

DEMOGRAPHY AND ECONOMIC BASE

1.1 Decadal Growth of Population

The state of Kerala is a green strip of land located in the southwest corner of India. It is only 1.18% of the total area of the country, but houses 3.43% of the country's population. It is one of the most densely populated states in the country with a density of population of 819 persons per Sq. Km. As per latest census figure, the state has registered a total population of 31.80 million and more than 25% of the population live in urban areas. Demographically the state enjoys a very advanced status with rapidly declining birth and death rates, low infant mortality and very high literacy and health delivery system.

Kochi, the largest urban agglomeration in Kerala, consists of the Municipal Corporation of Kochi, adjoining Municipalities and GramaPanchayaths. The CDP area of Kochi city consists of the Kochi Municipal Corporation, Two Municipalities and thirteen adjoining Panchayats (refer Figure 1.3).

The Kochi City has a flat topography characterized by small and large islands scattered in the area within the Vembanad Lake.

Kochi witnessed a rapid population growth during the past 30 years. The average decadal growth in Kochi Corporation is 7.83% whereas the nearby municipal areas registered decadal average of 18.65%, and the adjoining Panchayaths had an average decadal growth of 12.13%. The Semi urban areas around the city is showing high rate of population growth and also fast developing trends.

Table 1.1: Trend in Population Growth of Kochi City (CDP area)

	Name of Local Body	Area in Sq. KM	Population			Decadal Growth Rate (%)	
			1981	1991	2001	1981-91	1991-2001
	Cochin Corporation	94.88	513249	564589	596473	10.00	5.65
	KalamasseryMunicipality	27.00	43767	54342	63176	24.16	16.15
	ThripunithuraMunicipality	18.69	43646	51078	59881	17.03	17.24
	ElankunnapuzhaPanchayath	11.66	43911	47878	50563	9.03	5.61
	NjarakkalPanchayath	8.60	21672	22322	24166	3.00	8.26
	MulavukaduPanchayath	19.27	21397	22322	22842	4.32	2.33
	KadamakkudyPanchayath	12.92	13696	14668	15824	7.10	7.88
	CheranallurPanchayath	10.59	18381	21407	26316	16.46	22.93
	Eloor Panchayth	14.21	32011	34455	35573	7.63	3.24
	VarapuzhaPanchayath	7.74	20917	22514	24524	7.63	8.93
	ThrikkakaraPanchayath	27.46	38318	51166	65984	33.53	28.96
	ThiruvankulamPanchayath	10.49	15517	18412	21717	18.66	17.95
	MaraduPanchayath	12.35	28749	34995	41012	21.73	17.19
	KumbalamPanchayath	20.79	22826	24143	27549	5.77	14.11
	KumbalangiPanchayath	15.77	22376	24601	26661	9.94	11.98
	ChellanamPanchayath	17.60	29536	32978	36209	11.65	9.60
	TOTAL	330.02	929969	1041870	1138413		

The above details are represented graphically in the Pie diagram in **Figure 2A** in **Annexure 2**.

Table 1.2 shows the projected population of the constituents of CDP area

PREDICTED POPULATION GROWTH BASED ON TREND						
Name of Local Body	Population (in lakhs)			Projected Population		
	1981	1991	2001	2005 (estimated)	2011 (projected)	2021 (projected)
Cochin Corporation	513249	564589	596473	605335	618348	640000
KalamasseryMunicipality	43767	54342	63116	66266	72698	81437
ThripunithuraMunicipality	43646	51078	59884	63681	69662	77923
ElankunnapuzhaPanchayath	43911	47878	50563	51381	54590	63286
NjarakkalPanchayath	21672	22322	24166	25142	26932	31222
MulavukaduPanchayath	21397	22322	22842	22969	23622	27385
KadamakkudyPanchayath	13696	14668	15824	16323	17558	20355
CheranallurPanchayath	18381	21407	26316	28656	33679	39044
Eloor Panchayth	32011	34455	35573	35755	37250	43183
VarapuzhaPanchayath	20917	22514	24524	25411	29300	33967
ThrikkakaraPanchayath	38318	51166	65984	72305	88211	102263
ThiruvankulamPanchayath	15517	18412	21717	23121	26674	30923
MaraduPanchayath	28749	34995	41012	43373	50037	58007
KumbalamPanchayath	22826	24143	27549	29329	32658	37720
KumbalangiPanchayath	22376	24601	26661	27452	29751	34490
ChellanamPanchayath	29536	32978	36209	37459	41055	47595
CDP Area	929969	1041870	1138413	1173958	1252025	1368800

The contributing factors of population growth in the area are mainly the natural increase and the in migration from nearby villages for trade and employment. The population of the CDP area increased from 10.41 in 1991 to 11.38 lakhs in 2001.

1.2 Age Structure

The age wise distribution of population in Corporation of Kochi in 2001 is given below:

Table1.3: Age Structure - 2001

Age Group	No. of persons	Percentage
0-4	46942	7.87
5-19	139276	23.35
20-59	349116	58.53
60-79	54518	9.14
80	6621	1.11
Total	596473	100.00

The trend projection study on age structure conducted by the department of statistics of CUSAT reveals that, child population along with youth and middle aged population will consist of a major portion of total population, whereas percentage of old age population will be comparatively small in 2006.

1.3 Sex Ratio

Table 1.4 shows the Sex ratio of different Local bodies in the CDP area.

Table 1.4 Sex Ratio - 2001

1	Cochin corporation	1020
2	Kalamassery Municipality	977
3	Thripunitura Municipality	1029
4	Elamkunnappuzha Panchayat	1032
5	Njarakkal Panchayat	1053
6	MulavukaduPanchayath	1049
7	KadamakkudyPanchayath	1022
8	CheranallurPanchayath	1014
9	Eloor Panchayth	995
10	VarapuzhaPanchayath	1076
11	ThrikkakaraPanchayath	988
12	ThiruvankulamPanchayath	1015
13	MaraduPanchayath	1018
14	KumbalamPanchayath	1016
15	KumbalangiPanchayath	1062
16	ChellanamPanchayath	1009

In 2001, the Corporation of Kochi had 290095 males to 295764 females. The sex ratio is 1020 compared to the State average of 1058 females to 1000 males. CDP area has a sex ratio average of 1023.

1.4 Literacy

Table 1.5 shows the literacy rates of the constituent areas of CDP. There is no wide difference in literacy rates between male and female & between rural and urban in Kerala. Male literacy rate is 94.2% compared to 87.7% for females in Kerala. In CDP area the average literacy rate is 94.7% compared to 95.5 % for KMC area. Urban male literacy rate is 96.1% compared to 90.9% for females.

1	Cochin corporation	95.5
2	Kalamassery Municipality	97.04
3	Thripunitura Municipality	96.43
4	Elamkunnappuzha Panchayat	94.26
5	Njarakkal Panchayat	95.17
6	MulavukaduPanchayath	95.79
7	KadamakkudyPanchayath	94.45
8	CheranallurPanchayath	95.53
9	Eloor Panchayth	94.24
10	VarapuzhaPanchayath	94.46
11	ThrikkakaraPanchayath	90.41
12	ThiruvankulamPanchayath	95.41
13	MaraduPanchayath	95.31

14	KumbalamPanchayath	94.22
15	KumbalangiPanchayath	93.72
16	ChellanamPanchayath	93.47

The sex wise education status of the population in the categories of most vulnerable (MV), just above vulnerable (JV), urban poor (UP), low income group (LIG), middle income group (MIG) and high income group (HIG) are given in **Table 2A** in **Annexure 2**. The educational status of the constituent areas was evaluated based on a sample survey. There is only negligible percentage of the population who are illiterate. About 2 % of the populations even in the most vulnerable group among the surveyed people are graduates. The literacy level in the CDP area is given in table. In KMC area the literacy rate is 85.65%

1.5 Spatial Distribution of Density of Population

The intensity of population in various parts of the CDP area is depicted in the table below.

Table 1.6: Spatial Distribution of Density of Population – 2001

Sl.No.	Name of Local Body	Area in Hectare	Population in 2001	Density Persons per hectare
1	Cochin Corporation	9488	596473	63
2	Kalamassery Municipality	2700	63176	23
3	Thrippunithura Municipality	1869	59881	32
4	Elamkunnappuzha Panchayat	1166	50563	21
5	Njarakkal Panchayat	860	24166	12
6	Mulavukad Panchayat	1927	22842	28
7	Kadamakkudy Panchayat	1292	15824	43
8	Cheranallur Panchayat	1059	26316	25
9	Eloor Panchayat	1421	35573	25
10	Varapuzha Panchayat	774	24524	32
11	Thrikkakara Panchayat	2746	65984	21
12	Thiruvankulam Panchayat	1049	21717	33
13	Maradu Panchayat	1235	41012	13
14	Kumbalam Panchayat	2079	27549	17
15	Kumbalamngi Panchayat	1577	26661	12
16	Chellanam Panchayat	1760	36209	24
	TOTAL	33,002	1,138,413	35

1.6 Population Below Poverty Line

The percentage of population below poverty is higher in the coastal areas, where fishermen constitute a major share of the population. Thrippunithura, the capital of the erstwhile kingdom of Kochi has the lowest number of urban poor – 12% of the total population. The Table 2 in **Annexure 2** shows the number of people below poverty line in the constituent local bodies.

1.7 Economic Base

Work participation rate of Ernakulam District shows an increase from 33.5% in 1991 to 36.1% in 2001.

1.7.1 Occupational Pattern

The percentage of male work force is greater than the female work force. A detailed composition of the work force is enumerated in **Table 2C (Annexure 2)**. The no. of workers engaged in different categories of work from the different constituent areas of CDP is given in table 1.7

Table 1.7 Work Force Categorization - 2001

Sl. No.	Name of local body	Manufacturing, processing & other household industries		Construction		Trade & Commerce		Transport, Storage & Communication		Other Services		Total	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
1	Cochin Corporation	30159	15.9	15079	7.9	43460	22.3	37226	19.6	64354	33.8	190278	100
2	Kalamassery Municipality	5039	35.1	1110	7.7	2194	15.3	1862	13	4149	28.9	14354	100
3	Thrikkakkara Panchayat	2453	10.9	1879	8.3	2606	11.5	2198	9.7	13480	59.6	22616	100
4	Elankunnapuzha Panchayat	2215	22.5	1611	16.3	1958	20	1697	17.2	2362	24	9843	100
5	Njarakkal Panchayat	1081	23.1	738	15.8	1032	22	648	13.9	1178	25.2	4677	100
6	Mulavukadu Panchayat	1382	27.9	637	12.9	937	18.9	841	17.1	1148	23.2	4945	100
7	Kadamakkudy Panchayat	1052	33.7	830	26.6	99	0.3	291	9.3	938	30.1	3121	100
8	Cheranallur Panchayath	1355	28.95	1039	22.2	446	9.53	606	12.95	1233	26.35	4679	100
9	Eloor Panchayat	4923	55.94	629	7.14	1017	11.55	671	7.63	1560	17.73	8800	100
10	Varapuzha Panchayat	1358	27.19	1325	26.53	939	18.8	463	9.27	910	18.22	4995	100
11	Maradu Panchayat	1674	18.2	2242	24.4	1626	17.7	1338	14.6	2294	25.1	9174	100
12	Kumbalam Panchayat	730	14.3	1261	24.7	1116	21.9	557	10.9	1441	28.2	5105	100
13	Kumbalangi Panchayat	752	13	1115	19.3	858	14.84	356	6.15	1350	23.35	5781	100
14	Chellanam Panchayat	963	16.62	1514	26.13	1105	19.07	485	8.37	1726	29.7	5793	100

(Compiled by the Dept. of Economics & Statistics. Govt. of Kerala)

As can be seen from the table, employment in the services sector is comparatively more than the other sectors. As this is a Port based city the trade and commerce sector gained predominance. The major Port based developments proposed – The International Transshipment Terminal, Single Buoy Mooring, LNG Project, Special Economic Zone – are sure to boost up the economic base of the CDP area. Large scale IT development is envisaged in Thrikkakkara and Kalamassery. Port based developments are proposed mainly in Elankunnapuzha and Mulavukad (Vallarpadam) apart from KMC area. Industrial developments is concentrated in Eloor. The island Panchayats of Kumbalangi, Chellanam, Kadamakkudy and Maradu show potential for tourism developments. Thrikkakkara is the administrative headquarters of the district and it is a sprouting IT

hub. The average employment in an IT park which is being developed comes to 4000 with an annual turn over of Rs.66crore. The manufacturing sector within the Ernakulam district contributes around 775 crores annually. The employment in the sector was 64815 in 2000-01 in the district. The per capita income is estimated to be 25199 rupees and the growth in per capita income 12% annually. Almost 93% of industrial employment in the district is concentrated in CDP area. The economy of the CDP area is depended on Port Activities, related trade and commerce. The details of the major proposals (mega projects) of the Port are given in Annexure 1.

1.8 Demography: Emerging Issues and Concerns

Even though the natural growth rate of population does not show an exorbitant increase, the floating population and the migration in Kochi is to be considered while earmarking the infrastructural requirements. There had been no intensive migration to any of the cities in Kerala mainly due to the following reasons.

- Employment opportunities in the main cities are not sufficient to exert a pulling effect
- High land values in cities prohibit establishment of residences in cities especially among the middle and low-income categories.
- The homestead nature of holdings in sub urban areas allows fragmentation of property for new family housing.
- Availability of transport facilities allows daily commutation to the city from out lying areas and districts with in a radius of about 100 k.m.

Facility for daily commutation adds to the increased number of floating population in the core city. A transportation study conducted has shown that nearly 2.5 lakhs of people commute to the core city daily thereby increasing the pressure on civic amenities and congestion on major traffic corridors.

The Kochi City (CDP area) is experiencing population growth higher than the state average. In the next 2 decades it is expected to touch 2 million mark. Most of the growth is taking place out of the Kochi Municipal Corporation boundary but within the CDP area. This coupled with the high level of floating population, necessitates integrated planning, development and service delivery.

1.8 Future Population

Table 3.8 shows the growth of population in KMC and CDP area

Area	1981-91			1991-01		
	Increase in Population	% of increase to the total population in 81	Estimated migration component of the total increase	Increase in Population	% of increase to the total population in 91	Estimated migration component of the total increase
KMC	51240	9.98%	60%	32084	5.69%	65%
CDP area	111901	12.03%	50%	96543	10.79%	65%

Though the trend shows a gradual decrease in the growth rate. In addition to the natural growth, there will also be migration from other areas to the city. The large-scale projects already in progress and those envisaged in this area will be the deciding factors. It is assumed that for every 10 Lakhs investment in development projects, there will be a migration of one

family. Analyzing the current scenario it is estimated that investment to the tune of Rs.15,000 Crores will materialize with in the CDP area during the span of coming 20 years. Accordingly, an in-migration of 1.5 Lakhs families or 6 Lakhs population, will have to be accommodated with in the CDP area, which comes to 20.29 lakhs persons. This whole population will not be concentrated in the City but distributed in the various local bodies based on the type and intensity of developmental activities coming in each area and based on the transportation facilities available.

Table 1.9 Estimated Migration Components as % to Total Population

Year	2011	2021	2026
KMC	11.46%	18.98%	24.74%
2 Municipal Areas	26.04%	38.61%	46.27%
13 Panchayats	14.16%	20.83%	28.28%
CDP Area	13.77%	22.61%	29.60%

Table 1.10: Population Projection Including Expected Migration (in lakhs)

Year	2001	2011	2021	2026
KMC	5.96	6.98	7.9	8.61
2 Municipal Areas	1.2	1.92	2.59	3.09
13 Panchayats	4.22	5.72	7.2	8.59
CDP Area	11.38	14.52	17.69	20.29

Table 1.11: Total projected population including migration and floating population (in lakhs)

Year	2011	2021	2026
CDP area	17.52	21.69	25.29

Considering the migration component and the large number of floating population, as revealed by the outer corden survey conducted as part of the comprehensive transportation study carried out by M/s RITES, the infrastructural amenities will have to cater to a total population of **17.52 lakhs** by **2011**, **21.69 lakhs** by **2021** and **25.29 lakhs** by year **2026**.

1.10 Conclusion

Population growth rate is showing a declining trend in the Corporation area during the past three decades. The suburban area around the city included in CDP shows considerably high population growth. The projected population is based on natural growth, expected migration & the floating population.

The density of population in the Corporation area is 63 PPH compared to the average of 35 PPH in the CDP area taken as a whole. The share of urban poor (BPL) population is 34% in the CDP area. The sector wise workforce shows that the highest percentage of main workers is in Trade, Commerce & other services, which shows the characteristic feature of the area.