bodies are mostly confined to providing public health and sanitation services, road improvements, construction of markets and commercial complexes and in some cases on-site development and distribution network for water.

Housing

Generally housing stock is added both by the private sector and public sector, though the role of the former is predominant. The cooperative sector also contributes to housing supply. KHB, Karnataka State Police Housing Corporation and PWD are a few public sector agencies working on housing in addition to the housing provided by the industrial and other institutions such as BHEL, HMT, ITI, BEL, HAL, IIM, IISc and ISRO.

In Karnataka, the shortage of housing in urban areas is estimated to be about 700,000 units. Data on urban housing stock and housing shortage for the districts and state for 1996 and 2001 have been presented in Table 2.3. All efforts are needed to meet the future deficit. Some of the factors to be taken into consideration for programming housing activities are : i) developed land with infrastructure facilities; ii) building materials at affordable prices; and iii) financial assistance through organised institutions to needy persons for building houses at affordable interest rates.

Table 2.3

Urban Housing Situation by Districts, 1996 and 2001

(in 000s)

District/State	Item	1996	2001
Bangalore	Housing Stock	898.6	1064.5
	Unusable Stock	100.7	119.3
	Housing Demand	962.4	1140.2
	Deficit	164.5	194.9 (17.1)
	Housing Shortage	63.9	75.7
Belgaum	Housing Stock	138.0	150.1
	Unusable Stock	8.1	8.8
	Housing Demand	152.7	166.1
	Deficit	22.8	24.8 (14.9)
	Housing Shortage	14.7	16.0
Bellary	Housing Stock	103.9	116.9
	Unusable Stock	32.0	36.0
	Housing Demand	115.7	130.3
	Deficit	43.9	49.3 (37.9)
	Housing Shortage	11.9	13.3
Bidar	Housing Stock	37.5	40.9
	Unusable Stock	7.2	7.9
	Housing Demand	41.2	44.9
	Deficit	10.9	11.9 (26.5)
	Housing Shortage	3.7	4.0
Bijapur	Housing Stock	119.7	129.5
	Unusable Stock	13.1	14.1
	Housing Demand	134.2	145.2
	Deficit	27.5	29.7 (20.5)
	Housing Shortage	14.5	15.6

District/State	Item	1996	2001
Chikmangalur	Housing Stock	32.3	35.4
	Unusable Stock	2.8	3.0
	Housing Demand	36.0	39.5
	Deficit	6.5	7.1 (17.9)
	Housing Shortage	3.7	4.1
Chitradurga	Housing Stock	104.8	117.2
	Unusable Stock	14.2	15.9
	Housing Demand	116.2	129.9
	Deficit	25.6	28.6 (22.0)
	Housing Shortage	11.4	12.8
Dakshina Kannada	Housing Stock	125.3	137.3
	Unusable Stock	13.8	15.1
	Housing Demand	133.4	146.1
	Deficit	21.8	23.9 (16.4)
	Housing Shortage	8.1	8.8
Dharwad	Housing Stock	208.5	229.2
	Unusable Stock	41.3	45.5
	Housing Demand	235.4	258.8
	Deficit	68.2	74.9 (29.0)
	Housing Shortage	26.8	29.5
Gulbarga	Housing Stock	106.4	115.5
	Unusable Stock	5.8	6.3
	Housing Demand	118.8	128.9
	Deficit	18.2	19.7 (15.3)
	Housing Shortage	12.3	13.4
Hassan	Housing Stock	50.4	55.2
	Unusable Stock	2.7	2.9
	Housing Demand	51.4	56.3
	Deficit	3.7	4.1 (7.2)
	Housing Shortage	1.0	1.1

District/State	Item	1996	2001
Kodagu	Housing Stock	16.3	17.7
	Unusable Stock	1.3	1.4
	Housing Demand	16.8	18.2
	Deficit	1.7	1.9 (10.3)
	Housing Shortage	0.5	0.5
Kolar	Housing Stock	89.6	98.1
	Unusable Stock	5.3	5.8
	Housing Demand	100.1	109.6
	Deficit	15.8	17.3 (15.8)
	Housing Shortage	10.5	11.5
Mandya	Housing Stock	51.2	56.6
	Unusable Stock	10.6	11.7
	Housing Demand	54.0	59.6
	Deficit	13.4	14.8 (24.8)
	Housing Shortage	2.8	3.0
Mysore	Housing Stock	172.1	189.8
	Unusable Stock	12.0	13.2
	Housing Demand	185.2	204.3
	Deficit	25.2	27.7 (13.6)
	Housing Shortage	13.1	14.5
Raichur	Housing Stock	91.2	101.7
	Unusable Stock	40.9	45.6
	Housing Demand	101.9	113.6
	Deficit	51.5	57.5 (50.6)
	Housing Shortage	10.7	11.9
Shimoga	Housing Stock	93.3	104.3
	Unusable Stock	8.4	9.4
	Housing Demand	97.4	108.8
	Deficit	12.5	14.0 (12.9)
	Housing Shortage	4.1	4.6

District/State	Item	1996	2001
Tumkur	Housing Stock	71.3	77.3
	Unusable Stock	6.8	7.4
	Housing Demand	74.6	80.8
	Deficit	10.0	10.9 (13.5)
	Housing Shortage	3.2	3.5
Uttara Kannada	Housing Stock	55.1	61.0
	Unusable Stock	6.6	7.3
	Housing Demand	58.2	64.4
	Deficit	9.6	10.7 (16.6)
	Housing Shortage	3.1	3.4
Karnataka	Housing Stock	2776.3	3123.5
	Unusable Stock	357.1	401.8
	Housing Demand	3034.4	3413.9
	Deficit	615.2	692.1 (20.3)
	Housing Shortage	258.1	290.3

- Note: 1. Deficit is defined as the difference between Housing Demand and unusable stock put together and Housing Stock.
2. Housing Shortage is defined as the difference between Housing Demand and Housing Stock.
3. Figures in parentheses are per cent to housing stock including unusable stock in 2001.

Small and Medium Towns

All cities and towns with less than 500,000 population are treated as small and medium towns for the purpose of integrated development programme. According to this criteria all cities and towns in Karnataka except Bangalore, Hubli-Dharwad, Mysore, Mangalore and Belgaum have to be covered under the programme.

Karnataka has 254 urban centres according to the 1991 census, of which many are not municipal towns. Recently, some taluk headquarters have been converted into mandal panchayats under the Panchayat Raj Act.

Metropolitan Region Development

In Karnataka, Bangalore is the only metropolitan centre at present. Two other cities, viz., Mysore and Hubli-Dharwad which have about 600,000 population each at present may attain the status of metropolitan centres by 2010. These cities have city corporations for municipal administration and urban development authorities for urban planning and development. "Mega City Programme" sponsored by government of India jointly with State Government covers Bangalore. Under the Constitution (74th) Amendment Act, 1992, Metropolitan Planning Committee is yet to be constituted for Bangalore. At present the Bangalore Metropolitan Region Development Authority, which has a wider jurisdiction than the Bangalore Development Authority, looks after the regional planning and development functions in the absence of the Metropolitan Planning Committee. Currently BDA is in-charge of planning and development of the Bangalore Metropolis.

Funding

As examined earlier, the status of municipal finance in general is not sound and most of the ULBs rely on state government to fund capital works which also is not forthcoming adequately and regularly.

However the Constitution (74th) Amendment provides for setting up a State Finance Commission to regulate the transfer of funds from the government to civic bodies which is expected to enable them to undertake capital works. At present, as the combined efforts of the government and civic bodies are totally inadequate, assistance has been obtained from HUDCO and other financial institutions like Life Insurance Corporation. Only recently some efforts are being made to obtain external funding from the international agencies like World Bank, Asian Development Bank, OECF, ODA and others.

On-going Development Projects

Several large projects are presently under implementation in the state to give effect to its urban development strategy. Some of these pertain to the metropolitan cities of Bangalore, whose infrastructure has been subjected to increasing pressure on account of the large demands been made on its services. The important among them are discussed in the succeeding paragraphs.

A Rs. 1.35 billion Megacity project for Bangalore, jointly financed by Government of India, the State Government, and financing institution like Housing and Urban Development Corporation (HUDCO), is presently under implementation. This project has several important components, such as shifting of the iron and steel market, which would decongest the core areas

of the city, construction of roads, bridges, fly-overs and truck terminals, to ease the growing traffic problems, construction of markets, crematoria, and others.

A Rs. 3.11 billion programme to develop 4 project towns, namely Tumkur, Ramanagaram, Channapatna and Mysore, has been taken up with the Asian Development Bank (ADB) aid. This would ease the pressure on Bangalore and disperse urban benefits over a wide area. It would prevent excessive migration into the metro city, by providing the economic base as well as adequate infrastructure in these satellite towns.

The state is presently finalising a Rs.7 billion ADB assisted project for the development of the two coastal districts of Karnataka, where there has been intense economic activity since the last decade. These two districts are among the most ecologically sensitive areas in the country, with a coastline which provides rich marine fisheries and the Western Ghats which contain the best rain forests in Asia. An attempt would be made here, perhaps for the first time to develop the entire coastal area in an integrated manner, rather than only individual towns.

Plans have also been drawn up for similar development of certain selected towns, regions, and corridors. Some of these are the cities of Gulbarga, which is sought to be developed as the metropolis of the north, Hubli-Dharwad and Belgaum, which are on the national highway and have great potential for development. Shimoga in the Malnad region, Davanagere and Harihar which constitute an industrial belt just south of the Tungabhadra, Bellary-Raichur-Bidar which form an important axis in the central north, other potential growth centres like Hassan, and administrative towns. A beginning is being made, perhaps for the first time in the country, to take up the development of areas, rather than of single towns. This will spread benefits more equitably, and bring about linkages of the kind visualised by the National Commission on Urbanisation. It would prevent a developing town from depleting the resources of the smaller centres, and bring about a viable hierarchy of settlements.

Several schemes of water supply and underground drainage (UGD), covering numerous towns in the state are being formulated and executed by Karnataka Urban Water Supply and Drainage Board. The Eight Five Year Plan has provided Rs.2.05 billion for the completion of 60 water supply scheme and 12 UGD schemes.

Slums in urban areas need special measures for their rehabilitation or relocation to provide better standards of living to their inhabitants. Programmes to provide basic amenities like sanitation and drinking water and other services, and the construction of improved dwellings, are being undertaken on a continuing basis. there are 1,370 slums identified in the state, of which 401 are in Bangalore alone. The slum population is about 1.35 million, or a little less than 10 per cent of the entire urban population of the state. The Eighth Plan carried an outlay of Rs.400 million on these schemes.

III. STATUS OF URBAN INFRASTRUCTURE AND SERVICES

INTRODUCTION

Traditionally, the urban local bodies (ULBs) have been providing a variety of civic services to their people. The State Finance Commission (SFC) has identified some of them as being essential. They are, in order of priority: (a) safe drinking water supply; (b) sanitation, including underground sewerage, storm water drainage, and solid waste removal; (c) street lights; and (d) roads.

In identifying the adequacy of these services made available to the people by the ULBs, the State Finance Commission has relied upon the norms fixed by the Government of India and the Planning Commission. These norms represent an acceptable level of services which ought to be rendered to the people in urban areas.

CIVIC SERVICES

Water Supply

With regard to water supply, Government of India Committees, notably the Task Force constituted by the Ministry of Urban Affairs and Employment, have recommended the availability of 180 LPCD for class I towns, 120 LPCD for class II towns and 90 LPCD for class III and class IV towns

The SFC has noted that this is an ambitious level and is not attainable under present conditions. Though there is a 100 per cent coverage of all urban areas for drinking water supply, yet the average supply hardly exceeds 60 litres per capita daily. The Commission has recommended lower levels of water supply, which can be attained in the next five years. The recommended levels are 100 LPCD, 80 LPCD and 70 LPCD for City Corporations, City Municipalities, and Town Municipal Councils and Town Panchayats respectively.

Table 3.1 shows the existing supply, the additional requirement and the expenditure required to attain the norms for the population projected for 1995.

Table 3.1
Water Supply Requirements, 1995

Class of ULB	Existing water supply (in lpcd)	Additional requirement (in lpcd)	Expenditure (in million Rs.)
CCs	674	26	275.74
CMCs	1425	320	205.38
TMCs	7101	2645	569.45
Total	9200	2991	1050.56

It is seen from a detailed analysis that among City Corporations only Bangalore and Belgaum fall short of the norm of 100 LPCD, whereas among City Municipal Councils only 5 out of 21 have reached the norm of 80 LPCD, and among Town Municipal Councils only about 30 out of 135 have reached the norm of 70 LPCD. It is also a fact that, regardless of the averages, the availability goes down very sharply in the summer season in most Municipalities. The SFC has estimated that additional funds to the extent of Rs.1.05 billion would be required in the next 5 years for augmenting water supply in the urban local bodies to normative levels. The status of water supply is assessed by the size class of towns in Table 3.2.

Table 3.2
Water Supply by Size Class of Towns, 1995

Class of town	As per norm	More than 50 per cent of norm	Below 50 per cent of norm	Total towns
I	6	7	1	14
II	6	10	4	20
III	27	37	20	84
IV	9	70	30	39
Total towns	48	71	38	157

Source: STEM, Karnataka Urban Development Strategy, Government of Karnataka.

Note: Figures are number of towns in each category.

Sanitation

Sanitation is a broad term which includes the underground drainage system which takes away sewerage from the town, storm water drains to carry rain water away from the inhabited areas, and the collection and the disposal of garbage. Though it is a policy of the State Government to construct underground drainage systems in towns with population above 100,000 only a few cities have received this benefit. The large City Corporations of Bangalore and Mysore have extensive UGD systems. Other cities and towns like Gulbarga, Hubli-Dharwad, Mangalore, Davanagere, Udupi, and few others, have partial systems. However, many other towns have simplified forms of sewerage. Even the provision of complete UGD systems for all towns of 100,000 and above population would require very large outlays, which can be provided only by outside financing institutions. Thus, it is important that the work of maintenance and renovation of the existing systems should be taken up to prevent deterioration. In most towns only a part of the population is covered with a sewerage system. Table 3.3 indicates the condition of sewerage by class of towns.

Table 3.3

Condition of Sewerage by Class of Towns

Class of town	Population covered				Total
	> 75%	60-75%	40-60%	< 40%	
I	9	1	2	-	12
II	5	2	5	2	14
III	4	5	10	9	28
IV	-	-	3	15	18
V	-	-	1	3	4
VI	-	1	-	-	1
Total	18	9	21	29	77

Source : *ibid.*

Storm water drains are generally provided along the sides of all newly constructed roads. It is, however, observed that most kutchra roads, especially in smaller urban areas do not have such drains. It is also a fact that, even in the larger towns, maintenance of these drains is inadequate. Due to these reasons rain water stagnates, causing unhygienic conditions. This matter can be remedied only by constant maintenance of existing storm water drains, and construction of new drains.

The removal and disposal of garbage poses a problem in all urban areas. The problem becomes increasingly complex on account of the wide variety of waste that is generated, including non-biodegradable and hazardous material. In most towns, the arrangements for collection and disposal of garbage are quite inadequate. The local bodies require trained persons, equipment and properly identified dumping or recycling yards for dealing with solid waste. In addition, there is a need for every local body to generate civic consciousness among its citizens in keeping the surroundings clean. The SFC has estimated a sum of Rs. 567 million as the requirement of all ULBs in the state towards employing more staff and using improved equipment and vehicles to achieve acceptable standards of sanitation.

Street Lights

The SFC has regarded the provision of street lights as an important civic service to be rendered by ULBs, in the interest of safety and security of the people. The normative level prescribed by the Task Force of the Ministry of Urban Affairs and Employment is 20 lights per km. length of road, i.e., one light at a distance of every 15 mtrs. Table 3.4 reflects the existing status of street lighting in the ULBs of Karnataka.

Table 3.4

Normative Requirements and Availability of Street Lights

Class of ULB	Requirement	Availability	Deficit(-)/excess(+)
CCs	91600	15527	(-) 76073
CMCs	52740	88712	(+) 35972
TMCs	89834	131744	(+) 41910
All ULBs	234174	375983	(+)141809

The overall availability of street lights exceeds the requirement as per the norms. But an analysis of availability in individual ULBs reveal sharp imbalances. They are adequate in all the City Corporations. Of them, Mangalore is the best lit city, with 28,444 street lights as against the requirement of only 7,500. Belgaum, Bhadravati, and Hubli-Dharwad, barely meet the norm. Among City Municipal Councils, Bagalkot, Bijapur and Raichur are heavily short of the norm, while Ranebennur is marginally short. Among Town Municipal councils, 37 out of 135 are deficient in this respect. It is to be noted that most of the deficiencies occur in the areas which are part of Bombay-Karnataka and Hyderabad-Karnataka. The SFC has estimated that

a sum of Rs. 47.2 million is required for bringing up street lighting to normative standards in the places of deficiency. The SFC has proposed that the rectification should be done within a period of two years.

Roads

The next essential service is the provision of roads in urban areas. The requirement of roads is generally estimated both in terms of area as well as population. However, the Task Force of the Ministry of Urban Affairs and Employment has adopted the criteria of road length for specific population as a norm, and this has come to be generally accepted in estimating the requirement and deficit. The SFC has estimated that there is a total deficit of about 713 kms. of road length in the urban areas of the state, taken together. An allocation of Rs. 178.1 million has been proposed in a two-year period to make up this deficit, estimating the cost of constructing a good quality road with black topping at Rs.0.25 million per km. However, as noted in SFC report, it is difficult to combine the length norm and quality norm. In most cases, the deficiency pertained to quality rather than length, for in many urban areas kutcha roads have to be upgraded. Even for estimating the cost of raising road availability to normative levels, there is a great deal of approximation, as the existing roads are in various stages of deterioration or inferiority.

However, it is clear that SFC's recommendations would mark a starting point for the systematic upgradation of roads in urban areas.

OTHER SERVICES

There are several other useful and necessary services rendered by the ULBs. They are the provision for health services, municipal markets, bus terminals and parks and playgrounds. Historically, it has been the responsibility of the municipal bodies to provide preventive health services like vaccination, special measures during epidemics, and control of communicable diseases. Curative services are provided by both public and private agencies. Thus, it is not the responsibility of ULBs alone, but that of several agencies to provide adequate health care in urban areas.

Health Services

A survey of 151 towns of all classes shows that only 5 towns have more than 4 beds per thousand population, which is the accepted norm (Table 3.5).

Table 3.5**Beds per thousand Population by Class of Towns**

Class of town	Number of beds per 1000 population			
	< 2	2-4	> 4	Total
I	2	8	4	14
II	9	6	-	15
III	63	3	1	67
IV	41	1	-	42
V	10	-	-	10
VI	3	-	-	3
Total towns	128	18	5	151

Source : ibid.

Market Facility

Markets in most towns are built and maintained by the Municipalities. They are considered a source of income by way of rent. However, in many towns these facilities are inadequate, and the condition of the markets is also poor. This activity can be a profitable source of revenue to ULBs if undertaken correctly and systematically. The condition of municipal markets is indicated in Table 3.6.

Table 3.6**Condition of Municipal Markets by Class of Towns**

Class of town	Number of towns				
	Good	Fair	Poor	Bad	Total
I	2	8	3	0	13
II	1	8	7	0	16
III	1	18	37	0	56
IV	0	6	28	0	34
V	0	2	7	0	9
VI	0	1	3	0	4
Total	4	43	85	0	132-

Source : ibid.

Transport Facility

All urban areas are connected by bus services, provided by the State owned Karnataka State Road Transport Corporation, or, in some cases, by private operators. Bus terminals have been built in most of the towns, but most of them are either in congested core areas or in areas which do not conform to the accepted standards. As bus transport would become increasingly important in the future, the building of new terminals or the renovation of existing ones becomes important. Table 3.7 shows that in 132 towns, only 27 have reasonably good terminals, and 10 of them are in Class I towns. The worst are Class III and Class IV towns.

Table 3.7

Status of Bus Terminals by Class of Towns

Class of town	Number of towns			
	Good	Fair	Poor	Total
I	10	3	0	13
II	5	10	1	16
III	7	45	4	56
IV	1	30	3	34
V	2	7	0	9
VI	2	1	1	4
Total	27	96	9	132

Source : *ibid.*

Parks, Playgrounds and Open Spaces

Parks, playgrounds and open spaces are a necessary adjunct to any habitation. In the smaller towns lung spaces were formed outside the inhabited area. But as the towns grew there was a need to incorporate these within urban limits. In most cases, little attention is paid to the proper maintenance of parks. In a survey of 132 towns it was found that in 99 of them, position was poor to bad (survey by STEM). Town planning schemes would have to provide adequately for parks and open spaces.

IV. INSTITUTIONAL ARRANGEMENTS FOR URBAN INFRASTRUCTURE

ENACTMENTS GOVERNING URBAN DEVELOPMENT

The important enactments governing urban development in the state are listed in Table 4.1 below.

Table 4.1
Urban Development Acts, Karnataka

S.No.	Name of the Act
1.	Karnataka Town and Country Planning Act, 1961, to regulate land-use and development and for execution of town planning schemes. The jurisdiction of this Act has been extended to most urban areas with a population of over 40,000.
2.	Karnataka Urban Development Authority Act, to provide the institutional frame work for the planned development of major and important urban areas.
3.	Bangalore Development Authority Act, 1976, to promote and secure the development of Bangalore Metropolitan Area.
4.	Bangalore Metropolitan Region Development Authority Act, 1985, for planning, coordinating, and supervising the orderly development of the Bangalore Metropolitan Region.
5.	Karnataka Slum Areas Improvement and Clearance Act, 1973, for improving conditions prevailing in slums, providing better accommodation, clearance of slums and rehabilitation of slums dwellers.
6.	Karnataka Housing Board Act, to formulate and execute housing schemes.
7.	Karnataka Municipalities Act, for the management of municipal affairs in towns and cities.
8.	Karnataka Municipal Corporation Act, for Municipal Government in urban areas having a population of more than 300,000.

Among other Acts which have a direct bearing on land development in urban areas are: i) Karnataka Land Revenue Act, in those provisions dealing with alienation of agricultural land for non-agricultural purpose; ii) Urban Land (Ceiling and Regulation) Act; and iii) Karnataka Preservation of Parks and Playgrounds Act.

INSTITUTIONAL ARRANGEMENTS

Several organisations have been vested with the task of administering specific areas of urban development.

Urban Development Authorities and Town Planning Authorities

Urban planning is regulated by the Karnataka Town and Country Planning Act, and is carried out through Urban Development Authorities and Town Planning Boards in the larger areas. In smaller towns, with less than 40,000 population, to which the Town and Country Planning (T&CP) Act has not been made applicable, planning is done under the guidance of the Directorate of Town Planning through its representatives. The nature of work requires technical expertise and large outlays, which ULBs are not presently able to provide. Moreover, in many cases the planning areas have outspread the municipal areas to a considerable extent and sometimes contain within its fold more than one municipal body, and hence comprehensive urban planning requires a separate agency with a definite jurisdiction, which is much larger than that of ULB. The Bangalore Metropolitan area over which BDA has jurisdiction, extends over 1,279 sq.km. and has a population of 4.1 million in 1991.

These two authorities play a key role in the planned development of urban areas under their jurisdiction. Integrated land-use plans are prepared and implemented and there is a regulation of all land development in the major urban settlements. There are 21 Urban Development Authorities and Town Planning Authorities in the state.

Karnataka Slum Clearance Board

Its main objectives are rehabilitation, upgradation and relocation of slums, and providing improved living conditions to slum dwellers. The Board has jurisdiction over 1242 slums, spread all over the state, including Bangalore, where there are 401 slums. Of the latter, 128 slums are under the jurisdiction of the Bangalore City Corporation and the Bangalore Development Authority.

Karnataka Urban Water Supply and Drainage Board

Karnataka Urban Water Supply and Drainage Board (KUWS&DB) is the state organisation for the execution of water supply and drainage schemes in the urban areas of the state, except Bangalore. The jurisdiction of the Board covers 242 urban centres, with a population of 9.1 million.

The KUWS&DB provides for not only off-site works but also on-site maintenance, retail distribution, and even collection of dues in some cases. The construction of water works, and the bulk supply of water to the town, some-times from far away sources, requires large capital outlays and high technical expertise, both well beyond the means of ULBs. KUWS&DB borrows money from HUDCO, LIC and other financing agencies, supplements it through government loans and grants, and executes the works. In some cases, only bulk supply of water is made, and its retail distribution is undertaken by the ULBs. However, most municipalities do not have adequate maintenance staff and hence even retail distribution has to be undertaken by KUWS&DB. The loans are supposed to be repaid by the beneficiary ULBs, but their resources, and low accruals through water-rate, do not often permit timely and adequate repayments. This causes KUWS&DB to delay its own repayments to Department of Housing and Urban Development (HUD) and others, which reduces its borrowing capacity, and in turn leads to delays in execution, cost overruns, and other snags. In July 1995, the indebtedness of ULBs to KUWS&DB for water supply and underground drainage schemes was of the order of Rs. 1.03 billion. The SFC has recommended that the government should liquidate these dues to HUDCO and LIC on behalf of the ULBs as a one-time exception. There would still remain about Rs. 260 million due by the ULBs on account of water charges which, SFC suggests, may be recovered in five installments. This would enable ULBs to start with a clean slate as far as this programme is concerned.

Though KUWS&DB, Urban Development Bodies and other agencies like the Slum Clearance Board discharge many of the functions of ULBs, no area of conflict has developed for the primary reason that ULBs are not competitors in the performance of these functions. For the future, when ULBs build up adequate capacity they could displace these agencies to the extent necessary and take up by themselves these activities. However, with regard to water supply and underground drainage, it would be a good arrangement, as suggested by SFC, for KUWS&DB and continue to provide bulk supply of water and the ULBs to undertake their retail distribution.

Karnataka Housing Board

This is the major governmental agency for providing housing in the state. It is estimated that the deficit in housing which was 0.78 million units in 1991 would go up to 1.06 million units

by 2001, unless there is a strong intervention. The Board has built over 120,000 houses in various parts of the state since 1965.

Karnataka Urban Infrastructure Development and Finance Corporation

The KUIDFC was created in 1994 to act as an umbrella organisation for dealing with all externally assisted projects. It is presently implementing the Megacity projects for Bangalore, the ADB-assisted Karnataka Urban Infrastructure Development Project, and the new ADB assisted project for the development of the West Coast.

There are many other departments like the Karnataka Industrial Areas Development Board, for developing land for industrial use, the Karnataka Electricity Board, for the supply of electricity, the Public Works Department, and the Karnataka State Road Transport Corporation, which have important roles to play in urban life.

For Bangalore alone, keeping in view its size and complexity of problems, there are separate undertakings, the important among which are Bangalore Development Authority for land use planning and town development, Bangalore Metropolitan Regional Development Authority for regional planning and land development, and Bangalore Water Supply and Sewerage Board, which has the responsibility for both off-site and on-site operations of water supply and sewerage in the Megacity.

The urban local bodies, namely the Corporations and Municipalities, provide local governance and have responsibility for the basic infrastructural needs of the people living within their jurisdictions.

The State Finance Commission has expressed the view that all the functions enumerated in the 12th Schedule are expected to be performed by the municipal bodies and not by other agencies. The Commission has stated that in the spirit of the 74th Amendment, the Urban Development Boards and other Town Planning Units should be brought under the jurisdiction of the respective municipal bodies; that the functions of the Bangalore Development Authority (BDA) should be transferred to Bangalore City Corporation; that Karnataka Urban Water Supply and Drainage Board (KUWS&DB) and Bangalore Water Supply and Sewerage Board (BWSSB) should be concerned only with bulk supply of water and construction of underground drainage, but maintenance and distribution of water supply and collection of water rates should be done by the respective municipalities, or that these organisations may perform some of these functions at best as the agents of the respective municipal bodies. But this would represent a futuristic scenario, which is hard to be actualised at present.

V. URBAN INFRASTRUCTURE FINANCING

FINANCES OF URBAN LOCAL BODIES

It is the financial soundness of the ULBs that determine their ability to perform satisfactorily. Lack of adequate capacity in this regard has been cited as the main reason for their general poor performance. It is the biggest hurdle to be overcome, before they can function effectively. They were hitherto caught in the vicious circle of poor capacity and ineffective functioning, low empowerment, and indifferent or even hostile public response. The 74th Amendment, it is hoped, would bring about a significant change. One of its important effects would be the strengthening of the finances of ULBs.

A review of the present financial position of ULBs reveals that while some did better than others the overall position was one of weakness. In 1994-95, the total revenue of all ULBs was Rs.3606.2 million and expenditure was Rs.3563.5 million. Tables 5.1 (a) and 5.1 (b) show the budgetary position of ULBs during 1994-95.

Table 5.1 (a)

Budgetary Position of ULBs, 1994-95

Class of ULB	Number of ULBs	Revenue (in million Rs.)	Expenditure (in million Rs.)	Annual growth rate (%) 1994-95	
				Revenue	Expenditure
CCs	7	2648.30	2546.60	11.25	11.26
CMCs	19	447.20	448.40	8.00	10.87
TMCs	135	510.70	568.50	10.50	11.14
Total		3606.20	3563.50		

Table 5.1 (b)

Per Capita Revenue and Expenditure of ULBs, 1994-95

Class of ULB	Revenue (Rs.)	Expenditure (Rs.)
CCs	472	453
CMCs	181	181
TMCs	125	140

In 1994-95, there were 7 Corporations, including Shimoga-Bhadravati, which later reverted to its two constituent units.

Tables 5.1 (a) and 5.1 (b) reveal that the City Corporations (CCs) fared better than the smaller bodies. Even among CCs, analysis shows that the distribution was unequal. Bangalore and Belgaum had a per capita revenue which was more than four times that of Gulbarga and twice that of Mysore. In 1994-95 Bangalore had a total revenue of Rs.1785.5 million followed by Hubli-Dharwad with Rs.259.3 million. The lowest was in Gulbarga with barely Rs.44.2 million. Bangalore was able to raise its per capita revenue from Rs.366 in 1990-91 to Rs. 573 in 1994-95. At the bottom of the scale, during the same period, Gulbarga raised its per capita revenue from Rs. 75 to Rs. 131. The growth rate during the period in Bangalore was 17.92 per cent annually, while in Gulbarga it was only 10.09 per cent. The overall growth rate of revenue for the City corporations during the five year period was around 11.3 per cent, compared to the State Government's 17 per cent.

On the expenditure side, Bangalore increased its per capita expenditure from Rs. 326 in 1990-91 to Rs. 514 in 1994-95, which was less than Rs. 561 of Mysore in that year. However in the same period, the per capita expenditure in Gulbarga went down from Rs. 66 to Rs. 62. In absolute terms, inspite of increasing its revenue from Rs. 22.9 million (Rs. 75 per capita) to Rs. 44.2 million (Rs. 131 per capita), Gulbarga was able to raise its expenditure from Rs. 20 million (Rs. 66 per capita) to only Rs. 20.9 million (Rs. 62 per capita). Thus, inspite of a high percentage increase in revenue mobilisation, Gulbarga has not been able to achieve any growth in expenditure. In fact, Gulbarga's per capita expenditure is much less than that of all the City Municipal Councils and even most of the 135 Town Municipal Councils.

In the case of City Municipal Councils, the per capita expenditure was Rs. 181 in 1994-95, which is only a little better than the Rs. 138 in 1990-91. The TMCs, in 1994-95 registered the revenue and expenditure at Rs. 125 and Rs. 140 per capita respectively, compared to Rs. 124 and Rs. 103 in 1990-91.

The composition of revenue of ULBs reveals the extent to which they are able to raise their own resources and their dependence on government for grants. Table 5.2 presents the percentage share of each of the source of revenue.

Table 5.2
Percentage Composition of Sources of Revenue, 1994-95

Class of ULB	Property tax	Total non-tax receipts	Share in state taxes	Grant	Capital receipts	Total revenue
CCs	19.8	25.3	11.5	31.0	5.5	100.0
CMCs	14.5	26.0	16.3	32.9	5.4	100.0
TMCs	14.9	33.8	17.8	27.3	1.9	100.0

The weak position of the ULBs may be seen from an analysis of the composition of their revenue. Their total receipts are almost entirely on revenue account. One or two isolated cases of large capital receipts by certain ULBs serve to give an average share of about 5.5 per cent in the case of City Corporations and Municipalities, under this head. The single largest source of revenue for all classes of ULBs is "grants". This, together with the share of state taxes, account for 42.5 per cent of the income of CCs, 49.2 per cent of that of CMCs, and 51.6 per cent of that of TMCs. This reflects the varying capacity of the different classes of ULBs to raise their own resources. Here again, Gulbarga gets 50.74 per cent of its total income from these two sources, indicating its limitations in raising own revenue.

Property tax provides the largest source of own revenue collected by the Municipalities. It forms nearly 20 per cent of the revenue of the Corporations and 15 per cent of other ULBs. Non-tax revenues, such as user charges for water, rents and leases, license fees, parking fees, etc., also contribute substantially to the total revenue of ULBs. The share in state taxes and grant-in-aid to ULBs amounted to Rs. 1630 million in 1995-96. The budget estimates for 1996-97 provide for Rs. 1824.9 million, with an addition of Rs. 212.5 million released by the State Government. The devolution of funds from the State Government to ULBs would rise significantly after the recommendations of the Commission are accepted by government.

However, it is important that the capacity of ULBs to raise their own resources should be strengthened. The most significant results can be achieved here, as there is vast untapped and underutilised potential. Moreover, the autonomy of a local self-governing institution is dependent upon its ability to raise resources to finance its activities. In many cases, the taxes and levies have to be redesigned to suit modern socio-economic conditions. Tax administration and collection methods have to be improved, and new sources explored.

Property tax is an important area for reform. It is the single most important source of own revenue to ULBs. The way it is implemented now is perceived as arbitrary and extortionist, and has evoked resistance and evasion. It has been estimated that even in Bangalore, where tax administration is better than in other Corporations, less than 65 per cent of the properties have come into the tax net. In other ULBs, it could be much less. This is a serious loss, especially as methods are not easily available for surveying and identifying all taxable properties. If this lacuna is remedied the tax base could be almost doubled. There have been attempts to design better systems. The present ones are antiquated and unsuited to modern conditions. Perhaps more than one design is necessary to suit widely divergent situations like that in a metropolis like Bangalore and a small Town Panchayat. Every design has to incorporate objective criteria which is acceptable to the people at large. It has to be adequately publicised and debated before adoption so that the weight of consensus is behind it. A low tax rate with a wise base would yield far more revenue than high rates.

There is also the need to rationalise other sources of income like the levy of fees and user charges, license fees, rents and leases, etc. There are many other levies, such as parking fees, copying charges, and licence fees. Every one of them would yield substantial increases in revenue, with improvement in their design and methods of collection. It would thus be possible for ULBs to increase their revenues progressively in the years to come, as the majority of these sources are elastic and the yields improve with economic growth. The SFC has estimated that it should be possible for ULBs to double their own revenue in a five-year period by such measures. This will take them nearer to the desired objective of reducing dependence upon external financial support.

The devolution of funds recommended by SFC constitutes the single most important step in improving the financial position of ULBs. The SFC has recommended that 36 per cent of the total non-loan gross own revenue receipts of the State Government should go to ULBs and the Panchayat Raj Institutions (PRIs) every year. Out of the amount so devolved, 15 per cent should go to the ULBs, and 85 per cent to PRIs. In 1996-97, the total allocation of grants to ULBs was Rs. 2.04 billion. This represented only 2.86 per cent of the state's revenue receipts of Rs. 7.22 billion. The PRIs, on the other hand, got Rs. 23.05 billion, which represented 32.36 per cent, making a total devolution of 35.23 per cent. When SFC's recommendation in this regard is fully implemented, the shares of ULBs and PRIs would be 5.4 per cent and 30.6 per cent of the state's revenue receipts. In actual terms, this would lead to almost a doubling of the amounts now being devolved to ULBs. The notable feature of this scheme of devolution is that it does away with the sharing of taxes like motor vehicle (MV) tax, entertainment tax, or calculation of octroi compensation. It is a fixed share of the state's revenues, the buoyancy of which would automatically lead to increased amounts being devolved. The State Government has proposed that the recommended percentage of devolution should be reached in a graded manner by 1999-

2000. Based on the estimates of the state's revenue receipts for the period 1997-2002, the devolution to ULBs is expected to be as shown below in Table 5.3.

Table 5.3

**Estimated Devolution of Finance to ULBs,
1996-97 to 2001-2002**

Year	Amount devolved (in million Rs.)
1996-97	2040
1997-98	2890
1998-99	4140
1999-2000	5540
2000-2001	6260
2001-2002	7050

ISSUES IN FINANCIAL RESOURCES

Though not specific to ULBs of the Coastal districts, some of the fundamental issues related to all ULBs in the state have been presented for necessary policy intervention by the state government.

Financial and Functional Decentralisation

Though the problem of ULBs have been identified and various suggestions have been proposed during the last three to four decades by national and state level enquiry committees and commissions, significant and desired amendments and changes were not taken up by the concerned governments. The trend has reached a stage that these ULBs have almost lost the status of local self-governing agencies and achieved the status of highly dependent on and dictated by their higher tier governments. Even though many of the provisions have been added in the Constitution in the recent amendment, all of them have not being implemented in the state, except changes relating to : i) number of elected representatives, ii) delimitation of wards, iii) reservation of seats for SC/ST and women, and iv) appointment of State Finance Commission. It is observed that these by themselves do not adequately reflect the philosophy and intentions of the constitution amendment and its main thrust.

Devolution of Funds from State Governments

The devolution of funds from the state governments to ULBs includes octroi compensatory grant, a share in the net yield from entertainment tax and motor vehicles tax and the yield from cess on stamp duty. In the year 1994-95, out of the total devolution of Rs. 19.75 billion from the state government revenues to all local bodies, (urban and rural), hardly Rs. 1.63 billion went to the ULBs in the state. Even if we include the budgetary support of KUWS&DB and BWSSB, it does not exceed Rs. 2.20 billion. This constituted about 5 per cent of the total devolution. The remaining 95 per cent went to the Panchayat Raj Institutions. Even out of Rs. 1.63 billion, as much as Rs. 660 million went to Bangalore CC alone constituting 41 per cent of the devolution made to all ULBs. Consequently, the smaller municipalities suffered irreparable damage to their civic services. To some extent, within the strict budgetary resources of both state and ULBs, the recommendations of the State Finance Commission on devolution of resources may give some relief, but they constitute a meager in magnitude as compared to the huge magnitude of actual requirements of the ULBs.

State Finance Commission

The State Government has appointed the State Finance Commission as per the provisions of 73rd and 74th Amendments to the Constitution to recommend financial devolution to ULBs and PRIs. Recently, the Commission has submitted its report with the recommendations to improve the financial position of ULBs and civic services in urban areas. The financial implications of the recommendations on the ULBs of the state in general and that of the two Coastal districts have to be examined after the state government accepts them.

Additional Revenue Potential

It has been observed earlier that ULBs are facing financial stringency partly because of inadequate devolution of funds from the state government and partly because of their own inability to tap fully available sources of revenue. It is a fact that ULBs in Karnataka have lost an elastic source of revenue namely octroi, which was abolished in 1979. Revenue from octroi constituted about 24 per cent of the total revenue of CCs and about 26 per cent of the total revenue and 60 per cent of the total tax revenue of other CMCs and TMCs. The octroi revenue provided daily revenue yield of the municipal bodies thereby enabling them to meet their daily transactions. At the time of abolition of octroi in 1979, the total amount realised was Rs. 216.2 million and the state government agreed to compensate the loss of this revenue first by guaranteeing the actual revenue raised by each of the ULBs and then by increasing it from 5 to 10 per cent per annum. The yield would have increased substantially as the prices and trade volume increased. Now it has been abolished and there is very little chance of it being

reintroduced (though the state government has recently expressed its willingness to reintroduce octroi) because of the national demand for abolishing border taxes on trade and commerce. Therefore, the ULBs will have to mobilise additional resources from the existing sources of revenue. Prominent among them is the property tax.

The State Government has been able to obtain additional funds from international funding agencies like the World Bank for improving urban infrastructure and some civic services in selected cities and towns. For availing of such funds, the State Government provides guarantee for external loans and matching contribution. Till recently the State Government encouragement has been lukewarm in the levy of user's charges for making the beneficiaries to bear the cost of municipal service. In view of growing pressure from financial institutions and conditionalities of international organisations like the World Bank, ADB, the State Government has recently prepared the tariff structure for water supply schemes of some cities and towns taking into account the debt burden and operation and maintenance costs to be fully recovered from the users. In future, user's charges should be widely used to recover partly the cost of urban civic services.

SECTION - II

KARNATAKA COASTAL REGION PROFILE

A SUMMARY

COASTAL REGION PROFILE

Dakshina Kannada (DK) and Uttara Kannada (UK) districts constitute the Coastal region of Karnataka. Being geographically heterogeneous with abundant natural resource endowment, the region occupies a unique position playing a crucial role in socio-economic development of the state as a whole. With the initiative of two or three major projects and their expected spread effects and economic linkages, it is now found necessary to take planned advance actions to provide a direction for future growth of the region with special focus and emphasis on sub-sectoral components of the regional economy.

Some important characteristics of the Coastal region are given below:

- i) The region with a coast line of 293 kms. has a chain of mountains of the Western Ghats with heights ranging from 600 to 1,880 metres and receives heavy rainfall due to tropical evergreen forests. It is endowed with abundant river water sources which are also being exploited for power generation and irrigation.
- ii) The two districts of the region with 18 taluks can be grouped into: a) Coastal sub-region with 7 taluks; and b) Hilly and Western Ghat slope sub-region with the remaining 11 taluks.
- iii) The Coastal sub-region consists of a large number of fishing ports and landing centres engaged in fisheries and medium and large harbours dealing with domestic and international trade.
- iv) Most of the cities/towns of the region are well connected with surface, air and sea transport network.
- v) The region has an area of 18,700 sq.kms. and a population of about 4 million. There are about 34 towns with Mangalore city occupying a primate position in the region. Above the coast towards east, the urban centres have developed closely with different characteristics.
- vi) The decennial growth of population during the decade 1981-91 in the region has been slower (19.0%) as compared to the growth at the state level (29.1%).

- vii) The sex ratio in the region is in favour of female population, particularly in DK district as compared with the state. The birth rates and infant mortality rates are relatively lower and the indicators of health, education, communication and financial services are much better as compared with the other regions and the state.
- viii) In terms of economic functional classification (workforce composition), 11 out of 19 cities/towns in the region are grouped as multi-functional and the remaining eight fall under mono-functional group.
- ix) Even though the region is not termed as an industrial area, it has attracted a significant number of large, medium and small industries, at least around two or three large urban centres in the region.
- x) Historically, by tradition and culture, the people in the region, particularly in DK district, are advanced and forward looking, intelligent, work oriented, mobile and more entrepreneurial as compared to other regions.

Table 1 gives data on urban aspects in the two districts of the coastal region and the state during the period 1971-91.

Some special features of urban pattern in the coastal region are :

- i) There are 30 urban centres in the region of which 18 are with urban civic status (CCs, CMC and TMC).
- ii) Most of the cities/towns have experienced lesser population growth rate during 1981-91.
- iii) The Coastal region shares 11.8 per cent of total urban centres in the state and accommodates only 7 per cent of state urban population even though urban share in the region has gone up from 25 to 26 per cent during the decade (1981-91).
- iv) The region had experienced very fast population growth during the decade 1971-81 with 64 per cent, but drastically reduced to 19 per cent in 1981-91.
- v) The region is well off with the per capita income level of Rs. 5,136 in 1990-91 as compared to the state (Rs. 4,631) and other regions.
- vi) The share of non-primary (contribution of urban sector) sectoral income of the region indicates that the districts in the region ranks higher with 64 per cent as compared to other regions of the state.

Table 1
Urbanisation Patterns and Development Indicators, Coastal Region

Sl.No.	Indicator	Coastal district		Coastal Region	State	
		Uttara Kannada	Dakshina Kannada			
1.	Share of urban population (%)	1971	17.7	20.3	19.1	24.3
		1981	25.4	24.5	24.9	28.9
		1991	24.2	28.3	26.3	30.9
2.	Urban growth (%)	1971	25.8	40.4	33.2	35.2
		1981	80.6	40.8	64.2	50.7
		1991	8.3	31.0	19.0	29.1
3.	Urban centres (Nos.)	1971	8	18	26	230
		1981	13	17	30	250
		1991	15	15	30	254
4.	Share of urban population to state urban population (%)	1971	2.1	5.5	7.6	100.0
		1981	2.5	5.4	7.9	100.0
		1991	1.4	5.5	6.9	100.0
5.	Urban density (persons per sq.km.)	1971	2048	1897		2272
		1981	1581	1495		2914
		1991	1771	1611		3257
6a.	Towns with growth rate <20%	1971	4	3	7	57
		1981	-	6	6	39
		1991	12	12	24	146
6b.	Towns with growth rate >50%	1971	1	-	1	22
		1981	3	-	3	32
		1991	-	1	1	11
7.	District per capita income (Rs.)	1970-71	654	691	673	641
		1980-81	1665	1703	1830	1527
		1990-91	4909	5350	5136	4631
8.	Urban share in district income (%)	1980-81	50.0	59.1	55.0	54.2
		1991-92	61.5	67.2	64.2	61.3

URBAN INFRASTRUCTURE AND SERVICES : STATUS AND REQUIREMENTS

The selected infrastructure and services for study are : Water supply, sanitation, health, solid waste management, roads, street lighting, bus/truck terminals, municipal markets and parks and playgrounds.

A two dimensional approach is adopted to assess the infrastructure status of urban areas:

- i) As assessed and evaluated by the State Finance Commission with limited scope and coverage of selected towns and cities with municipal status; and intended to raise the standards to a minimum level.
- ii) As assessed and evaluated in a study conducted by STEM with enlarged coverage of all urban centres and infrastructure services and intended to tackle the problems of a region envisaged as the foremost industrial area of the state next to Bangalore.

Assessment by the State Finance Commission on Status and Gaps in Essential Urban Civic Services and Capital Requirements

a) Water Supply

Six ULBs in DK district and three ULBs in UK district have deficit water supply levels ranging from 50 LPCD in Kundapura and Saligram TMCs to 5 LPCD in Karkala and Sirsi TMCs. The total cost to fill the gaps in water supply levels works out to Rs.35.4 million in DK district and Rs.38.6 million in UK district.

b) Sanitation : Solid Waste Collection and Disposal

Based on the norm of number of Pourakarmikas per 700 population (500 for Mangalore CC), it is found that many ULBs do not have sufficient number of Pourakarmikas. In addition, three TMCs in DK district and one TMC in UK district require trucks/tractors to dispose off the solid waste. If these have to be fulfilled, the investment requirements are Rs. 2.3 million in DK district and Rs. 0.4 million in UK district.

c) Roads and Streets

Based on the physical requirement norm of one km. of road per 1,250 persons, all the ULBs have more than the prescribed norm. In fact, in some towns and cities the excess of road length is more than twice the desired level. However, the length alone is not a

reliable indicator to assess the quality of roads and streets. If the quality is assessed on direct observation, none of the cities and towns have satisfactory or good condition roads.

d) Street Lights

Based on the norms of 20 street lights per km. of road/street, majority of ULBs in Coastal region have more than required number of street lights. The deficit in number of street lights are in smaller towns.

e) Investment Requirements

The total capital investment for these four essential civic services in DK district is estimated at Rs.41.6 million and Rs. 25.5 million in UK district, thus the total cost for the Coastal region is Rs. 67.1 million. This, as a share, constitutes about 5 per cent of the total cost estimated by the State Finance Commission for all ULBs in the state.

Assessment by STEM on Status, Need and Capital Requirements

The estimated total capital costs for an integrated urban infrastructure development programme (qualitative and quantitative) is estimated at Rs. 6.28 billion, of which Rs. 3.50 billion is for land and housing. It is obvious that neither the ULBs nor the State Government alone have the capacities to finance the upgradation of urban infrastructure and service levels. Hence, this would lead to no other alternatives but to look for funding sources from both private investment and international funding.

A plan of funding pattern proposed indicates that only one-eighth of the total capital requirements could be borne by ULBs (with the support from State Government), 40 per cent should come from private sector, particularly in land and housing sector, and the remaining share of 47.5 per cent has to be obtained from centre/international funding agencies.

FINANCES OF ULBs IN COASTAL DISTRICTS

In the two Coastal districts, there is one City Corporation, 2 CMCs and 16 TMCs with municipal status and the remaining 12 urban centres are with non-municipal status. The finances of these ULBs for the year 1990-91 and 1994-95 are analysed.

Historically, the ULBs in the Coastal districts, particularly in DK, have established themselves with relatively good performance in almost all fields of urban governance. Their tax management, revenue mobilisation and functional administration are found to be good as compared to their counterparts in the rest of the state.

It is also acknowledged that from among the six CC's in the state, the overall budgets of the Mangalore CC is more impressive not only at each point of time but also consistent over the years. This can be observed even in relation to other CMCs and TMCs within the district and the Coastal region.

Revenue Components

Among other things, some salient features of aggregate revenue and major components are highlighted here :

- i) In per capita terms, the aggregate revenue of ULBs varies from Rs.379 to Rs.44 for the year 1994-95;
- ii) Approximately, about 55 to 70 per cent of total revenue comes from own sources (tax and non-tax), 10 to 20 per cent as tax shares from state, 25 to 30 per cent as grants and 2 to 5 per cent as loans.
- iii) Most ULBs have significant non-tax revenue receipts.

Expenditure Components

Expenditure is classified into three functional groups viz., general services, social services and economic services. Based on this classification, their shares for each ULB indicates that :

- i) The share of general services is more than 40 per cent among bigger ULBs like Karwar in UK district, Managalore and Udupi in DK district.
- ii) The share of social services are higher with more than 50 per cent among smaller ULBs since many economic services are mixed with social services.
- iii) The expenditure commitments of ULBs are not uniform and determined on the basis of their local needs, irrespective of size and municipal status of the ULB.

Debt Position of ULBs

A major part of works of capital nature are undertaken by the ULBs through loans from government and other financial institutions, particularly LIC and HUDCO.

Many of the ULBs have obtained the loans from LIC for their water supply and drainage works. The KUWS & DB also takes up water supply schemes on behalf of ULB through

borrowed funds. These constitute the debt burden of the ULBs in terms of outstanding loans and interest. As on 1994-95, an amount of Rs.38.3 million is remaining with the ULB of the region as outstanding loans and interest. The overall outstanding loans and interest charges show that Udupi, Karkala and Bantwal TMCs have a significant debt burden as compared to other ULBs.

DEVELOPMENT PERSPECTIVE

An attempt is made to present a future perspective and imperatives for the urban development of the Coastal region.

Urban Future

The following are some important future urban trends :

- i) The urban population of the Coastal region would reach 1.24 million by 2001 with a growth rate of 17.7 per cent during the decade 1991-2001. This will be marginally lower than the growth rate of the state (17.99%). Also, the region would have a higher share of urban population with 27 per cent as compared to 25 per cent in 1991.
- ii) The two districts of the Coastal region would remain in the range of 15-20 per cent decennial growth rate by the year 2001.
- iii) The DK district will have a deficit of 23,900 housing units out of a demand of 146,100 units in 2001, and in the case of UK district, the estimated housing deficit in 2001 would be 10,700 out of the expected demand of 64,400 units.
- iv) The average population size of urban settlements in the Coastal region in 1991 was 35,237 which is marginally smaller than the state level and would reach the size of 41,464 by 2001.

Urban Infrastructure

Based on the two assessments made earlier, it is found that for providing minimum basic civic services in urban local areas, an amount of Rs. 67.1 million is required.

For a long term comprehensive urban infrastructure development in the region, it is estimated that an investment of Rs. 6.28 billion is required in which the share of ULBs will be Rs. 780 million (12.5 per cent); the share of private sector would be 40 per cent and the remaining 47.5 per cent would have to be through funding agencies.

New Industries and its Impact

The liberalisation of the Indian economy has shown signs of further activities in the region and many major industrial activities will have a great impact on the urban centres in the Coastal region. The estimated investment is of a massive nature, i.e., about Rs. 30 billion in steel, Rs. 90 billion in petro-chemicals and Rs. 30 billion in power sector. Advance action has to be taken to build up the regional and urban infrastructure.

Institutional and Personnel Capacity Building and Training

Some of the state urban planning development authorities and regional and urban local institutions are very weak in their technical capability and financial management. A number of vacancies exist in these organisations. Moreover, training is absolutely necessary for the staff to handle urban planning and development programmes. Many technical functions including urban planning and infrastructure development are entrusted to ULBs under the latest amendments to Municipal and Panchayat Raj Acts after 73rd and 74th Amendments to the Constitution of India. This is the context where institutional capacity building and upgradation in the skills of personnel have been suggested.

Development Goals, Objectives and Research Inputs

The three main goals of coastal development would be : i) sustainable development; ii) balanced physical, social and economic development; and iii) upgradation of the quality of life.

With these goals, the specific objectives of urban development in the region should be :

- i) Development plan for urban growth in the regional setting with structure plans for priority cities/towns.
- ii) Development of infrastructure on an area wide basis for transport, water, power drainage, sewage disposal, solid waste management, detailed plans for housing, industries, major commercial and educational centres.
- iii) Plan for strengthening local finances and resources at urban centre level.
- iv) To evolve an "Integrated Environmental Management and Development Plan" for urban growth in the Coastal region.

RESEARCH INPUTS

A number of research and planning projects may have to be undertaken for evolving a functional urban development programme in the coastal region of Karnataka. Some important research inputs suggested in the key areas are : i) growth perspective for the city and towns, ii) study of infrastructural facilities, viz., water supply, sewerage and drainage and other facilities, present status and future needs, iii) study of effective demand for housing in the metropolis, iv) municipal fiscal study, v) in depth study of economic activity in the informal sector; vi) industrial dispersal policy - effect on development, and vii) study on development agencies in the region and organisational structure needs.

STATE POLICY ON URBAN SECTOR

The state (or centre) government has not yet evolved any comprehensive policy on urban sector, but ad-hoc and piece meal policies and programmes are being implemented through their Five Year Plans. A brief review is made on the existing policies and programmes that are being practiced in the state. They include urban land development and housing, plan programmes on urban development, metro, small and medium town development and institutional and fiscal reforms arising out of the 74th Amendment to the Constitution.

I. REGIONAL PROFILE

INTRODUCTION

Dakshina Kannada and Uttara Kannada, the two coastal districts constituting the coastal region of the state, got importance in the mid-eighties, mainly due to the then proposed massive investments on some major projects, of which Kaiga Power Generation and Naval Harbour projects near Karwar are significant. In this decade, the coastal region is to be the largest industrial area in the state. Impending massive industrialisation includes such projects as Kalinidhi Hydel Projects, Mangalore Refinery and Petro-Chemical Limited, Cogentrix Power Plant, New Mangalore Port, Kudremukh Iron Ore, West Coast National Highway and Mangalore-Hassan-Bangalore Broad-gauge Railway. Already existing industries requiring modernisation are coffee, cashew, tile, beedi and tourism. Thus, with the initiation of these major projects and their expected linkage economic effects, it was found necessary to take advanced action plans to provide a direction for future growth of this region. Some initiatives have already been taken and efforts are on to further strengthen the development plans with emphasis on sub-sectoral components.

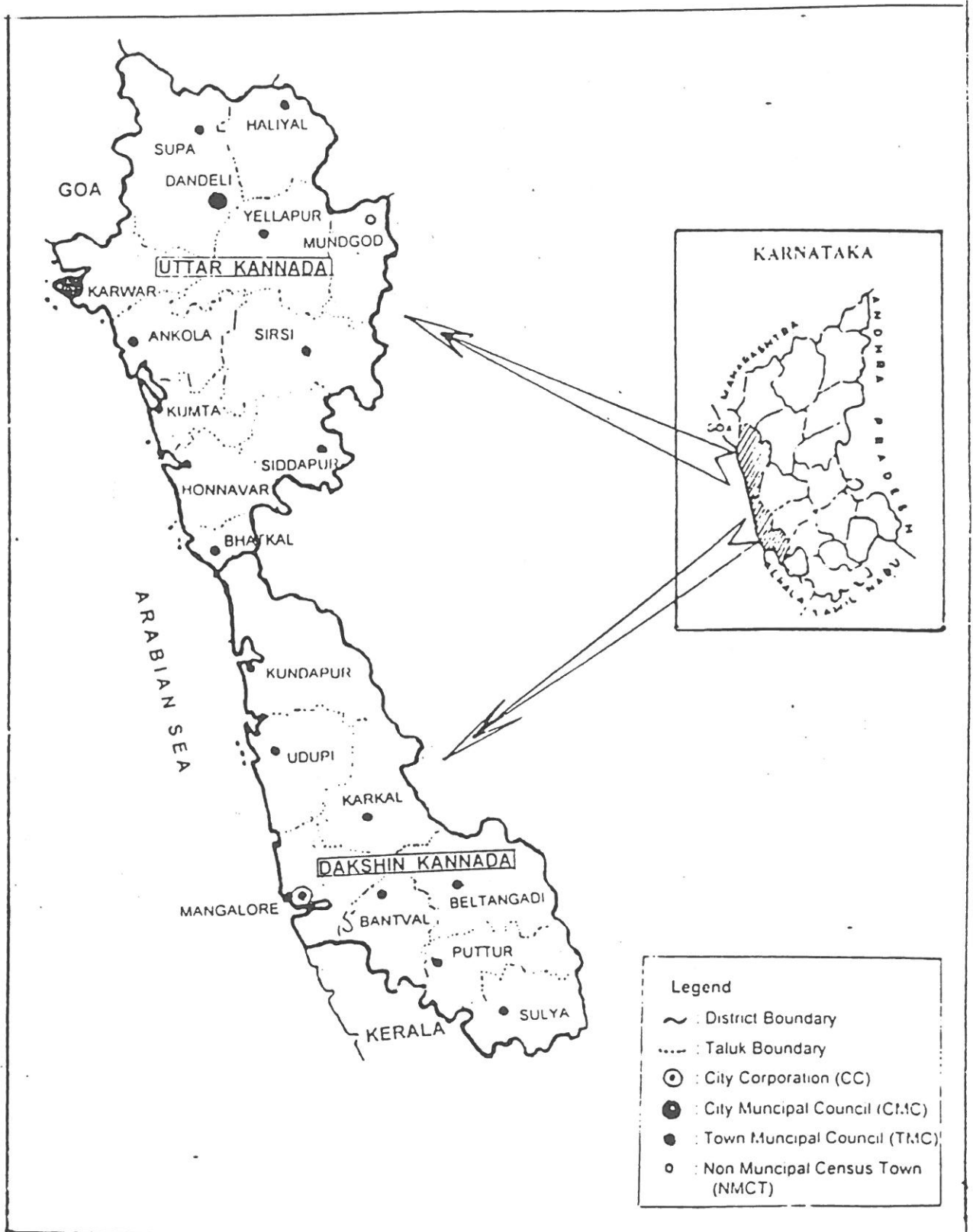
However, any effort towards physical development of any region or area depends on the local human resources, their capabilities and technical skills that require continuous improvement and updating. Hence, the capacity building and sensitisation of the managerial, organisational and administrative personnel have to be an integral part of development planning. Since such approaches differ from time to time, place to place and region to region, the insights of the geographical characteristics, growth potentialities, development imperatives have to be understood such that specific projects, programmes and schemes can be formulated best suited to the region. To that extent, an assessment and status review of any given area, or region or society become pre-requisite to the formulation of action plans to be implemented by the concerned agency or agencies.

COASTAL REGION CHARACTERISTICS

The coastal region of Karnataka occupies a very special and unique geographical position in the Indian sub-continent. It is a part of the western coast of India that runs along the states of Maharashtra, Goa, Karnataka and Kerala (Map 1).

The Coastal region has an area of 18,700 sq.kms. and a population of about 4 million in 1991. There are about 1,900 inhabited villages and 34 towns with Mangalore Urban Agglomeration in the extreme south having a 400,000 of population and dominating the region.

Map 1 : Coastal Districts of Karnataka



The coastal area of the state itself is, for most parts, a narrow strip of land varying from 40 to 80 kms. with a coastline of about 259 kms. along the Arabian sea and is frequently broken by the estuaries of small, swift-flowing rivers, which empty into the Arabian sea against the backdrop of the Western Ghats, which stretch right from Nasik in Maharashtra to Kanyakumari in Tamil Nadu, the southern most tip of the India.

The region has two distinct sub-regions : i) on the west is the plain area of the coastal belt (coastal sub-region), and ii) on the east is the hilly area with slopes of the Western Ghats (western ghat sub-region).

The taluks in the two districts of the region are : 1) Coastal sub-region, consists of Mangalore, Udupi and Kundapura taluks in DK and Bhatkal, Honnavar, Ankola and Karwar taluks in UK district; and 2) Western Ghat sub-region, consists of Sulya, Puttur, Bantwal, Belthangadi and Karkal in DK district and Siddapur, Sirsi, Yellapur, Mundgod, Supa Halingal in UK district.

Some of the special characteristics of the region are :

- 1) Rising sharply and running parallel to the coast in an almost continuous chain is the range of mountains of the Western Ghats. In both the districts, the height of the mountain range varies from 600-900 metres, but in its higher reaches, its peak goes up to 1,880 metres.
- 2) The region receives heavy to very heavy rainfall from the south-west monsoon. Some of the best rain forests in the country exist on the slopes of the hill ranges, particularly on their western face.
- 3) Some of the most picturesque water falls in the world occur amongst the forests of the region. Down below the Ghats is the territory rich in spices, beetle vines, cashews, arecanuts, coconuts and rice.
- 4) Rivers originating from the Western Ghats flow into the Arabian Sea in this region. The state has exploited the steep descent of the west flowing waters of the rivers, notably the Sharavathy and the Kali, to generate electricity which are the major sources of electricity for Karnataka.
- 5) Along the coast line there are 21 minor ports, a medium harbour at karwar, a fishing port at Malpe, a major deep sea harbour at Mangalore. National highway No.17 from Kanyakumari in Tamil Nadu to Bombay connects all the important coastal towns of Karnataka.

- 6) In addition, the Konkan railway line recently laid, almost parallel to the National Highway No.17, has provided another important transport corridor for the west coast region. In addition, a number of state highways connect all the urban centers of the region to other cities in the state.
- 7) The Mangalore-Hassan railway line currently being converted to broadgauge connects the port city of Mangalore with the state capital, Bangalore.
- 8) National highway No.48 connects Mangalore with Hassan and Bangalore.
- 9) The Bajpe airport about 25 kms. north-east of Mangalore (and equally accessible to Udupi) gives air link to Bangalore and Chennai in the east, Goa and Bombay in the north and Cochin and Thiruvananthapuram in the south.
- 10) This ecologically fragile region with the sea coast and the rich forests of the ghats presents a challenge to the ingenuity of preserving it while planning development for the larger interests of the state and the country.

DISTRICT CHARACTERISTICS

Some selected demographic and socio-economic indicators of two districts of the region are listed in Table 1.1.

Demographic and Socio-economic Characteristics

- 1) Dakshina Kannada district has better demographic, social and economic indicators than Uttara Kannada district;
- 2) The coastal region has attained better social and economic levels of development than the other regions of the state;
- 3) The area of UK is 1.22 times higher than DK, but the population inhabited by UK is only 0.48 times that of DK district;
- 4) The total population of DK district was 2.38 million in 1981 which increased to 2.69 million in 1991. In the case of UK district, the increase in the total population has been from 1.07 million in 1981 to 1.30 million in 1991;

Table 1.1
Selected Indicators of Coastal Districts

Indicator	Year	Districts		State	
		Dakshina Kannada	Uttara Kannada		
A. Demographic					
Area (sq.km.)	1991	8441	10291	191800	
Population (million)	1981	2.38	1.07	37.10	
	1991	2.69	1.30	44.90	
Sex ratio (females per 1000 males)	1991	1063	967	960	
Literacy rate (%)					
	Male	1991	84.7	76.1	67.30
	Female	1991	68.3	56.7	44.30
Birth rate (per 1000 persons)	1991	22.3	24.3	26.30	
Infant mortality rate (per 1000 persons)					
	Male	1990	50.4	82.1	89.7
	Female	1990	48.9	78.1	85.0
B. Social & Economic					
Share of SC & ST population (%)					
	SC	1991	6.5	7.5	16.4
	ST	1991	3.9	0.8	4.3
Population per hospital bed (Nos.)	1991	1142	1577	1413	
Pupil-Teacher Ratio (Nos.)					
	Primary	1993-94	56	40	54
	High school	1993-94	48	26	36
No. of telephones per 100,000 population	1993-94	2114	1031	1061	
Population per post office	1993-94	3554	2572	4901	
Population per commercial bank	1993-94	5756	8042	11065	
Share of workers (%)	1991	41.29	35.13	38.45	

- 5) The sex ratio (females to 1000 males) in 1991 is higher in DK district (1063) compared to UK district (967) and the state (960);
- 6) The share of SC and ST communities is rather low in both the districts as compared to the state;
- 7) The birth rates per 1000 population during 1991 in both the districts are lower, i.e. 22.3 and 24.3 in UK and DK districts respectively, as compared to the birth rate in the state (26.3);
- 8) Infant mortality (per 1000) for male and female in both the districts are lower than the state level of 89.7 for male and 85.0 for female;
- 9) Population coverage per hospital bed available show that DK district has a relatively better coverage (1,142) than the UK district (1,577) as well as the coverage at the state level (1,413);
- 10) In the education front, there is a higher demand and availability of more schools and teachers in DK district as compared to UK district as well as the state;
- 11) The share of workers in total population in the year 1991 is lesser in UK district (35.1%) as compared to about 41 per cent in DK district and the state;
- 12) Telephones per 100,000 population in DK is twice than that available in UK as well as the state.

URBAN PATTERN OF COASTAL REGION AND ITS DISTRICTS

In addition to the general features of the coastal districts presented earlier, the specific urban characteristics of the two districts and their changing patterns in the last three decades (1971, 1981 and 1991) as compared to the state are presented separately in Table 1.2. These indicators provide the degree and the extent to which the districts distinguish themselves from the state aggregate.

Share of Urban Population

The urbanisation pattern in the two districts reveals that while both districts are less urbanised as compared to the state; the trend in UK district has been fluctuating as against the DK where there is a continuous growth in urban share in the district. The share of urban

population in total population during 1991 was 28.3 per cent and 24.2 per cent in DK and UK districts respectively. The state recorded a share of 30.9 per cent during the same period.

Urban Growth

While the decennial urban growth rates in DK district during 60s and 70s did not vary and declined during the 80s, the growth rates in UK district fluctuated drastically. The urban growth rate during 1981-91 was 31.0 per cent in DK, 8.3 per cent in UK and 29.1 per cent in the state.

Urban Settlements

Though the number of urban settlements in DK district were more than those in UK district till 1981, the latter experienced an increase in the number and reached an equal status in 1991. The region has experienced an increase in the number of urban settlements from 26 in 1971 to 30 in 1991, with both DK and UK registering a figure of 15 urban centers.

Urban Density

Urban population density in both the districts has declined during the decade 1971-81 due to the change in boundaries. However, densities have marginally increased in the subsequent decade 1981-91. The densities in both the districts are less as compared to the state due to the undulating nature of the land.

Trends in Growth Patterns of Resettlements

Many urban settlements in both the districts have grown with slower growth rates (less than 20 per cent decennial growth) during the last two decades, particularly in DK district; the slower growth of towns is more evident during 1981-91 in both the districts. This is because of out-migration of local population mainly to Bangalore, Mumbai, the Gulf, USA, United Kingdom, etc.

Economic Growth

The contribution of urban sector to the economic growth of the districts has been more than half of the district total income. In fact, the share have increased rapidly during 1980-81 to 1991-92. It is 67.2 per cent for DK, 61.5 per cent for UK and 64.2 per cent for the state.

Table 1.2

Urban Pattern and Development Indicators, Coastal Region

Indicator	Coastal District		Coastal Region	State	
	Dakshina Kannada	Uttara Kannada			
Share of urban population (%)	1971	20.3	17.7	19.1	24.3
	1981	24.5	25.4	24.9	28.9
	1991	28.3	24.2	26.3	30.9
Decennial urban growth (%)	1971	40.4	25.8	33.2	35.2
	1981	40.8	80.6	64.2	50.7
	1991	31.0	8.3	19.0	29.1
Urban centers (Nos.)	1971	18	8	26	230
	1981	17	13	30	250
	1991	15	15	30	254
Urban density (persons per sq.km.))	1971	1897	2048	-	2272
	1981*	1495	1581	-	2914
	1991	1611	1771	-	3257
Towns with growth rate < 20%	1971	3	4	7	57
	1981	6	-	6	39
	1991	12	12	24	146
Towns with growth rate 20-50%	1971	-	1	1	22
	1981	-	3	3	32
	1991	1	-	1	11
Urban share in district income (%)	1980-81	59.1	50.0	55.0	-
	1991-92	67.2	61.5	64.2	-

Note: * Change in geographical boundaries.

POPULATION TRENDS IN CITIES AND TOWNS

Urban Settlements and Population

Some important urban characteristics of individual city and towns (with civic status) of the two Coastal districts are presented by their population size in 1991 in Table 1.3. The population growth rate for the decade 1971-81 is not available for five towns in DK district and one town in UK district as they were newly added towns at the time of census count in 1981. It is observed from Table 1.3 that:

- 1) Except Karkala and Puttur towns in DK district, all other towns have lesser population growth rates during the decade 1981-91 as compared to 1971-81;
- 2) The areas of most ULBs remained the same during the decade 1981-91;
- 3) The population density of Dandeli CMC being the highest among all the ULBs in the Coastal region, majority of the ULBs in UK district have high density with more than 5,000 persons/sq.kms., particularly Bhatkal and Sirsi towns. In DK district, Mangalore CC is highly dense with 3,708 persons/sq.km. followed by Udupi TMC;
- 4) While DK district, known for its high literacy level, has been declared fully literate, UK district is also equally literate, particularly in urban areas. However, Baindur and Haliyal towns have relatively lower literacy rates;
- 5) The population projections by the year 2005 show that only Mangalore city continues to be with more than 100,000 population even in the year 2005. However, there will be two towns in DK district reaching the 50,000 mark by 2005, while all other towns will remain below the mark of 40,000 by the year 2005. Mangalore Urban Agglomeration (425,000 population) and Udupi Agglomeration (117,000 population) are bound to have rapid growth. The boundary of Mangalore City Corporation has recently been extended and Udupi will be a district town very soon.

Functional Classification of Towns

Many documents analysing urbanisation patterns have not taken into account the dimensions of economic base and functional characteristics of towns in terms of workforce composition and its impact on their growth and development. The Eighth Five Year Plan of Government of India has clearly indicated that any attempt towards infrastructure development of towns should take note of the functional status of the town and choose a mix of infrastructure

facilities most suitable to their growth and facilitate a healthy support to the further development in the overall economy.

It is proposed here to bring forth and examine the relationship between the size class of towns, and types of functional characteristics of towns.

The functional status (as defined and classified by Census of India) of a town is identified as Mono-functional (any one function alone has more than 40 per cent of total workforce); Bi-functional (any two functions together have 60 per cent or more of total workforce); and Multi-functional (any three functions together have 60 per cent or more of total work force) with any three of five functional categories of primary (code-1) based, industrial (code-2) based, trade and commerce (code-3) based, transportation and communication (code-4) based and services (code-5) based. These are arrived at based on proportion of work force engaged in the respective categories in each city/town.

The functional status of the urban settlements thus classified is given in Table 1.3. This leads to the following conclusions :

- 1) Out of the 19 ULBs in the Coastal region, 11 fall in Multi-functional group and the remaining are under mono-functional group.
- 2) While Baindur, Saligram and Haliyal are categorised as primary-based mono-functional urban centres, Mangalore, Bantwal and Dandeli are grouped as industry- based mono-functional urban centres.
- 3) Among the multi-functional towns, majority of the TMCs come under industry-cum-service-cum-trade and commerce group.

This enables the planners to take corrective action to rectify the imbalance in economic activities.

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Table 1.3
Population Trends in Cities and Towns

District/Town/City	Status of ULBs	Population		Growth rate (%)		Area (sq.km.)	Population density (persons per sq.km.)	Functional status	Literacy rate (%)	Projected population	
		1981	1991	1971-81	1981-91					2001	2005
Dakshina Kannada											
Mangalore	MC	261514	273304	12.30	4.51	73.71	3708	200	78.32	371000	419200
Bantval	TMC	31378	34313	-	9.34	28.14	1219	200	66.52	46600	52600
Udupi	TMC	33413	33913	37.05	1.50	9.71	3493	253	84.21	46000	52000
Kundapura	TMC	28315	28477	18.82	0.57	14.01	2033	213	69.88	38700	43700
Puttur	TMC	20103	25800	14.99	28.34	9.74	2649	253	75.51	35000	39600
Karkal	TMC	20713	24108	11.40	16.39	23.06	1045	235	76.72	32700	37000
Suratkal*	TMC	25998	22635	-	12.94	15.26	1483	200	77.69	30700	34700
Baëndur	TMC	14071	16488	-	17.18	96.99	170	100	56.68	22400	25300
Mudubidri	TMC	13575	15868	-	16.88	18.64	851	215	74.11	21500	24300
Mulki	TMC	12098	14100	4.97	16.54	10.10	1396	253	71.17	19100	21600
Saligram	TMC	13228	14020	-	5.98	14.69	954	100	63.51	19000	21500
Uttara Kannada											
Dandeli	CMC	47625	52701	87.32	10.65	8.52	6186	200	64.98	57300	59200
Karwar	CMC	47210	51022	70.00	8.05	14.35	3556	525	74.92	55400	57300
Sirsi	TMC	38907	41747	36.15	7.30	9.28	4499	352	75.1	45400	46900
Bhatkal	TMC	25665	31478	37.01	22.64	5.23	6019	300	72.14	34200	35400
Kumta	TMC	23385	26181	22.36	11.83	15.34	1707	153	70.28	28400	29400
Haliyal	TMC	15655	18005	28.71	15.01	5.49	3280	100	58.37	19600	20200
Honnavar	TMC	15124	16192	21.54	7.06	8.86	1828	325	73.42	17600	18200
Ankola	TMC	12153	13509	-	11.16	7.42	1821	153	69.92	14700	15200

Source: STEM & KSUPO (1995), (Karnataka Urban Development Strategy, A framework for IDSMT.

Note: * Now a part of Mangalore City

II. STATUS OF URBAN SERVICES

COMPONENTS OF URBAN INFRASTRUCTURE AND SERVICES

The basic and essential civic services in urban areas are provided by the Urban Local Bodies. The obligatory functions of ULBs include provision of water supply, roads, drainage, solid waste management, street lighting, sewerage, sewage disposal, health services, etc. The ULBs are not able to meet the necessary minimum requirements and hence the quality of services are deteriorating and the gap between demand and supply has been widening.

An attempt is made here to assess the status of selected urban local services and infrastructure in the individual urban areas of the Coastal region. The selected services are water supply, health and sanitation, sewerage, solid waste, roads, street lighting, bus/truck terminals, municipal markets and parks and playgrounds.

The two approaches reviewed here are: (i) as assessed and evaluated by the State Finance Commission with limited scope and coverage of towns and cities with municipal status and (ii) As assessed and evaluated in a study conducted by the Centre for Symbiosis of Technology, Environment and Management (STEM) with enlarged coverage of all urban centres and their infrastructure services within and beyond the municipal boundaries.

ASSESSMENT BY THE STATE FINANCE COMMISSION

The physical status of water supply, sanitation, road network and street lights are assessed on the basis of data collected from the report of the State Finance Commission, State Government of Karnataka. Table 2.1 gives the existing physical levels of services, desired levels, and the estimated cost to fill the gaps and amount of devolution of funds from the state and the centre as proposed by the State Finance Commission.

Water Supply

From Table 2.1 it evident that six ULBs in DK district and six ULBs in UK district have deficit water supply levels ranging from 50 LPCD in Kundapura and Saligram TMCs to 5 LPCD in Karkal and Sirsi TMCs. Consequently, the estimated costs to fill the gaps range from Rs.11.9 million in Kundapura to Rs. 1 million in Karkala. The total cost of water supply system works out to Rs. 35.4 million in DK district and Rs. 38.6 million in UK district.

Sanitation : Solid Waste Collection and Disposal

The indicator chosen for assessing the sanitation conditions of ULBs is the number of Pourakarmikas per 700 population (500 for Mangalore CC). Based on the norm, it is found that many ULBs do not have sufficient number of Pourakarmikas. In addition, three TMCs in DK district and one TMC in UK district require trucks/tractors to dispose off the solid waste. If these have to be fulfilled, the investment requirements are Rs. 2.3 million in DK district and Rs. 400,000 in UK district.

Roads and Streets

Roads and streets constitute a basic infrastructure of the transport network for the smooth movement of people and goods. Based on the physical requirement norm of 1 km. of road per 1,250 persons, it can be observed that all the ULBs have more than the prescribed norm. In fact, in some towns and cities the excess of road length is more than twice the desired level. However, the length alone is not a reliable indicator to assess the quality of roads and streets. If the quality is assessed on direct observation, none of the cities and towns have satisfactory or good condition roads as will be examined in the latter part of this chapter.

Thus, only on the basis of physical requirement, (i.e., quantitative) there will not be any additional financial requirements for urban road network in the Coastal region. However, improvement in the quality of roads (such as surfacing, footpath, storm water drains, signals and lighting) needs to be undertaken.

Street Lights

Public safety in urban areas is normally assessed on the level of number of street lights. Once again, based on the norms of 20 street lights per km. of road/street, it can be seen that majority of ULBs in Coastal region have more than the required number of street lights. The deficit in number of street lights can be seen in smaller towns like Bantwal, Baiduru, Mudbidri, Saligram and Suratkal TMCs in DK district and Haliyal TMC in UK district. Since the street lighting is related to the length of the roads, the number of lights are found many times higher than the desired levels particularly in Mangalore CC, Puttur and Bhatkal TMCs and Karwar and Dandeli CMCs. Baidanur TMC in DK has the largest deficit in street lighting.

The estimated cost to fill the gaps is Rs. 4.1 million for DK district and about Rs. 200,000 for UK district.

Table 2.1

Status of Urban Basic Infrastructure Services in ULBs of Coastal Region

ULBs	Water supply			Sanitation				Roads/Streets (kms.)			Street lights (Nos.)		
	Existing Level (LPCD)	Deficit/ Surplus	Cost (in million Rs.)	Pourakarmikas		Vehicles		Existing	Deficit/ Surplus	Available	Excess/ Deficit	Estimated (in million Rs.)	
				Existing (Nos.)	Deficit (Nos.)	Cost (in million Rs.)	Required (Nos.)						Cost (in million Rs.)
Dakshina Kannada													
Mangalore	155	-	-	NA	NA	NA	-	375	+156	28444	20944	-	
Bantwal	50	20	5.71	12	-37	0.09	-	57	+30	752	-338	0.97	
Udupi	70	-	-	73	25	-	2	45	+18	2074	1174	-	
Kundapura	20	50	11.86	22	-18	0.05	-	26	+3	1002	482	-	
Puttur	70	-	-	37	1	-	1	33	+12	1360	-00	-	
Karkal	65	5	1.01	13	-21	0.05	-	47	+28	1205	265	-	
Suratkal	89	-	-	12	-20	0.05	-	41	+23	646	-174	0.44	
Bandur	25	45	6.18	4	-19	0.05	-	44	+31	191	-686	1.72	
Mudbidri	70	-	-	NA	-22	-	1	32	+19	538	-102	0.26	
Mulki	30	40	4.69	10	-10	0.03	-	26	+15	658	138	-	
Saligram	20	50	5.89	3	-17	0.04	-	20	+9	133	-267	0.67	
Uttara Kannada													
Dandeli	70	10	3.45	62	-10	0.03	-	43	+084	1491	631	-	
Karvar	65	15	5.01	37	-35	0.09	-	77	+36	2775	1235	-	
Sirisi	65	5	1.74	60	1	-	-	97	64	2325	385	-	
Bhatkal	70	-	-	20	-24	0.06	-	27	+2	1526	986	-	
Kumta	45	25	5.45	NA	-37	-	-	-	-	1390	670	-	
Haliyal	40	30	4.49	NA	-25	-	-	24	+9	418	-62	0.16	
Honnavar	35	35	4.72	19	-4	0.01	-	41	+28	829	9	-	
Ankola	70	-	-	16	-3	0.01	1	21	+10	676	256	-	

Source : State Finance Commission Report (1996).

Investment Requirements

To bring the urban infrastructure of all the ULBs in the Coastal district to basic levels, the investment requirements thus estimated under each service has been presented in Table 2.2. It is to be noticed that the largest amount required is for Kundapura TMC to the extent of Rs. 11.9 million. Strangely, of all the urban infrastructure services here, Mangalore CC has come out with no additional requirements at all. This is mainly due to the norms which the State Finance Commission has used to make relative amount of needs of ULBs. A dynamic city's requirement is not the same as that of a small town. Thus, accordingly to this assessment the total capital costs for the above discussed four essential civic services in DK district is Rs. 41.6 million and Rs. 25.5 million in UK district. The total cost for the Coastal region is Rs. 67.1 million. This constitutes about 5 per cent of the total cost estimated by the State Finance Commission for all ULBs in the state.

Table 2.2
Estimated Investments and Devolution of Finances from Centre and State (SFC)
(in million Rs.)

District/ULBs	Total estimated capital costs	Devolution from state and centre
Dakshina Kannada		
Mangalore	-	3.69
Bantwal	6.78	1.18
Udupi	1.14	0.61
Kundapura	11.91	0.68
Puttur	0.23	0.59
Karkal	1.06	0.77
Suratkal*	0.49	1.18
Baindanur	7.95	2.58
Mudbidri	0.83	1.04
Mulki	4.72	0.50
Saligram	6.55	0.91
Total	41.65	13.73
Uttara Kannada		
Dandeli	3.48	0.90
Karwar	5.10	0.86
Sirisi	1.74	0.86
Bhatkal	0.06	0.70
Kumta	5.46	0.78
Haliyal	4.65	0.54
Honnavar	4.73	0.55
Ankola	0.23	0.46
Total	52.49	5.66
Total of DK and UK	67.14	19.39

Source: ibid.

Note : * Now a part of Mangalore.

Source of Funding

When compared with the devolution of financial resources from the state and central budgetary sources for the next five years (up to 2001) recommended by the State Finance Commission, four TMCs, namely Mudbidri, Suratkal, Bhatkal and Ankola might be able to improve their services to the level of suggested norms from such financial transfers. The other ULBs have to search for additional sources of funds.

ASSESSMENT BY STEM

With an enlarged version and with extended scope and coverage, STEM has made an in-depth study and assessed the urban infrastructure status in the coastal region and proposed a development programme. The details are summarised here.

Land Requirement and Acquisition

Karnataka Town and Country Planning Act, 1961 is extended only to the local planning areas of Managalore, Udupi, Karwar and Dandeli in coastal district. Even though comprehensive development plans (ODP/CDP) of cities are prepared and approved by government for the four major urban centres of the region, the land use plans are not enforced strictly. Consequently, haphazard and unauthorized developments are taking place. Urban sprawl and ribbon development along the roads have become common features in both the Coastal districts. Open spaces and parks which provide the much needed recreational facilities for urbanites are inadequate and not properly maintained. Lack of infrastructure, violation of building bye-laws, including zoning and sub-division regulations, has resulted in building congestion and traffic problems affecting the physical, social and economic welfare of the people.

After a detailed assessment, it is found necessary to gear these institutions for development by strengthening and providing them financial assistance for land acquisition and development including infrastructure. It is estimated that a total extent of 2,000 hectares are to be acquired for town extension only, excluding industrial and other uses. The acquisition of development of these 2,000 hectares will cost Rs.2,000 million at a rate of Rs.1 million per hectare.

Housing and Urban Renewal

In a developing country like India, large scale urban renewal programmes are very expensive, if not altogether prohibitive. However, some degree of urban renewal process can be achieved through a decongestion mechanism of undertaking housing and land development programmes (HALDEP) in each towns.

Similar to the national and state pattern, the shortage of housing is felt in the Coastal region also. The urban housing shortage by 2001 is estimated at 25,700 in DK and 35,500 in UK districts. Thus, there is a need to encourage construction of additional dwelling units by providing developed plots with infrastructure facilities, building materials at affordable prices and finances required by different sectors of people.

While construction of housing units at an annual rate of 8 to 12 per 1000 population is required to prevent further deterioration in the housing sector, it is estimated that on an average only 3.5 housing units per 1000 population are added annually and is mostly contributed by the private sector. Therefore, it is necessary to obtain finances from external agencies and encourage house building activity in all the urban areas of the Coastal region. An approximate estimate is made of the amount needed for housing, including urban renewal and improvement of slums.

Considering the future population and affordability of the families, it is estimated that 50,000 dwelling units, at a average rate of Rs.40,000 per dwelling unit will cost Rs.2 billion for HALDEP.

Roads and Footpaths

In the Coastal region, roads can be classified into two categories : (i) inter-city roads (National, State and District Highways), connecting various urban centres are maintained by the Public Works Department and the Zilla Panchayat; and (ii) intra-city roads, within the cities and towns, are under the control of urban local authorities. While the physical requirement of roads and streets are found to be sufficient or sometimes, more their quality and conditions are not satisfactory in the majority of ULBs. The heavy monsoon rains of 400 cms. in 4 months is to be reckoned with.

Most of the roads in cities and towns are not asphalted for many years and in small towns, most of them are gravel roads which get damaged badly during the heavy monsoon rains in the Coastal region.

Even though foot paths exist along major roads and particularly in the administrative and commercial areas, they have become narrow with obstructions due to unauthorised vendors. In small towns, road berths along highways passing through them act as foot paths. Raised and paved pedestrian paths are needed in almost all urban areas along major roads in busy areas.

An assessment of the upgradation of roads and foot paths needed and the amount required for the work is estimated. The approximate cost of improving inter-city and intra-city roads and foot paths in the two Coastal districts is expected to be Rs. 1 billion. This also does not include the cost of upgrading National Highway (NH) 17 and 14 to four lanes.

Surface Drainage

Rainfall in the Coastal region is very heavy during the monsoon period and the discharge in the rivers and valleys is large and flooding of low lying areas is a common feature in the coastal towns. Therefore, storm water drainage needs attention. Many valleys inside the cities and towns get silted up and overflow the banks causing damage to properties. Lack of underground drainage system leads to mixing up of sullage with surface water causing water pollution and flooding of low lying areas causes damage to underground drainage system, particularly in Mangalore, Udupi and Karwar.

A detailed study of all the natural drains and estuaries within the urbanisable areas is necessary to assess the financial needs to improve the surface drainage system through desilting, realigning and lining the water courses identified for the purpose. The cost of improving surface drainage in urban and urbanisable areas by 2001 A.D. is estimated at Rs.100 million.

Water Supply

Provision of water supply system for any urban area depends on : (i) availability of dependable sources of water and its conveyance to the urban areas; (ii) technical ability of the organisation responsible for storage, purification and distribution of water to the consumers; and (iii) financial resources available for implementing the schemes.

Though there are a number of west flowing rivers and streams, in view of highly undulating topography, there is a difficulty of storing water for summer use. The capability of the ULBs in project formulation and implementation of water supply schemes on their own are weak. The state government at present gets all the water supply and underground drainage scheme executed by KUWS&D Board, which supplies bulk water to ULBs collecting charges for such supply. The distribution system is maintained by the concerned ULB. Many towns in the region are not able to take up improvement of the existing system to cater to the increasing population and industries.

The KUWS&D Board depends for finances on the ULBs and the state government. Since the finances of ULBs are insufficient for capital works, the state has to come to their aid frequently. The state in turn approaches domestic financing agencies like LIC and HUDCO and the external agencies like the World Bank, ADB and OPEC. Therefore, it is inevitable that external finances have to be obtained to take up water supply schemes in all the urban centres of the Coastal region.

It is estimated that the future population and industrial units in Mangalore area will need an additional 25 million gallons of water daily by the year 2001. The paucity of water from the source of Nethravati river during summer is causing concern. The Sarpadi reservoir proposed

in the upstream of the river is yet to be cleared by the Ministry of Forest and Environment. Alternative proposals like building of small anicuts, keeping in view the environmental impacts, are to be worked out during the detailed project preparation stage. Desolation of sea water is another source to be seriously considered for the future needs.

Water supply schemes for other towns are in various stages of preparation and implementation by KUWS&D Board. Taking them together, the financial requirement for the works is estimated at Rs. 950 million.

Under Ground Drainage and Treatment of Waste Water

The necessity of UGD system is realised by the people in urban areas but the authorities consider it as a last priority since it is not remunerative. And at the same time, the ULBs cannot afford to provide finances even to such important and essential programmes. Mangalore city got an UGD system only in 1971 while Udupi got it in 1985. The other towns in DK district like Karkal got UGD executed only in 1992, with some pending works. The towns which have partial UGD system in UK district are Dandeli and Karwar but these are without treatment plants. In other towns, individual pit latrines and surface drains are utilised for disposal of night soil and sewage causing environmental pollution and health hazards.

Even in cities like Mangalore and Udupi, it is found that the maintenance of the UGD system is not satisfactory and many improvement works were not undertaken for want of finances. In many towns of the region, the sewage has to be collected in wet wells, located at the lowest points of each catchment area, and pumped to treatment plants located away from the city/town at higher elevation for treatment and discharge treated sewage. Similar is the situation in many other towns/cities. Therefore, there is an urgent necessity to assess the situation in all towns and take up UGD new works as well as augmentation of capacity as early as possible.

Further, there is also a case of improper maintenance of the UGD system, leading to flooding of sewer lines by rain water and damaging the entire system. Treatment of industrial and toxic waste water (about 20 mgd expected by 2002 in Mangalore alone) is an urgent requirement. The entire programme needs finance either as grants or as interest free loans, since working an UGD system is not an economically viable activity. The enlisted UGD projects for the ULBs in the Coastal region would cost about Rs. 80 million.

Solid Waste Management and Sanitation

Collection, transportation and disposal of solid waste is an obligatory function of the ULBs. The age old system of street sweeping and collecting domestic and non-domestic wastes through dust beings, transporting the garbage through trucks or bullock carts and dumping them haphazardly at the outskirts of urban areas is the present practice in almost all the towns.

It was observed that all the three functions-collection, transportation and disposal - are not properly executed in many towns. For example, Mangalore City Corporation collects only 65 tons (62%) out of about 104 tons of solid waste generated in the city and the rest is either dumped into the gutters and valleys or burnt. the disposal site presents a chaotic picture. Sanitary land filling or composting and recycling the waste are not adopted. The position in other towns is still worse. Therefore, there is an urgent need to take up systematic solid waste management in all the centres of the region. All these works are expected to cost Rs. 150 million.

Remunerative Projects

The internal resources of ULBs including that of Mangalore CC are meager. One way of improving the resources is to build a few commercial and other complexes like shops and markets and collect advances and rents. Many cities like Bangalore, Mysore, Hubli and Mangalore and even some smaller towns have succeeded in improving their internal resources by investing in such remunerative projects. Therefore, it is proposed to encourage the ULBs in the Coastal region to expand the activities of building commercial complexes and markets which are, however, badly needed. For instance, the Coastal towns and particularly port towns can build ware-houses, ice plants, cold storages, fish markets, auction yards, bus-terminals, godowns and shipping centres near the ports and earn income and clear the loans obtained from financial institutions. ULBs also require funds to construct or improve health and educational buildings in the respective towns.

An assessment is made of the total requirement of finances for such projects and it is found that a minimum of Rs. 200 million will be needed for remunerative projects in the towns of Coastal districts.

Parks and Playgrounds

In view of the undulating terrain and high land value, much attention is not given for development of parks and playgrounds in the towns of the Coastal districts. According to planning standards, parks and playgrounds should constitute 5 to 10 per cent of urbanised/urbanisable area depending upon the size of the urban centre. Comparative statement of existing land uses by the Mangalore City Planning Authority shows that parks, playgrounds and other public open spaces constituted only 1.9 per cent of developed area in 1967 (ODP) and 2.9 per cent of built-up area in 1990 as per Comprehensive Development Plan (CDP). Similarly in Udupi Urban Agglomeration, area occupied by parks and playgrounds was only 2.9 per cent in 1982. The situation in other towns of the Coastal districts is worse.

In the CDPs approved by the State Government for Mangalore and Udupi, and additional area of 843 hectares and 186 hectares are proposed for parks and playgrounds by the year 2011. Similarly for the other urban areas in the two districts, it is estimated that another 500 hectares will be needed. Thus, a total area of about 1,529 hectares is to be acquired, developed and maintained for the use of the inhabitants. Assuming that the cost of land is met under Land Acquisition and Development, the cost of developing, fencing and lighting 500 hectares at the rate of Rs. 0.25 million per hectare will be about Rs. 125 million.

QUALITATIVE ASSESSMENT OF URBAN INFRASTRUCTURE

While the available urban infrastructure in quantitative terms in the urban centres with municipal status have been described earlier, the quality of these services are broadly indicated in Table 2.3.

FINANCING URBAN INFRASTRUCTURE

From the magnitudes of the estimated capital costs presented in Table 2.4, it is obvious that neither the ULBs nor the state government alone have the capacity to finance the upgradation of the service level of the urban infrastructure. Hence, this would lead to alternative funding sources such as private investment and international funding.

A plan of funding pattern is presented in Table 2.5 which suggests that only one-eighth of the total capital requirements of Rs. 6.28 billion could be borne by the ULBs (with the support from state government) 40 per cent should come from private sector, particularly in land and housing sector, and the remaining share of 47.5 per cent has to be obtained from the centre/international funding agencies.

Table 2.3

Existing Condition (Quality) of Infrastructure Facilities in the ULBs of Coastal Region

ULBs	Water supply	Sewerage	Surface drainage	Solid waste management & sanitation	Road network	Foot paths	Electricity supply & street lighting	Parks & play grounds	Remarks
Dakshina Kannada									
Mangalore	Fair	Fair	Needs Improvement	Poor	Narrow but fair	Bad	Fair	Poor	Condition in towns within the UA is bad.
Udupi	Fair	Poor	Needs Improvement	Poor	Narrow but fair	Bad	Fair	Fair	Condition in towns within the UA is bad.
Bantval	Fair	Bad	Fair	Poor	Fair	Poor	Fair	Nil	Ribbon Development.
Kundapura	Poor	Bad	Poor	Poor	Poor	Bad	Poor	Poor	Need Strengthening and Improvement(NSI).
Puttur	Poor	Bad	Poor	Poor	Poor	Bad	Poor	Bad	NSI
Karkal	Fair	Fair	Fair	Poor	Poor	Bad	Poor	Poor	NSI
Baunduru	Poor	Bad	Poor	Bad	Bad	Bad	Poor	Bad	NSI
Mudbidri	Poor	Bad	Fair	Bad	Poor	Bad	Poor	Bad	NSI
Mulki	Poor	Bad	Poor	Bad	Poor	Bad	Poor	Bad	NSI
Saligram	Poor	Bad	Poor	Bad	Poor	Bad	Poor	Bad	NSI
Uttara Kannada									
Dandeli	Fair	Fair	Fair	Poor	Fair	Fair	Good	Fair	Conditions are poor in slum areas.
Karwar	Fair	Poor	Poor	Poor	Fair	Poor	Fair	Bad	Need Strengthening and Improvement(NSI).
Sirsi	Poor	Bad	Fair	Poor	Poor	Bad	Fair	Bad	NSI
Bhatkal	Poor	Poor	Fair	Bad	Fair	Bad	Bad	Poor	NSI
Kumta	Poor	Poor	Poor	Bad	Bad	Bad	Poor	Bad	NSI
Haliyal	Poor	Bad	Fair	Bad	Poor	Bad	Fair	Bad	NSI
Honavar	Poor	Poor	Poor	Poor	Poor	Bad	Poor	Poor	NSI
Yellapur	Poor	Bad	Fair	Bad	Poor	Bad	Fair	Bad	NSI
Ankola	Bad	Bad	Fair	Bad	Poor	Bad	Fair	Bad	NSI

Source : STEM (1995), Karnataka Urban Development Strategy.

Table 2.4**Estimates of Urban Infrastructure**

Sl.No.	Infrastructure	Amount (in million Rs.)
1.	Land Acquisition and Development for Town Extensions (excluding industries, major parks & playgrounds & airport) 2,000 hectares at Rs.1 million per hectare.	2000
2.	Housing & Land Development Programme (HALDEP) for 50,000 Dwelling Units	1,500
3.	Roads and Footpaths : (Intra-city and Inter-city)	1,000
4.	Surface Drainage in Urban and Urbanisable Areas	100
5.	Water Supply	950
6.	Underground Drainage	800
7.	Solid Waste Management	150
8.	Remunerative Projects	200
9.	Parks, Playgrounds and Recreational Centres	125
Total Project Cost		6,280

Source: STEM & KSUPO (1994), Concept Paper on Urban Development Programme in the West Coast District of Karnataka.

Table 2.5**Composition of Finance for Envisaged Programmes**

Components	Amount (in million Rs.)
a. Total estimated cost of urban development programme, (1995-2001)	6280 (100.0)
b. Investment from private sector	2520 (40.0)
c. Investment by Local Self Government	780 (12.5)
d. External financial requirement (a)-(b+c)	2980 (47.5)

Source: *ibid.*

Note : Figures in parentheses are percentages.

III. FINANCING OF URBAN SERVICES

This section reviews the administrative status of ULBs, their financial and functional powers and status of annual budgets (revenue and expenditure) and issues related to and arising out of the recent economic policies and structural reforms.

ADMINISTRATIVE STATUS OF ULBs

In Karnataka, the evolution of ULBs was patterned on the experience of the British provinces and in the erstwhile princely state of Mysore. After the reorganisation of the states, the comprehensive Municipal Act was passed in 1964 to create city and town municipal bodies and to empower them to perform civic functions. Similarly, in 1976 a separate legislation was passed to create city corporations.

Thus, the urban administration of the cities and towns in Karnataka state is governed according to the provision of the Karnataka Municipal Corporation Act of 1976 (City Corporations) and Karnataka Municipalities Act of 1964 (City, Town Municipality and other Notified Areas and Sanitary Boards). Recently, these Acts have been amended keeping in view the 74th Amendment to the Constitution, thus giving revised status of the ULBs in the state. Accordingly, the state government has reclassified the status of ULBs into four tier system. There are 6 City Municipal Corporations (CCs), 39 City Municipal Councils (CMCs), 82 Town Municipal Councils (TMCs) and 48 Town Panchayats (TPs) during the year 1997. Thus, the total number of statutorily constituted ULBs in Karnataka is 214.

In the two Coastal districts, there is one City Corporation, two CMCs and sixteen TMCs with municipal status and the remaining twelve urban centres with non-municipal status.

The CCs are directly under the administrative control of the Department of Urban Development, and all CMCs, TMCs and TPs are under the control of the Directorate of Municipal Administration of Government of Karnataka.

TAXING POWERS AND FUNCTIONS OF ULBs

The Karnataka Municipalities Act (1964) and Corporation Act (1976) delegate taxation powers to ULBs in the state as well as empowers them to levy certain fees and charges of local nature. All these delegated revenue resources may broadly be classified as autonomous sources

of revenue consisting of own tax and non-tax revenue sources. Own taxes consist of property tax, water tax and a group of minor taxes such as non-motorable vehicle tax, shop tax, animal tax, advertisement tax. The own non-tax revenue sources comprises of a large number of small sources like license fee, copying fee, fines, penalties and also income from rents and leasing of some immovable municipal properties such as buildings for commercial purposes, lands, trees, etc.

In addition, the State Government also transfers a portion out of some state tax revenues under statutory obligations called statutory transfers. These are: share in motor vehicles tax, entertainment tax and surcharges and cesses. Another important source is octroi compensation. The state government also provides grants-in-aid to ULBs for some specific purposes as well as lump sum compensatory and development grants on some ad-hoc criteria. Other external funding sources to ULBs are the loans from the state government or financial institutions like LIC and HUDCO but guaranteed by the state government for the purpose of capital work or specific schemes such as water supply, drainage and housing. These external sources are grouped as non-autonomous sources of revenue.

Following the general pattern of assigning the functions to ULBs, the Acts also enumerate the functions of ULBs of the state. These are divided into two groups: (i) Obligatory; and (ii) Discretionary functions. However, most of the ULBs discharge traditional services such as water supply, sanitation, public health, street cleaning, maintenance of roads and streets, public conveniences, street lighting and so on. Also, one can easily conclude from the lists that the functions assigned to the ULBs are quite considerable and comprehensive in view of the local needs. But it is argued that a serious lacuna existing in the lists is that these functions are made applicable to all size and classes of cities and towns ranging from a city municipality with 200,000 population to a town municipality with less than 10,000 population.

The State Finance Commission has pointed out that in view of the 74th Amendment to the Constitution, the ULBs in the state should be assigned the functions as listed in the 12th Schedule, newly added to the Constitution, integrate or combine Corporation Act and Municipalities Act together, and abolish separate Boards or bring them under the control of ULBs.

Urban Governance in DK District

It is appropriate to recollect the observations and conclusions of the earlier three Committees on urban local finances of the state that historically, the ULBs in the Coastal districts, particularly in DK, have established themselves with relatively good performance in almost all fields of urban governance. Their tax management, revenue mobilisation and functional administration are found to be good as compared to their counterparts in the rest of

the state. This has been possible mainly due to the citizens tax compliance, civic consciousness, commitment of the municipal administrative, revenue, health and engineering staff and equally responsible representatives of the urbanities. These remarks should be taken as a base before reviewing the present status of their finances.

TRENDS IN OVERALL BUDGET OF ULBs

In general, annual aggregate revenues and expenditure of ULBs provide their overall budgetary status. For better understanding, an inter-temporal comparison would give the dynamic profile of their performance in their financial management. Table 3.1 gives aggregate revenue and aggregate expenditure (with per capita) of ULBs of the two Coastal districts for two years, 1990-91 and 1994-95.

It is acknowledged in the earlier studies that from among the six CC's in the state, the overall budgets of the Mangalore CC is more impressive not only at each point of time but also consistent over the years. This can be observed even in relation to other CMCs and TMCs within the district and the Coastal region exhibiting as a model ULB.

In addition, there are many patterns peculiar to the Coastal region.

- 1) At the first glance, it is difficult to see the relationship between the size and status of ULBs and their budgets both in magnitude and in per capita terms. Other than the Mangalore CC, the difference in revenue and expenditure are very large between Dandeli and Karwar (both in UK district) CMCs which are of the same population size, to the extent that the Dandeli CMC is nearly three times bigger than the Karwar CMC.
- 2) Such variations can also be observed from among the smaller towns with TMC status. Udupi TMC has the largest magnitude of budget with substantial growth during 1990-91 and 1994-95, followed by Suratkal and Karkala TMCs in DK district.
- 3) More significant is the growth of finances among the TMCs of UK district, particularly Sirsi and Honnavar even though they exhibited deficits in 1994-95.

Table 3.1

Revenue and Expenditure of ULBs, 1990-91 and 1994-95

(in million Rs.)

Districts/ULBs	1990-91		1994-95	
	Revenue	Expenditure	Revenue	Expenditure
Dakshina Kannada				
Mangalore	75.0 (275)	55.7 (204)	128.9 (417)	117.1 (379)
Bantwal	1.7 (50)	1.4 (41)	1.8 (46)	1.8 (46)
Udupi	11.0 (324)	9.8 (288)	15.6 (411)	17.6 (463)
Kundapura	2.1 (75)	1.6 (57)	3.6 (113)	3.1 (97)
Puttur	2.8 (108)	3.4 (131)	4.0 (138)	5.6 (193)
Karkal	2.8 (117)	2.8 (117)	4.8 (178)	4.5 (167)
Suratkal	2.1 (91)	4.3 (187)	2.3 (88)	6.2 (238)
Baindur	0.9 (56)	0.6 (38)	1.0 (53)	1.0 (53)
Mudbidri	1.2 (75)	1.4 (88)	1.9 (50)	2.1 (117)
Mulki	1.4 (100)	0.4 (29)	1.4 (88)	0.7 (44)
Saligram	0.7 (50)	0.8 (57)	1.4 (88)	0.9 (56)
Uttara Kannada				
Dandeli	22.6 (428)	12.4 (234)	19.4 (359)	17.1 (317)
Karwar	2.8 (55)	5.2 (102)	6.6 (125)	5.4 (102)
Sirisi	4.4 (105)	2.4 (57)	6.9 (160)	11.5 (267)
Bhatkal	6.3 (203)	1.5 (48)	4.2 (127)	4.7 (142)
Kumta	3.1 (119)	2.1 (81)	4.8 (178)	3.0 (111)
Haliyal	2.9 (161)	1.2 (57)	3.2 (138)	1.6 (84)
Honnavar	2.0 (125)	2.4 (150)	3.1 (182)	4.4 (259)
Ankola	1.3 (93)	1.4 (100)	1.8 (129)	1.2 (86)

Note : Figures in parentheses are Rs. per capita.

The surplus deficit in the budgets of the ULBs should not be understood as in the case of state or union government budgets because the ULBs have to, at the most, balance the budget and do not have over draft or deficit financing mechanisms as they operate through commercial banks. Hence, such budgetary imbalances are only manipulations and not real. Situations may arise that there will be a huge surplus as in the case of Bhatkal and Sirsi TMCs in 1990-91 and Mulki TMC in 1994-95 mainly because of receipt of state transfers at the end of the financial year. On the other hand, the large deficit may arise as in the case of the same TMCs who made disbursements (from deposit account) in anticipation of grants from the state. In spite of such variations, it is to be concluded that, both in terms of absolute magnitude and in per capita terms the overall performance of the budgets of ULBs in Coastal districts are relatively better in the state.

Composition of Revenue of ULBs

Analysis of the composition of the revenue of ULBs is an important pre-requisite for policy interventions. By and large all ULBs in India are weak in their financial status and performance, but it is essential to examine their revenue and expenditure patterns in some detail for specific case studies.

The percentage composition of aggregate revenue of ULBs of the Coastal region for the year 1994-95 is presented in Table 3.2.

The components consists of own sources and transfers from the state. Under own sources of ULBs, the composition of tax and non-tax revenue composition is given. Under transfers, tax shares, grants and loans are presented.

At the state level, the composition of revenue consists of about 55 to 75 per cent own sources, 20 to 10 per cent tax shares, 25 to 35 per cent grants and 2 to 5 per cent loans.

With some variations, a similar pattern can be observed among the ULBs in Coastal region also. However, depending upon the receipt of grants from state during the year, some deviation may be found in the percentage shares of other revenue components.

Among other things, some salient features of revenue composition of ULBs in Coastal region are :

- 1) Most of the ULBs have significant non-tax revenue receipts like water charges, market fees and rents and rents even among small towns like Mudibidri, Surakal, Karkala and Bhatkal;

Table 3.2

Composition of Revenue of ULBs in Coastal Districts, 1994-95

(Per cent)

District/ULBs	Own sources			Transfers from state			Total revenue
	Taxes	Non-taxes	Total	Tax shares	Grants/loans	Total	
Dakshina Kannada							
Mangalore	21.2	35.5	56.7	8.9	33.4	42.3	100.0 (128.9)
Bantwal	44.2	26.6	70.8	24.1	4.8	28.9	100.0 (1.8)
Udupi	26.9	33.6	60.5	13.3	3.3	16.6	100.0 (15.6)
Kundapura	34.8	31.4	66.2	20.4	13.4	33.8	100.0 (3.6)
Puttur	9.9	44.8	54.7	35.3	10.0	45.3	100.0 (4.0)
Karkal	16.9	54.5	71.4	16.0	12.5	28.5	100.0 (4.8)
Suratkal	10.2	49.0	59.2	21.5	19.3	40.8	100.0 (2.3)
Baindur	10.4	48.5	58.9	31.8	9.3	41.1	100.0 (1.0)
Mudbidri	11.5	68.7	80.2	19.2	0.5	19.7	100.0 (1.9)
Mulki	49.8	18.7	68.5	28.7	2.9	31.6	100.0 (1.4)
Saligram	5.2	15.8	21.0	16.9	62.2	79.1	100.0 (1.4)
Uttara Kannada							
Dandeli	12.4	21.8	34.2	12.3	53.5	65.8	100.0 (19.4)
Karwar	47.6	34.3	81.9	12.0	6.1	18.1	100.0 (6.6)
Sirisi	17.4	12.9	30.3	20.9	48.8	69.7	100.0 (6.9)
Bhatkal	20.2	44.1	64.3	10.6	25.1	35.7	100.0 (4.2)
Kumta	13.8	27.3	41.1	9.7	49.2	58.9	100.0 (4.8)
Haliyal	8.3	27.4	35.7	11.2	53.1	64.3	100.0 (3.2)
Honnavar	16.1	26.2	42.3	8.8	49.0	57.8	100.0 (3.1)
Ankola	13.7	37.3	51.0	24.7	24.3	49.0	100.0 (1.8)

Note : Figures in parentheses are Rs. in million.

- 2) Even though some small towns receive nearly half of their revenues in the form of grants, their non-tax revenue shares remain to be nearly one-fourth of their total revenue;
- 3) The capital receipts in the form of loans are very insignificant during the year except Udupi and Mangalore who have obtained loans for development of infrastructure;
- 4) The smaller proportion of tax revenue component among the ULBs in UK district has been due to the large amounts of grants received during the year and;
- 5) Transfer of tax shares from state are comparatively higher among the ULBs in DK district.

Composition of Aggregate Expenditure of ULBs

As detailed earlier, the ULBs spend on the functions assigned to them in their respective Acts. The budgets are also prepared according to their functional classification. However, for a better understanding their functional expenditures are classified by the State Finance Commission into three groups : (i) general services, consisting of general administration, tax collection and other fiscal services; (ii) social services, consisting of education, health, water supply, sanitation, urban development and other social welfare activities; and (iii) economic services, consisting of drainage, roads, commercial enterprises, parks and gardens.

Based on this classification, the percentage shares of expenditure components of ULBs of Coastal districts are presented in Table 3.3.

The main observations are :

- 1) The share of general services is more than 40 per cent among Karwar in UK district, Mangalore, Udupi and Baindur in DK district.
- 2) On the other hand, Karkala, Mudibidiri and Puttur TMC in DK district and Bhatkal TMC in UK district have exhibited less than 10 per cent share on general services.
- 3) The share of social services is higher among Bantwal, Mulki (since economic services are not separately shown in their budgets) and Puttur TMCs in DK district and Honnavar and Haliyal TMCs in UK district. On the other hand, lower shares are reported from Baindur TMC in DK district and Sirsi TMC in UK district; and
- 4) The expenditure share on economic services is higher among Suratkal TMC in DK district with 56 per cent and more than 60 per cent among Bhatkal and Sirsi TMCs in UK district, Udupi and Saligram TMCs in DK district. Honnavar and Ankola TMCs in UK district have indicated very low expenditure shares.

The above findings show that the expenditure commitments of ULBs are determined on the basis of their local needs irrespective of the size and municipal status of the ULB.

Table 3.3
Composition of Total Expenditure of ULBs
in Coastal Districts, 1994-95

(Per cent)				
District/ULBs	General services	Social services	Economic services	Total expenditure
Dakshina Kannada				
Mangalore	42.6	32.9	24.5	100.0 (117.1)
Bantwal	23.2	76.8	*	100.0 (1.8)
Udupi	42.4	51.1	6.5	100.0 (17.6)
Kundapura	18.9	50.6	30.4	100.0 (3.1)
Puttur	8.8	67.9	22.3	100.0 (5.6)
Karkal	9.3	42.9	47.7	100.0 (4.5)
Suratkal	14.0	29.8	56.3	100.0 (6.2)
Baindur	44.1	11.4	43.9	100.0 (1.0)
Mudbidri	8.4	59.7	31.9	100.0 (2.1)
Mulki	30.1	69.9	*	100.0 (0.7)
Saligram	38.1	50.5	11.5	100.0 (0.9)
Uttara Kannada				
Dandeli	28.5	52.3	19.1	100.0 (17.1)
Karwar	44.9	30.7	24.2	100.0 (5.4)
Sirisi	27.6	12.5	60.0	100.0 (11.5)
Bhatkal	6.2	27.3	66.5	100.0 (4.7)
Kumta	32.6	48.2	19.2	100.0 (3.0)
Haliyal	34.9	49.5	15.6	100.0 (1.6)
Honnavar	28.1	60.3	11.6	100.0 (4.4)
Ankola	33.1	60.4	6.5	100.0 (1.2)

Notes: (i) Figures in parentheses are Rs. in million.
(ii) * indicates not separately shown.

DEBT POSITION OF ULBs

A major part of the works of capital nature are undertaken by the ULBs through loans from government and other financial institutions particularly LIC and HUDCO.

Many of the ULBs have obtained loans from LIC for their water supply and drainage works. The KUWS&D Board also takes up water supply schemes on behalf of ULB through borrowed funds. These constitute the debt burden of the ULBs in terms of outstanding loans and interest. Table 3.4 gives the position of debt burden of the ULBs of Coastal districts. Four ULBs in both the districts have obtained one or the other type of loan during the last four years. As on 1995, HUDCO has funded only one TMC (Karkala in DK district) and LIC has advanced loan to three TMCs in DK district.

The overall outstanding loan and interest charges show that Udupi, Karkala and Bantwal TMCs have a significant burden as compared to other ULBs.

Table 3.4

Outstanding Loans and Interest of ULBs in Coastal Districts, 1994-95

(in million Rs.)

District/ULBs	Outstanding Loans and Interest				Total
	LIC	Debenture	HUDCO	KUWS & D Board	
Dakshina Kannada					
Mangalore					
Bantwal	0.56			5.82	6.38
Udupi	1.2	0.99		10.80	13.09
Kundapura					
Puttur				1.17	1.17
Karkal	2.58	0.31	1.37	5.24	9.50
Suratkal					
Baindur					
Mudbidri					
Mulki					
Saligram					
Uttara Kannada					
Dandeli	1.40				1.40
Karwar	0.33				0.33
Sirisi	1.68				1.68
Bhatkal	1.14	0.45			1.59
Kumta	0.71			1.16	2.76
Haliyal					
Honnavar					
Ankola				0.51	0.51

IV. CRITICAL AREAS FOR REFORM AND INVESTMENT

This section presents a perspective and imperatives for the development of the Coastal region. The issues discussed here include : (i) urban perspectives; (ii) infrastructure development needs and capital requirements; (iii) institutional capacity building and training; (iv) industrial development and potentialities; (v) research and planning inputs, and (vi) future outlook for regional and state level urban development.

URBAN PERSPECTIVE : 1996-2001

The urban population and their shares in the Coastal region have been projected for 1996 and 2001 along with similar analysis for other regions as presented in Table 4.1

Table 4.1

Projected Urban Population by Regions, 1991-2001

Region/State	Urban population (in million)			% Increase	Percentage of urban population 2001
	1991	1996	2001	1991-2001	
Northern	4.65	4.99	5.47	17.58	25.90
Southern*	2.70	2.89	3.19	18.40	23.49
Malnad	1.03	1.11	1.23	19.09	20.74
Coastal	1.06	1.13	1.24	17.67	27.00
State*	9.44	10.12	11.13	17.99	24.61

Source: STEM & KSUPO (1995), Karnataka Urban Development Strategy, KUDS.

Note : (i) * Excluding Bangalore (urban & rural) districts.

(ii) Since 1995 there has been a massive investment in industries of the Coastal region. Consequently, the projections may require review.

The population projections for Coastal region show that the urban population will be 1.24 million by 2001 registering a growth rate of 17.7 per cent during the decade 1991-2001. This will be marginally lower than the growth rate of the state (17.99%). Again, the per cent urban population in the Coastal region will be higher than the level of state (24.6%) as well as other regions.

The two districts of Coastal region have exhibited that they will continue to remain in the range of 15-20 per cent decadal growth rate by the year 2001.

Share of Urban Population to Total Population

While the per cent share of urban in total population in the state is expected to reach 24.61 per cent by 2001, the Coastal region will experience a higher share of urban population with 27.0 per cent. While the DK district would experience a higher growth in urban share (25 to 35%), the share of UK district will be between 20 to 25 per cent.

Size of Urban Settlement

Table 4.2 gives the average size of urban settlements in 2001 by regions. It is inferred that :

- i) At the state level, the average population size of a town in 1991 has been 37,147 (equivalent to a town in size class III). It is expected to grow with 17.99 per cent during the decade 1991-2001 and reach a level of 43,828.
- ii) The average size of urban settlement in the Coastal region in 1991 was 35,237 which is marginally smaller than the state level and is expected to reach the size of 41,464 by 2001 with almost the same decadal growth rate as of the state.
- iii) Southern region will have the maximum average population size of 54,082 per town in 2001 with a growth rate of 18.40 per cent, followed by the northern region with a size of 52,621 and a growth of 14.95 per cent.
- iv) Among the regions, the percentage increase in Malnad is highest with 19.06 per cent followed by the Southern region (18.40%).

Distribution of Urban Settlements

The area wise distribution of urban settlements is measured by the number of towns per 100 sq.kms. and per 100,000 population. These are indices of the level and spatial distribution of towns in the districts. Table 4.2 gives information on these indices by regions and the relative position of the Coastal region. The following conclusions emerge :

- 1) Malnad has smaller average town size but the density per 100 sq.kms. and per 100,000 population is higher, indicating geographical dispersal of urban settlements as well as

scope for lesser concentration of settlements for higher population with 0.92 towns per 100,000 population.

- 2) With the same density of towns in the Coastal region (0.16), the population concentration is higher with 0.77 towns per 100,000 population.

Table 4.2

Average Size and Distribution of Urban Settlements

Region/State	Average size of urban settlement		Number of towns per 100 sq.km.	Number of towns per 100,000 population
	1991	2001		
Northern	44754	52621 (14.95)	0.12	0.58
Southern *	45677	54082 (18.40)	0.13	0.51
Malnad	22364	26628 (19.06)	0.16	0.92
Coastal	35237	41464 (17.67)	0.16	0.77
Karnataka *	37147	43828 (17.99)	0.13	0.62

Source: *ibid.*

Note: (i) * Excluding Bangalore (urban & rural) districts.

(ii) Figures in parentheses are per cent decennial growth for the period 1991-2001.

- 3) Southern and Northern regions have the contrasting features with the State and Malnad and Coastal regions.
- 4) Uttara Kannada district, in view of its geographical (hilly region) advantages, has relatively higher levels of indicators of population concentration.
- 5) Both DK and UK districts have more than 0.15 towns per 100 sq.kms.
- 6) UK district has more than 0.6 towns per 100,000 population.

HOUSING DEMAND

Housing

As a corollary to urbanisation, an attempt is also made here to present the estimates of urban housing stock, unusable stock, housing demand and probable deficit and shortage by 1996 and 2001 for the state as well as for districts of Karnataka. These are presented in Table 4.3.

Table 4.3
Housing Demand : 2001

(in '000)

District/State	Housing components	1996	2001
Dakshina Kannada	Housing Stock	125.3	137.3
	Unusable Stock	13.8	15.1
	Housing Demand	133.4	146.1
	Deficit	21.8	23.9
	Housing Shortage	8.1	8.8
Uttara Kannada	Housing Stock	55.1	61
	Unusable Stock	6.6	7.3
	Housing Demand	58.2	64.4
	Deficit	9.6	10.7
	Housing Shortage	3.1	3.4
Karnataka	Housing Stock	2776.3	3123.5
	Unusable Stock	357.1	401.8
	Housing Demand	3034.4	3413.9
	Deficit	615.2	692.1
	Housing Shortage	258.1	290.3

Source : STEM (1991), Corporate Plan for HALDEP, 1991-2001.

- Note :
1. Deficit is defined as the difference between housing demand and unusable stock put together and housing stock.
 2. Housing Shortage is defined as the difference between housing demand and housing stock.
 3. Figures in parentheses brackets are per cent to housing stock including unusable stock in 2001.

It is observed from Table 4.3 that:

- i) The overall state level estimated housing deficit would be 615,000 units in 1996 and 692,000 units in 2001, which constitute 20 per cent of the housing stock, including unusable stock. However, if unusable stock is not accounted the housing shortage in the State would be 258,000 units in 1996, and 290,000 units in 2001.
- ii) The forecast indicates that DK district will have a deficit of 21,800 housing units out of the estimated demand of 133,400 units in 1996 and by the year 2001, the deficit will be 23,900 out of a demand of 146,100 units.
- iii) In the case of UK district, the estimated housing deficit in 2001 will be 10,700 out of the expected demand of 64,400 units.

Urban Infrastructure

In earlier chapters, the gaps in urban infrastructure and civic services were assessed and the magnitude of capital investment requirements were also estimated. Based on the two assessments, it is found that for providing minimum basic services in urban local areas, an amount of Rs.67.1 million is required. On the other hand, for a long term comprehensive urban infrastructure development in the region, an investment of Rs.6.28 billion is required in which the share of ULBs will be only Rs.780 million.

INDUSTRIAL DEVELOPMENT

Future Industrial Growth Potential

In board terms, there is a need to provide a stable urban settlement pattern that will take care of major industrial activity being located in the Coastal region by providing the necessary infrastructure as well as employment to the local people by inducting new industries vis-a-vis and foot-loose industries like electronics, gem and jewellery and more importantly by modernising and regenerating the languishing traditional industries.

Major industries proposed for the two Coastal districts include a thermal power plant and a nuclear power plant. Also a petroleum refinery and a couple of steel plants are in the offing which are bound to give rise to many down-stream industries. While these would provide employment, they may not do so for the employment seekers of the two Coastal districts though

they will generate some service activities. But this opportunity should be utilised to strengthen the regional economy by avoiding further intra-regional disparity in development between Mangalore urban area and its district hinterland as well as between the two Coastal districts. The aim should be to avoid over-concentration in a couple of urban centres and prevent haphazard growth elsewhere. Balanced development of the coastal region assumes great importance in view of the migratory trends noticed in both the urban and rural areas of the districts. In the near future, the urban components of the Coastal region could very well prove to be counter-magnets to the metro city of Bangalore.

Proposed New Industries and its Impact

The liberalisation of the Indian economy and encouragement to private sector have shown signs of further activities in the region. The investment proposed is of a massive nature, i.e. , about Rs.30 billion in steel, Rs. 90 billion in petro-chemicals and Rs. 30 billion in power sector. It is appropriate to mention at this stage that the following major activities will have a great impact on the urban centres of the Coastal region:

- 1) M.R.P.L., Suratkal (Oil refinery)
- 2) Jayaprakash Steels, Mangalore (Alloy steel)
- 3) Nagarjuna Power Plant
- 4) Nagarjuna Chemical and Fertilisers
- 5) B.A.S.F., Mangalore (Chemical products)
- 6) M.S.T.P.L., Padubidri (Power generation)
- 7) Cogentrix (Coal-based power project)
- 8) Barge Mounted power
- 9) Boat building at Maple and ship-breaking activity in Mangalore
- 10) Gauge conversion of the Mangalore-Bangalore railway line
- 11) Completion of the West Coast Konkan Railway
- 12) Widening of the coastal highway to four lanes
- 13) Environmental safe guard programmes
- 14) Expansion of the New Mangalore port
- 15) Expansion of the Kunremukh iron ore and pelletisation plant
- 16) Expansion of the airport
- 17) Copper smelter, Mangalore
- 18) Ore exporting, Karwar
- 19) Agro-based industries near all towns
- 20) Industrial estates of KIADB, at all towns
- 21) Tourism activities

- 22) Pilgrimage centres-Udupi, Gokarna, Dharmasthala and Subramanya
- 23) Protection of the coastline

It is expected that by 2001 in addition to the above, there will be 8 new large industries, about 30 medium industries and around 8,000 new small-scale industries in DK district. Of them, 3 major, 15 medium and 250 small scale industries are envisaged with a total investment of Rs.23.9 billion in the next ten years, with an employment potential of 9,000 workers in the major industries alone.

Compared to DK district, a lesser number of new industries may come up in UK district. These include the Naval port at Karwar, Kaiga Power Plant and Forestry and Tourism projects. All these activities will have a tremendous effect on the urban infrastructure of the study area.

CAPACITY BUILDING AND TRAINING

The following are the major institutions/organisations involved in the formulation and implementation of urban and regional development programmes in the two districts of Coastal region.

Urban Areas

- 1) Mangalore CC and other CMCs and TMCs;
- 2) Mangalore Urban Development Authority and City Planning Authorities of Udupi, Karwar and Dandeli;
- 3) The Town Panchayats and the proposed District Planning Committees;
- 4) Karnataka Slum Clearance Board;
- 5) Karnataka Housing Board; and
- 6) Karnataka Urban Water Supply and Drainage Board.

Regions

- 1) Karnataka Electricity Board;
- 2) Karnataka Industrial Area Development Board;
- 3) Karnataka Public Works Department;
- 4) Karnataka State Pollution control Board;
- 5) Airport Authority of India;
- 6) The Ports Authority of India, and others.

Some of these authorities, particularly the urban planning and development authorities are weak in their technical capability and financial management. A number of vacancies exist in these organisation. Moreover training is absolutely necessary for the staff of these authorities and other institutions to handle urban planning and development programmes. Many technical functions including urban planning and infrastructure development are entrusted to ULBs under latest Amendments to Municipal and Panchayat Raj Acts after 73rd and 74th Amendments to the Constitution of India.

All the agencies have to create technical cells or procure professional services from consultants to implement the concerned components of the Urban Development Programmes of the Coastal region and this necessitates augmentation of staff and strengthening the organisations to carry out the programmes in a phased manner. These authorities have also to be provided with assistance to purchase equipment like computers, construction machinery and furniture, and also to provide additional accommodation to the establishment. This is the context where Institution's Capacity Building is very necessary to improve the efficiency of the various organisations concerned.

The State Finance Commission has dealt at length on the working behaviour performance and their capabilities of the staff of ULBs. The commission has taken note that all the municipal personnel have been working in ULBs without any regular and periodical training and orientation, though some of them might have undergone training during their probationary period. Lack of such in-service training and orientation courses is reflected in their performance in almost all municipal functions. The committees also noted the poor state of municipal administration (including Bangalore CC) as revealed by the findings of the studies of several citizens organisations. Hence, the committee is also of the strong opinion that at the present stage of urban development, it is necessary to improve not only skills and knowledge about functions but also the attitude and perceptions of municipal personnel towards people, with professionally designed and well structured training modules administered to all categories of the municipal staff.

Lack of qualified and trained staff in the organisation is affecting the developmental programmes in the two districts. Even the staff working at present is not trained to handle many of their own programmes. Low status of certain posts and lack of career growth for certain professionals have caused vacancies in many organisations like Mangalore Urban Development Authority, City Planning Authorities of Udupi, Karwar and Dandeli, and Karnataka Urban Water Supply and Drainage Board. Therefore, as recommended by the State Finance Commission, there is a necessity to make appropriate avenues for training, orientation, sensitisation of the present staff of these organisations in the from of institution's capacity building and also for organising

periodic training programmes. Public participation can be improved by organising awareness programmes for NGOs and other voluntary agencies. This will also help in protecting the environment of human settlements with the co-operation of the general public.

RESEARCH AND PLANNING INPUTS FOR URBAN DEVELOPMENT

A number of research and planning projects may have to be undertaken for evolving functional urban development programmes in the Coastal region of Karnataka. A few to be listed are :

- 1) Identification of key issues and constraints in the growth and development of the Coastal districts;
- 2) Growth perspective for the city and towns;
- 3) Structure of the city and towns and their capabilities;
- 4) Study of infrastructural facilities - water supply, sewerage and drainage and other facilities - present status and future needs;
- 5) Improvement of bus transport;
- 6) Study of effective demand for housing in the metropolis;
- 7) Economic activities and benefit to population;
- 8) Environment problems of slums (including LIG housing) in a metropolis - with special reference to social, economic and cultural features of the inhabitants;
- 9) Municipal fiscal study;
- 10) In-depth study of economic activity in the informal sector;
- 11) Proposal for urban design - redevelopment, renewal and expanding towns;
- 12) Industrial dispersal policy - effect on development;
- 13) A perspective of population growth, economic development and infrastructure needs;
- 14) Study on development agencies in the region and organisational structure needs.

FUTURE OUTLOOK

In the context of the physical, organisational and managerial human resource development and the necessity of improving and reorienting their capacity to meet emerging new challenges require the backdrop of their present status and future imperatives of the following trends :

- 1) A number of major projects were located in both the districts during 1971-91. In the coming years many more projects are envisaged involving massive investment which are likely to have forward linkages with the economic base of the nation.

- 2) The railway and highway network taking shape will provide better accessibility and open up the entire hinterland for trade and commerce and bring Bombay, the commercial capital of India, to the door step for future large scale investment.
- 3) The above, together with the liberalisation of the Indian economy with its concomitant encouragement to private entrepreneurs will have a major impact on the economy which is bound to change the face of these two districts in general and the urban centres in particular. The brunt of this will have to be taken by the urban centres which are already reeling under the impact. The infrastructure is bursting at the seams in all the urban centres. Only planned development by the professional and experienced administrators will ensure success in this regard.
- 4) The present age old traditional and conventional planning and urban management approaches are none too good and will not be able to cope with the tremendous pressure of unplanned haphazard growth of both building and infrastructure activities now taking place.
- 5) There are competitive claims to financial resources in a developing economy. In the final analysis, the availability of funding of the right projects to the right urban managers at the right time holds the key to the success of the development of the region.

GOALS AND OBJECTIVES

Given the future imperatives, it is necessary to formulate the goals and objectives. The three main goals of coastal development are :

- 1) The region should have as its major goal of sustainable development. On one side are the western ghats with their vulnerable rain forests leading to a dominant influence on the south-west monsoon which sustains in many rivers and all life itself, on the other side is the sea with its rich natural resources and fragile coastline endangered by over-exploitation.
- 2) There should be balanced physical, social and economic development. For this, corrective measures and positive actions are necessary to prevent accentuation of the unhealthy trends and lead towards a more desirable urban-rural continuum.

- 3) The quality of life in the region has to be enhanced. The social and economic indicators of the region hold out the rich promise of growth and could well be an example of planned development if the distortions are avoided.

Based on the development needs, the specific objectives of urban development in the Coastal region are :

- 1) A regional perspective of the natural and human resources in its present setting and the preparation of a human settlement plan with transport and communication network for balanced development of the region.
- 2) Development plan for urban growth in the regional setting with structure plans for priority cities/towns.
- 3) Development of infrastructure on an area wide basis for transport, water, power drainage, sewage disposal, solid waste management, etc.
- 4) Plan for strengthening local finances and resources at urban centre level.
- 5) Detailed plans for housing, industries, alternative city centres, sites and services for the urban poor, plans for major commercial and administrative centres, educational and medical facilities and parks, open spaces and recreation centres.
- 6) In harmony with the environment, development and conservation plans for cultural and religious centres, tourism, utilising the beaches as well as forest and other natural sites.
- 7) Finally, to evolve an "Integrated Environmental Management and Development Plan" for urban growth in the Coastal region.

Financial resources are necessary for these projects. An attempt was made earlier to estimate the capital requirement and suggested a financial proposal of the region for a short time perspective. Taking into consideration the financial constraints of the state government to fund development of this scale and magnitude and the poor financial and administrative management systems in various developmental agencies and local self governments, it is proposed to approach the Government of India, to obtain the financial aid from external agencies like the World Bank, Asian Development Bank and other international funding agencies for urban development.

SECTION - III
UDUPI CITY PROFILE

A SUMMARY

LOCATION, TOPOGRAPHICAL AND CLIMATIC FEATURES

Udupi is situated at a latitude of 13°12' North and longitude of 74°45' East. The area is characterised by flat and undulating topography within the built up area. The temperature of the city ranges from 22.5° C to 36.10° C and the humidity varies from 23.9 to 96 per cent. During June-October, the south-west monsoon contributes nearly 87 per cent rainfall and the annual rainfall is 4,000 mm.

Udupi is a national pilgrim and tourist centre located in Dakshina Kannada (DK) district, attracting about 500,000 pilgrims annually to the temple of Lord Krishna. It also functions as headquarters of Udupi taluk which comes under the Kundapura revenue sub-division of DK District. Udupi is bounded by the western Ghats a few kms. on the east, the Arabian sea on the west and Swarna river on the north (Map 2). The city has good surface transport connections by road and rail. National Highway (NH) No.17 from Kanyakumari in Tamil Nadu in the south to Mumbai in the north all along the west coast passes through the city as well as the coastal towns of the state. The Konkan railway line linking Mangalore and Mumbai passes on the eastern side of Udupi and the city railway station is located between Udupi and Manipal towns.

Udupi had become a Town Municipal Council (TMC) on 1st November 1935 covering an area of 9.72 sq.km. It has been elevated to City Municipal Council (CMC) on 20th October 1995 by extending the boundaries to include the surrounding notified areas (NA). The Udupi CMC newly formed municipal area covers 68.81 sq. km. Besides, the state government has constituted Udupi Local Planning Area (LPA) with jurisdiction extending beyond the boundaries of Udupi CMC by including the fringe rural areas of the city. The extent of LPA is about 127.35 sq.km. which is almost double the area of Udupi CMC (Map 3 and Table 1).

Table 1**Area and Population of Udupi CMC, LPA and UA**

Name	Area (sq.km.)	Population (1991)
Udupi (Old town)	9.72	33,913
Malpe	9.22	19,063
Puttur	7.39	10,071
Shivalli	22.30	18,291
Herga	12.61	12,311
76 Badagabettu	7.37	10,446
Mudanidambur	0.20	522
Total CMC	68.81	104,617
Udupi LPA	127.35	167,000
Udupi UA		117,000

POPULATION GROWTH AND SOCIO-ECONOMIC PROFILE**Population**

The population of the old town of Udupi had increased from 33,413 in 1981 to 33,913 in 1991 at a growth rate of only 1.5 per cent. The growth rate between 1971 and 1981 was 12.30 per cent with an increase of 3,660 persons in that decade. Though the natural increase of population of Udupi is not much, the floating population, i.e., the on-rush of seasonal visitors is about 500,000 annually. The population of newly formed municipal area - Udupi CMC is 1,04,617 with inclusion of 70,632 persons from the newly merged NA into CMC.

Literacy Levels

Both male and female literacy rates, are high in Udupi town. The literacy rate of male population is 81.13 per cent and that of the female population is 71.15 per cent as per the 1991 Census, which is higher as compared to the taluk literacy level.

Major Economic Activities

Tourism is the most assured economic activity in Udupi. As Udupi is a pilgrim centre, the area is attracting about 500,000 tourists every year in the past five years. It is estimated that, at least one employment is generated for every 125 tourists.

Nearby Manipal town is considered as the center of excellence for education in the fields of engineering, medicine, pharmacy, management and other sciences. Students from different parts of India as well as from other countries come to Manipal for higher education.

Udupi-Manipal are also functioning as the headquarters for two leading banks, viz., Syndicate Bank and Karnataka Bank. They also have a number of financial institutions.

Malpe harbour is the biggest fishing harbour in the state. Fishing industry is one of the main economic activity in the region. About 3,000 people are engaged in fishing and its allied activities.

A number of tile factories are located in the surrounding areas of Udupi. Other industries like ice plant, beedi rolling, weaving, engineering industries, fish meal are some of the small scale industries providing employment in the region.

MUNICIPAL SERVICES

Both qualitative and quantitative aspects of municipal services have been analysed and the summary is presented below.

Roads

The total road length in Udupi CMC is 156 km., 41.32 km. in old town and 114.77 km. in added NA. Type of roads are cement concrete (0.6 per cent), WBM (8.0 per cent), asphalt (69.6 per cent) and mud roads (21.8 per cent).

Water Supply

Major source of water supply to the city is from river Swarna. Total water supplied to the city is 2 MGD, i.e., 55 LPCD. About 95 per cent of the people in old town area are served by piped water supply.

Sewerage

Under ground drainage (UGD) system, septic tanks, and leach pits are some of methods of sewerage system in Udupi. About 60 per cent of the municipal area is served by UGD system. The total length of UGD line is about 42 km.

Solid Waste Management

About 20 tonnes of solid waste is reported to be generated daily. About 60 per cent of the waste is collected and disposed. The disposal method is landfilling. Total extent of landfill site being operated since 35 years is about 5 acres.

MUNICIPAL FINANCE

Collection Performance

Property tax collection performance of the municipality in the past five years is above 67 per cent. However, tax collection has declined from 88 per cent in 1992-93 to 67 per cent in 1995-96. The water cess collection is 76 per cent in 1992-93 and declined to 67 per cent in 1995-96. The performances of collection of arrears and current demand separately are not readily available.

Revenue Receipts and Expenditure

Revenue receipts for the last five years period is presented in Table 2. The revenue receipt collection of the municipality is fluctuating between Rs. 9.7 million and Rs.10.4 million in the past five years and has not shown much increase. The expenditure, however has shown considerable increase between 1991-92 (Rs.10.9 million) and 1995-96 (Rs.14.8 million). Property tax still remains to be the major source of income to the municipality and constitutes 40 per cent of total revenue.

Table 2

Revenue Receipts and Expenditure, 1991-92 to 1995-96

(in million Rs.)

Item	1991-92	1992-93	1993-94	1994-95	1995-96
Revenue receipts	10.37	9.73	9.94	9.72	16.02
Revenue expenditure	10.99	9.15	9.19	9.06	14.83
Surplus/Deficit	-0.62	0.58	0.75	0.66	1.19

Capital Grants and Expenditure

The capital receipts from sources such as government, IDSMT scheme, NRY and others has declined from Rs.2.2 million in 1991-92 to Rs.700,000 in 1995-96 (Table 3). However, the expenditure seems to be lower than the receipts in all the past five years, thus showing surplus under this account.

Table 3

Capital Grants and Expenditure, 1991-92 to 1995-96

(in million Rs.)

Item	1991-92	1992-93	1993-94	1994-95	1995-96
Receipts	2.23	1.67	2.93	1.80	0.72
Expenditure	0.67	1.43	1.59	1.68	0.72
Surplus/Deficit	1.56	0.24	1.37	0.11	0.00

PROJECTS IDENTIFIED FOR DEVELOPMENT

To find ways and means of increasing the local body's internal resources remunerative projects costing Rs.60 million have been identified. After analysing the existing conditions and requirements of the municipal services, infrastructure improvement projects costing Rs.107.3 million have been identified. For integrated development of the city, developmental projects costing Rs.392.5 million have been identified. The total cost for the projects identified is Rs.559.8 million (Table 4).

Table 4

Cost Estimates of Projects Identified

(in million Rs.)

S.No.	Projects	Cost
1.	Remunerative projects	60.00
2.	Infrastructure improvement projects	107.30
3.	Developmental projects :	
	a. II Stage water supply scheme	350.00
	b. Formulation of new roads	40.00
	c. Tourism	2.50
	Total (1+2+3)	559.80

CRITICAL ISSUES OF URBAN GROWTH, DEVELOPMENT AND GOVERNANCE

- a) The floating population of Udupi, as high as 500,000 annually, needs to be provided with adequate infrastructure to serve as a pilgrim centre of national importance.
- b) Different geographical and administrative boundaries for CMC, LPA and UA creates confusion in planning and non-cohesion in development.
- c) Multiple development agencies working in the cities and environs are not well-knitted and coordinated for any organised planned development for optimum utilisation of resources.
- d) Lack of trained professionals, adequate skilled staff, availability of modern gadgets and updated technologies are the major areas of concern for upgradation of the organisational capabilities of the municipality.
- e) The implications and adoption of the Constitution (74th) Amendment Act is not clear and understood well at the municipal levels.
- f) The participation of banks and financial institutions located within Udupi CMC in the overall infrastructure development of the city is rather negligible and their potential is yet to be tapped.
- g) Tourist facilities are meager in the city and need immediate attention and upgradation.
- h) The important places of tourism are Shri Lord Krishna Temple, Malpe Port and Beach, Thottam Beach, and Manipal Hills.
- i) The population of Udupi CMC is likely to be dominated by student community who belong to the age group of 15 to 30 years. The demands of the young population are to be critically evaluated while planning the city.

I. CITY PROFILE

INTRODUCTION

Udupi is one of the prominent pilgrim and tourist places in the country and is famous for its temple of Lord Krishna. There is an all weather fishing harbour at Malpe at a distance of 5 km. from Udupi. It is the biggest fishing harbour in the state generating considerable employment and attracting more development. Further, Manipal situated at a distance of 5 km. to the east is well known for its educational, industrial and commercial activities. Students from various parts of the country as well as from abroad, come to Manipal for higher education. Banks and other financing institutions are also concentrated at Manipal.

LOCATION, TOPOGRAPHY AND CLIMATE

Udupi city is the taluk headquarters of Udupi taluk which comes under Kundapura revenue sub-division of Dakshina Kannada district of the Coastal region of Karnataka state. Udupi as a national pilgrim and tourist centre, attracts a large number of pilgrims to the temple of Lord Krishna. In addition, the bi-annual "Paryaya", a ceremony during which the temple administration is transferred from one religious institution (Mutt) to another of the eight Udupi Mutts, attracts thousands of devotees to Udupi. Though, the natural increase of population of Udupi is negligible, the on-rush of seasonal tourists, who may stay barely for a week or two, adds tremendous load on the infrastructure facilities.

Udupi is situated at a latitude of 13°12' North and longitude of 74° 45' East. The city has the western ghats on the east, the Arabian sea on the west and Swarna river on the north (Map 2). The area of the city is characterised by flat as well as undulating topography. There are a few regions rising from sea levels to about 75 metres with natural valleys. This region contains recent and sub recent deposits and laterite formations particularly along the coastal line, and along the river valley, clays of different colour are also found.

The temperature of the city ranges from 22.5° C in the month of January to 36.1° C in the month of April, and the humidity varies from 23.9 to 96 per cent. The average annual rainfall is 4000 mm. During June-October, the south-west monsoon contributes nearly 87 per cent rainfall.

The city has good surface transport connections by the road and rail. The National Highway No.17, coming from Kanyakumari in Tamil Nadu in the south to Mumbai in the north all along the west coast passes through the city and through the coastal towns of the state. Other important state highways are Udupi-Karkal Road, Udayavara-Malpe Road and Malpe-Manipal-

Agumbe Road. In addition, the road running from Hiriyadaka to Guruvanakere connects Udupi to another religious town namely Dharmasthala. The Konkan railway line linking Mangalore and Mumbai passes on the western side of Udupi and the city railway station is located between Udupi and Manipal.

CMC AND LPA

Udupi became a Town Municipal Council (TMC) on 1st November 1935 covering an area of 9.72 sq. kms. It has been elevated to the status of City Municipal Council (CMC) on 20th October 1995 by extending the boundaries to include the surrounding notified areas (NA). The NA are, Badagabettu in the south, Puttur in the north, Shivalli and Herga in the east and Malpe in the west. The Udupi CMC, newly formed municipal area covers 68.81 sq.kms. Besides, the state government has constituted Udupi Local Planning Area (LPA) with jurisdiction extending beyond the boundaries of Udupi CMC by including the fringe rural areas of the city. The extent of LPA is about 127.35 sq.kms. which is almost double the area of Udupi CMC (Map 2 and Table 1.1).

Table 1.1
Area and Population, Udupi CMC and LPA

Name	Area (sq.km.)	Population (1991)
Udupi (Old town)	9.72	33,913
Malpe	9.22	19,063
Puttur	7.39	10,071
Shivalli	22.30	18,291
Herga	12.61	12,311
76 Badagabettu	7.37	10,446
Mudanidambur	0.20	522
Total CMC	68.81	104,617
Udupi LPA	127.35	167,000

Udupi LPA includes Manipal which is about 5 kms. away from Udupi on the east and is a renowned educational centre, with professional institutions of higher education. It is also an industrial and commercial centre developing rapidly at the outskirts of Udupi. Malpe, located at about 5 kms. west of Udupi is an all weather fishing harbour with a beautiful beach on the north of its coast line.

POPULATION CHARACTERISTICS

The population of the old town of Udupi had increased from 33,413 in 1981 to 33,913 in 1991 at a decennial growth rate of only 1.5 per cent, while the decennial growth rate during 1971-81 was 12.30 per cent. Though the natural increase of population of Udupi old town is negligible, the population growth in Udupi environs coupled with the floating population, i.e., onrush of seasonal visitors which is about 500,000 annually has an overall impact on the developmental needs of the city. The population of newly formed municipal area (Udupi CMC) is 104,617 with the inclusion of 70,632 persons from the newly merged NA areas into CMC. Growth of urban population during the decade 1971-81 and 1981-91 in Karnataka, DK District and Udupi are shown in Table 1.2.

Table 1.2

Urban Population Growth, 1971-91

State/District/Town	Urban Population (in million)		Decennial Growth Rate (%)	
	1981	1991	1971-1981	1981-1991
Karnataka state	10.73	13.91	50.70	29.64
DK district	0.58	0.76	47.60	31.03
Udupi LPA	0.15	0.17	22.31	12.84
Udupi old town	0.03	0.03	12.30	1.50

From Table 1.2, it can be observed that the percentage growth of population in the LPA is more than that of Udupi city. The higher growth of population outside the old municipal limits is due to developmental activities in the surrounding settlements like Malpe, Manipal and Puttur.

Both male and female literacy rates are high in Udupi. Literacy among the male population is 81 per cent and that of female population is 71 per cent as per 1991 Census. These are higher than that of taluk literacy levels. Table 1.3 shows a comparison of literacy rate with DK district and the state.

The mean age at marriage of females is high at 22.4 for the district as compared to 19.2 for the state. The infant mortality in the district is low at 50.4 per thousand as compared to the state. Population per hospital bed in the district is 1,142 as compared to 1,413 for the state.

Old Municipal Area, Extended Municipal Area and LPA Area

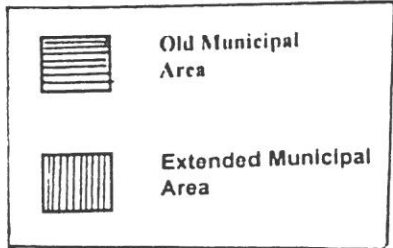
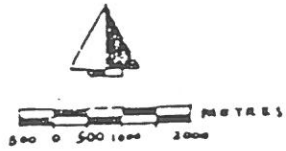
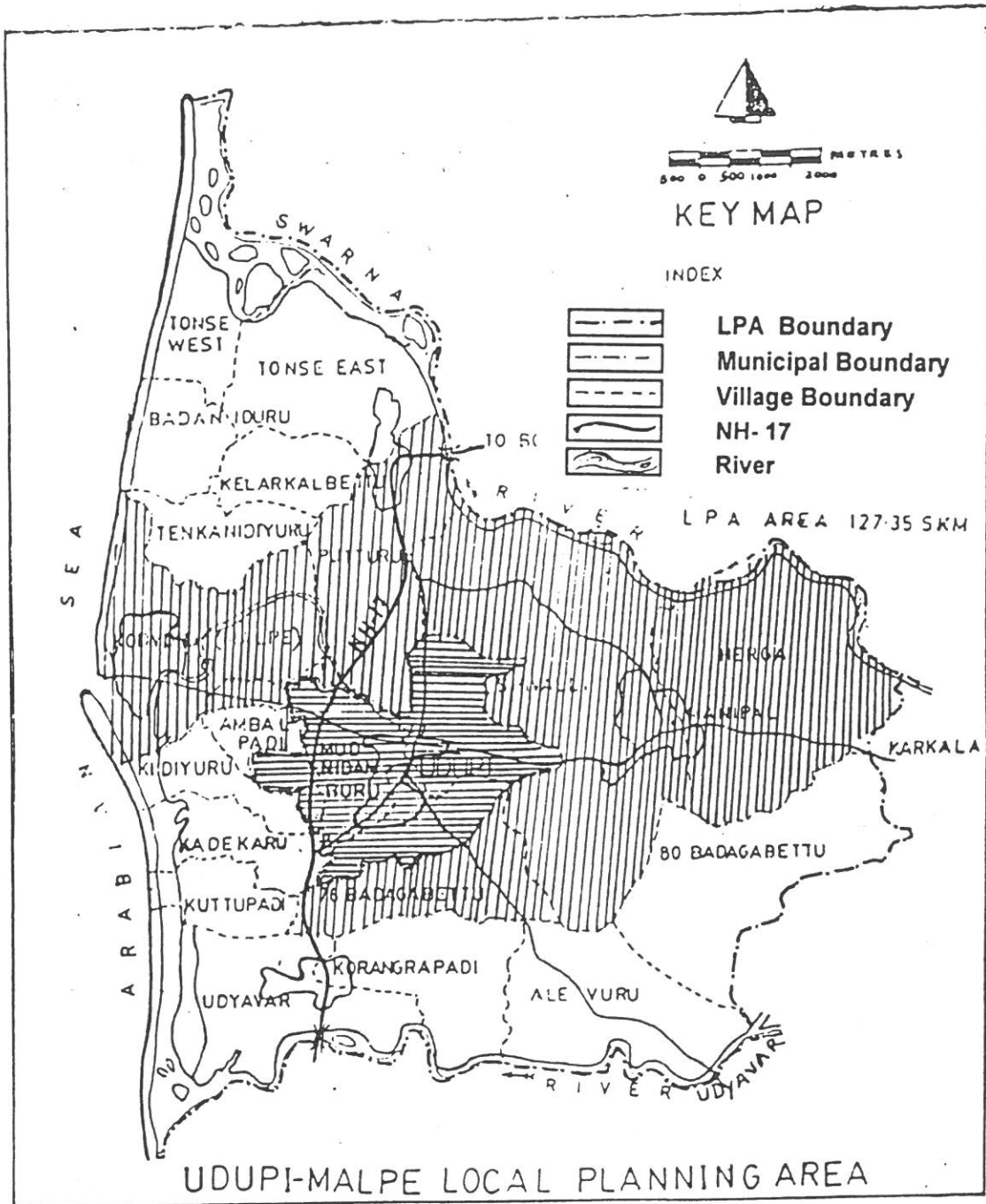


Table 1.3**Literacy Rates, 1991**

Population	Karnataka state	DK district	Udupi taluk	Udupi town
Male	67.30	84.70	75.67	81.31
Female	44.30	76.10	64.19	71.15

LAND-USE PATTERN

The total geographical area covered under the Comprehensive Development Plan (CDP) for LPA is 127.35 sq.kms. including 68.81 sq.kms. of Udupi CMC. The existing land use study was conducted during 1989. The break-up of existing land use is shown in the Table 1.4.

Table 1.4**Existing Land Use Pattern in Udupi Old Town and LPA**

Land Use	LPA		Old Town Area	
	Area (sq.km.)	% of LPA	Area (sq.km.)	% of Municipal Area
Residential	22.52	17.68	3.76	38.18
Commercial	0.76	0.60	0.23	2.34
Industrial	0.68	0.54	0.09	0.88
Transport & Communication	5.45	4.28	1.06	10.80
Public & Semi Public	1.67	1.31	0.42	4.28
Parks & Play Ground of Recreational Area	0.68	0.53	0.27	2.70
Agriculture Land, Water Sheets and Vacant Land	95.59	75.06	4.02	40.82
Total	127.35	100.00	9.85	100.00

The tendency of the people in LPA is to settle on their own agricultural land by constructing a house within the farm. Even within the Udupi town area, there are existing wet lands used partly for agriculture. Due to the presence of small wet lands around the habitation and forest land within the conurbation limits, the human settlement pattern is scattered. This has resulted in having 75 per cent of LPA under agricultural, water sheets and vacant land uses.

The total existing residential area in LPA is 22.52 sq.kms. which constitutes 18 per cent of the total geographical area. Whereas, 38 per cent of old town area is under residential use. The area under water sheets, agricultural and vacant land constitutes 40 per cent of the city area.

ECONOMIC ACTIVITIES IN UDUPI LPA

Fishing Industries

Udupi is a coastal taluk having 16.6 km. length of coast line along the western boundary of the Udupi LPA. Marine fishing and other associated activities such as fish curing and canning are quite important. Malpe fishing harbour is the biggest fishing harbour in the state of Karnataka.

More than 250 mechanised boats and about 650 country boats are engaged in fishing activity and operate from the harbour. About 15,000 tonnes of fish is being handled in a year of which nearly one-third is being exported outside the region.

There are many allied activities such as fish meal manufacturing, ice factories, dry fish crushing industries, fish oil extraction industries in and around Malpe. About 3,000 workers are engaged in fishing and allied activities in the Udupi LPA.

Tourism

Tourism is the most assured economic activity in Udupi. As Udupi is a pilgrim centre, the area is attracting about 500,000 tourist population every years for the past five years. It is estimated that, at least one employment is generated for every 125 tourists. The huge amount of fund collected in the form of donations to the temple is being invested for the development of the town which in turn is generating additional employment in this region.

Education Centre

Manipal is considered as the centre of excellence for education in the fields of engineering, medicine, pharmacy, management and other sciences. Students from different parts of India as well as from other countries come to Manipal for higher education.

Banking

Manipal is the birth place of commercial banks such as Syndicate Bank and Karnataka Bank. The headquarters of these banks are located at Manipal. As many as six scheduled banks with over 60 branches are scattered throughout Udupi LPA.

Industries

A number of tile factories are located in the surrounding areas of Udupi. The tiles manufactured in this area are also called as Managalore tiles which are famous in most parts of India. Other industries such as the fishing industries and ice plants are located in and around Malpe. Beedi rolling, weaving (fish net), engineering industries, fish meal industries, printing press, automobile, etc., are the small scale and household industries providing employment in the region.

DISTRIBUTION OF WORKERS IN UDUPI LPA

The percentage distribution of workers by occupation in Udupi LPA is shown in Table 1.5. It can be observed from the Table that between 1981 and 1991 the proportion of workers in household industry is reduced considerably in Udupi LPA as well as DK district and state. DK district registered the heaviest decline where the proportion of workers in household industries declined from 16.14 per cent in 1981 to 2.04 per cent in 1991. In Udupi LPA proportion of workers in household industries declined from 9.22 per cent in 1981 to 2.30 per cent in 1991. The reason could be that the educated men and women do not engage any more in labour intensive household industry but prefer clean industries like electronics and computer oriented jobs as their level of education is improving.

Table 1.5

Percentage Distribution of Workers, 1981 and 1991

Area	Cultivators		Agriculture labourers		Workers in household industry		Other workers	
	1981	1991	1981	1991	1981	1991	1981	1991
State	38.25	34.36	26.78	28.75	4.10	2.81	30.87	34.08
DK District	25.00	19.72	19.44	16.01	16.14	2.04	39.42	62.23
Udupi LPA	4.35	7.07	4.43	6.05	9.22	2.30	80.00	84.58

Source : Census of India, 1991.

II. STATUS OF URBAN SERVICES

MUNICIPAL SERVICES

Collection of data on various aspects of municipal services was undertaken by direct contact with officers and staff of the municipality and LPA. A brief field visit to the Udupi CMC and LPA has facilitated to assess much of the qualitative status of urban services in addition to the collection of locally available documents and reports. Based on these documents and field visits, an attempt is made to assess the current level of municipal services. The analysis for the entire CMC area is presented under the old town and the other areas separately.

Roads

Old Town

The total road length within the old town is 41.32 kms. of which 0.59 per cent is cement concrete, 69.60 per cent is asphalted, 8.03 per cent is WBM, and 21.78 per cent is earthen. The density works out to 4.25 kms. length per sq.km. area in old town and 2.30 km. length per sq.km. area for the entire CMC area. The length of various type of roads and their condition is given in Table 2.1.

Table 2.1

Category-wise Length of Roads, Udupi Old Town

Type of road	Length (Km.)	% to total road length	Condition (%)		
			Good	Fair	Bad
Cement Concrete	0.24	0.59	100.00	-	-
Asphalt	28.76	69.60	80.00	20.00	-
WBM	3.32	8.03	-	-	100.00
Earthen (Mud)	9.00	21.78	-	-	100.00
Total	41.32	100.00			

Source : CMC - Udupi.

It is found that except in the central business area of the city, many roads are narrow, with small carriage width. Widening of most of the roads is not feasible due to buildings and structures abutting these roads. The total road length with side drains within the built up area

is only 20 km. The main cause for road damage is the lack of side drains along the roads and the existing drains which have silted up. Box type drains are very small in size measuring about 1-2 feet. About 10 km. length of roads have side drain covered with precast cement slabs or stone slabs. Being an area subject to heavy rains, roads deteriorate fast and require new formation. The drainage network will require serious attention in view of the recurring floods in the city when large areas get inundated.

Only 2 km., i.e., about 5 per cent of the total road length have foot paths. All the foot paths of mud type are having mild steel side railings. There is a need to provide foot paths along major roads in the central business area wherever enough road width is available.

Other Areas

The total road length in other areas is 114.77 kms. The extent of newly included area is 59.09 sq.km. The street density works out to about 2 km. length per sq. km. area. Most of the asphalt roads are either state highways or national highways. The total mud road is 47 km., which constitutes 40.95 per cent of the total road length. The length of various type of roads are given in the Table 2.2.

Table 2.2
Category-wise Length of Roads, Other Areas

Type of road	Length (km.)	% to total road length
Cement Concrete	-	-
Asphalt	36.87	32.13
WBM	30.90	26.92
Earthen (Mud)	47.00	40.95
Total	114.77	100.00

Source : Udupi-CMC.

The road pattern is not well planned and the road system is evolved through haphazard developments over a period of time. The roads are very narrow and the width varies from 5 feet to 10 feet to a maximum of 24 feet in the well developed areas.

Street Lighting

There are about 7,395 street lights in the Udupi CMC area. The distance between the two lamp posts works out well within the standard distance of 30-50 metres. The break-up of different categories of lamps is given in Table 2.3. Though there is a steady increase in the

number of lights, it is not satisfactory in some of the interior roads in the town. About 70 per cent of the area in the old town has satisfactory street lighting.

Table 2.3
Street Lights in Udupi CMC, 1997

Type	Number of lights
Sodium Vapour Lamps	920
Mercury Lamps	10
Fluorescent Lamps	6465
Total	7395

Source : Udupi - CMC.

Water Supply

Udupi water supply scheme was commissioned in the year 1971. The two MGD capacity water supply scheme was designed for a population of only 50,000 by 1991. The Karnataka Urban Water Supply and Drainage Board has constructed a weir (low dam) across the Swarna river at a cost of about 6.25 million. The storage capacity of the reservoir is about 1.2 million cubic metres. The scheme is being maintained by the Udupi municipality from 1st July 1995. The length of the weir is 111 metres.

Old Town

Most of the inhabitants in Udupi town by habit depend on individual private borewells/open wells. The residents have their own well within their compound inspite of the availability of the municipal water supply. At present about 1.35 MGD of water is supplied to Udupi town for homes, institutions and commercial establishments. The amount of water available for domestic purpose is only about 65 LPCD. Table 2.4 gives details of the water supply system in Udupi town.

About 95 per cent of the population is served by piped water supply, 3 per cent by open wells and 2 per cent by bore wells. Areas like Car Street, Bannanje, Gundibail, Kinnimulky have moderate water supply and areas like Ambal Pady, Shanti Nagar, Beedinagundi, Doddanagudde have less water supply. At present, the water supply level is fairly satisfactory, but the future demand requires careful planning of the water sources and remodeling of the existing distribution network. During summer season, the city faces water problem due to non-availability of water at Swarna river source and irregular availability of power.

Table 2.4
Water Supply System in Udupi Old Town, 1997

Item	Description	
Source of water and existing Supply	Swarna river	6.40 MLD supply
	Wells	0.05 MLD supply
	Bore wells	0.32 MLD supply
	Total from all sources	6.77 MLD
Population coverage	Piped water supply	95 per cent
	Wells	3 per cent
	Bore wells with handpump	2 per cent
Per capita supply	65 LPCD.	
No. of public stand posts	10	
Tap connections	- Domestic	3549
	- Commercial	1199
Total	4748	
No. of bore wells	- with handpumps	10
	- with submersible pumps	3

Source : Udupi-CMC.

Water is being treated at the water treatment plant (TP) located at Manipal, 10.5 km. from the water intake structure at Swarna river. Water is pumped from the source to a sump at Hiriyadaka for a distance of 3 km. At the pumping station, there are two 150 HP motors working alternatively for 24 hours. From the sump, water is taken to TP at Manipal by gravity mains for a distance of 7.5 km. At TP water is treated in clarifluculators and filtered in rapid filters (2 Nos.). Additional treatment facilities available at TP are alum treatment and chlorination. Water is being treated with alum only during rainy seasons.

The treated water is pumped to the ground level storage reservoir through a rising main of 400 mm. diameter located at 1.25 km. from TP. The capacity of the storage reservoir is 1.5 million litres.

The total length of the distribution line is about 40 kms. The pipe lines are designed for peak flow conditions. The size of the pipe in the distribution varies from 80 mm. to 375 mm. The water is then distributed to various parts of the town through a network of mains and sub-mains. About 40 fire hydrants are provided at various points at a convenient interval. The

existing distribution network of the town was laid way back in 1970s and needs modification with overhead tanks to cater to the present requirement in relation to the density of population residing in various areas.

Other Areas

At present the rural settlements are provided with water supply from borewells, open wells and only a few settlements are served by piped water supply. Manipal and Malpe harbour areas get piped water supply from Swarna river in addition to the number of borewells with handpumps.

Table 2.5
Water Supply System in Other Areas, 1997

Item	Description
Amount of water supplied from Swarna river	0.65 MGD
Number of public stand posts	120
Bore wells	
- with hand pump	70
- with submersible pumps	17

Source : Udupi-CMC.

Under Udupi water supply scheme, which was designed for 2.0 MGD, supplies about 0.65 MGD of water to other urban centres like Manipal and Malpe. For the areas other than Manipal, water supply is from borewells dug by Zilla Panchayat which are now being maintained by Udupi municipality (Table 2.5).

Under Ground Drainage

Old Town

Udupi got its Under Ground Drainage (UGD) System in 1986. In LPA, only Udupi town and Manipal have UGD system. One sewage treatment plant is being used by the Udupi CMC to treat the sewage. The area has been divided into two zones for drainage purpose taking topography into consideration.

Table 2.6
Sewerage System in Udupi Old Town, 1997

Item	UGD Drainage	Septic tank/leach pit
Area covered with sewer network (%)	60	-
Number of houses connected	315	50
Percentage of people using UGD system	5.11	-
Condition	Good	Good

Source : Udupi-CMC.

The UGD lines are laid in about 60 per cent of the municipal area (old), which can serve about 4000 out of 6000 houses. But the number of houses which have their toilets connected to the UGD is only 315 (Table 2.6). The entire system is not properly utilised, consequently the whole system is under-utilised. The total length of sewer network laid is about 42 km. and the number of manholes are about 2200 of which about 20 are damaged. They need repair and improvement.

Most of the people prefer leachpit as it is cheap when compared to septic tanks. The people in Udupi have their own leachpit/septic tanks within their premises. The reasons for the very slow progress in houses getting UGD connections are : (i) habit to use leachpits or septic tanks and natural surroundings as toilets; (ii) lack of enforcement of regulations by KUWS & DB & CMC; and (iii) another reason is that house owners like to utilise the bathroom/toilet water for watering the garden crops around their shallow pit latrines.

At present sewage is collected in the wet wells, located at the lowest points in the city. There are three wet wells located at Kinnimulky, Kidiyoor and NH-17 by-pass near hotel Sharada International. At wet wells, heavy duty electric pumps (20 to 70 HP) are installed to pump sewage to TP consuming a lot of power. It is found that, the wet wells and pumps are not operating to their full capacity.

The sewage treatment plant is of oxidation ponds type located north-west of the city at Nittur along NH-17. The TP has been designed to handle 1.5 MGD of sewage, but the designed sewage flow is not reaching the TP due to the reasons mentioned earlier. The oxidation ponds are not loaded as per the designed sewage flow, which eventually allows grass and weeds to grow inside. From the wet wells, sewage is pumped to oxidation ponds (2 Nos.) at TP. The oxidation ponds are rectangular in shape measuring 30 m. x 100 m. each and the total land acquired for

the purpose is 4 hectares. The site was fenced earlier but now it has no protection as the barbed wires were stolen and trespassers enter the site without check. Sewage is being continuously pumped to the oxidation pond and retained for about 10 days and then let out to the nearby stream. Finally the treated sewage is discharged into the sea.

The drainage system in Udupi has created underground water pollution. As stated earlier, open wells and bore-wells are generally being used as a source for water supply. These sources are being polluted by the open drainage system and leachpits.

Other Areas

UGD system is not provided in other areas. At present septic tanks and leachpits are used as a sewage system in most of the newly included areas.

Proposals

In the second phase it is proposed to take up Malpe and some parts of Manipal to provide UGD system which are the two important urban nodes growing as fast as Udupi. It is also proposed to take up the remaining pockets within the CMC area in the next phase.

Public Conveniences

Old Town

For public use the municipality has constructed many Sulabha Souchalayas and public urinals mainly at bus stands and market places. There are five public latrines consisting of 40 seats. The municipality also has a malaria control programme. The public latrines and urinals require regular maintenance and a proper ventilation.

Other Areas

For other notified areas, public conveniences have not been given much importance.

Storm Water Drainage

In Udupi city about 20 Kms. length of roads have side drains of which about 10 kms. are mud/earthen side drains and the remaining lengths are covered type. The surface water due to rain is collected by means of open side drains along with sullage water in some areas. About 50 per cent of the road side drains get silted up causing flooding during the rainy season.

Besides the roadside drains, there are large storm water courses (nalas) running in the heart of the city. Total length of the natural water courses is about 15 km. During summer, when there is no storm water flow, sullage water get collected in these nalas at low points creating mosquito breeding ponds. Houses not connected to UGD are discharging their waste water into these natural drains causing water pollution. An efficient system of surface water management, with desilting and constructing retaining side walls for these natural drains, is absolutely necessary in Udupi, Manipal and Malpe.

Solid Waste Management

Solid waste management in Udupi is undertaken as a regular municipal function. The RCC circular dustbin rings are placed along the roadside, street junctions, market places, etc., to dump the waste by the residents of the surrounding areas.

Amount and Composition

About 20 tonnes of solid waste (including general municipal waste, debris) is reported to be generated daily. Out of this, only 60 per cent is collected and disposed (Table 2.7). The composition of waste is organic waste, glass, plastic, paper and others. No special study has been undertaken to assess the composition of waste. It is found that, about 60 per cent volume of waste is organic in nature. During special occasions like festivals, fairs and religious celebrations by the eight Udupi mutts and at Sri Krishna temple, solid waste generated is so heavy that it remains dumped for a longer period creating a bad environment near the collection points.

Waste Collection

The waste generated from households, commercial units, markets, hospitals/nursing homes and religious mutts are mixed up at the collection points. There are 550 RCC ring type dustbins each of 10 cubic feet capacity in the city area. The spacing of two dustbins is 100 metres which is well within the norm of 100-150 metres. Waste is collected from the dustbin in two shifts from 7 a.m. to 11 a.m. and 2 p.m. to 5 p.m. There are two lorries of 10 tonnes capacity and 1 tractor of 5 tonnes capacity. Each vehicle makes 3 trips per day transporting about 12 tonnes of waste and finally disposing at municipal landfill located 2 km. away from the city.

Table 2.7

Details of Solid Waste Management

Item	Description
Total waste generated (tonnes per day)	20
Amount of waste collected and disposed per day (tonnes)	12
Total length of roads in old town (km.)	42
Dustbins	RCC ring type
Total number	550
Capacity (cubic feet)	10
Spacing of dustbins (metres)	100
Vehicles (Number)	
a. Lorries	2
b. Tractors	1
c. Wheel barrows	9
No. of trips per day	3
Collection time	7 a.m. to 11 a.m. & 2 p.m. to 5 p.m.
Disposal	
Extent of landfill area (acres)	5
Distance of landfill from city (km.)	2
Infrastructure available at landfill (water supply, electricity, security house, etc.)	No.

Source : Udupi-CMC.

Sanitary Landfill

Solid waste disposal method is by uncontrolled sanitary landfill. The landfill is being operated since 35 years. The extent of landfill area is about 5 acres located within the periphery of the municipal area situated at Beedinagudde in the south-western side of the city. It could also be observed from the meteorological data that the predominant wind direction is south-west. The wind blows just across the waste dump place and reaches the core area of the city. The site is unattended and unfenced and the waste is being dumped indiscriminately. No compaction and covering of waste with earth is practiced. No measures have been taken to prevent rain water from seeping through the waste, which ultimately pollutes ground waters.

Recycling

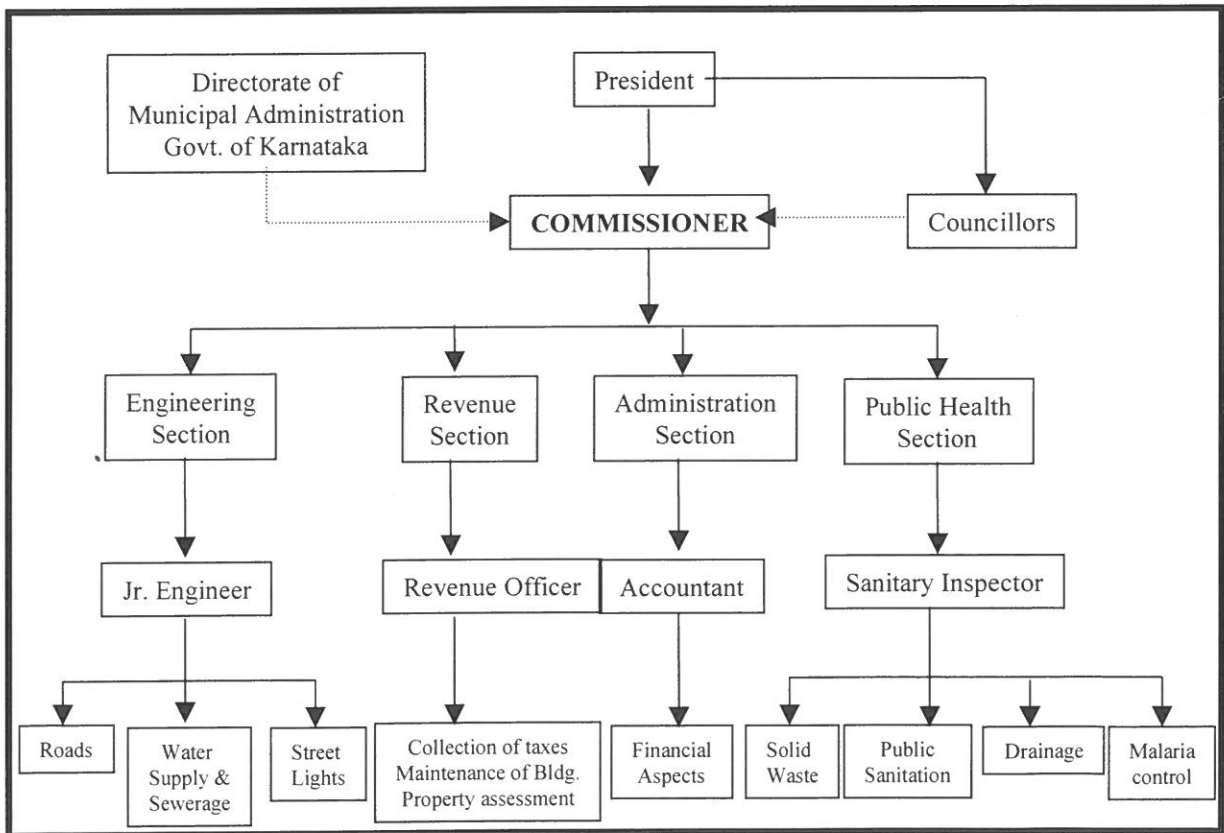
During a visit to the landfill site it was noticed that rag pickers are collecting all the recyclable materials like glass, metals, plastic bags, carton boxes, etc. The rag pickers are working daily on the dumping site and they burn old dried waste in order to get the materials easily. The smoke released ultimately reaches the neighbouring areas adjacent to the dumping place.

INSTITUTIONAL ARRANGEMENTS

UDUPI - CMC Setup

The chief executive of Udupi CMC is the municipal commissioner and the CMC is under the governance of the elected members. The president is elected from among the elected councillors. The main departments of CMC are engineering public health, revenue and administrative sections and are headed by junior engineer, senior health officer, revenue officer and accountant respectively. Chart 1 shows the organisation structure of Udupi - CMC as on 1997.

CHART - I
Organisational Structure of Udupi-CMC - 1997



Functions of UDUPI - CMC

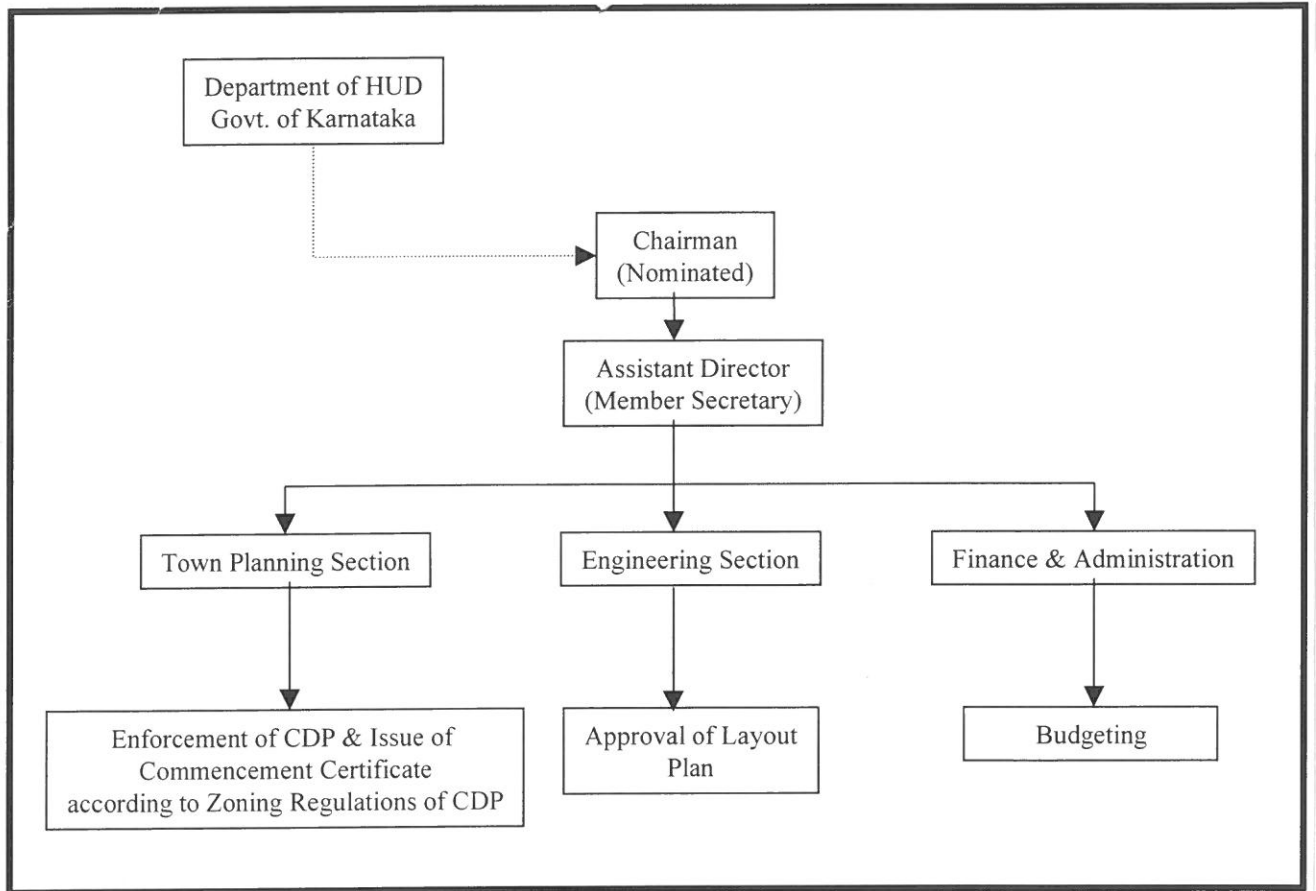
The main functions of the Udupi Municipality are :

- a) Collection of taxes, revenues and administering municipal services.
- b) Planning, developing and operating the water supply and sewerage system, through Karnataka Urban Water Supply and Drainage Board.
- c) Coordination with local town planning department for layout formation and providing sites and services.
- d) Planning, improving and maintenance of municipal services such as :
 - (i) Roads, Foot paths
 - (ii) Street Lights
 - (iii) Solid Waste Management
 - (iv) Storm Water Drainage
 - (v) Health and Sanitation including Public Toilets, Malaria Control Programme, Slaughter Houses & Burial Grounds
 - (vi) Amenities such as Parks, Playgrounds and other facilities
 - (vii) Markets (Flower, Vegetable, Fish Markets)
 - (viii) Bus Stands with Commercial Buildings

Local Planning Authority Set up and its Function

The Local Planning Authority (LPA) was constituted in 1977 by the government under section 4C of Karnataka Town and Country Planning Act, 1961. The office of the authority is not having its own staff, but the staff of the Assistant Director of Town Planning, Udupi is assisting the planning authority. The planning authority is governed by the chairman, nominated by the Department of Housing and Urban Development (HUD), Government of Karnataka. Implementation and enforcement of CDP, which was approved by Government in December 1992 is the primary function of LPA. The main functions of the authority are land acquisition and development apart from enforcing land use proposals and approval of building plans as per zoning regulations of CDP. Chart II shows the organisation structure of local planning authority.

CHART - II
Organisational Structure of Local Planning Authority - 1997



III. FINANCING OF URBAN SERVICES

REVENUE RECEIPTS

The revenue receipts of the municipality are classified under two heads, viz., tax receipts and non-tax receipts. Under tax receipts, the revenue generated from property tax, entertainment tax, stamp duty, motor vehicle tax and revenue from advertisement have been analysed. Under non-tax receipts, revenue generated from water charges, fees and rents from markets, bus stands, revenue from remunerative enterprises have been analysed.

The main source of income to the municipality is from property tax which accounts for 37 to 40 per cent of the total revenue. The analysis presents an uneven growth rate in the five year period. The revenue receipts in 1991-92 was Rs.10.37 million, and has increased to Rs.16.02 million in 1995-96. Analysis of the composition of receipts shows a constant revenue for the period 1992-93 to 1994-95, but a sudden rise in the year 1995-96 (Table 3.1).

Tax Receipts

Property Tax

Property tax is one of the major source of revenue. The current tax rate is 22 per cent of annual rated value and the last revision was done in 1992-93. The total number of properties assessed in the year 1995-96 was 8710 residential and 3485 non-residential, compared with 8,020 residential and 2,690 non-residential in 1991-92. The revenue receipts from property tax has increased from Rs.2.83 million in 1990-91 to Rs.5.41 million in 1995-96 (Table 3.1).

The property tax collection performance of the municipality in the past five years is above 67 per cent. However, the tax collection declined from 88 per cent in 1992-93 to 67 per cent in 1995-96. The performance of collection by arrear and current demand is not readily available (Table 3.2). The property tax collection remains to be the major source of income to the municipality and contributes about 40 per cent of the total revenue.

Table 3.1
Revenue Receipts of Udipi CMC, 1991-92 to 1995-96

Heads of receipts	1991-92	1992-93		1993-94		1994-95		1995-96	
	Actuals (in million Rs.)	Actuals (in million Rs.)	Increase over previous year (per cent)	Actuals (in million Rs.)	Increase over previous year (per cent)	Actuals (in million Rs.)	Increase over previous year (per cent)	Actuals (in million Rs.)	Increase over previous year (per cent)
i) Tax									
Property tax	2.83 (27.28)	2.95 (30.34)	4.31	3.18 (31.95)	7.60	3.65 (37.54)	14.90	5.41 (33.74)	48.16
Entertainment	1.94 (18.74)	1.86 (19.12)	-4.32	1.80 (18.11)	-3.17	1.78 (17.84)	-0.89	0.91 (5.65)	-49.27
Stamp duty	0.06 (0.61)	0.28 (2.87)	342.86	0.27 (2.75)	-2.20	0.20 (2.09)	-25.64	1.05 (6.57)	418.22
Motor vehicle	0.48 (4.63)	-	-	0.48 (4.83)	-	0.48 (4.94)	-	0.72 (4.50)	-
Others (Advertisement)	0.02 (0.15)	0.05 (0.53)	225.00	0.08 (0.82)	55.77	0.06 (0.63)	-24.69	0.04 (0.25)	-34.43
Sub-total (i)	5.33 (51.14)	5.14 (52.86)	-3.56	5.81 (58.46)	12.99	6.18 (63.55)	6.32	8.12 (50.70)	31.50
ii) Non-tax									
Water charges*	1.53 (14.72)	1.49 (15.35)	-2.16	1.45 (14.57)	-3.01	1.37 (14.13)	-5.18	1.46 (9.13)	-6.55
Fees & license									
a) Markets	0.76 (7.29)	0.51 (5.23)	-32.67	0.83 (8.30)	62.08	0.57 (5.84)	-31.15	0.93 (5.81)	63.73
b) Bus stand	0.17 (1.68)	0.18 (1.90)	6.32	0.21 (2.07)	11.35	0.21 (2.18)	2.91	0.21 (1.28)	-3.03
Remunerative enterprises	0.63 (6.05)	0.49 (5.03)	-22.01	0.57 (5.70)	15.75	0.70 (7.24)	24.38	1.71 (10.70)	143.32
Octroi compensation	0.41 (3.92)	-	-	0.31 (3.07)	-	-	-	0.20 (1.27)	-
Sub total (ii)	3.49 (33.65)	2.68 (27.52)	-23.30	3.35 (33.71)	25.19	2.86 (29.94)	-14.72	4.51 (28.18)	57.99
iii) Others	1.50 (14.47)	1.91 (19.62)	27.20	0.78 (7.83)	-59.22	0.69 (7.05)	-11.95	3.38 (21.12)	390.00
Total (i+ii+iii)	10.37 (100.00)	9.73 (100.00)	-6.21	9.94 (100.00)	2.18	9.72 (100.00)	-2.20	16.02 (100.00)	64.84

Note : (i) * Includes water charges and connection charges.
(ii) Figures in parentheses are per cent to total receipts.

Table 3.2**Collection Performance of Property Tax, 1991-92 to 1995-96**

Year	Demand (in million Rs.)			Collection (in million Rs.)			Collection Performance (per cent)		
	Current	Arrear	Total	Current	Arrear	Total	Current	Arrear	Total
1991-92	2.61	0.79	3.40	-	-	2.83	-	-	83.23
1992-93	2.78	0.57	3.35	-	-	2.95	-	-	88.04
1993-94	3.29	0.40	3.69	-	-	3.18	-	-	86.00
1994-95	3.64	0.52	4.16	-	-	3.65	-	-	87.76
1995-96	2.12	2.12	7.96	-	-	5.41	-	-	67.87

Entertainment Tax

This source of income to the municipality is disbursed by the commercial tax department. Number of theaters in the city are 3 and number of shows per theater per day is 4. During most of the five years period the tax has shown negative growth rate from that of previous year. The tax collection in the year 1991-92 was 1.94 million constituting 18.74 per cent of the total revenue and collection in the year 1995-96 was only 905,000 constituting 5.65 per cent of the total revenue (Table 3.1). The reason for less tax collection in 1995-96 is due to the removal of surcharge on entertainment tax as well as due to the reduction in cinema viewers because of TV/Video performances at home. Such a trend is commonly observed in most towns of the state.

Stamp Duties

The revenue from stamp duty has increased over the period of five years (from Rs.63,000 in 1991-92 to Rs.1.05 million in 1995-96). Share of stamp duty to total receipts has increased from 0.61 per cent in 1991-92 to 6.57 per cent in 1995-96 (Table 3.1)

Motor Vehicle Tax

This source of revenue is collected by the Regional Transport Office (RTO) and a fixed amount is disbursed to the municipality every year. A fixed amount of Rs.480,000 was paid from 1991-92 to 1994-95 and this contribution has increased to Rs.720,000 in 1995-96. The annual contribution of motor vehicle tax to the total revenue constitutes 4.5 to 5.0 per cent.

Other Tax Receipts

The other tax receipts constitute advertisement tax. There is a fluctuation in the receipts from advertisement tax. The share of this tax constitutes less than 1 per cent.

Non-tax Receipts

Water Charges

Water charges are based on water consumption and new tap connection fees. The current water charge pattern is given in Table 3.3.

Table 3.3

Water Charges in Udupi, 1996

(in Rs.)

Item	Old charges (till Oct.'96)		New charges (From Nov.'96)
New tap connection	a) Domestic	10	1500.00
	b) Commercial	10	3000.00
	c) Industrial	-	6000.00
Meter installation charges	a) Domestic	-	45.00
	b) Commercial	-	90.00
	c) Industrial	-	180.00
Water charges	a) Domestic	-	2.5 per 1000 lit.
	b) Commercial	-	5.0 per 1000 lit.
	c) Industrial	-	7.50 per 1000 lit.

Source : Udupi-CMC.

The water charges have not been increased. For 1000 litres it is Rs.2.50 for domestic, Rs.5.0 for commercial and Rs.7.50 for industrial purposes. Charges for new connections have been increased steeply. They are Rs.1,500 for domestic, Rs.3,000 for commercial and Rs.6,000 for industrial (Table 3.3).

The water cess collection is about 75 per cent of the demand in 1992-93 and declined to 67 per cent in 1995-96 (Table 3.4). The share of water tax constitutes about 15 per cent of the total revenues, but during the last financial year the share is just 9.13 per cent (Table 3.1).

Table 3.4**Collection Performance of Water Charges, 1991-92 to 1995-96**

Year	Demand (in million Rs.)			Collection (in million Rs.)			Collection performance (per cent)		
	Current	Arrear	Total	Current	Arrear	Total	Current	Arrear	Total
1991-92	1.50	0.58	2.08	-	-	1.53	-	-	73.44
1992-93	1.42	0.55	1.97	-	-	1.49	-	-	75.79
1993-94	1.45	0.48	1.93	-	-	1.45	-	-	75.14
1994-95	1.57	0.48	2.05	-	-	1.37	-	-	67.01
1995-96	1.50	0.68	2.18	-	-	1.46	-	-	67.26

Fees

This source consists of the receipts from markets and the bus stand. This includes fees from licensing of hotels, building, issue of no objection certificate, etc. However, the analysis has been done only with respect to the fees from markets and bus stand. There is a fluctuation of revenue receipts from market fees. The fees has increased from Rs.756,000 in 1991-92 to Rs.930,000 in 1995-96 (Table 3.1). The revenue from market fees contributed about 5 to 8 per cent of the total revenue.

Bus stand fees are based on fees per bus per day. At present the municipality is charging only private buses at Rs.1.50 per bus per day. The total revenue is Rs.174,000 in 1991-92 and Rs.205,000 in 1995-96. This revenue contribution has increased from 1.68 per cent in 1991-92 to 2.18 per cent in 1994-95 (Table 3.1).

Octroi Compensation

The octroi compensation to the municipality in 1991-92 was Rs.406,000 and declined to Rs.203,000 in 1995-96. The share of the total receipts on this count in 1995-96 is about 1.3 per cent (Table 3.1).

REVENUE EXPENDITURE

Revenue Expenditure constitutes, general administration, (salaries, wages) public health, safety (like street lighting), water supply, solid waste management, public works (like roads, culverts, etc.) and grants to anganwadi buildings, hostels, etc. Table 3.5 shows the analysis of revenue expenditure under different heads. The total expenditure has increased from Rs.10.99 million in 1991-92 to Rs.14.83 million in 1995-96.

Table 3.5

Revenue Expenditure, 1991-92 to 1995-96

Heads of expenditure	1991-92	1992-93		1993-94		1994-95		1995-96	
	Actual (in million Rs.)	Actual (in million Rs.)	Increase over previous year (per cent)	Actual (in million Rs.)	Increase over previous year (per cent)	Actual (in million Rs.)	Increase over previous year (per cent)	Actual (in million Rs.)	Increase over previous year (per cent)
General admn. & staff	1.36 (12.33)	3.22 (32.19)	137.39	1.32 (14.36)	-58.99	5.99 (66.18)	354.32	6.87 (46.29)	14.47
Public safety, health & staff salary	6.84 (62.17)	3.57 (39.04)	-47.76	4.54 (49.37)	27.11	0.48* (5.31)	18.23	0.84* (5.64)	73.80
Public works	1.60 (14.56)	1.86 (20.34)	16.81	2.55 (27.77)	37.20	1.68 (18.59)	-34.01	1.28 (5.62)	-24.29
Miscellaneous	1.20 (10.93)	0.50 (5.42)	-58.74	0.78 (8.45)	57.46	0.90 (9.92)	15.10	5.86 (39.48)	551.28
Total	10.99 (100.00)	9.15 (100.00)	-16.82	9.19 (100.00)	0.50	9.70 (100.00)	-1.41	14.83 (100.00)	63.68

Note : (i) * Staff salary not included.
(ii) Figures in parentheses are per cent to total expenditure.

General Administration

Expenditure under this head has increased from Rs. 1.36 million in 1991-92 to Rs.6.87 million in 1995-96, except for the year 1993-94 when it was Rs. 1.32 million. The general administration expenditure in 1991-92 constitutes about 12.33 per cent of the total expenditure where as in 1995-96 the figure is 46.29 per cent (Table 3.5).

Public Safety and Health

Expenditure under this head is the second largest constituting about 62.17 per cent in 1991-92. This declined to 49.37 per cent million in 1993-94. The expenditure for the year 1994-95 to 1995-96 does not include staff salary, hence the analysis shows different figures (Table 3.5).

Public Works

During the last five year period the highest expenditure occurred in the year 1993-94 (Rs.2.55 million). Analysis shows that the expenditure in 1991-92 constitutes about 14.56 per cent of the total expenditure compared to 5.62 per cent in 1995-96 (Table 3.5).

Miscellaneous

There is no clear trend visible during the five year period. The share of miscellaneous expenditure has increased from Rs.1.20 million in 1991-92 to Rs.5.86 million in 1995-96 (Table 3.5).

CAPITAL GRANTS RECEIVED

The capital receipts from sources such as government, IDSMT scheme, NRY and others declined from Rs.2.2 million in 1991-92 to Rs.700,000 in 1995-96 (Table 3.6). The highest share of grant from IDSMT scheme was Rs. 2.34 million in 1993-94 and was nil in 1995-96.

Table 3.6

Capital Grants Received, 1991-92 to 1995-96

(in million Rs.)

Agency	1991-92	1992-93	1993-94	1994-95	1995-96
Government	-	0.05	0.57	0.06	-
IDSMT	-	1.06	2.34	0.03	-
NRY	0.60	0.28	-	0.34	-
DC office (Flood relief fund, town improvement, scarcity fund)	0.93	0.29	0.03	-	0.72
Others	0.70	-	-	1.41	-
Total	2.23	1.67	2.94	1.80	0.72

CAPITAL EXPENDITURE

The capital expenditure of the municipality is presented in Table 3.7. Most of the capital works carried out are under public works, housing, flood relief works, town improvement projects, subsidies given for business like tailoring, cycle shop, etc. But a large share of capital expenditures are for public works, such as formation of new roads and bus stand. The highest capital expenditure is Rs.1.69 million in 1994-95. However, the expenditure seems to be lower than the receipts in all the past five years, thus showing a surplus under this account.

Table 3.7

Capital Expenditure, 1991-92 to 1995-96

(in million Rs.)

Item	1991-92	1992-93	1993-94	1994-95	1995-96
Public works	-	0.76	1.06	1.44	-
Housing	-	0.02	0.32	0.04	-
City improvement	0.08	0.39	0.15	-	0.72
Others	0.59	0.27	0.02	0.21	-
Total	0.67	1.43	1.56	1.69	0.72

LOAN SCENARIO

The municipality has taken loan from three agencies, viz, government, LIC and Syndicate Bank for water supply (WS) and under ground drainage (UGD) projects. The total loan received is Rs.13.43 million. The municipality has been repaying the loan amount since 1989, and as on 1992-93 the balance amount to be paid is Rs.8.21 million (Table 3.8).

Table 3.8**Loan Account Statement**

(in million Rs.)

Loan purpose	Agency	Amount	Balance
UGD	Government	8.78	6.16
Water supply	LIC	4.35	1.83
UGD/WS	Syndicate	0.30	0.22
Total		13.43	8.21

FINANCIAL STATUS

The revenue receipt collection of the municipality between 1991-92 and 1994-95 had been fluctuating around Rs.9.7 million and it has substantially increased to Rs.16 million in 1995-96. The financial status of the municipality is shown in Table 3.9. Except in the year 1991-92, the balance sheet shows net surplus in the revenue account.

Table 3.9**Financial Status, 1991-92 to 1995-96**

(in million Rs.)

Item	1991-92	1992-93	1993-94	1994-95	1995-96
Revenue Account					
Receipts	10.37	9.73	9.94	9.72	16.02
Expenditure	10.99	9.15	9.19	9.06	14.83
Surplus/Deficit	-0.63	0.58	0.75	0.66	1.19
Capital Account					
Receipts	2.22	1.67	2.93	1.80	0.72
Expenditure	0.67	1.43	1.59	1.68	0.72
Surplus/Deficit	1.56	0.24	1.37	0.11	0.00

IV. CRITICAL AREAS FOR REFORM AND INVESTMENT

To find ways and means of increasing the local body's internal resources, remunerative projects costing Rs.60 million have been identified. After analysing the existing conditions and requirements of the municipal services, infrastructure improvement projects costing Rs.107.3 million have also been identified. More importantly for integrated development of the city, developmental projects costing Rs.392.5 million have been identified. The total cost for these projects identified is Rs.559.8 million (Table 4.1).

POTENTIAL PROJECTS FOR INVESTMENT

Fishing and its Processing

Udupi being a coastal city, the availability of abundant wealth from the sea is a major income generating activity in the region. As mentioned earlier, Malpe fishing harbour is the biggest harbour in the State. About 3,000 fisherman and other workers are engaged in fishing and its allied activities. It is, therefore, very important to develop this industry and also upgrade the present system of fish processing. One of the components required for fish processing is cold storage. Huge quantity of ice is required for processing and transporting the fish. It has been identified that, the local ice plant industries are not able to produce the required quantity of ice due to power problems. This lead the individuals to set up their own power generators to run the ice plant. Therefore, there is an urgent need to tackle the ice plant problem for development of the fishing industry. The investment fund for development of fishing industry, however, needs to be assessed and steps taken to make it available.

Tourism

Udupi is a national pilgrim and tourist place attracting thousands of devotees annually. Therefore it is necessary to develop the religious mutt places and tourist places by providing basic services for the pilgrims. It is also necessary to provide medical facilities for the devotees to avoid the outbreak of epidemics as well as control if necessary.

Malpe beach is the most beautiful beach in DK district. Some guest houses at the beach resort are required to be constructed. Other recreational facilities like parks and playgrounds, small museum, etc. need to be developed. Manipal hills offer the only beautiful forests in Udupi LPA and need to be developed.

DEVELOPMENT OF MUNICIPAL SERVICES

The following are some of the projects identified for development :

- i) Second stage water supply scheme to cater to new areas.
- ii) Extension of UGD system.
- iii) Formation and improvement of roads.
- iv) Remunerative projects like bus stand cum shopping complexes.

Table 4.1 shows developmental projects with cost. A large part of the development project costs is required for implementation of the second stage water supply scheme to cater to new areas.

Table 4.1
Cost Estimates of Development Projects

(in million Rs.)

Projects	Cost
1. Remunerative projects	
Shopping complex service at bus stand premises	20.00
New shopping complex at city bus stand premises	20.00
Improvement of shopping complex at new bus stand	20.00
Sub total (1)	60.00
2. Augmentation of municipal services	
Extension of UGD system	40.00
Upgrading WBM roads to metal roads	60.00
Solid waste management	5.00
Improvement to storm water drainage	1.50
Street lighting	0.80
Sub total (2)	107.30
3. Development Works	
Second stage water supply scheme	350.00
Formation of roads	40.00
Tourism	2.50
Sub total (3)	392.50
Grand total	559.80

CRITICAL ISSUES OF URBAN GROWTH, DEVELOPMENT AND GOVERNANCE

An assessment of the socio-economic profile of Udupi city brings out the following issues which are of immediate concern to the authorities responsible for planning and development :

- a) The floating population of Udupi is as high as 500,000 annually. Seasonal influx of tourists adds a tremendous load on the existing municipal services. For instance, during fairs and religious festivals the demand for food and water increases manifold. The solid waste generated is so heavy that it remains uncleared for a long period. The authorities are not able to attend to these tasks with their present staff and workers, as well as resources. Therefore, the city needs to be provided with adequate infrastructure in order to effectively serve as a pilgrim centre of national importance.
- b) The Udupi CMC boundary is not co-terminous with the LPA boundary. Different geographical and administrative boundaries for CMC and LPA create confusion in planning and non-cohesion in development. Therefore, co-ordination of both the authorities is very important for the integrated development of the city.
- c) Multiple development agencies working in the city and its environs are not well-knit nor coordinated for organised planned development for an optimum utilisation of resources.
- d) Lack of trained professionals, inadequate skilled staff, non-availability of modern gadgets and updated technologies are the major areas of concern for the necessary upgradation of the organisational capabilities of the municipality.
- e) The implications and adoption of the Constitution (74th) Amendment Act of devolution of authority is not clear and is not well understood at the municipal levels.
- f) The participation of banks and financial institutions located within Udupi CMC in the overall infrastructure development of the city is rather negligible and their potential is yet to be tapped.
- g) Religious mutts can play an important role in improving the quality of life for pilgrims and residents. This has to be assessed with a view to obtaining their participation in this very important aspect of early life.
- h) Tourist facilities are meager in the city and need immediate attention and upgradation. The important places of tourism are Shri Lord Krishna Temple, Malpe Port and Beach, Thottam Beach, and Manipal Hills. In addition, hotel beds need to be substantially increased by the private sector.

- i) The population of Udupi is likely to be dominated by the student community who belong to the age group of 15 to 30 years. The demands of the young population are to be critically evaluated while planning the city and its environs and necessary infrastructure needs to be provided for the purpose.
- j) Funding of developmental and institutional set up need to be improved.

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